

Compilation of Changes to the CPC Scheme Between 2021.08 and 2022.01

Presentation Details

Entries for new symbols and headings:	<i>Black text in italics</i>
Entries for existing symbols and headings	
—text insertions:	<i>Green text in italics with yellow background</i>
—text deletions:	Red strikethrough text with grey background
Entries for deleted symbols and headings:	Black strikethrough text
<ul style="list-style-type: none"> • In cases when the originating project cannot be found, "N/A" is given for the Project information (e.g. the change could be due to an Editorial Correction). • Projects ending in "-F" indicate finalisation after reclassification was completed. 	

Project: MP0514 (A01C)

M	A01C	<p>PLANTING; SOWING; FERTILISING (combined with general working of soil A01B 49/04; parts, details or accessories of agricultural machines or implements, in general A01B 51/00 - A01B 75/00; {apparatus for spreading sand or salt E01C; sowing and fertilising with aircraft B64D 1/16 - B64D 1/20})</p> <p><u>WARNING</u></p> <p>In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.</p>
M	A01C 1/00	Apparatus, or methods of use thereof, for testing or treating seed, roots, or the like, prior to sowing or planting (chemicals therefor A01N 25/00 - A01N 65/00 {irradiation in general B01J 19/08})
M	A01C 1/02	<ul style="list-style-type: none"> • Germinating apparatus; Determining germination capacity of seeds or the like (germinating in preparation of malt C12C 1/027)
M	A01C 1/06	<ul style="list-style-type: none"> • Coating or dressing seed ({encapsulated embryos or artificial seeds A01H 4/006; seed coating compositions C09D})
M	A01C 3/00	Treating manure; Manuring ({ploughs with additional arrangements for putting manure under the soil A01B 17/002; dung forks A01D 9/00 - {treating of waste water, sewage or sludge C02F} organic fertilisers from waste or refuse C05F})
M	A01C 3/02	<ul style="list-style-type: none"> • Storage places for manure, e.g. cisterns for liquid manure; Installations for fermenting manure (sewerage structures E03F 5/00; silos, bunkers E04H 7/22)
M	A01C 3/028	<ul style="list-style-type: none"> • {Covers, roofs or other structures for covering manure storage places (production of methane or biogas C02F 11/04; coverings for swimming or splash baths or pools E04H 4/10)}
M	A01C 3/04	<ul style="list-style-type: none"> • Manure loaders (loaders in general B65G)
U	A01C 5/00	Making or covering furrows or holes for sowing, planting or manuring (ploughs for making ridges A01B 13/02)
M	A01C 5/02	<ul style="list-style-type: none"> • Hand tools for making holes for sowing, planting or manuring (transplanting devices for trees A01G 23/02)
U	A01C 5/04	<ul style="list-style-type: none"> • Machines for making or covering holes for sowing or planting
M	A01C 5/045	<ul style="list-style-type: none"> • {with piercing buckets (devices for laying-out or removing protective coverings for plants A01G 13/02)}
M	A01C 7/00	Sowing ({with centrifugal wheels A01C 17/00} arrangements for driving working parts A01C 19/00)
M	A01C 7/02	<ul style="list-style-type: none"> • Hand sowing implements ({fertiliser distributors for hand use A01C 15/02; tools for cultivation A01G 20/30, A01G 20/40})

M	A01C 7/04	• Single-grain seeders with or without suction devices {{regulation A01C 7/10; for quantities of seed A01C 7/18}}
M	A01C 7/06	• Seeders combined with fertilising apparatus {{conducting and depositing seed A01C 7/20; apparatus for two kinds of fertiliser A01C 15/00; combinations with soil-working tools A01B 49/04}}
M	A01C 7/08	• Broadcast seeders; Seeders depositing seeds in rows {{machines for making furrows A01C 5/06; combination of seed machines with other soil-working tools A01B 49/06; foldable apparatus A01B 73/00}}
U	A01C 7/081	• • {Seeders depositing seeds in rows using pneumatic means}
M	A01C 7/082	• • • {Ducts, distribution pipes or details thereof for pneumatic seeders (non-pneumatic seed pipes A01C 7/206)} }
M	A01C 7/16	• • Seeders with other distributing devices, e.g. brushes, discs, screws, slides or slides {{with distributing slots A01C 15/06; with slides A01C 15/124; with chains A01C 15/18}}
M	A01C 7/166	• • • {Centrifugal distributors (pneumatic distributors A01C 15/04)} }
M	A01C 7/18	• Machines for depositing quantities of seed at intervals {{dibble seeders A01C 7/002; single-grain seeders A01C 7/04; regulation A01C 7/102; ridge marking A01B 69/02}}
M	A01C 7/20	• Parts of seeders for conducting and depositing seed {{combined with fertilising apparatus A01C 7/06}}
M	A01C 7/208	• • {Chassis; Coupling means to a tractor or the like; Lifting means; Side markers (hoppers for seeders or spreaders A01C 15/006)} }
M	A01C 9/00	Potato planters {{planting by hand A01C 7/02; combinations with soil working tools A01B 49/04}}
M	A01C 9/04	• with bucket wheels {{with other distributing devices A01C 9/08}}
M	A01C 9/08	• with other distributing devices, e.g. flaps, screws, horizontal turning plates {{with bucket wheels A01C 9/04}}
M	A01C 11/00	Transplanting machines {{hand sowing A01C 7/02; carriers for supporting persons A01B 75/00; transplanting devices for trees A01G 23/02}}
M	A01C 15/00	Fertiliser distributors (A01C 7/06 takes precedence; {combined with seeders} A01C 7/06); arrangements for driving working parts A01C 19/00; {harrows with special additional arrangements A01B 19/00; sand, gravel or salt spreaders for roads E01C 19/20}
M	A01C 15/02	• for hand use {{hand sowing A01C 7/02}}
M	A01C 15/06	• with distributing slots {, i.e. for dosing, e.g. adjustable openings e.g. adjustable openings for dosing }
U	A01C 15/08	• • with pushers or stirrers in the slots
M	A01C 15/10	• • • with reciprocating pushers {or stirrers in front of the slots (with endless chains A01C 15/18)} }
U	A01C 15/12	• with movable parts of the receptacle
M	A01C 15/122	• • {with moving floor parts (with endless chains A01C 15/18)} }
M	A01C 15/14	• with means for lifting out the fertiliser {{feeding wheels, cell wheels, discs A01C 7/12; bucket wheels A01C 7/14}}
M	A01C 17/00	Fertilisers or seeders with centrifugal wheels {{hand-used implements A01C 7/02, A01C 15/02; fertiliser distributors A01C 15/00; mechanical throwing machines for articles or solid bulk materials, in general B65G 31/00; sand, gravel or salt spreaders E01C 19/20}}
M	A01C 21/00	Methods of fertilizing, {fertilising {, sowing or planting}}(fertilisers C05; soil-conditioning or soil-stabilising materials C09K 17/00)

- M A01C 21/005 • {Following a specific plan, e.g. pattern ~~(precision agriculture in general A01B 79/005; steering or guiding agricultural machines or implements A01B 69/00)}~~}
- M A01C 23/00** **Distributing devices specially adapted for liquid manure or other fertilising liquid, including ammonia, e.g. transport tanks, ~~or~~ sprinkling wagons (watering fields in general A01G 25/00; spraying or applying liquids or other fluent materials in general B05)**
- M A01C 23/006 • {Distribution of liquid fertilisers by gravity flow ~~(distribution of liquid ammonia in or on the soil A01C 23/024; under pressure A01C 23/04)~~}
- U A01C 23/02 • Special arrangements for delivering the liquid directly into the soil
- U A01C 23/021 • • {Sludge injectors, i.e. liquid manure injectors}
- M A01C 23/022 • • • {Continuous injection tools ~~(devices for making drill or furrows A01C 5/066)}~~}
- M A01C 23/027 • • {Other methods for delivering fertiliser into the soil ~~(sowing granular fertiliser A01C 21/002; subirrigation A01G 25/06)~~}
- U A01C 23/04 • Distributing under pressure; Distributing mud; Adaptation of watering systems for fertilising-liquids
- M A01C 23/042 • • {Adding fertiliser to watering systems ~~(adding insecticides or herbicides A01M 7/00)}~~}
- M A01C 23/045 • • {Filling devices for liquid manure or slurry tanks ~~(arrangements for connecting hoses of the quick-acting type F16L 37/00)}~~}
- M A01C 23/047 • • {Spraying of liquid fertilisers ~~(gravity flow A01C 23/006; watering gardens, fields, sports grounds or the like A01G 25/00)}~~}

Project: MP0534 (A01M)

- M A01M** **CATCHING, TRAPPING OR SCARING OF ANIMALS (appliances for catching swarms or drone-catching [A01K 57/00](#); fishing [A01K 69/00](#) - ~~{A01K 99/00}~~; biocides, pest repellants or attractants [A01N](#)); APPARATUS FOR THE DESTRUCTION OF NOXIOUS ANIMALS OR NOXIOUS PLANTS**

NOTE

in this subclass, terms "killing" and "destruction" cover "non-chemical sterilisation" of invertebrates

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0630-F, MP0534 (A01N)

- M A01N 63/00** **Biocides, pest repellants or attractants, or plant growth regulators containing microorganisms, viruses, microbial fungi, animals or substances produced by, or obtained from, ~~microorganisms, viruses, microbial fungi or animals, e.g. enzymes or fermentates (containing compounds of determined constitution [A01N 27/00](#) - [A01N 59/00](#); unicellular algae [A01N 65/03](#))~~**

NOTE

In this main group and its indented subgroups, the last place priority rule is not applied, i.e. the common rule is applied.

WARNING

Group A01N 63/00 is impacted by reclassification into groups A01N 63/10; A01N 63/12; A01N 63/14; A01N 63/16; A01N 63/20; A01N 63/22; A01N 63/23; A01N 63/25; A01N 63/27; A01N 63/28; A01N 63/30; A01N 63/32; A01N 63/34;

~~A01N 63/36, A01N 63/38, A01N 63/40, A01N 63/50, A01N 63/60, and A01N 65/03.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: RP0630-F (A01N)

M A01N 63/10

- Animals; Substances produced thereby or obtained therefrom

WARNING

~~Group A01N 63/10 is incomplete pending reclassification of documents from group A01N 63/00.~~

~~Group A01N 63/10 is also impacted by reclassification into groups A01N 63/12, A01N 63/14, A01N 63/16, A01N 63/20, A01N 63/22, A01N 63/23, A01N 63/25, A01N 63/27, A01N 63/28, A01N 63/40, A01N 63/50, and A01N 63/60.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A01N 63/12

- • Nematodes

WARNING

~~Group A01N 63/12 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10.~~

~~Groups A01N 63/00, A01N 63/10, and A01N 63/12 should be considered in order to perform a complete search.~~

M A01N 63/14

- • Insects

WARNING

~~Group A01N 63/14 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10.~~

~~Groups A01N 63/00, A01N 63/10, and A01N 63/14 should be considered in order to perform a complete search.~~

M A01N 63/16

- • Arachnids

WARNING

~~Group A01N 63/16 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10.~~

~~Groups A01N 63/00, A01N 63/10, and A01N 63/16 should be considered in order to perform a complete search.~~

M A01N 63/20

- Bacteria; Substances produced thereby or obtained therefrom

WARNING

~~Group A01N 63/20 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10.~~

~~Groups A01N 63/00, A01N 63/10, and A01N 63/20 should be considered in order to perform a complete search.~~

M A01N 63/22

- • Bacillus

WARNING

~~Group A01N 63/22 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10.~~

~~Groups A01N 63/00, A01N 63/10, and A01N 63/22 should be considered in order to perform a complete search.~~

M	A01N 63/23	<ul style="list-style-type: none"> • • B. thuringiensis <p><u>WARNING</u> Group A01N 63/23 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10. Groups A01N 63/00, A01N 63/10, and A01N 63/23 should be considered in order to perform a complete search.</p>
M	A01N 63/25	<ul style="list-style-type: none"> • • Paenibacillus <p><u>WARNING</u> Group A01N 63/25 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10. Groups A01N 63/00, A01N 63/10, and A01N 63/25 should be considered in order to perform a complete search.</p>
M	A01N 63/27	<ul style="list-style-type: none"> • • Pseudomonas <p><u>WARNING</u> Group A01N 63/27 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10. Groups A01N 63/00, A01N 63/10, and A01N 63/27 should be considered in order to perform a complete search.</p>
M	A01N 63/28	<ul style="list-style-type: none"> • • Streptomyces <p><u>WARNING</u> Group A01N 63/28 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/10. Groups A01N 63/00, A01N 63/10, and A01N 63/28, and A01N 63/28 should be considered in order to perform a complete search.</p>
M	A01N 63/30	<ul style="list-style-type: none"> • Microbial fungi; Substances produced thereby or obtained therefrom <p><u>WARNING</u> Group A01N 63/30 is incomplete pending reclassification of documents from group A01N 63/00. Group A01N 63/30 is also impacted by reclassification into groups A01N 63/32, A01N 63/34, A01N 63/36, A01N 63/38, A01N 63/40, A01N 63/50, and A01N 63/60. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A01N 63/32	<ul style="list-style-type: none"> • • Yeast <p><u>WARNING</u> Group A01N 63/32 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/30. Groups A01N 63/00, A01N 63/30, and A01N 63/32 should be considered in order to perform a complete search.</p>
M	A01N 63/34	<ul style="list-style-type: none"> • • Aspergillus <p><u>WARNING</u> Group A01N 63/34 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/30. Groups A01N 63/00, A01N 63/30 and A01N 63/34 should be considered in order to perform a complete search.</p>

M A01N 63/36

- Penicillium

WARNING

Group A01N 63/36 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/30.
Groups A01N 63/00, A01N 63/30 and A01N 63/36 should be considered in order to perform a complete search.

M A01N 63/38

- Trichoderma

WARNING

Group A01N 63/38 is incomplete pending reclassification of documents from groups A01N 63/00 and A01N 63/30.
Groups A01N 63/00, A01N 63/30 and A01N 63/38 should be considered in order to perform a complete search.

M A01N 63/40

- Viruses, e.g. bacteriophages

WARNING

Group A01N 63/40 is incomplete pending reclassification of documents from groups A01N 63/00, A01N 63/10, and A01N 63/30.
All groups listed in this Warning should be considered in order to perform a complete search.

M A01N 63/50

- Isolated enzymes; Isolated proteins (peptides [A01N 37/46](#))

WARNING

Group A01N 63/50 is incomplete pending reclassification of documents from groups A01N 63/00, A01N 63/10, and A01N 63/30.
All groups listed in this Warning should be considered in order to perform a complete search.

M A01N 63/60

- Isolated nucleic acids

WARNING

Group A01N 63/60 is incomplete pending reclassification of documents from groups A01N 63/00, A01N 63/10, and A01N 63/30.
All groups listed in this Warning should be considered in order to perform a complete search.

U A01N 65/00

Biocides, pest repellants or attractants, or plant growth regulators containing material from algae, lichens, bryophyta, multi-cellular fungi or plants, or extracts thereof (containing compounds of determined constitution [A01N 27/00](#) - [A01N 59/00](#))

M A01N 65/03

- Algae

WARNING

Group A01N 65/03 is incomplete pending reclassification of documents from group A01N 63/00.
Groups A01N 63/00 and A01N 65/03 should be considered in order to perform a complete search.

Project: MP0532 (A23C)

M A23C

DAIRY PRODUCTS, e.g. MILK, BUTTER, OR CHEESE; MILK OR CHEESE SUBSTITUTES; MAKING THEREOF (obtaining protein compositions for foodstuffs, {e.g. from milk}, [A23J 1/00](#); preparation of peptides, e.g. of proteins, in general C07K 1/00)

NOTE

This subclass covers:

- the chemical aspects of making dairy products
- the apparatus used for performing techniques provided for therein, e.g. for concentration, evaporation, drying, preservation, or sterilisation, unless such apparatus is specifically provided for in another subclass, e.g. [A01J](#) for treatment of milk or cream for manufacture of butter or cheese.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

- M A23C 1/00** Concentration, evaporation or drying ([A23C 3/00](#) takes precedence; products obtained thereby [A23C 9/00](#); making butter powder [A23C 15/14](#); cheese powder [A23C 19/086](#); evaporating in general [B01D 1/00](#))
- M A23C 1/14 • combined with other treatment ([A23C 3/00](#), [A23C 9/00](#) take precedence)
- U A23C 7/00** Other dairy technology
- M A23C 7/02 • Chemical cleaning of dairy apparatus (~~cleaning in general B08B, e.g. B08B 3/08~~); Use of sterilisation methods therefor (~~sterilisation methods per se A61L~~)
- M A23C 7/04 • Removing unwanted substances {other than lactose or milk proteins} from milk (~~by filtering A01J 9/02, A01J 11/06~~)
- M A23C 9/00** Milk preparations; Milk powder or milk powder preparations ([A23C 21/06](#) takes precedence; preservation [A23C 3/00](#); chocolate milk [A23G 1/00](#); ice-cream or mixtures for preparation of ice-cream [A23G 9/00](#); puddings or dry powder puddings [A23L 9/10](#) mixtures of whey with milk products or milk components [A23C 21/06](#))
- M A23C 9/12 • Fermented milk preparations; Treatment using microorganisms or enzymes (~~whey preparations A23C 21/00~~)
- M A23C 9/14 • in which the chemical composition of the milk is modified by non-chemical treatment
- NOTE**
When classifying in this group, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned
- M A23C 9/15 • Reconstituted or recombined milk products containing neither non-milk fat nor non-milk proteins (~~containing thickening substances A23C 9/154; mixtures of whey, with milk products or milk components A23C 21/06~~)
- U A23C 9/152 • containing additives (fermented milk preparations containing additives [A23C 9/13](#))
- M A23C 9/156 • • Flavoured milk preparations {; {Addition of fruits, vegetables, sugars, sugar alcohols; or sweeteners} ([A23C 9/154](#) takes precedence)
- M A23C 9/16 • Agglomerating or granulating milk powder; Making instant milk powder; Products obtained thereby ([A23C 1/05](#), [A23C 9/18](#) take takes precedence)
- M A23C 11/00** Milk substitutes, e.g. coffee whitener compositions (cheese substitutes [A23C 20/00](#); butter substitutes [A23D](#); cream substitutes [A23L 9/20](#))
- M A23C 11/02 • containing at least one non-milk component as source of fats or proteins (~~A23C 19/055, A23C 21/04 take precedence~~ addition of non-milk fats or non-milk proteins in making cheese curd [A23C 19/055](#); whey or whey preparations containing non-milk components as source of fats or proteins [A23C 21/04](#))
- M A23C 13/00** Cream; Cream preparations (ice-cream [A23G 9/00](#)); Making thereof (~~coffee whitener compositions A23C 11/00; cream substitutes A23L 9/20~~)
- M A23C 13/12 • Cream preparations (~~ice-cream A23G 9/00~~)

- M A23C 17/00** Buttermilk; Buttermilk preparations (~~A23C 9/14 takes precedence; preservation A23C 3/00~~ *milk preparations, milk powder or milk powder preparations in which the chemical composition of the milk is modified by non-chemical treatment A23C 9/14*)
- M A23C 19/00** Cheese; Cheese preparations; Making thereof (cheese substitutes [A23C 20/00](#); ~~casein A23J 1/20~~)
- U A23C 19/02** • Making cheese curd
- M A23C 19/045** • • Coagulation of milk without rennet or rennet substitutes ~~{followed by whey separation}~~
- M A23C 19/05** • • Treating milk before coagulation; Separating whey from curd ([A23C 19/097](#); ~~{A23C 19/045} take takes~~ precedence)
- U A23C 19/06** • Treating cheese curd after whey separation; Products obtained thereby ([A23C 19/097](#) takes precedence)
- U A23C 19/09** • • Other cheese preparations; Mixtures of cheese with other foodstuffs (preservation [A23C 19/097](#))
- M A23C 19/093** • • • Addition of non-milk fats or non-milk proteins ~~{, polyol fatty acid polyesters or mineral oils}~~
- U A23C 19/097** • Preservation
- M A23C 19/10** • • Addition of preservatives ~~{(enzymes or microorganisms, see A23C 19/032; A23C 19/04, A23C 19/061 and A23C 19/063)}~~
- M A23C 21/00** Whey; Whey preparations (~~A23C 1/00, A23C 3/00, A23C 9/14 take precedence~~ *concentration, evaporation or drying A23C 1/00; preservation of milk or milk preparations A23C 3/00; milk preparations, milk powder or milk powder preparations in which the chemical composition of the milk is modified by non-chemical treatment A23C 9/14*)

Project: MP0537 (A23L)

- M A23L** FOODS, FOODSTUFFS, OR NON-ALCOHOLIC BEVERAGES, NOT COVERED BY SUBCLASSES [A21D](#) OR [A23B](#) - [A23J](#); THEIR PREPARATION OR TREATMENT, e.g. COOKING, MODIFICATION OF NUTRITIVE QUALITIES, PHYSICAL TREATMENT (shaping or working, not fully covered by this subclass, [A23P](#)); PRESERVATION OF FOODS OR FOODSTUFFS, IN GENERAL
- WARNING
{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- M A23L 2/00** Non-alcoholic beverages; Dry compositions or concentrates therefor (*soup concentrates A23L 23/10*); Their preparation (~~soup concentrates A23L 23/10~~; preparation of non-alcoholic beverages by removal of alcohol ~~{C12H 3/00}~~)
- U A23L 3/00** Preservation of foods or foodstuffs, in general, e.g. pasteurising, sterilising, specially adapted for foods or foodstuffs (preserving foods or foodstuffs in association with packaging [B65B 55/00](#))
- NOTE
In groups [A23L 3/3472](#) - [A23L 3/3562](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place. {This Note corresponds to IPC Note (1) relating to [A23L 3/3472](#) - [A23L 3/3562](#)}

M	A23L 3/02	<ul style="list-style-type: none"> by heating materials in packages which are progressively transported, continuously or stepwise, through the apparatus (A23L 3/005 takes precedence)
M	A23L 3/10	<ul style="list-style-type: none"> by heating materials in packages which are not progressively transported through the apparatus (A23L 3/005 takes precedence)
M	A23L 3/16	<ul style="list-style-type: none"> by heating loose, unpacked materials (A23L 3/005 takes precedence)
M	A23L 5/00	Preparation or treatment of foods or foodstuffs, in general; Food or foodstuffs obtained thereby; Materials therefor (preservation thereof in general A23L 3/00)
M	A23L 5/20	<ul style="list-style-type: none"> Removal of unwanted matter, e.g. deodorisation or detoxification (removing undesirable, e.g. bitter, substances from pulses or legumes A23L 11/30)
M	A23L 5/30	<ul style="list-style-type: none"> Physical treatment, e.g. electrical or magnetic means, wave energy or irradiation (preservation A23L 3/00, A23B; cooking A23L 5/10)
M	A23L 7/00	Cereal-derived products; Malt products (malt products of pulses A23L 11/70); Preparation or treatment thereof (preparation of malt for brewing C12C)
U	A23L 7/10	<ul style="list-style-type: none"> Cereal-derived products
M	A23L 7/104	<ul style="list-style-type: none"> • Fermentation of farinaceous cereal or cereal material; Addition of enzymes or microorganisms (A23L 7/109, A23L 7/20 take precedence; soya sauce A23L 27/50)
M	A23L 7/117	<ul style="list-style-type: none"> • Flakes or other shapes of ready-to-eat type; Semi-finished or partly-finished products therefor (A23L 7/143, A23L 7/152 take precedence <i>cereal granules or flakes to be cooked and eaten hot A23L 7/143; cereal germ products A23L 7/152</i>)
M	A23L 7/20	<ul style="list-style-type: none"> Malt products (malt products of pulses A23L 11/70; preparation of malt for brewing C12C)
M	A23L 19/00	Products from fruits or vegetables; Preparation or treatment thereof (of pulses A23L 11/00; marmalades, jams, jellies or the like A23L 21/10; treating harvested fruit or vegetables in bulk A23N)
M	A23L 23/00	Soups; Sauces (A23L 27/50, A23L 27/60 take precedence <i>soya sauce A23L 27/50; salad dressings, mayonnaise or ketchup A23L 27/60</i>); Preparation or treatment thereof
U	A23L 29/00	Foods or foodstuffs containing additives (containing additives for modifying the nutritive qualities A23L 33/10; containing substantially indigestive additives, e.g. dietary fibres, A23L 33/21); Preparation or treatment thereof
U	A23L 29/20	<ul style="list-style-type: none"> containing gelling or thickening agents (marmalades, jams, jellies or other similar fruit or vegetable compositions A23L 21/10)
U	A23L 29/206	<ul style="list-style-type: none"> • of vegetable origin
M	A23L 29/238	<ul style="list-style-type: none"> • • from seeds, e.g. locust bean gum or guar gum (A23L 29/212, A23L 29/231 take precedence <i>starch A23L 29/212; pectin A23L 29/231</i>)
M	A23L 29/244	<ul style="list-style-type: none"> • • from corms, tubers or roots, e.g. glucomannan (A23L 29/212 takes precedence <i>starch A23L 29/212</i>)
M	A23L 29/30	<ul style="list-style-type: none"> containing carbohydrate syrups; containing sugars; containing sugar alcohols, e.g. xylitol; containing starch hydrolysates, e.g. dextrin (A23L 21/20 takes precedence; <i>products from apiculture A23L 21/20</i>; artificial sweetening agents A23L 27/30)
U	A23L 33/00	Modifying nutritive qualities of foods; Dietetic products; Preparation or treatment thereof

- M A23L 33/10
 - using additives (~~A23L 33/21 takes precedence~~ *addition of substantially indigestible substances A23L 33/21*)
- U A23L 33/20
 - Reducing nutritive value; Dietetic products with reduced nutritive value
- M A23L 33/21
 - • Addition of substantially indigestible substances, e.g. dietary fibres (~~addition of gelling or thickening agents A23L 29/20~~)

Project: MP0515 (A23P)

- U A23P 20/00 **Coating of foodstuffs; Coatings therefor; Making laminated, multi-layered, stuffed or hollow foodstuffs**
- U A23P 20/10
 - Coating with edible coatings, e.g. with oils or fats
- M A23P 20/12
 - • Apparatus *or processes* for applying powders or particles to foodstuffs, e.g. for breading; Such apparatus combined with means for pre-moistening or battering

Project: RP0619-F (A24B)

- U A24B 3/00 **Preparing tobacco in the factory**
- M A24B 3/14
 - Forming reconstituted tobacco products, e.g. wrapper materials, sheets, imitation leaves, rods, cakes; Forms of such products (delustering [A24C 1/40](#))

WARNING

~~Group A24B 3/14 is impacted by reclassification into group A24C 5/01. Groups A24B 3/14 and A24C 5/01 should be considered in order to perform a complete search.~~

Project: RP0619-F (A24C)

- U A24C 5/00 **Making cigarettes; Making tipping materials for, or attaching filters or mouthpieces to, cigars or cigarettes**
- M A24C 5/01
 - Making cigarettes for simulated smoking devices
- U A24C 5/32
 - Separating, ordering, counting or examining cigarettes (in relation to packaging [B65B 19/00](#)); Regulating the feeding of tobacco according to rod or cigarette condition
- U A24C 5/34
 - • Examining cigarettes or the rod, e.g. for regulating the feeding of tobacco; Removing defective cigarettes
- M A24C 5/3406
 - • • {Controlling cigarette combustion}

WARNING

~~Group A24C 5/01 is incomplete pending reclassification of documents from groups A24B 3/14, A24F 47/004, A24F 47/006, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.~~

WARNING

~~Group A24C 5/3406 is impacted by reclassification into groups A24F 40/80 and A24F 42/90. Groups A24C 5/3406, A24F 40/80, and A24F 42/90 should be considered in order to perform a complete search.~~

Project: RP0619-F (A24D)

- M A24D 1/00 **Cigars; Cigarettes**

WARNING

~~Group A24D 1/00 is impacted by reclassification into groups A24D 1/20 and A24D 1/22.~~

~~Groups A24D 1/00, A24D 1/20, and A24D 1/22 should be considered in order to perform a complete search.~~

M A24D 1/14

- Tobacco cartridges for pipes

WARNING

~~Group A24D 1/14 is impacted by reclassification into group A24D 1/20. Groups A24D 1/14 and A24D 1/20 should be considered in order to perform a complete search.~~

M A24D 1/20

- Cigarettes specially adapted for simulated smoking devices

WARNING

~~Group A24D 1/20 is incomplete pending reclassification of documents from groups A24D 1/00 and A24D 1/14. Groups A24D 1/00, A24D 1/14, and A24D 1/20 should be considered in order to perform a complete search.~~

M A24D 1/22

- Cigarettes with integrated combustible heat sources, e.g. with carbonaceous heat sources

WARNING

~~Group A24D 1/22 is incomplete pending reclassification of documents from groups A24D 1/00, A24F 47/004, A24F 47/006, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.~~

U A24D 3/00

Tobacco smoke filters, e.g. filter-tips, filtering inserts; Filters specially adapted for simulated smoking devices; Mouthpieces for cigars or cigarettes (for pipes, for cigar or cigarette holders [A24F 7/00](#))

M A24D 3/04

- Tobacco smoke filters characterised by their shape or structure

WARNING

~~Groups A24D 3/04, A24D 3/041, A24D 3/043, A24D 3/045, A24D 3/046 and A24D 3/048 are impacted by reclassification into group A24D 3/17. All groups listed in this Warning should be considered in order to perform a complete search.~~

M A24D 3/17

- Filters specially adapted for simulated smoking devices

WARNING

~~Group A24D 3/17 is incomplete pending reclassification of documents from groups A24D 3/04, A24D 3/041, A24D 3/043, A24D 3/045, A24D 3/046, A24D 3/048, A24F 47/00, A24F 47/002, A24F 47/004, A24F 47/006, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.~~

Project: RP0619-F (A24F)

M A24F 15/00

Receptacles or boxes specially adapted for cigars, cigarettes, simulated smoking devices or cigarettes therefor (adaptations for use in vehicles [B60N 3/12](#); packages specially adapted for cigarettes [B65D 85/10](#))

WARNING

~~Group A24F 15/00 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, A24F 47/006, and A24F 47/008.~~

Group A24F 15/00 is also impacted by reclassification into groups A24F 15/01 and A24F 15/015. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 15/01
- specially adapted for simulated smoking devices or cigarettes therefor (battery charging means structurally associated with the case [A24F 40/95](#))
- WARNING
Groups A24F 15/01 and A24F 15/015 are incomplete pending reclassification of documents from groups A24F 15/00, A24F 15/04, A24F 15/06, A24F 15/08, A24F 15/12, A24F 15/14, A24F 15/16, A24F 15/18, A24F 15/20, A24F 47/00, A24F 47/002, A24F 47/004, A24F 47/006, and A24F 47/008.
All groups listed in this Warning should be considered in order to perform a complete search.
- U A24F 15/02
- for domestic use {([A24F 15/005](#) takes precedence)}
- M A24F 15/04
- with appliances for releasing a single cigar or cigarette
- WARNING
Group A24F 15/04 is impacted by reclassification into groups A24F 15/01 and A24F 15/015.
Groups A24F 15/04, A24F 15/01, and A24F 15/015 should be considered in order to perform a complete search.
- M A24F 15/06
- with means for offering ([A24F 15/04](#) takes precedence)
- WARNING
Group A24F 15/06 is impacted by reclassification into groups A24F 15/01 and A24F 15/015.
Groups A24F 15/06, A24F 15/01, and A24F 15/015 should be considered in order to perform a complete search.
- M A24F 15/08
- combined with other objects
- WARNING
Group A24F 15/08 is impacted by reclassification into groups A24F 15/01 and A24F 15/015.
Groups A24F 15/08, A24F 15/01, and A24F 15/015 should be considered in order to perform a complete search.
- M A24F 15/12
- for pocket use {([A24F 15/005](#) takes precedence)}
- WARNING
Groups A24F 15/12, A24F 15/14, A24F 15/16 and A24F 15/18 are impacted by reclassification into groups A24F 15/01 and A24F 15/015.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A24F 15/20
- with separate compartments for each cigar or cigarette {([A24F 15/005](#) takes precedence)}
- WARNING
Group A24F 15/20 is impacted by reclassification into groups A24F 15/01 and A24F 15/015.
Groups A24F 15/20, A24F 15/01, and A24F 15/015 should be considered in order to perform a complete search.

- M A24F 40/00** **Electrically operated smoking devices; Component parts thereof; Manufacture thereof; Maintenance or testing thereof; Charging means specially adapted therefor**

WARNING

Group A24F 40/00 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/05** • Devices without heating means

WARNING

Group A24F 40/05 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/10** • Devices using liquid inhalable precursors

WARNING

Group A24F 40/10 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/20** • Devices using solid inhalable precursors

WARNING

Group A24F 40/20 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/30** • Devices using two or more structurally separated inhalable precursors, e.g. using two liquid precursors in two cartridges

WARNING

Group A24F 40/30 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/40** • Constructional details, e.g. connection of cartridges and battery parts

WARNING

Groups A24F 40/40, A24F 40/42, A24F 40/44, A24F 40/46, A24F 40/465, A24F 40/48, A24F 40/485 and A24F 40/49 are incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

- M A24F 40/50** • Control or monitoring

WARNING

Groups A24F 40/50, A24F 40/51, A24F 40/53 and A24F 40/57 are incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.

M	A24F 40/60	<ul style="list-style-type: none"> • Devices with integrated user interfaces <p><u>WARNING</u> Group A24F 40/60 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 40/65	<ul style="list-style-type: none"> • Devices with integrated communication means, e.g. Wi-Fi <p><u>WARNING</u> Group A24F 40/65 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 40/70	<ul style="list-style-type: none"> • Manufacture <p><u>WARNING</u> Group A24F 40/70 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 40/80	<ul style="list-style-type: none"> • Testing <p><u>WARNING</u> Group A24F 40/80 is incomplete pending reclassification of documents from groups A24C 5/3406, A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 40/85	<ul style="list-style-type: none"> • Maintenance, e.g. cleaning <p><u>WARNING</u> Group A24F 40/85 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 40/90	<ul style="list-style-type: none"> • Arrangements or methods specially adapted for charging batteries thereof <p><u>WARNING</u> Group A24F 40/90 and A24F 40/95 are incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/008. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 42/00	<p>Simulated smoking devices other than electrically operated; Component parts thereof; Manufacture or testing thereof</p> <p><u>WARNING</u> Group A24F 42/00 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/006. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	A24F 42/10	<ul style="list-style-type: none"> • Devices with chemical heating means <p><u>WARNING</u> Group A24F 42/10 is incomplete pending reclassification of documents from groups A24F 47/004 and A24F 47/006. Groups A24F 47/004, A24F 47/006, and A24F 42/10 should be considered in order to perform a complete search.</p>
M	A24F 42/20	<ul style="list-style-type: none"> • Devices without heating means <p><u>WARNING</u> Group A24F 42/20 is incomplete pending reclassification of documents from groups A24F 47/00 and A24F 47/002. Groups A24F 47/00, A24F 47/002, and A24F 42/20 should be considered in order to perform a complete search.</p>
M	A24F 42/60	<ul style="list-style-type: none"> • Constructional details <p><u>WARNING</u> Group A24F 42/60 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/006. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 42/80	<ul style="list-style-type: none"> • Manufacture <p><u>WARNING</u> Group A24F 42/80 is incomplete pending reclassification of documents from groups A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/006. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 42/90	<ul style="list-style-type: none"> • Testing <p><u>WARNING</u> Group A24F 42/90 is incomplete pending reclassification of documents from groups A24C 5/3406, A24F 47/00, A24F 47/002, A24F 47/004, and A24F 47/006. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A24F 47/00	<p>Smokers' requisites not otherwise provided for</p> <p><u>WARNING</u> Group A24F 47/00 is impacted by reclassification into groups A24D 3/17, A24F 15/00, A24F 15/01, A24F 15/015, A24F 40/00, A24F 40/05, A24F 40/10, A24F 40/20, A24F 40/30, A24F 40/40, A24F 40/42, A24F 40/44, A24F 40/46, A24F 40/465, A24F 40/48, A24F 40/485, A24F 40/49, A24F 40/50, A24F 40/51, A24F 40/53, A24F 40/57, A24F 40/60, A24F 40/65, A24F 40/70, A24F 40/80, A24F 40/85, A24F 40/90, A24F 40/95, A24F 42/00, A24F 42/20, A24F 42/60, A24F 42/80, and A24F 42/90. All groups listed in this Warning should be considered in order to perform a complete search.</p>
D	A24F 47/002 —(Frozen)	<ul style="list-style-type: none"> • {Simulated smoking devices, e.g. imitation cigarettes (inhaling appliances for medical use shaped like cigars, cigarettes or pipes A61M 15/06)} <p><u>WARNING</u> Group A24F 47/002 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups A24D 3/17, A24F 15/00, A24F 15/01, A24F 15/015, A24F 40/00, A24F 40/05, A24F 40/10, </p>

A24F 47/002

(Frozen)

(continued)

A24F 40/20, A24F 40/30, A24F 40/40, A24F 40/42, A24F 40/44, A24F 40/46, A24F 40/465, A24F 40/48, A24F 40/485, A24F 40/49, A24F 40/50, A24F 40/51, A24F 40/53, A24F 40/57, A24F 40/60, A24F 40/65, A24F 40/70, A24F 40/80, A24F 40/85, A24F 40/90, A24F 40/95, A24F 42/00, A24F 42/20, A24F 42/60, A24F 42/80, and A24F 42/90.

All groups listed in this Warning should be considered in order to perform a complete search.

D A24F 47/004
—(Frozen)

- {with heating means, e.g. carbon fuel (chemical features A24B 15/165)}

WARNING

Group A24F 47/004 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups A24D 3/17, A24C 5/01, A24D 1/22, A24F 15/00, A24F 15/01, A24F 15/015, A24F 40/00, A24F 40/05, A24F 40/10, A24F 40/20, A24F 40/30, A24F 40/40, A24F 40/42, A24F 40/44, A24F 40/46, A24F 40/465, A24F 40/48, A24F 40/485, A24F 40/49, A24F 40/50, A24F 40/51, A24F 40/53, A24F 40/57, A24F 40/60, A24F 40/65, A24F 40/70, A24F 40/80, A24F 40/85, A24F 40/90, A24F 40/95, A24F 42/00, A24F 42/10, A24F 42/60, A24F 42/80, and A24F 42/90.

All groups listed in this Warning should be considered in order to perform a complete search.

D A24F 47/006
—(Frozen)

- • {with chemical heating means}

WARNING

Group A24F 47/006 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups A24D 3/17, A24C 5/01, A24D 1/22, A24F 15/00, A24F 15/01, A24F 15/015, A24F 42/00, A24F 42/10, A24F 42/60, A24F 42/80, and A24F 42/90.

All groups listed in this Warning should be considered in order to perform a complete search.

D A24F 47/008
—(Frozen)

- • {with electrical heating means}

WARNING

Group A24F 47/008 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups A24D 3/17, A24C 5/01, A24D 1/22, A24F 15/00, A24F 15/01, A24F 15/015, A24F 40/00, A24F 40/05, A24F 40/10, A24F 40/20, A24F 40/30, A24F 40/40, A24F 40/42, A24F 40/44, A24F 40/46, A24F 40/465, A24F 40/48, A24F 40/485, A24F 40/49, A24F 40/50, A24F 40/51, A24F 40/53, A24F 40/57, A24F 40/60, A24F 40/65, A24F 40/70, A24F 40/80, A24F 40/85, A24F 40/90, and A24F 40/95.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0534 (A41D)

U A41D 31/00

Materials specially adapted for outerwear

U A41D 31/04

- characterised by special function or use (protective clothing affording protection against heat or harmful chemical agents or for use at high altitudes [A62B 17/00](#); composition of materials for coverings or clothing affording protection against harmful chemical agents [A62D 5/00](#))

M A41D 31/10

- Impermeable to liquids, e.g. waterproof; Liquid-repellent

Project: RP0737 (A43B)**M A43B****CHARACTERISTIC FEATURES OF FOOTWEAR; PARTS OF FOOTWEAR**WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[A43B 21/10](#) - [A43B 21/16](#) covered by [A43B 21/06](#)

[A43B 21/34](#) covered by [A43B 21/24](#)

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

M A43B 1/00**Footwear characterised by the material ~~(layered products B32B)~~**

- M A43B 1/0009 • {~~Footwear~~ made at least partially of alveolar or honeycomb material}
- M A43B 1/0018 • {~~Footwear~~ made at least partially of flexible, bellow-like shaped material}
- M A43B 1/0027 • {~~Footwear~~ made at least partially from a material having special colours}
- M A43B 1/0036 • {with fluorescent or ~~phosforescent~~ *phosphorescent* parts}
- M A43B 1/0045 • {~~Footwear~~ made at least partially of deodorant means}
- M A43B 1/0054 • {~~Footwear~~ provided with magnets, magnetic parts or magnetic substances}
- M A43B 1/0063 • {~~Footwear~~ made at least partially of material that can be recycled}
- M A43B 1/0072 • {~~Footwear~~ made at least partially of transparent or translucent materials}
- M A43B 1/0081 • {~~Footwear~~ made at least partially of hook-and-loop type material (hook and loop-type straps for fastening purpose [A43C 11/1493](#))}
- M A43B 1/009 • {~~Footwear~~ made at least partially of washable material}
- C A43B 1/02 • ~~Footwear made of animal or plant~~ *made of* fibres or fabrics made therefrom

WARNING

Group [A43B 1/02](#) is impacted by reclassification into groups [A43B 1/023](#), [A43B 1/025](#), [A43B 1/028](#) and [A43B 1/05](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N A43B 1/023

- *Animal fibres*

WARNING

Group [A43B 1/023](#) is incomplete pending reclassification of documents from groups [A43B 1/02](#) and [A43B 1/04](#).

Groups [A43B 1/02](#), [A43B 1/04](#) and [A43B 1/023](#) should be considered in order to perform a complete search.

N A43B 1/025

- *Plant fibres*

WARNING

Group [A43B 1/025](#) is incomplete pending reclassification of documents from groups [A43B 1/02](#) and [A43B 1/04](#).

Groups [A43B 1/02](#), [A43B 1/04](#) and [A43B 1/025](#) should be considered in order to perform a complete search.

N A43B 1/028

- *Synthetic or artificial fibres*

WARNING

Group [A43B 1/028](#) is incomplete pending reclassification of documents from groups [A43B 1/02](#), [A43B 1/04](#) and [A43B 1/14](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C	A43B 1/04	<ul style="list-style-type: none"> • Braided<i>braided</i>, knotted, knitted; or crocheted footwear <p>WARNING Group <i>A43B 1/04</i> is impacted by reclassification into groups <i>A43B 1/023</i>, <i>A43B 1/025</i>, <i>A43B 1/028</i> and <i>A43B 1/05</i>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	A43B 1/05	<ul style="list-style-type: none"> • woven <p>WARNING Group <i>A43B 1/05</i> is incomplete pending reclassification of documents from groups <i>A43B 1/02</i> and <i>A43B 1/04</i>. Groups <i>A43B 1/02</i>, <i>A43B 1/04</i> and <i>A43B 1/05</i> should be considered in order to perform a complete search.</p>
M	A43B 1/06	<ul style="list-style-type: none"> • Footwear made of wood, cork, card-board, paper or like fibrous material (soles A43B 13/00; making of wooden shoes B27M 3/20)
M	A43B 1/08	<ul style="list-style-type: none"> • Footwear made of metal (soles A43B 13/10)
M	A43B 1/10	<ul style="list-style-type: none"> • Footwear made of rubber
C	A43B 1/14	<ul style="list-style-type: none"> • Footwear made of gutta-percha, celluloid, or plastics <i>made of plastics (A43B 1/028 takes precedence)</i> <p>WARNING Group <i>A43B 1/14</i> is impacted by reclassification into group <i>A43B 1/028</i>. Groups <i>A43B 1/14</i> and <i>A43B 1/028</i> should be considered in order to perform a complete search.</p>
U	A43B 3/00	Footwear characterised by the shape or the use
D	A43B 3/0005	<ul style="list-style-type: none"> • {Footwear provided with electrical or electronic systems <p><administratively transferred to <i>A43B 3/34</i>></p>
D	A43B 3/001	<ul style="list-style-type: none"> • {Footwear provided with light source <p><administratively transferred to <i>A43B 3/36</i>></p>
D	A43B 3/0015	<ul style="list-style-type: none"> • {Footwear provided with generator <p><administratively transferred to <i>A43B 3/38</i>></p>
D	A43B 3/0021	<ul style="list-style-type: none"> • {Footwear provided with sound or music source <p><administratively transferred to <i>A43B 3/50</i>></p>
M	A43B 3/0026	<ul style="list-style-type: none"> • {Footwear for use in minefields; Footwear protecting from landmine blast; Footwear preventing landmines from being triggered}
M	A43B 3/0031	<ul style="list-style-type: none"> • {Footwear provided with a pocket, e.g. for keys or a card}
M	A43B 3/0036	<ul style="list-style-type: none"> • {Footwear characterised by a special shape or design}
M	A43B 3/0047	<ul style="list-style-type: none"> • {Footwear parts having a male and corresponding female profile to fit together, e.g. form-fit}
M	A43B 3/0078	<ul style="list-style-type: none"> • {Footwear provided with logos, letters, signatures or the like decoration (<i>A43B 23/24</i> takes precedence)}
M	A43B 3/02	<ul style="list-style-type: none"> • Top-boots <i>Boots covering the lower leg</i>; Leg-boots; Shoes with batwing tabs
M	A43B 3/10	<ul style="list-style-type: none"> • Low shoes {, <i>e.g. comprising only a front strap</i>}; Slippers (sandals A43B 3/12)
M	A43B 3/101	<ul style="list-style-type: none"> • {Slippers, <i>e.g. flip-flops or thong sandals</i>}
M	A43B 3/102	<ul style="list-style-type: none"> • {Slippers leaving the heel of the foot bare (<i>A43B 3/106</i> takes precedence; slippers with an anklestrap, sling-type shoes A43B 3/12)}
U	A43B 3/105	<ul style="list-style-type: none"> • {characterised by the shape or layout of the toestrap}
M	A43B 3/106	<ul style="list-style-type: none"> • {Disposable slippers; One-piece slippers}

- M A43B 3/12
 - Sandals ~~{provided with an anklestrap}~~; Strap guides thereon ~~{{footwear having only a toestraps, thong sandals A43B 3/10}}~~
- T A43B 3/16
 - Overshoes ~~{{A43B 23/30 takes precedence}}~~
- M A43B 3/163
 - {~~Overshoes~~ specially adapted for health or hygienic purposes, e.g. comprising electrically conductive material allowing the discharge of electrostatic charges}
- D A43B 3/22
 - Protecting sheaths worn between shoe and overshoe
<administratively transferred to [A43B 3/16](#)>
- M A43B 3/24
 - Collapsible or convertible ~~footwear {{multipurpose skate boots A43B 5/1633; exchangeable soles A43B 13/36}}~~
- M A43B 3/248
 - {Collapsible ~~or foldable footwear~~, e.g. ~~foldable~~ for travelling}
- M A43B 3/26
 - ~~Footwear~~ adjustable as to length or size ~~{{adjustable ski boots or similar boots A43B 5/0427; adjustable skating boots A43B 5/1608}}~~
- D A43B 3/28
 - Footwear specially adapted for dolls
<administratively transferred to [A63H 3/52](#)>
- M A43B 3/30
 - ~~Footwear~~ specially adapted for babies or small children
- Q A43B 3/34
 - *with electrical or electronic arrangements*

WARNING

Group [A43B 3/34](#) is incomplete pending reclassification of documents from group [A43B 7/005](#).

Group [A43B 3/34](#) is also impacted by reclassification into groups [A43B 3/38](#), [A43B 3/40](#), [A43B 3/42](#), [A43B 3/44](#), [A43B 3/46](#), and [A43B 3/48](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q A43B 3/35
 - *with electric heating arrangements*
- WARNING
- Group [A43B 3/35](#) is incomplete pending reclassification of documents from group [A43B 7/02](#).
- Group [A43B 3/35](#) is also impacted by reclassification into groups [A43B 3/38](#), [A43B 3/40](#) and [A43B 3/42](#).
- All groups listed in this Warning should be considered in order to perform a complete search.

- N A43B 3/355
 - {heated by an electric current from an external source, e.g. car batteries}
- N A43B 3/36
 - *with light sources*
- Q A43B 3/38
 - *with power sources*

WARNING

Group [A43B 3/38](#) is incomplete pending reclassification of documents from groups [A43B 3/34](#) and [A43B 3/35](#).

Group [A43B 3/38](#) is also impacted by reclassification into groups [A43B 3/40](#) and [A43B 3/42](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N A43B 3/40
 - Batteries

WARNING

Group [A43B 3/40](#) is incomplete pending reclassification of documents from groups [A43B 3/34](#), [A43B 3/35](#) and [A43B 3/38](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N	A43B 3/42	<ul style="list-style-type: none"> • • where power is generated by conversion of mechanical movement to electricity, e.g. by piezoelectric means <p><u>WARNING</u> Group A43B 3/42 is incomplete pending reclassification of documents from groups A43B 3/34, A43B 3/35 and A43B 3/38. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	A43B 3/44	<ul style="list-style-type: none"> • • with sensors, e.g. for detecting contact or position <p><u>WARNING</u> Groups A43B 3/44 and A43B 3/46 are incomplete pending reclassification of documents from group A43B 3/34. Groups A43B 3/34, A43B 3/44 and A43B 3/46 should be considered in order to perform a complete search.</p>
N	A43B 3/46	<ul style="list-style-type: none"> • • Global positioning system [GPS] sensors
N	A43B 3/48	<ul style="list-style-type: none"> • • with transmitting devices, e.g. GSM or WiFi <p><u>WARNING</u> Group A43B 3/48 is incomplete pending reclassification of documents from group A43B 3/34. Groups A43B 3/34 and A43B 3/48 should be considered in order to perform a complete search.</p>
N	A43B 3/50	<ul style="list-style-type: none"> • • with sound or music sources
C	A43B 5/00	<p>Footwear for sporting purposes (non-skid devices, e.g. ice-spurs; or studs for football shoes, A43C 15/00)</p> <p><u>WARNING</u> Group A43B 5/00 is impacted by reclassification into group A43B 5/06. Groups A43B 5/00 and A43B 5/06 should be considered in order to perform a complete search.</p>
M	A43B 5/006	<ul style="list-style-type: none"> • {for horse riding {stirrups B68C 3/00}}
M	A43B 5/007	<ul style="list-style-type: none"> • {Footwear for car driving or racing}
M	A43B 5/02	<ul style="list-style-type: none"> • Football boots {or shoes, i.e. footwear for soccer, football or rugby}
M	A43B 5/04	<ul style="list-style-type: none"> • Ski or like boots; Similar boots
M	A43B 5/0405	<ul style="list-style-type: none"> • • {Linings, paddings; or insertions; Inner boots {in general A43B 19/00}}
T	A43B 5/06	<ul style="list-style-type: none"> • Running boots shoes; Track shoes <p><u>WARNING</u> Group A43B 5/06 is incomplete pending reclassification of documents from group A43B 5/00. Groups A43B 5/00 and A43B 5/06 should be considered in order to perform a complete search.</p>
U	A43B 7/00	<p>Footwear with health or hygienic arrangements</p>
C	A43B 7/005	<ul style="list-style-type: none"> • {Footwear with cooling arrangements} <p><u>WARNING</u> Group A43B 7/005 is impacted by reclassification into group A43B 3/34. Groups A43B 7/005 and A43B 3/34 should be considered in order to perform a complete search.</p>

- C A43B 7/02
- ~~Footwear~~ with heating arrangements (~~footwarmers A61F 2007/0045; electric heating elements H05B~~ *with electric heating arrangements A43B 3/35*)
- WARNING**
Group A43B 7/02 is impacted by reclassification into group A43B 3/35. Groups A43B 7/02 and A43B 3/35 should be considered in order to perform a complete search.
- D A43B 7/025
- {heated by an electric current from an external source, e.g. car batteries}
 <administratively transferred to [A43B 3/355](#)>
- D A43B 7/04
- ~~Footwear with electric batteries, generators, or the like~~
 <administratively transferred to [A43B 3/35](#)>
- M A43B 7/06
- ~~Ventilated footwear {ventilated (ventilated skating boots A43B 5/165; A43B 5/1675; ventilated socks or inserts A43B 17/08)}~~
- M A43B 7/08
- ~~Footwear~~ with air-holes, with or without closures
- U A43B 7/082
- • {the air being expelled to the outside}
- N A43B 7/083
- • • *with pumping means or valves*
- M A43B 7/10
- • • with closable air-slots ~~near the waist~~
- D A43B 7/105
- • • {with pumping means or valves}
 <administratively transferred to [A43B 7/083](#)>
- M A43B 7/14
- ~~Footwear~~ with foot-supporting parts
- M A43B 7/1405
- {~~provided~~ with pads or holes on one or more locations, or having an anatomical or curved form}
- M A43B 7/1415
- • {characterised by the location under the foot}
- M A43B 7/142
- • • {situated under the medial arch, i.e. *under* the navicular or cuneiform bones}
- M A43B 7/1425
- • • {situated under the ball of the foot, i.e. the joint between the first metatarsal and first phalange}
- M A43B 7/143
- • • {situated under the lateral arch, i.e. the cuboid bone}
- M A43B 7/1435
- • • {situated under the joint between the fifth phalange and the fifth metatarsal bone}
- M A43B 7/144
- • • {situated under the heel, i.e. the calcaneus bone}
- M A43B 7/1445
- • • {situated under the midfoot, i.e. the ~~metatarsal~~ *second, third or fourth metatarsal*}
- M A43B 7/145
- • • {situated under the toes, i.e. the ~~phalange~~ *phalanges*}
- M A43B 7/1455
- • • {with special properties}
- M A43B 7/146
- • • {provided with acupressure points or means for ~~footmassage~~ *foot massage*}
- N A43B 7/1463
- • • *with removable pads to allow custom fit*
- WARNING**
Group [A43B 7/1463](#) is incomplete pending reclassification of documents from group [A43B 7/1464](#). Groups [A43B 7/1464](#) and [A43B 7/1463](#) should be considered in order to perform a complete search.
- Q A43B 7/1464
- • • *with adjustable pads to allow custom fit*
- WARNING**
Group [A43B 7/1464](#) is impacted by reclassification into groups [A43B 7/1463](#), [A43B 7/1466](#), [A43B 7/1467](#), [A43B 7/1468](#) and [A43B 7/1469](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D A43B 7/1465 . . . {with removable or adjustable pads to allow custom fit}
<administratively transferred to [A43B 7/1464](#)>
- N A43B 7/1466 adjustable by screws or threads
WARNING
Group [A43B 7/1466](#) is incomplete pending reclassification of documents from group [A43B 7/1464](#).
Groups [A43B 7/1464](#) and [A43B 7/1466](#) should be considered in order to perform a complete search.
- N A43B 7/1467 adjustable by resilient members, e.g. springs
WARNING
Group [A43B 7/1467](#) is incomplete pending reclassification of documents from group [A43B 7/1464](#).
Groups [A43B 7/1464](#) and [A43B 7/1467](#) should be considered in order to perform a complete search.
- N A43B 7/1468 adjustable by shims
WARNING
Group [A43B 7/1468](#) is incomplete pending reclassification of documents from group [A43B 7/1464](#).
Groups [A43B 7/1464](#) and [A43B 7/1468](#) should be considered in order to perform a complete search.
- N A43B 7/1469 adjustable by selectively fastening or securing into multiple available positions
WARNING
Group [A43B 7/1469](#) is incomplete pending reclassification of documents from group [A43B 7/1464](#).
Groups [A43B 7/1464](#) and [A43B 7/1469](#) should be considered in order to perform a complete search.
- M A43B 7/1475 . . . {characterised by the type of support}
- M A43B 7/148 {Recesses or holes filled with ~~a support or pad~~ **supports or pads**}
- M A43B 7/1485 {Recesses or holes, traversing partially or completely the thickness of the pad}
- M A43B 7/149 {~~Pad~~ **Pads**, e.g. protruding on the foot-facing surface}
- M A43B 7/1495 . . {~~Footwear~~ with arch-supports of the bracelet type}
- M A43B 7/16 . . . ~~Footwear~~ with elevated heel parts inside
- M A43B 7/22 . . ~~Footwear~~ with fixed flat-foot insertions, metatarsal supports, ankle flaps; or the like ~~(orthopaedic insertions A61F 5/14)~~
- M A43B 7/24 . . Insertions or **capothes** supports preventing the foot canting to one side {, preventing supination or pronation}
- M A43B 7/26 . . ~~Footwear~~ with toe-spacers or toe-spreaders
- M A43B 7/32 . ~~Footwear~~ with shock-absorbing means ~~(Safety footwear)~~ (resilient soles [A43B 13/18](#))
- M A43B 7/34 . ~~Footwear~~ with protection against heat or cold
- M A43B 7/38 . Elevating, i.e. height increasing, ~~footwear~~ (with elevated heel parts inside ~~{A43B 7/14}~~ [A43B 7/16](#); lengthening pieces for natural legs [A61F 3/00](#); ~~orthopaedic insertions for conventional shoes A61F 5/14~~)

M	A43B 9/00	Footwear characterised by the assembling of the individual parts {{assembling parts of upper together A43B 23/0245; assembling sole parts together A43B 13/12}}
U	A43B 9/16	• Footwear with soles moulded on to uppers or welded on to uppers without adhesive
M	A43B 9/18	• • moulded {{moulding soles or heels to preformed uppers B29D 35/06}}
M	A43B 11/00	Footwear with miscellaneous arrangements to facilitate putting-on or removing, e.g. with straps
M	A43B 13/00	Soles {{Skating boots characterised by the sole A43B 5/1641;}} socks A43B 17/00 ; Sole and heel and-heel <i>integral</i> units
C	A43B 13/02	• characterised by the material <i><u>WARNING</u></i> <i>Group A43B 13/02 is impacted by reclassification into group A43B 13/06. Groups A43B 13/02 and A43B 13/06 should be considered in order to perform a complete search.</i>
M	A43B 13/023	• • {Soles with several layers of the same material {{soles with several layers of different materials A43B 13/12}} }
M	A43B 13/04	• • plastics <i>Plastics</i> , rubber or vulcanised fibre
N	A43B 13/06	• • Leather <i><u>WARNING</u></i> <i>Group A43B 13/06 is incomplete pending reclassification of documents from group A43B 13/02. Groups A43B 13/02 and A43B 13/06 should be considered in order to perform a complete search.</i>
M	A43B 13/08	• • wood <i>Wood</i>
M	A43B 13/10	• • metal <i>Metal</i>
M	A43B 13/28	• characterised by their attachment, also attachment of combined soles and heels {{attachment of heels A43B 21/36; attachment of heel parts {A43B 21/42}}}
M	A43B 13/36	• • Easily-exchangeable soles {{of metal A43B 13/10; protecting-soles A43C 13/12}}
M	A43B 17/00	Insoles for insertion, e.g. footbeds or inlays, for attachment to the shoe after the upper has been joined {{special medical insertions for shoes A61F 5/14}}
M	A43B 19/00	Shoe-shaped inserts; Inserts covering the instep {{for ski boots or similar boots A43B 5/0405, for skating boots A43B 5/1616}}
M	A43B 21/00	Heels; Top-pieces {{, e.g. high heels, heel distinct from the sole, high heels monolithic with the sole or top-lifts (sole and heel units A43B 13/37)}}
U	A43B 23/00	Uppers; Boot legs; Stiffeners; Other single parts of footwear
M	A43B 23/02	• Uppers; Boot legs {{(ski boots with an upper made of flexible material A43B 5/0486; skating boots characterised by the uppers A43B 5/1666)}}
M	A43B 23/07	• Linings therefor {{(for ski boots or similar boots A43B 5/0405, lining laminated with upper A43B 23/026 lining laminated with upper A43B 23/026)}}
M	A43B 23/08	• Heel stiffeners; Toe stiffeners {{footwear with shock-absorbing means A43B 7/32}}
M	A43B 23/22	• Supports for the shank or arch of the uppers {{for health or hygienic purposes A43B 7/14}}

Project: RP0019-F (A47C)

- U A47C 1/00** Chairs adapted for special purposes (features relating to vertical adjustability [A47C 3/20](#); convertible chairs [A47C 13/00](#); chairs or personal conveyances specially adapted for patients or disabled persons [A61G 5/00](#); operating chairs, dental chairs [A61G 15/00](#))
- U A47C 1/02** • Reclining or easy chairs (supports for parts of body [A47C 7/36](#), [A47C 7/50](#), [A47C 7/54](#))
- U A47C 1/022** • • having independently-adjustable supporting parts
- M A47C 1/03** • • • the parts being arm-rests {(conversion into a bed [A47C 17/12](#))}
- WARNING**
Group A47C 1/03 is incomplete pending reclassification of documents from group A47C 7/54, A47C 7/543 and A47C 7/546.
Group A47C 1/03 is also impacted by reclassification into groups A47C 1/0303, A47C 1/0305, A47C 1/0307, A47C 1/0308 and A47C 7/541.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 1/0303** • • • {adjustable rectilinearly in vertical direction}
- WARNING**
Group A47C 1/0303 is incomplete pending reclassification of documents from groups A47C 1/03, A47C 7/54, A47C 7/543 and A47C 7/546.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 1/0305** • • • • {by peg-and-notch or pawl-and-ratchet mechanism}
- WARNING**
Group A47C 1/0305 is incomplete pending reclassification of documents from groups A47C 1/03, A47C 7/54, A47C 7/543 and A47C 7/546.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 1/0307** • • • • {adjustable rectilinearly in horizontal direction}
- WARNING**
Group A47C 1/0307 is incomplete pending reclassification of documents from groups A47C 1/03, A47C 7/54, A47C 7/543 and A47C 7/546.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 1/0308** • • • • {adjustable by rotation}
- WARNING**
Group A47C 1/0308 is incomplete pending reclassification of documents from groups A47C 1/03, A47C 7/54, A47C 7/543 and A47C 7/546.
All groups listed in this Warning should be considered in order to perform a complete search.
- U A47C 1/031** • • having coupled {concurrently} adjustable supporting parts
- U A47C 1/032** • • • the parts being movably-coupled seat and back-rest ([A47C 1/035](#) takes precedence)
- M A47C 1/03261** • • • • {characterised by elastic means}
- WARNING**
Group A47C 1/03261 is incomplete pending reclassification of documents from group A47C 7/14.

Group A47C 1/03261 is also impacted by reclassification into groups A47C 1/03277 and A47C 1/03279.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 1/03266 {with adjustable elasticity}

WARNING

Group A47C 1/03266 is incomplete pending reclassification of documents from group A47C 7/14.
Group A47C 1/03266 is also impacted by reclassification into groups A47C 1/03277 and A47C 1/03279.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 1/03272 {with coil springs}

WARNING

Group A47C 1/03272 is incomplete pending reclassification of documents from group A47C 7/14.
Group A47C 1/03272 is also impacted by reclassification into group A47C 1/03274.
Groups A47C 7/14, A47C 1/03272 and A47C 1/03274 should be considered in order to perform a complete search.

M A47C 1/03274 {of torsion type}

WARNING

Group A47C 1/03274 is incomplete pending reclassification of documents from groups A47C 1/03272 and A47C 7/14.
Groups A47C 1/03272, A47C 7/14 and A47C 1/03274 should be considered in order to perform a complete search.

M A47C 1/03277 {with bar or leaf springs}

WARNING

Group A47C 1/03277 is incomplete pending reclassification of documents from groups A47C 1/03261, A47C 1/03266 and A47C 7/14.
Group A47C 1/03277 is also impacted by reclassification into group A47C 1/03279.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 1/03279 {of torsion type}

WARNING

Group A47C 1/03279 is incomplete pending reclassification of documents from groups A47C 1/03261, A47C 1/03266, A47C 1/03277 and A47C 7/14.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 1/03283 {with fluid springs}

WARNING

Group A47C 1/03283 is incomplete pending reclassification of documents from group A47C 7/14.
Groups A47C 7/14 and A47C 1/03283 should be considered in order to perform a complete search.

M	A47C 1/03288	<ul style="list-style-type: none"> • • • • {with resilient blocks} <p><u>WARNING</u> Group A47C 1/03288 is incomplete pending reclassification of documents from group A47C 7/14. Groups A47C 7/14 and A47C 1/03288 should be considered in order to perform a complete search.</p>
U	A47C 3/00	Chairs characterised by structural features; Chairs or stools with rotatable or vertically-adjustable seats (A47C 1/00, A47C 4/00 take precedence)
U	A47C 3/02	<ul style="list-style-type: none"> • Rocking chairs (specially for children A47D 13/10)
M	A47C 3/025	<ul style="list-style-type: none"> • • with seat, or seat and back-rest unit elastically {or pivotally} mounted in a rigid {base} frame <p><u>WARNING</u> Group A47C 3/025 is impacted by reclassification into group A47C 3/0251. Groups A47C 3/025 and A47C 3/0251 should be considered in order to perform a complete search.</p>
M	A47C 3/0251	<ul style="list-style-type: none"> • • • {driven by electric motors} <p><u>WARNING</u> Group A47C 3/0251 is incomplete pending reclassification of documents from groups A47C 3/025, A47C 3/0252, A47C 3/0255, A47C 3/0257, A47C 3/026 and A47C 3/027. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 3/0252	<ul style="list-style-type: none"> • • • {connected only by an elastic member positioned between seat and base frame} <p><u>WARNING</u> Group A47C 3/0252 is impacted by reclassification into group A47C 3/0251. Groups A47C 3/0252 and A47C 3/0251 should be considered in order to perform a complete search.</p>
M	A47C 3/0255	<ul style="list-style-type: none"> • • • {pivotally mounted in the base frame, e.g. swings} <p><u>WARNING</u> Group A47C 3/0255 is impacted by reclassification into group A47C 3/0251. Groups A47C 3/0255 and A47C 3/0251 should be considered in order to perform a complete search.</p>
M	A47C 3/0257	<ul style="list-style-type: none"> • • • {slidingly movable in the base frame, e.g. by rollers} <p><u>WARNING</u> Group A47C 3/0257 is impacted by reclassification into group A47C 3/0251. Groups A47C 3/0257 and A47C 3/0251 should be considered in order to perform a complete search.</p>
M	A47C 3/026	<ul style="list-style-type: none"> • • • with central column, e.g. rocking office chairs; Tilting chairs <p><u>WARNING</u> Group A47C 3/026 is impacted by reclassification into group A47C 3/0251. Groups A47C 3/026 and A47C 3/0251 should be considered in order to perform a complete search.</p>
M	A47C 3/027	<ul style="list-style-type: none"> • • • with curved rocking members between seat and {base} frame <p><u>WARNING</u> Group A47C 3/027 is impacted by reclassification into group A47C 3/0251.</p>

Groups A47C 3/027 and A47C 3/0251 should be considered in order to perform a complete search.

- | | | |
|---|-------------|---|
| U | A47C 7/00 | Parts, details, or accessories of chairs or stools (attaching to floor A47B 91/08) |
| U | A47C 7/02 | <ul style="list-style-type: none"> • Seat parts (adaptation of seats to mounting in tubular chairs A47C 5/06; such parts not restricted to chairs A47C 23/00; removable upholstered units or cushions A47C 27/00) |
| M | A47C 7/021 | <ul style="list-style-type: none"> • {Detachable or loose seat cushions} <p><u>WARNING</u>
Group A47C 7/021 is impacted by reclassification into group A47C 7/0213. Groups A47C 7/021 and A47C 7/0213 should be considered in order to perform a complete search.</p> |
| M | A47C 7/0213 | <ul style="list-style-type: none"> • • {detachably secured to seats, e.g. by ties or hook and loop straps} <p><u>WARNING</u>
Group A47C 7/0213 is incomplete pending reclassification of documents from group A47C 7/021. Groups A47C 7/021 and A47C 7/0213 should be considered in order to perform a complete search.</p> |
| M | A47C 7/14 | <ul style="list-style-type: none"> • • of adjustable shape; elastically mounted {; adaptable to a user contour or ergonomic seating positions (movably-coupled seat and backrests with elastic adjustment means A47C 1/03261; elastically-mounted back-rests or backrest-seat units in the base frame A47C 7/44)} <p><u>WARNING</u>
Group A47C 7/14 is impacted by reclassification into groups A47C 7/142, A47C 7/144, A47C 7/44, A47C 7/441, A47C 7/443, A47C 7/444, A47C 7/445, A47C 7/4454, A47C 7/446, A47C 7/448, A47C 1/03261, A47C 1/03266, A47C 1/03272, A47C 1/03274, A47C 1/03277, A47C 1/03279, A47C 1/03283 and A47C 1/03288. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| M | A47C 7/142 | <ul style="list-style-type: none"> • • • {by fluid means} <p><u>WARNING</u>
Group A47C 7/142 is incomplete pending reclassification of documents from group A47C 7/14. Groups A47C 7/14 and A47C 7/142 should be considered in order to perform a complete search.</p> |
| M | A47C 7/144 | <ul style="list-style-type: none"> • • • {with array of movable supports} <p><u>WARNING</u>
Group A47C 7/144 is incomplete pending reclassification of documents from group A47C 7/14. Groups A47C 7/14 and A47C 7/144 should be considered in order to perform a complete search.</p> |
| U | A47C 7/36 | <ul style="list-style-type: none"> • Support for the head or the back |
| U | A47C 7/40 | <ul style="list-style-type: none"> • • for the back |
| M | A47C 7/44 | <ul style="list-style-type: none"> • • • with elastically-mounted {back-rest or backrest-seat unit in the base} frame <p><u>WARNING</u>
Group A47C 7/44 is incomplete pending reclassification of documents from group A47C 7/14.</p> |

Group A47C 7/44 is also impacted by reclassification into groups A47C 7/444, A47C 7/445 and A47C 7/4454.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 7/441 . . . {with adjustable elasticity}

WARNING

Group A47C 7/441 is incomplete pending reclassification of documents from group A47C 7/14.
Groups A47C 7/14 and A47C 7/441 should be considered in order to perform a complete search.

M A47C 7/443 . . . {with coil springs}

WARNING

Group A47C 7/443 is incomplete pending reclassification of documents from group A47C 7/14.
Group A47C 7/443 is also impacted by reclassification into group A47C 7/444.
Groups A47C 7/14, A47C 7/443 and A47C 7/444 should be considered in order to perform a complete search.

M A47C 7/444 . . . {of torsion type}

WARNING

Group A47C 7/444 is incomplete pending reclassification of documents from groups A47C 7/14, A47C 7/44 and A47C 7/443.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 7/445 . . . {with bar or leaf springs}

WARNING

Group A47C 7/445 is incomplete pending reclassification of documents from groups A47C 7/14 and A47C 7/44.
Group A47C 7/445 is also impacted by reclassification into group A47C 7/4454.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 7/4454 . . . {of torsion type}

WARNING

Group A47C 7/4454 is incomplete pending reclassification of documents from groups A47C 7/14, A47C 7/44 and A47C 7/445.
All groups listed in this Warning should be considered in order to perform a complete search.

M A47C 7/446 . . . {with fluid springs}

WARNING

Group A47C 7/446 is incomplete pending reclassification of documents from group A47C 7/14.
Groups A47C 7/14 and A47C 7/446 should be considered in order to perform a complete search.

M A47C 7/448 . . . {with resilient blocks}

WARNING

Group A47C 7/448 is incomplete pending reclassification of documents from group A47C 7/14.

Groups A47C 7/14 and A47C 7/448 should be considered in order to perform a complete search.

- U A47C 7/50
 - Supports for the feet or the legs {coupled to fixed parts of the chair} (coupled to other adjustable parts {of the reclining or easy chair} [A47C 1/034](#), [A47C 1/037](#); {stand-alone rests or supports for the feet or the legs, e.g.} footstools [A47C 16/02](#))
- M A47C 7/506
 - • {of adjustable type}

WARNING
Group A47C 7/506 is impacted by reclassification into groups A47C 7/5062, A47C 7/5064, A47C 7/5066 and A47C 7/5068.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 7/5062
 - • • {rectilinearly}

WARNING
Group A47C 7/5062 is incomplete pending reclassification of documents from group A47C 7/506.
Groups A47C 7/506 and A47C 7/5062 should be considered in order to perform a complete search.
- M A47C 7/5064
 - • • • {in vertical direction}

WARNING
Group A47C 7/5064 is incomplete pending reclassification of documents from group A47C 7/506.
Groups A47C 7/506 and A47C 7/5064 should be considered in order to perform a complete search.
- M A47C 7/5066
 - • • • {by rotation}

WARNING
Group A47C 7/5066 is incomplete pending reclassification of documents from group A47C 7/506.
Groups A47C 7/506 and A47C 7/5066 should be considered in order to perform a complete search.
- M A47C 7/5068
 - • • • {actuated by linkages}

WARNING
Group A47C 7/5068 is incomplete pending reclassification of documents from group A47C 7/506.
Groups A47C 7/506 and A47C 7/5068 should be considered in order to perform a complete search.
- M A47C 7/54
 - Supports for the arms

WARNING
Group A47C 7/54 is impacted by reclassification into groups A47C 7/541, A47C 1/03, A47C 1/0303, A47C 1/0305, A47C 1/0307 and A47C 1/0308.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A47C 7/541
 - • {of adjustable type (adjustable arm-rests of reclining or easy chairs [A47C 1/03](#))}

WARNING
Group A47C 7/541 is incomplete pending reclassification of documents from groups A47C 1/03, A47C 7/54, A47C 7/543 and A47C 7/546.

		All groups listed in this Warning should be considered in order to perform a complete search.
M	A47C 7/543	<ul style="list-style-type: none"> • {movable to inoperative position} <p><u>WARNING</u> Group A47C 7/543 is impacted by reclassification into groups A47C 7/541, A47C 1/03, A47C 1/0303, A47C 1/0305, A47C 1/0307 and A47C 1/0308. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/546	<ul style="list-style-type: none"> • {of detachable type} <p><u>WARNING</u> Group A47C 7/546 is impacted by reclassification into groups A47C 7/541, A47C 1/03, A47C 1/0303, A47C 1/0305, A47C 1/0307 and A47C 1/0308. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/62	<ul style="list-style-type: none"> • Accessories for chairs <p><u>WARNING</u> Group A47C 7/62 is impacted by reclassification into groups A47C 7/622, A47C 7/624, A47C 7/626 and A47C 7/628. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/622	<ul style="list-style-type: none"> • {Receptacles, e.g. cup holders, storage containers} <p><u>WARNING</u> Group A47C 7/622 is incomplete pending reclassification of documents from groups A47C 7/62, A47C 7/68 and A47C 7/70. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/624	<ul style="list-style-type: none"> • • {located on side of seat, e.g. on armrest} <p><u>WARNING</u> Group A47C 7/624 is incomplete pending reclassification of documents from groups A47C 7/62, A47C 7/68 and A47C 7/70. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/626	<ul style="list-style-type: none"> • • • {directly under the seat} <p><u>WARNING</u> Group A47C 7/626 is incomplete pending reclassification of documents from groups A47C 7/62, A47C 7/68 and A47C 7/70. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/628	<ul style="list-style-type: none"> • • • {accessible by displacement of seat} <p><u>WARNING</u> Group A47C 7/628 is incomplete pending reclassification of documents from groups A47C 7/62, A47C 7/68 and A47C 7/70. All groups listed in this Warning should be considered in order to perform a complete search.</p>

M	A47C 7/66	<ul style="list-style-type: none"> Means to protect against weather <p><u>WARNING</u> Group A47C 7/66 is impacted by reclassification into groups A47C 7/664 and A47C 7/666. Groups A47C 7/66, A47C 7/664 and A47C 7/666 should be considered in order to perform a complete search.</p>
M	A47C 7/664	<ul style="list-style-type: none"> {of umbrella type} <p><u>WARNING</u> Group A47C 7/664 is incomplete pending reclassification of documents from group A47C 7/66. Groups A47C 7/66 and A47C 7/664 should be considered in order to perform a complete search.</p>
M	A47C 7/666	<ul style="list-style-type: none"> {of enclosure type with side panels} <p><u>WARNING</u> Group A47C 7/666 is incomplete pending reclassification of documents from group A47C 7/66. Groups A47C 7/66 and A47C 7/666 should be considered in order to perform a complete search.</p>
M	A47C 7/68	<ul style="list-style-type: none"> Arm-rest tables {; or back-rest tables} <p><u>WARNING</u> Group A47C 7/68 is impacted by reclassification into groups A47C 7/622, A47C 7/624, A47C 7/626 and A47C 7/628. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/70	<ul style="list-style-type: none"> of foldable type <p><u>WARNING</u> Group A47C 7/70 is impacted by reclassification into groups A47C 7/705, A47C 7/622, A47C 7/624, A47C 7/626 and A47C 7/628. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A47C 7/705	<ul style="list-style-type: none"> {of detachable type} <p><u>WARNING</u> Group A47C 7/705 is incomplete pending reclassification of documents from group A47C 7/70. Groups A47C 7/70 and A47C 7/705 should be considered in order to perform a complete search.</p>
M	A47C 7/72	<ul style="list-style-type: none"> Adaptations for incorporating lamps, radio sets, bars, telephones, ventilation, heating or cooling arrangements or the like <p><u>WARNING</u> Group A47C 7/72 is impacted by reclassification into groups A47C 7/723 and A47C 7/727. Groups A47C 7/72, A47C 7/723 and A47C 7/727 should be considered in order to perform a complete search.</p>
M	A47C 7/723	<ul style="list-style-type: none"> {with display screens} <p><u>WARNING</u> Group A47C 7/723 is incomplete pending reclassification of documents from group A47C 7/72.</p>

Groups A47C 7/72 and A47C 7/723 should be considered in order to perform a complete search.

M A47C 7/727 • • • {with speakers}

WARNING

Group A47C 7/727 is incomplete pending reclassification of documents from group A47C 7/72.

Groups A47C 7/727 and A47C 7/727 should be considered in order to perform a complete search.

Project: RP0738 (A47J)

U A47J 36/00 **Parts, details or accessories of cooking-vessels ([A47J 27/00](#) - [A47J 33/00](#) take precedence insofar as these parts, details or accessories are restricted to a particular kind of cooking-vessel provided for in a single one of these groups)**

C A47J 36/06 • Lids or covers for cooking-vessels (specially adapted for pressure-cookers [A47J 27/08](#) {- preventing boiling over of milk [A47J 27/56](#); for draining liquids from cooking-vessels [A47J 36/08](#); lids for frying-pans [A47J 37/101](#); for deep fat fryers [A47J 37/128](#)})

WARNING

Group [A47J 36/06](#) is impacted by reclassification into groups [A47J 36/062](#), [A47J 36/064](#) and [A47J 36/066](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N A47J 36/062 • • {non-integrated lids or covers specially adapted for deep fat fryers}

WARNING

Group [A47J 36/062](#) is incomplete pending reclassification of documents from groups [A47J 36/06](#) and [A47J 37/128](#).

Groups [A47J 36/06](#), [A47J 37/128](#) and [A47J 36/062](#) should be considered in order to perform a complete search.

N A47J 36/064 • • {non-integrated lids or covers specially adapted for frying-pans}

WARNING

Group [A47J 36/064](#) is incomplete pending reclassification of documents from groups [A47J 36/06](#) and [A47J 37/101](#).

Groups [A47J 36/06](#), [A47J 37/101](#) and [A47J 36/064](#) should be considered in order to perform a complete search.

N A47J 36/066 • • • {Broiling- or heating-lids}

WARNING

Group [A47J 36/066](#) is incomplete pending reclassification of documents from groups [A47J 36/06](#) and [A47J 37/103](#).

Groups [A47J 36/06](#), [A47J 37/103](#) and [A47J 36/066](#) should be considered in order to perform a complete search.

U A47J 37/00 **Baking; Roasting; Grilling; Frying (bakers' ovens, non-domestic baking apparatus or equipment [A21B](#); domestic stoves or ranges [F24B](#), [F24C](#))**

M A47J 37/10 • Frying-pans, including pans, e.g. frying pans with integrated lids or basting devices

C A47J 37/101 • • {Lids Integrated lids}

WARNING

Group [A47J 37/101](#) is impacted by reclassification into group [A47J 36/064](#).

Groups A47J 37/101 and A47J 36/064 should be considered in order to perform a complete search.

C A47J 37/103

- • {Broiling- or heating-lids}

WARNING

Group A47J 37/103 is impacted by reclassification into group A47J 36/066. Groups A47J 37/103 and A47J 36/066 should be considered in order to perform a complete search.

C A47J 37/106

- • {**Basting**Integrated basting devices}

WARNING

Group A47J 37/106 is impacted by reclassification into group A47J 43/005. Groups A47J 37/106 and A47J 43/005 should be considered in order to perform a complete search.

M A47J 37/12

- Deep fat fryers, including apparatus specially adapted for frying fish {e.g. for frying fish or chips (frying under pressure A47J 27/0817; devices for withdrawing or condensing frying vapours A47J 36/38; small-size ovens with forced air circulation, e.g. air fryers, A47J 37/0641)}

U A47J 37/1276

- • {Constructional details (A47J 37/1247 and A47J 37/1261 take precedence)}

C A47J 37/128

- • • {LidsIntegrated lids or covers}

WARNING

Group A47J 37/128 is impacted by reclassification into group A47J 36/062. Groups A47J 37/128 and A47J 36/062 should be considered in order to perform a complete search.

C A47J 43/00

Miscellaneous implements for preparing or holding foodImplements for preparing or holding food, not provided for in other groups of this subclass

WARNING

Group A47J 43/00 is impacted by reclassification into group A47J 43/005. Groups A47J 43/00 and A47J 43/005 should be considered in order to perform a complete search.

N A47J 43/005

- {Basting devices (basting devices integrated in frying pans A47J 37/106)}

WARNING

Group A47J 43/005 is incomplete pending reclassification of documents from groups A47J 37/106 and A47J 43/00. Groups A47J 37/106, A47J 43/00 and A47J 43/005 should be considered in order to perform a complete search.

Project: RP0751 (A61B)

U A61B 5/00

Measuring for diagnostic purposes (radiation diagnosis A61B 6/00; diagnosis by ultrasonic, sonic or infrasonic waves A61B 8/00); Identification of persons

NOTE

In this group, the following term is used with the meaning indicated:
"measuring" covers also detecting or recording.

U A61B 5/05

- Detecting, measuring or recording for diagnosis by means of electric currents or magnetic fields; Measuring using microwaves or radio waves (impedance plethysmography A61B 5/0295; measuring movement of the entire body or parts thereof A61B 5/11; detecting, measuring or recording bioelectric or biomagnetic signals of the body or parts thereof A61B 5/24)

- U A61B 5/053 • • Measuring electrical impedance or conductance of a portion of the body
- C A61B 5/0535 • • • Impedance plethysmography (for measuring blood flow [A61B 5/0295](#))
- WARNING
Group [A61B 5/0535](#) is impacted by reclassification into group [A61B 5/0295](#). Groups [A61B 5/0535](#) and [A61B 5/0295](#) should be considered in order to perform a complete search.
- C A61B 5/055 • • involving electronic [EMR] or nuclear [NMR] magnetic resonance, e.g. magnetic resonance imaging
- WARNING
Group [A61B 5/055](#) is impacted by reclassification into groups [A61B 5/70](#), [A61B 5/702](#), [A61B 5/704](#), [A61B 5/706](#) and [A61B 5/708](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/24 • Detecting, measuring or recording bioelectric or biomagnetic signals of the body or parts thereof
- WARNING
Group [A61B 5/24](#) is impacted by reclassification into group [A61B 5/388](#). Groups [A61B 5/24](#) and [A61B 5/388](#) should be considered in order to perform a complete search.
- C A61B 5/242 • • Detecting biomagnetic fields, e.g. magnetic fields produced by bioelectric currents
- WARNING
Group [A61B 5/242](#) is impacted by reclassification into group [A61B 5/248](#). Groups [A61B 5/242](#) and [A61B 5/248](#) should be considered in order to perform a complete search.
- C A61B 5/25 • • Bioelectric electrodes therefor
- WARNING
Group [A61B 5/25](#) is impacted by reclassification into groups [A61B 5/251](#), [A61B 5/254](#), [A61B 5/256](#), [A61B 5/257](#), [A61B 5/26](#), [A61B 5/262](#), [A61B 5/263](#), [A61B 5/265](#), [A61B 5/266](#), [A61B 5/268](#), [A61B 5/27](#), [A61B 5/271](#), [A61B 5/273](#), [A61B 5/274](#), [A61B 5/276](#), [A61B 5/277](#), [A61B 5/279](#), [A61B 5/28](#), [A61B 5/288](#), [A61B 5/29](#), [A61B 5/293](#), [A61B 5/294](#) ~~and~~, [A61B 5/297](#), and [A61B 5/367](#). All groups listed in this Warning should be considered in order to perform a complete search.
- U A61B 5/251 • • • Means for maintaining electrode contact with the body
- WARNING
Groups [A61B 5/251](#), [A61B 5/254](#), [A61B 5/256](#) and [A61B 5/257](#) are incomplete pending reclassification of documents from group [A61B 5/25](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/252 • • • • by suction
- WARNING
Group [A61B 5/252](#) is impacted by reclassification into groups [A61B 5/28](#), [A61B 5/282](#), [A61B 5/283](#), [A61B 5/285](#), [A61B 5/287](#), [A61B 5/288](#), [A61B 5/29](#) and [A61B 5/293](#). All groups listed in this Warning should be considered in order to perform a complete search.
- U A61B 5/257 • • • • using adhesive means, e.g. adhesive pads or tapes

- C A61B 5/259
- • • • using conductive adhesive means, e.g. gels
- WARNING
Group A61B 5/259 is impacted by reclassification into groups A61B 5/28, A61B 5/282, A61B 5/283, A61B 5/285, A61B 5/287, A61B 5/288, A61B 5/29 and A61B 5/293. All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/271
- • Arrangements of electrodes with cords, cables or leads, e.g. single leads or patient cord assemblies
- WARNING
 Groups [A61B 5/271](#) -and ~~A61B 5/274~~[A61B 5/273](#) are incomplete pending reclassification of documents from group [A61B 5/25](#).
~~All groups listed in this Warning~~Groups [A61B 5/25](#), [A61B 5/271](#) and [A61B 5/273](#) should be considered in order to perform a complete search.
- U A61B 5/273
- • • Connection of cords, cables or leads to electrodes
- C A61B 5/274
- • • • using snap or button fasteners
- WARNING
Group A61B 5/274 is incomplete pending reclassification of documents from group A61B 5/25. Group A61B 5/274 is also impacted by reclassification into groups A61B 5/28, A61B 5/282, A61B 5/283, A61B 5/285, A61B 5/287, A61B 5/288 and A61B 5/293. All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/276
- • Protection against electrode failure
- WARNING
 Group [A61B 5/276](#) is incomplete pending reclassification of documents from group [A61B 5/25](#).
~~Groups~~Group ~~A61B 5/25~~ and ~~A61B 5/276~~ is also impacted by reclassification into groups [A61B 5/28](#), [A61B 5/282](#), [A61B 5/283](#), [A61B 5/285](#), [A61B 5/287](#), [A61B 5/288](#), [A61B 5/29](#) and [A61B 5/293](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/279
- • specially adapted for particular uses
- WARNING
~~Groups~~Group ~~A61B 5/279~~, ~~A61B 5/28~~, ~~is~~ ~~A61B 5/29~~, ~~A61B 5/293~~ and ~~A61B 5/294~~ are incomplete pending reclassification of documents from group [A61B 5/25](#).
~~All groups listed in this Warning~~Groups [A61B 5/25](#) and [A61B 5/279](#) should be considered in order to perform a complete search.
- M A61B 5/28
- • • for electrocardiography [ECG]
- WARNING
Groups A61B 5/28 and A61B 5/288 are incomplete pending reclassification of documents from groups A61B 5/25, A61B 5/252, A61B 5/259, A61B 5/274 and A61B 5/276. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61B 5/282 Holders for multiple electrodes (for introduction into the body [A61B 5/287](#))
- WARNING
Group [A61B 5/282](#) is incomplete pending reclassification of documents from groups [A61B 5/252](#), [A61B 5/259](#), [A61B 5/274](#) and [A61B 5/276](#). All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/283 Invasive
- WARNING
Group [A61B 5/283](#) is impacted by reclassification into groups [A61B 5/29](#) and [A61B 5/293](#). Groups [A61B 5/283](#), [A61B 5/29](#) and [A61B 5/293](#) should be considered in order to perform a complete search.
- Group [A61B 5/283](#) is incomplete pending reclassification of documents from groups [A61B 5/252](#), [A61B 5/259](#), [A61B 5/274](#) and [A61B 5/276](#). Group [A61B 5/283](#) is also impacted by reclassification into groups [A61B 5/29](#) and [A61B 5/293](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/285 Endotracheal, oesophageal or gastric probes
- WARNING
Group [A61B 5/285](#) is incomplete pending reclassification of documents from groups [A61B 5/252](#), [A61B 5/259](#), [A61B 5/274](#) and [A61B 5/276](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/287 Holders for multiple electrodes, e.g. electrode catheters for electrophysiological study [EPS]
- WARNING
Group [A61B 5/287](#) is incomplete pending reclassification of documents from groups [A61B 5/252](#), [A61B 5/259](#), [A61B 5/274](#) and [A61B 5/276](#). All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/29 for permanent or long-term implantation
- WARNING
Group [A61B 5/29](#) is incomplete pending reclassification of documents from groups [A61B 5/25](#), [A61B 5/252](#), [A61B 5/259](#), [A61B 5/276](#) and [A61B 5/283](#). Groups [A61B 5/25](#), groups [A61B 5/283](#) and listed in [A61B 5/29](#) this Warning should be considered in order to perform a complete search.
- C A61B 5/291 for electroencephalography [EEG]
- WARNING
Group [A61B 5/291](#) is impacted by reclassification into group [A61B 5/293](#). Groups [A61B 5/291](#) and [A61B 5/293](#) should be considered in order to perform a complete search.

- M A61B 5/293 • • • • Invasive
- WARNING
Group [A61B 5/293](#) is incomplete pending reclassification of documents from groups [A61B 5/25](#) and [A61B 5/252](#), [A61B 5/259](#), [A61B 5/274](#), [A61B 5/276](#), [A61B 5/283](#) and [A61B 5/291](#).
~~Groups All A61B 5/25, groups A61B 5/283 and listed in A61B 5/293~~ this *Warning* should be considered in order to perform a complete search.
- M A61B 5/294 • • • • for nerve conduction study [NCS]
- WARNING
Group [A61B 5/294](#) is incomplete pending reclassification of documents from groups [A61B 5/25](#) and [A61B 5/388](#).
Groups [A61B 5/25](#), [A61B 5/388](#) and [A61B 5/294](#) should be considered in order to perform a complete search.
- C A61B 5/30 • • Input circuits therefor
- WARNING
Group [A61B 5/30](#) is impacted by reclassification into groups [A61B 5/305](#), [A61B 5/307](#), [A61B 5/308](#), [A61B 5/31](#), [A61B 5/311](#), [A61B 5/313](#) and [A61B 5/315](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/301 • • • providing electrical separation, e.g. by using isolating transformers or optocouplers
- WARNING
*Group [A61B 5/301](#) is impacted by reclassification into groups [A61B 5/305](#) and [A61B 5/308](#).
Groups [A61B 5/301](#), [A61B 5/305](#) and [A61B 5/308](#) should be considered in order to perform a complete search.*
- C A61B 5/302 • • • for capacitive or ionised electrodes, e.g. metal-oxide-semiconductor field-effect transistors [MOSFET]
- WARNING
*Group [A61B 5/302](#) is impacted by reclassification into groups [A61B 5/305](#) and [A61B 5/308](#).
Groups [A61B 5/302](#), [A61B 5/305](#) and [A61B 5/308](#) should be considered in order to perform a complete search.*
- C A61B 5/303 • • • {Patient cord assembly, e.g. cable harness}
- WARNING
*Group [A61B 5/303](#) is impacted by reclassification into groups [A61B 5/305](#) and [A61B 5/308](#).
Groups [A61B 5/303](#), [A61B 5/305](#) and [A61B 5/308](#) should be considered in order to perform a complete search.*
- C A61B 5/304 • • • Switching circuits
- WARNING
*Group [A61B 5/304](#) is impacted by reclassification into groups [A61B 5/305](#) and [A61B 5/308](#).
Groups [A61B 5/304](#), [A61B 5/305](#) and [A61B 5/308](#) should be considered in order to perform a complete search.*

- M A61B 5/305
- • • Common mode rejection
- WARNING
Group [A61B 5/305](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/30](#), [A61B 5/301](#), [A61B 5/302](#), [A61B 5/303](#) and [A61B 5/304](#).
~~Groups~~All ~~A61B 5/30~~ and groups listed ~~A61B 5/305~~ in this Warning should be considered in order to perform a complete search.
- M A61B 5/307
- • • specially adapted for particular uses
- WARNING
Groups [A61B 5/307](#)–, [A61B 5/31](#), [A61B 5/313](#) and [A61B 5/315](#) are incomplete pending reclassification of documents from group [A61B 5/30](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61B 5/308
- • • • for electrocardiography [ECG]
- WARNING
*Group [A61B 5/308](#) is incomplete pending reclassification of documents from groups [A61B 5/30](#), [A61B 5/301](#), [A61B 5/302](#), [A61B 5/303](#) and [A61B 5/304](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- M A61B 5/311
- • • • for nerve conduction study [NCS]
- WARNING
*Group [A61B 5/311](#) is incomplete pending reclassification of documents from groups [A61B 5/30](#) and [A61B 5/388](#).
Groups [A61B 5/30](#), [A61B 5/388](#) and [A61B 5/311](#) should be considered in order to perform a complete search.*
- C A61B 5/316
- • Modalities, i.e. specific diagnostic methods
- WARNING
Group [A61B 5/316](#) is impacted by reclassification into groups [A61B 5/321](#), [A61B 5/329](#), [A61B 5/33](#), [A61B 5/338](#), [A61B 5/343](#), [A61B 5/346](#), [A61B 5/347](#), [A61B 5/353](#), [A61B 5/355](#), [A61B 5/357](#), [A61B 5/358](#), [A61B 5/36](#), [A61B 5/367](#), [A61B 5/372](#), [A61B 5/374](#), [A61B 5/388](#), [A61B 5/395](#) and [A61B 5/397](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C A61B 5/318
- • • Heart-related electrical modalities, e.g. ~~electrocardiography~~[electrocardiography](#) [ECG]
- WARNING
*Group [A61B 5/318](#) is impacted by reclassification into groups [A61B 5/321](#), [A61B 5/329](#) and [A61B 5/33](#).
All groups listed in this Warning should be considered in order to perform a complete search.*
- M A61B 5/321
- • • • Accessories or supplementary instruments therefor, e.g. cord hangers
- WARNING
Group [A61B 5/321](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/318](#).
Groups [A61B 5/316](#), [A61B 5/318](#) and [A61B 5/321](#) should be considered in order to perform a complete search.

- M A61B 5/329 • • • Load diagnosis, e.g. cardiac stress tests
WARNING
 Group [A61B 5/329](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/318](#).
 Groups [A61B 5/316](#), [A61B 5/318](#) and [A61B 5/329](#) should be considered in order to perform a complete search.
- M A61B 5/33 • • • specially adapted for cooperation with other devices
WARNING
 Group [A61B 5/33](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/318](#).
 Groups [A61B 5/316](#), [A61B 5/318](#) and [A61B 5/33](#) should be considered in order to perform a complete search.
- C A61B 5/333 • • • Recording apparatus ~~especially~~*especially* adapted therefor
WARNING
Group [A61B 5/333](#) is impacted by reclassification into group [A61B 5/338](#). Groups [A61B 5/333](#) and [A61B 5/338](#) should be considered in order to perform a complete search.
- M A61B 5/338 • • • Recording by printing on paper
WARNING
 Group [A61B 5/338](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/333](#).
 Groups [A61B 5/316](#), [A61B 5/333](#) and [A61B 5/338](#) should be considered in order to perform a complete search.
- C A61B 5/339 • • • Displays ~~especially~~*especially* adapted therefor
WARNING
Group [A61B 5/339](#) is impacted by reclassification into group [A61B 5/343](#). Groups [A61B 5/339](#) and [A61B 5/343](#) should be considered in order to perform a complete search.
- M A61B 5/343 • • • Potential distribution indication
WARNING
 Group [A61B 5/343](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/339](#).
 Groups [A61B 5/316](#), [A61B 5/339](#) and [A61B 5/343](#) should be considered in order to perform a complete search.
- M A61B 5/346 • • • Analysis of electrocardiograms
WARNING
 Groups [A61B 5/346](#), and [A61B 5/347](#), [A61B 5/353](#), [A61B 5/355](#), [A61B 5/357](#), [A61B 5/358](#) and [A61B 5/36](#) are incomplete pending reclassification of documents from group [A61B 5/316](#).
~~All groups listed in this Warning~~Groups [A61B 5/316](#), [A61B 5/346](#) and [A61B 5/347](#) should be considered in order to perform a complete search.
- C A61B 5/349 • • • Detecting specific parameters of the electrocardiograph cycle
WARNING
Group [A61B 5/349](#) is impacted by reclassification into groups [A61B 5/353](#), [A61B 5/355](#), [A61B 5/357](#), [A61B 5/358](#) and [A61B 5/36](#). All groups listed in this Warning should be considered in order to perform a complete search.

M	A61B 5/353	<ul style="list-style-type: none"> • • • • • Detecting P-waves <p><u>WARNING</u> Group A61B 5/353 is incomplete pending reclassification of documents from groups A61B 5/316 and A61B 5/349. Groups A61B 5/316, A61B 5/349 and A61B 5/353 should be considered in order to perform a complete search.</p>
M	A61B 5/355	<ul style="list-style-type: none"> • • • • • Detecting T-waves <p><u>WARNING</u> Group A61B 5/355 is incomplete pending reclassification of documents from groups A61B 5/316 and A61B 5/349. Groups A61B 5/316, A61B 5/349 and A61B 5/355 should be considered in order to perform a complete search.</p>
M	A61B 5/357	<ul style="list-style-type: none"> • • • • • Detecting U-waves <p><u>WARNING</u> Group A61B 5/357 is incomplete pending reclassification of documents from groups A61B 5/316 and A61B 5/349. Groups A61B 5/316, A61B 5/349 and A61B 5/357 should be considered in order to perform a complete search.</p>
M	A61B 5/358	<ul style="list-style-type: none"> • • • • • Detecting ST segments <p><u>WARNING</u> Group A61B 5/358 is incomplete pending reclassification of documents from groups A61B 5/316 and A61B 5/349. Groups A61B 5/316, A61B 5/349 and A61B 5/358 should be considered in order to perform a complete search.</p>
M	A61B 5/36	<ul style="list-style-type: none"> • • • • • Detecting PQ interval, PR interval or QT interval <p><u>WARNING</u> Group A61B 5/36 is incomplete pending reclassification of documents from groups A61B 5/316 and A61B 5/349. Groups A61B 5/316, A61B 5/349 and A61B 5/36 should be considered in order to perform a complete search.</p>
M	A61B 5/367	<ul style="list-style-type: none"> • • • • • Electrophysiological study [EPS], e.g. electrical activation mapping or electro-anatomical mapping <p><u>WARNING</u> Group A61B 5/367 is incomplete pending reclassification of documents from groupgroups A61B 5/25 and A61B 5/316. Groups A61B 5/25, A61B 5/316 and A61B 5/367 should be considered in order to perform a complete search.</p>
C	A61B 5/369	<ul style="list-style-type: none"> • • • • • Electroencephalography [EEG] (devices for psychotechnics A61B 5/16) <p><u>WARNING</u> Group A61B 5/369 is impacted by reclassification into groups A61B 5/37, A61B 5/372, A61B 5/384 and A61B 5/386. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	A61B 5/372	<ul style="list-style-type: none"> • • • • • Analysis of electroencephalograms <p><u>WARNING</u> Group A61B 5/372 is incomplete pending reclassification of documents from groupgroups A61B 5/316 and A61B 5/369.</p>

Groups [A61B 5/316](#), [A61B 5/369](#) and [A61B 5/372](#) should be considered in order to perform a complete search.

M A61B 5/374

- • • Detecting the frequency distribution of signals, e.g. detecting delta, theta, alpha, beta or gamma waves

WARNING

Group [A61B 5/374](#) is incomplete pending reclassification of documents from group [A61B 5/316](#).
Groups [A61B 5/316](#) and [A61B 5/374](#) should be considered in order to perform a complete search.

C A61B 5/377

- • • using evoked responses

WARNING

Group [A61B 5/377](#) is impacted by reclassification into group [A61B 5/383](#).
Groups [A61B 5/377](#) and [A61B 5/383](#) should be considered in order to perform a complete search.

C A61B 5/388

- • Nerve conduction study, e.g. detecting action potential of peripheral nerves

WARNING

Group [A61B 5/388](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/24](#) and [A61B 5/316](#).
~~Groups~~Group [A61B 5/316](#) and [A61B 5/388](#) is also impacted by reclassification into groups [A61B 5/294](#) and [A61B 5/311](#).
All groups listed in this Warning should be considered in order to perform a complete search.

C A61B 5/389

- • Electromyography [EMG]

WARNING

Group [A61B 5/389](#) is impacted by reclassification into group [A61B 5/395](#).
Groups [A61B 5/389](#) and [A61B 5/395](#) should be considered in order to perform a complete search.

M A61B 5/395

- • • Details of stimulation, e.g. nerve stimulation to elicit EMG response

WARNING

Group [A61B 5/395](#) is incomplete pending reclassification of documents from ~~group~~groups [A61B 5/316](#) and [A61B 5/389](#).
Groups [A61B 5/316](#), [A61B 5/389](#) and [A61B 5/395](#) should be considered in order to perform a complete search.

C A61B 5/398

- • Electrooculography [EOG], e.g. detecting nystagmus; Electroretinography [ERG]

WARNING

Group [A61B 5/398](#) is impacted by reclassification into group [A61B 5/297](#).
Groups [A61B 5/398](#) and [A61B 5/297](#) should be considered in order to perform a complete search.

M A61B 5/70

- {Means for positioning the patient in relation to the detecting, measuring or recording means}

WARNING

Groups [A61B 5/70](#) - [A61B 5/708](#) are incomplete pending reclassification of documents from group [A61B 5/055](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0152-F (A61B)

- U A61B 6/00** Apparatus for radiation diagnosis, e.g. combined with radiation therapy equipment (instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. in vivo counting, [G01T 1/161](#); apparatus for taking X-ray photographs [G03B 42/02](#))

NOTE

{In this group the following terms or expressions are used with the meaning indicated:

- "radiation" means ionising radiation, e.g. X rays or gamma rays, and does not cover other forms of radiation, e.g. optical

}

- M A61B 6/02** • Devices for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis

WARNING

~~Group A61B 6/02 is impacted by reclassification into group A61B 6/4429.
Groups A61B 6/02 and A61B 6/4429 should be considered in order to perform a complete search.~~

- U A61B 6/42** • {with arrangements for detecting radiation specially adapted for radiation diagnosis}

- M A61B 6/4283** • • {characterised by a detector unit being housed in a cassette}

WARNING

~~Group A61B 6/4283 is incomplete pending reclassification of documents from group A61B 6/4411.
Groups A61B 6/4411 and A61B 6/4283 should be considered in order to perform a complete search.~~

- U A61B 6/44** • {Constructional features of apparatus for radiation diagnosis}

- M A61B 6/4411** • • {the apparatus being modular ([A61B 6/4283](#) takes precedence)}

WARNING

~~Group A61B 6/4411 is impacted by reclassification into group A61B 6/4283.
Groups A61B 6/4411 and A61B 6/4283 should be considered in order to perform a complete search.~~

- M A61B 6/4429** • • {related to the mounting of source units and detector units}

WARNING

~~Group A61B 6/4429 is incomplete pending reclassification of documents from group A61B 6/02.
Groups A61B 6/02 and A61B 6/4429 should be considered in order to perform a complete search.~~

Project: RP0339-F (A61C)

- U A61C 3/00** Dental tools or instruments (implanting tools [A61C 8/00](#); tools for fastening artificial teeth [A61C 13/12](#); visual inspection devices, e.g. dental mirrors, [A61B 1/24](#))

- U A61C 3/02** • Tooth drilling or cutting instruments; Instruments acting like a sandblast machine

- M A61C 3/03** • • Instruments operated by vibration

WARNING

~~Group A61C 3/03 is impacted by reclassification into groups A61C 17/18 and A61C 17/20.~~

~~Groups A61C 3/03, A61C 17/18 and A61C 17/20 should be considered in order to perform a complete search.~~

U A61C 17/00

Devices for cleaning, polishing, rinsing or drying teeth, teeth cavities or prostheses (instruments acting like a sandblast machine [A61C 3/025](#); tooth polishing discs or holders therefor [A61C 3/06](#); devices for cleaning between the teeth [A61C 15/00](#)); Saliva removers; Dental appliances for receiving spittle

NOTE

Cleaning of prostheses using ultrasonic techniques similar to those used for natural teeth is classified in this group. Other ultrasonic cleaning of prostheses is classified in group [B08B 3/12](#)

M A61C 17/02

- Rinsing or air-blowing devices, e.g. using fluid jets {or comprising liquid medication} (combined with receptacles for spittle [A61C 17/14](#); combined with power-driven cleaning or polishing devices [A61C 17/16](#))

WARNING

~~Group A61C 17/02 is impacted by reclassification into groups A61C 17/024 and A61C 17/14.~~

~~Groups A61C 17/02, A61C 17/024 and A61C 17/14 should be considered in order to perform a complete search.~~

M A61C 17/0211

- {specially adapted for rinsing the teeth of at least one jaw simultaneously ([A61C 17/20](#) takes precedence)}

WARNING

~~Group A61C 17/0211 is impacted by reclassification into groups A61C 17/0211 and A61C 17/028.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M A61C 17/024

- with constant liquid flow

WARNING

~~Group A61C 17/024 is incomplete pending reclassification of documents from group A61C 17/02.~~

~~Groups A61C 17/02 and A61C 17/024 should be considered in order to perform a complete search.~~

M A61C 17/028

- with intermittent liquid flow

WARNING

~~Group A61C 17/028 is incomplete pending reclassification of documents from group A61C 17/0211.~~

~~Groups A61C 17/0211 and A61C 17/028 should be considered in order to perform a complete search.~~

D A61C 17/04
~~—(Frozen)~~

- {Spittoons or saliva removers for dental use}

WARNING

~~Group A61C 17/04 is no longer used for the classification of documents as of May 1, 2019.~~

~~The content of this group is being reclassified into groups A61C 17/06, A61C 17/084, A61C 17/088, A61C 17/092, A61C 17/096, A61C 17/10, A61C 17/12, A61C 17/125, A61C 17/13, A61C 17/135 and A61C 17/14.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

M	A61C 17/06	<ul style="list-style-type: none"> • Saliva removers; Accessories therefor <p><u>WARNING</u> Groups A61C 17/06, A61C 17/084, A61C 17/088, A61C 17/092, A61C 17/096, A61C 17/10, A61C 17/12, A61C 17/125, A61C 17/13 and A61C 17/135 are incomplete pending reclassification of documents from group A61C 17/04. These groups should be considered in order to perform a complete search.</p>
M	A61C 17/14	<ul style="list-style-type: none"> • Dental appliances for receiving spittle, with or without rinsing means therefor, e.g. dental basins, spittoons, cuspidors <p><u>WARNING</u> Group A61C 17/14 is incomplete pending reclassification of documents from groups A61C 17/02 and A61C 17/04. Groups A61C 17/14, A61C 17/02, and A61C 17/04 should be considered in order to perform a complete search.</p>
U	A61C 17/16	<ul style="list-style-type: none"> • Power-driven cleaning or polishing devices
M	A61C 17/18	<ul style="list-style-type: none"> • Chiselling scalers (A61C 17/20 takes precedence) <p><u>WARNING</u> Group A61C 17/18 is incomplete pending reclassification of documents from group A61C 3/03. Groups A61C 3/03 and A61C 17/18 should be considered in order to perform a complete search.</p>
M	A61C 17/20	<ul style="list-style-type: none"> • using ultrasonics <p><u>WARNING</u> Group A61C 17/20 is incomplete pending reclassification of documents from group A61C 3/03. Groups A61C 3/03 and A61C 17/20 should be considered in order to perform a complete search.</p>

Project: RP0759 (A61F)

U	A61F	<p>FILTERS IMPLANTABLE INTO BLOOD VESSELS; PROSTHESES; DEVICES PROVIDING PATENCY TO, OR PREVENTING COLLAPSING OF, TUBULAR STRUCTURES OF THE BODY, e.g. STENTS; ORTHOPAEDIC, NURSING OR CONTRACEPTIVE DEVICES; FOMENTATION; TREATMENT OR PROTECTION OF EYES OR EARS; BANDAGES, DRESSINGS OR ABSORBENT PADS; FIRST-AID KITS (dental prosthetics A61C)</p> <p><u>WARNINGS</u></p> <p>1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:</p> <table> <tr> <td>A61F 2/56</td><td>covered by</td><td>A61F 2/54</td></tr> <tr> <td>A61F 2/62</td><td>covered by</td><td>A61F 2/60</td></tr> <tr> <td>A61F 5/045</td><td>covered by</td><td>A61G 13/12</td></tr> <tr> <td>A61F 5/052</td><td>covered by</td><td>A61F 5/05</td></tr> <tr> <td>A61F 5/447</td><td>covered by</td><td>A61F 5/445</td></tr> <tr> <td>A61F 5/452</td><td>covered by</td><td>A61F 5/451</td></tr> <tr> <td>A61F 5/457</td><td>covered by</td><td>A61F 5/451</td></tr> <tr> <td>A61F 5/458</td><td>covered by</td><td>A61F 5/451</td></tr> <tr> <td>A61F 6/10</td><td>covered by</td><td>A61F 6/08</td></tr> <tr> <td>A61F 9/01</td><td>covered by</td><td>A61F 9/00802 - A61F 9/00825</td></tr> </table>	A61F 2/56	covered by	A61F 2/54	A61F 2/62	covered by	A61F 2/60	A61F 5/045	covered by	A61G 13/12	A61F 5/052	covered by	A61F 5/05	A61F 5/447	covered by	A61F 5/445	A61F 5/452	covered by	A61F 5/451	A61F 5/457	covered by	A61F 5/451	A61F 5/458	covered by	A61F 5/451	A61F 6/10	covered by	A61F 6/08	A61F 9/01	covered by	A61F 9/00802 - A61F 9/00825
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A61F 5/458	covered by	A61F 5/451																														
A61F 6/10	covered by	A61F 6/08																														
A61F 9/01	covered by	A61F 9/00802 - A61F 9/00825																														

A61F 9/011	covered by	A61F 9/00802 - A61F 9/00825
A61F 13/22	covered by	A61F 13/206
A61F 13/24	covered by	A61F 13/2045
A61F 13/30	covered by	A61F 13/26
A61F 13/32	covered by	A61F 13/26
A61F 13/40	covered by	A61M 35/006

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

Project: RP0475-F (A61F)

- U A61F 2/00** Filters implantable into blood vessels; Prostheses, i.e. artificial substitutes or replacements for parts of the body; Appliances for connecting them with the body; Devices providing patency to, or preventing collapsing of, tubular structures of the body, e.g. stents (as cosmetic articles, see the relevant subclasses, e.g. wigs, hair pieces, [A41G 3/00](#), [A41G 5/00](#); artificial nails [A45D 31/00](#); dental prostheses [A61C 13/00](#); materials for prostheses [A61L 27/00](#); artificial hearts [A61M 60/00](#); artificial kidneys [A61M 1/14](#))
- M A61F 2/01** • Filters implantable into blood vessels
- WARNING
Group A61F 2/01 is impacted by reclassification into groups A61F 2/0103, A61F 2/0105, A61F 2/0108, and A61F 2/012.
All groups listed in this Warning should be considered in order to perform a complete search.
- M A61F 2/0103** • {With centering means}
- WARNING
Group A61F 2/0103 is incomplete pending reclassification of documents from group A61F 2/01.
Groups A61F 2/01 and A61F 2/0103 should be considered in order to perform a complete search.
- M A61F 2/0105** • {Open ended, i.e. legs gathered only at one side}
- WARNING
Group A61F 2/0105 is incomplete pending reclassification of documents from group A61F 2/01.
Groups A61F 2/01 and A61F 2/0105 should be considered in order to perform a complete search.
- M A61F 2/0108** • {Both ends closed, i.e. legs gathered at both ends}
- WARNING
Group A61F 2/0108 is incomplete pending reclassification of documents from group A61F 2/01.
Groups A61F 2/01 and A61F 2/0108 should be considered in order to perform a complete search.
- M A61F 2/012** • {Multiple filtering units}
- WARNING
Group A61F 2/012 is incomplete pending reclassification of documents from groups A61F 2/01 and A61F 2/013.
Groups A61F 2/01, A61F 2/013, and A61F 2/012 should be considered in order to perform a complete search.

- M A61F 2/013
- {Distal protection devices, i.e. devices placed distally in combination with another endovascular procedure, e.g. angioplasty or stenting}
- WARNING**
 Group A61F 2/013 is impacted by reclassification into groups A61F 2/012 and A61F 2/014.
 Groups A61F 2/013, A61F 2/012, and A61F 2/014 should be considered in order to perform a complete search.
- M A61F 2/014
- {Retrograde blood flow filters, i.e. device inserted against the blood flow direction}
- WARNING**
 Group A61F 2/014 is incomplete pending reclassification of documents from group A61F 2/013.
 Groups A61F 2/013 and A61F 2/014 should be considered in order to perform a complete search.

Project: RP0759 (A61F)

- U A61F 2/02
- Prostheses implantable into the body {(closure means for urethra or rectum or for artificial body openings therefor [A61F 2/0004](#))}
- A61F 2/18
- Internal ear or nose parts, e.g. ear-drums {(implants for middle ear ventilation or drainage [A61F 11/002](#) [A61F 11/202](#))}

Project: RP0475-F (A61F)

- M A61F 2/24
- Heart valves {; Vascular valves, e.g. venous valves; Heart implants, e.g. passive devices for improving the function of the native valve or the heart muscle; Transmyocardial revascularisation [TMR] devices; Valves implantable in the body}
- WARNING**
 Group A61F 2/24 is impacted by reclassification into group A61F 2/2476.
 Groups A61F 2/24 and A61F 2/2476 should be considered in order to perform a complete search.
- M A61F 2/2476
- {Valves implantable in the body not otherwise provided for}
- WARNING**
 Group A61F 2/2476 is incomplete pending reclassification of documents from group A61F 2/24.
 Groups A61F 2/24 and A61F 2/2476 should be considered in order to perform a complete search.
- U A61F 2/95
- Instruments specially adapted for placement or removal of stents or stent-grafts
- M A61F 2/9522
- {Means for mounting a stent or stent-graft onto or into a placement instrument}
- WARNING**
 Group A61F 2/9522 is impacted by reclassification into groups A61F 2/9524, A61F 2/9525, and A61F 2/9526.
 All groups listed in this Warning should be considered in order to perform a complete search.
- M A61F 2/9524
- {Iris-type crimpers}
- WARNING**
 Group A61F 2/9524 is incomplete pending reclassification of documents from group A61F 2/9522.

Groups A61F 2/9522 and A61F 2/9524 should be considered in order to perform a complete search.

M A61F 2/9525

- • • {using a funnel}

WARNING

Group A61F 2/9525 is incomplete pending reclassification of documents from group A61F 2/9522.
Groups A61F 2/9522 and A61F 2/9525 should be considered in order to perform a complete search.

M A61F 2/9526

- • • {using a mandrel}

WARNING

Group A61F 2/9526 is incomplete pending reclassification of documents from group A61F 2/9522.
Groups A61F 2/9522 and A61F 2/9526 should be considered in order to perform a complete search.

M A61F 2/962

- • having an outer sleeve

WARNING

Group A61F 2/962 is impacted by reclassification into group A61F 2002/9623.
Groups A61F 2/962 and A61F 2002/9623 should be considered in order to perform a complete search.

M A61F 2002/9623

- • • {the sleeve being reinforced}

WARNING

Group A61F 2002/9623 is incomplete pending reclassification of documents from group A61F 2/962.
Groups A61F 2/962 and A61F 2002/9623 should be considered in order to perform a complete search.

M A61F 2/966

- • • with relative longitudinal movement between outer sleeve and prosthesis, e.g. using a push rod

WARNING

Group A61F 2/966 is impacted by reclassification into groups A61F 2/9661 and A61F 2/9662.
Groups A61F 2/966, A61F 2/9661, and A61F 2/9662 should be considered in order to perform a complete search.

M A61F 2/9661

- • • • {the proximal portion of the stent or stent-graft is released first}

WARNING

Group A61F 2/9661 is incomplete pending reclassification of documents from group A61F 2/966.
Groups A61F 2/966 and A61F 2/9661 should be considered in order to perform a complete search.

M A61F 2/9662

- • • • {the middle portion of the stent or stent-graft is released first}

WARNING

Group A61F 2/9662 is incomplete pending reclassification of documents from group A61F 2/966.
Groups A61F 2/966 and A61F 2/9662 should be considered in order to perform a complete search.

Project: RP0759 (A61F)

- M A61F 4/00 Methods or devices enabling ~~invalids~~*patients or disabled persons* to operate an apparatus or a device not forming part of the body (operating or control means for prostheses *A61F 2/48, A61F 2/68*; ~~{serving devices for one-handed persons A47G 21/08}~~)

Project: RP0737 (A61F)

- U A61F 5/00 Orthopaedic methods or devices for non-surgical treatment of bones or joints (surgical instruments or methods for treatment of bones or joints, devices specially adapted therefor *A61B 17/56*); Nursing devices; {Anti-rape devices}{bandages, dressings or absorbent pads *A61F 13/00*}
- U A61F 5/01 • Orthopaedic devices, e.g. splints, casts or braces
- M A61F 5/14 • • Special medical insertions for shoes for flat-feet, club-feet; or the like ~~(ordinary arch supports A43B 7/14)~~

Project: RP0759 (A61F)

- M A61F 11/00 Methods or devices for treatment of the ears; ~~e.g. surgical~~ *or hearing sense (implantable prostheses that substitute or replace internal ear parts, e.g. ear-drums, A61F 2/18; methods or devices to cause a change in the state of auditory consciousness A61M 21/00; electrotherapy applying electrical stimulation of the auditory system, or circuits therefor A61N 1/36; radiotherapy using optical stimulation of the auditory system A61N 5/06; electro-acoustic hearing aids H04R 25/00); Non-electric hearing aids; Methods or devices for enabling ear patients to achieve auditory perception through physiological senses other than hearing sense*; Protective devices for the ears, carried on the body or in the hand (headwear, e.g. caps or helmets, with means for protecting the ears ~~A42B 1/0186~~*A42B 1/0188, A42B 3/16*); ~~Non-electric hearing aids~~
- D A61F 11/002 • {Surgical middle ear ventilation or drainage, e.g. permanent; Implants therefor (drainage implants in general A61M 27/002)}
<administratively transferred to *A61F 11/202*>
- D A61F 11/004 • {Ear surgery (A61F 11/002 takes precedence)}
<administratively transferred to *A61F 11/20*>
- D A61F 11/008 • {Non-electric hearing aids, e.g. ear trumpets, sound amplifiers, ear-shells (non-electric sound-amplifying devices in general G10K 11/08; sound-focusing or directing using reflection in general G10K 11/28)}
<administratively transferred to *A61F 11/30*>
- M A61F 11/04 • ~~Devices or methods enabling ear patients to replace direct auditory perception by another kind of perception~~*Methods or devices for enabling ear patients to achieve auditory perception through physiological senses other than hearing sense, e.g. through the touch sense* {(electronic stimulation of auditory nerves *A61N 1/36036*)}
- M A61F 11/045 • • {using mechanical stimulation of nerves ~~(acting directly on the ear H04R 25/00)~~}
- U A61F 11/06 • Protective devices for the ears
- U A61F 11/08 • • internal, e.g. earplugs
- D A61F 2011/085 • • • {including an inner channel}
<administratively transferred to *A61F 11/085 INV*>
- N A61F 11/085 • • • {including an inner channel}
- U A61F 11/12 • • • External mounting means

- M A61F 11/14
- external, e.g. earcaps or earmuffs ~~{{(for hairdresser's rooms A45D 44/12; for sports A63B 71/10; headphones H04R 1/10)}}~~

NOTE

~~{Group A61F 11/14 contains only acoustic protection (other external protectors, see A61F 11/06)}~~

- D A61F 2011/145
- • {electric, e.g. for active noise reduction}
 - <administratively transferred to [A61F 11/145](#) INV>
- N A61F 11/145
- • {electric, e.g. for active noise reduction}
- N A61F 11/20
- Ear surgery
- N A61F 11/202
- {Surgical middle-ear ventilation or drainage, e.g. permanent; Implants therefor}
- N A61F 11/30
- Non-electric hearing aids, e.g. ear trumpets, sound amplifiers or ear-shells

Project: RP0758 (A61H)**A61H 33/00**

Bathing devices for special therapeutic or hygienic purposes ([A61H 35/00](#) takes precedence; {sprays acting on a body or body part not immersed in water [A61H 9/00](#); means for washing bed-ridden persons [A61G 7/0005](#);} for sub aquatic intestinal cleaning [A61M 9/00](#); {isolation chambers [A61M 21/0094](#); } electric or magnetic baths, applying ionised fluids [A61N 1/44](#) {; heater for bath tubs ~~F24H 1/0081~~ [F24H 1/54](#)})

Project: N/A (A61K)**U A61K 31/00****Medicinal preparations containing organic active ingredients****NOTES**

1. When classifying in groups [A61K 31/00](#) - [A61K 41/00](#) the symbol [A61K 2300/00](#) may be added, using Combination Sets, to indicate a mixture of active ingredients.
2. In the preparation of new organic compounds and their use in medicinal preparations, classification is only made in the relevant subclasses [C07C](#) - [C07J](#) according to the type of compound. However, the inventions dealing with medicinal preparations containing at least two active organic ingredients are always classified in this group in addition to the classification for the type of compounds in [C07C](#) - [C07J](#).
3. Attention is drawn to the notes in class [C07](#), particularly to the definition of steroids given in Note (1) following the title of [C07J](#) and to the definition of carbohydrates and sugars given in the notes following the title of [C07H](#).
4. Salts and complexes of organic active compounds are always classified according to the free active compounds. If a complex is formed between two or more active compounds, then they are classified according to all compounds forming the salts or complexes followed by the symbol [A61K 2300/00](#) (i.e. as a mixture of active organic compounds). According to the last place rule, organic active compounds forming salts with heavy metals should be classified in [A61K 33/24](#) - [A61K 33/38](#) and not in subgroups [A61K 31/28](#) - [A61K 31/32](#), [A61K 31/555](#) or [A61K 31/714](#).
This does not apply to complexes, as apparent from the [A61K 31/00](#) scheme, wherein the complexes hemin and hematin are classified in [A61K 31/555](#) and cyanocobalamin in [A61K 31/714](#).
5. From January 2003 onwards, the EPO copies into CPC the IPC classification of the first document received (family representative). However, blends of active ingredients receive the additional symbol [A61K 2300/00](#) as Combination Set.

- U A61K 31/33
- Heterocyclic compounds

- U A61K 31/38 • • having sulfur as a ring hetero atom
- A61K 31/382 • • • having six-membered rings, e.g. thioxanthenes (~~thiotixene~~
A61K 31/496 *thiothixene* A61K 31/496)

Project: RP0273-F (A61K)

- M A61K 31/395 • • having nitrogen as a ring hetero atom, e.g. guanethidine or rifamycins

WARNING

Group A61K 31/395 is impacted by reclassification into group A61K 31/5545.
Groups A61K 31/395 and A61K 31/5545 should be considered in order to perform a complete search.

Project: N/A (A61K)

- U A61K 31/55 • • • having seven-membered rings, e.g. azelastine, pentylenetetrazole
- A61K 31/554 • • • • having at least one nitrogen and one sulfur as ring hetero atoms, e.g.
~~chlothiapine~~ *clothiapine*, diltiazem

Project: RP0273-F (A61K)

- M A61K 31/5545 • • • {having eight-membered rings not containing additional condensed or non-condensed nitrogen-containing 3-7 membered rings}

NOTE

{This subgroup does not cover N-containing eight-membered rings which also contain additional condensed and non-condensed nitrogen containing 3-7 membered rings, which are covered by subgroups [A61K 31/396](#) - [A61K 31/554](#).}

WARNING

Group A61K 31/5545 is incomplete pending reclassification of documents from group A61K 31/395.
Groups A61K 31/395 and A61K 31/5545 should be considered in order to perform a complete search.

Project: RP0535-F (A61K)

- U A61K 33/00 **Medicinal preparations containing inorganic active ingredients**

- M A61K 33/24 • Heavy metals; Compounds thereof

WARNING

Group A61K 33/24 is impacted by reclassification into groups A61K 33/241, A61K 33/242, A61K 33/243, A61K 33/244 and A61K 51/00 - A61K 51/1296. All groups listed in this Warning should be considered in order to perform a complete search.

- M A61K 33/241 • • Lead; Compounds thereof

WARNING

Group A61K 33/241 is incomplete pending reclassification of documents from group A61K 33/24.
Groups A61K 33/24 and A61K 33/241 should be considered in order to perform a complete search.

- M A61K 33/242 • • Gold; Compounds thereof

WARNING

Group A61K 33/242 is incomplete pending reclassification of documents from group A61K 33/24.

Groups A61K 33/24 and A61K 33/242 should be considered in order to perform a complete search.

M A61K 33/243

- Platinum; Compounds thereof

WARNING

Group A61K 33/243 is incomplete pending reclassification of documents from group A61K 33/24.

Groups A61K 33/24 and A61K 33/243 should be considered in order to perform a complete search.

M A61K 33/244

- Lanthanides; Compounds thereof (medicinal preparations containing radioactive lanthanides for use in therapy or testing *in vivo* [A61K 51/00](#))

WARNING

Group A61K 33/244 is incomplete pending reclassification of documents from group A61K 33/24.

Groups A61K 33/24 and A61K 33/244 should be considered in order to perform a complete search.

M A61K 51/00

Preparations containing radioactive substances for use in therapy or testing *in vivo*

WARNING

Groups A61K 51/00 - A61K 51/1296 are incomplete pending reclassification of documents from group A61K 33/24.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: N/A (A61K)

A61K 2300/00

Mixtures or combinations of active ingredients, wherein at least one active ingredient is fully defined in groups [A61K 31/00](#) - [A61K 41/00](#)

NOTE

This code is meant to be allocated in combination with the CPC classification symbol of the active ingredients, and replaces the former **+M+M** Combi symbols used in this subclass

Project: RP0754 (A61L)

A61L 11/00

Methods specially adapted for refuse {(disintegrating medical waste [B02C 19/0075](#); disposal of medical waste ~~B09B 3/0075~~ [B09B 3/00](#))}

Project: RP0757 (A61M)

U A61M 1/00

Suction or pumping devices for medical purposes; Devices for carrying-off, for treatment of, or for carrying-over, body-liquids; Drainage systems (catheters [A61M 25/00](#); tube connectors, tube couplings, valves or branch units specially adapted for medical use [A61M 39/00](#); devices for taking samples of blood [A61B 5/15](#); filters implantable into blood vessels [A61F 2/01](#))

U A61M 1/02

- Blood transfusion apparatus (blood infusion by syringes [A61M 5/14](#))

A61M 1/025

- {Means for agitating or shaking blood containers ([A61M 1/0245](#) takes precedence; shaking in general ~~B01F 11/00~~ [B01F 31/00](#))}

Project: RP0754 (A61M)

- U A61M 5/00 **Devices for bringing media into the body in a subcutaneous, intra-vascular or intramuscular way; Accessories therefor, e.g. filling or cleaning devices, arm-rests ({vaccination appliances for veterinary use [A61D 1/025](#)}; tube connectors, tube couplings, valves or branch units specially adapted for medical use [A61M 39/00](#); containers specially adapted for medical or pharmaceutical purposes [A61J 1/00](#); {combinations of vial and syringe for mixing or transferring their contents [A61J 1/20](#); holders for containers for collecting, storing or administering blood or medical fluids [A61J 1/16](#)})**
- U A61M 5/178 • Syringes
- U A61M 5/31 • Details
- U A61M 5/32 • • Needles; Details of needles pertaining to their connection with syringe or hub (infusion needles [A61M 5/158](#)); Accessories for bringing the needle into, or holding the needle on, the body {([A61M 5/42](#), [A61M 5/46](#) take precedence; guide needles for catheters [A61M 25/065](#)); Devices for protection of needles {(apparatus specially adapted for cleaning or sterilising needles [A61M 5/001](#))}
- A61M 5/3205 • • • {Apparatus for removing or disposing of used needles or syringes, e.g. containers; Means for protection against accidental injuries from used needles (for sharps [A61B 50/362](#); disintegrating apparatus in general [B02C](#), e.g. [B02C 19/0075](#), [B23H 9/001](#); disposal of medical waste in general [B09B 3/0075](#)[B09B 3/00](#); receptacles for refuse disposal in general [B65F 1/00](#))}

Project: RP0759 (A61M)

- A61M 27/00 **Drainage appliance for wounds or the like {, i.e. wound drains, implanted drains} ({negative pressure wound therapy devices [A61M 1/90](#)}; implements for holding wound open [A61B 17/02](#) {; middle ear drainage [A61F 11/002](#)[A61F 11/202](#)})**
- A61M 27/002 • {Implant devices for drainage of body fluids from one part of the body to another (intraocular [A61F 9/00781](#); middle ear [A61F 11/002](#)[A61F 11/202](#))}

Project: MP0515 (A61M)

- U A61M 60/00 **Blood pumps; Devices for mechanical circulatory actuation; Balloon pumps for circulatory assistance (heart stimulation [A61H 31/00](#); heart stimulators for electrotherapy [A61N 1/362](#))**

NOTE

In this main group, it is obligatory to classify all aspects of location, type, medical purpose, driving details, control details, and constructional details other than driving details that are represented in groups [A61M 60/10](#), [A61M 60/20](#), [A61M 60/30](#), [A61M 60/40](#), [A61M 60/50](#) and [A61M 60/80](#). This obligation extends to information that would normally only be considered as additional information.

WARNING

Group [A61M 60/00](#) is impacted by reclassification into groups [A61M 60/10](#) - [A61M 60/90](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U A61M 60/40 • Details relating to driving

WARNING

Group [A61M 60/40](#) is incomplete pending reclassification of documents from group [A61M 60/00](#).

Group [A61M 60/40](#) is also impacted by reclassification into groups [A61M 60/403](#) - [A61M 60/497](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U A61M 60/465

- for devices for mechanical circulatory actuation

WARNING

Groups [A61M 60/465](#) - [A61M 60/495](#) are incomplete pending reclassification of documents from groups [A61M 60/00](#) and [A61M 60/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M A61M 60/489

- • the force acting on the ~~blood-contacting member~~ **actuation means** being magnetic

Project: RP0063-F (A63F)

U A63F 13/00

Video games, i.e. games using an electronically generated display having two or more dimensions {(gaming systems which provide a financial reward [G07F 17/32](#))}

D A63F 13/005
—(Frozen)

- {characterised by the type of game, e.g. ball games, fighting games}

WARNING

Group A63F 13/005 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/80-A63F 13/847.

Until reclassification is complete, groups A63F 13/005 and A63F 13/80-A63F 13/847 should be considered in order to perform a complete search.

D A63F 13/02
—(Frozen)

- Accessories (input or output arrangements for electrical digital computers G06F 3/00)

WARNING

Group A63F 13/02 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/20-A63F 13/245 and A63F 13/98.

Until reclassification is complete, groups A63F 13/02 and A63F 13/20-A63F 13/245 and A63F 13/98 should be considered in order to perform a complete search.

D A63F 13/04
—(Frozen)

- • for aiming at specific areas on the displays, e.g. with photodetecting means

WARNING

Group A63F 13/04 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/20-A63F 13/245, and A63F 13/837.

Until reclassification is complete, groups A63F 13/04 and A63F 13/20-A63F 13/245, and A63F 13/837 should be considered in order to perform a complete search.

D A63F 13/06
—(Frozen)

- • using player-operated means for controlling the position of a specific area display

WARNING

Group A63F 13/06 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/20-A63F 13/245.

A63F 13/06

(Frozen)

(continued)

Until reclassification is complete, groups A63F 13/06 and A63F 13/20 – A63F 13/245 should be considered in order to perform a complete search.

D A63F 13/08
—(Frozen)

- Constructional details or arrangements, e.g. housing, wiring, connections, cabinets, not otherwise provided for

WARNING

Group A63F 13/08 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/90 – A63F 13/98.

Until reclassification is complete, groups A63F 13/08 and A63F 13/90 – A63F 13/98 should be considered in order to perform a complete search.

D A63F 13/10
—(Frozen)

- Control of the course of the game, e.g. start, progress, end

WARNING

Group A63F 13/10 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/40 – A63F 13/88.

Until reclassification is complete, groups A63F 13/10 and A63F 13/40 – A63F 13/88 should be considered in order to perform a complete search.

D A63F 13/12
—(Frozen)

- involving interaction between a plurality of game devices, e.g. transmisson or distribution systems {{protocols for networked virtual reality, networked games H04L 29/06034}}

WARNING

Group A63F 13/12 is no longer used for the classification of documents as of September 1, 2014. The backfile of this group is being reclassified into groups A63F 13/30 – A63F 13/88.

Until reclassification is complete, groups A63F 13/12 and A63F 13/30 – A63F 13/88 should be considered in order to perform a complete search.

M A63F 13/20

- Input arrangements for video game devices

WARNING

Group(s) A63F 13/20-A63F 13/98 are incomplete pending reclassification of documents from group(s) A63F 13/00-A63F 13/12.

Until reclassification is complete, groups A63F 13/20-A63F 13/98 and A63F 13/00-A63F 13/12 should be considered in order to perform a complete search.

Project: RP0737 (A63H)

U A63H 3/00

Dolls {{puppets or marionettes for shows or theatres [A63J 19/006](#)}}

NOTE

In this group, the following term is used with the meaning indicated:

- "doll" includes a toy animal

U A63H 3/36

- Details; Accessories

T A63H 3/52

- Dolls' houses, furniture, or other equipment {{simulating liquid flow [A63H 33/3022](#)}}; Dolls' clothing [or footwear](#) ~~(dolls' footwear A43B 3/28)~~

Project: RP0736 (B01D)

- M B01D 45/00 - B01D 59/00** **Separating dispersed particles from gases or vapours (~~suction cleaner filters A47L 9/10; filters for breathing-protection purposes A62B 23/00; filtering air for vehicles B60H 3/06; separating pneumatically-conveyed materials from propelling gas B65G 53/60; exhaust or silencing apparatus for machines or engines having means for removing solid constituents of exhaust F01N 3/02; air cleaners for the intakes of gas-turbine or jet-propulsion plants F02C 7/05, of combustion engines F02M 35/024, of compressors F04B 39/16; filtering in air-conditioning F24F 3/16, F24F 8/10~~)**
- M B01D 46/00** **Filters ~~{, i.e. particle separators}~~ or filtering processes specially modified for separating dispersed particles from gases or vapours (filtering elements ~~B01D 23/00~~ ~~B01D 24/00~~ ~~B01D 35/00~~; filtering material ~~B01D 39/00~~; their regeneration outside the filters ~~B01D 41/00~~)**
- D B01D 46/0019 • {with multiple filtering elements, characterised by their mutual disposition}
<administratively transferred to [B01D 46/56](#)>
- D B01D 46/002 • • {connected in parallel}
<administratively transferred to [B01D 46/58](#)>
- D B01D 46/0021 • • • {arranged concentrically or coaxially}
<administratively transferred to [B01D 46/60](#)>
- D B01D 46/0023 • • {connected in series}
<administratively transferred to [B01D 46/62](#)>
- D B01D 46/0024 • • • {arranged concentrically or coaxially}
<administratively transferred to [B01D 46/64](#)>
- D B01D 46/0026 • • • {Protecting screens at filter inlet or outlet}
<administratively transferred to [B01D 46/645](#)>
- D B01D 46/0057 • {Regenerating the filter material in the filter (B01D 46/04, B01D 46/48 take precedence)}
<administratively transferred to [B01D 46/66](#)>
- D B01D 46/0058 • • {Devices for taking out of action one or more units of multi-unit filters}
<administratively transferred to [B01D 46/90](#)>
- D B01D 46/006 • • {Chemical processes for the removal of the retained particles, e.g. by burning of processes}
<administratively transferred to [B01D 46/80](#)>
- D B01D 46/0061 • • • {making use of catalysts}
<administratively transferred to [B01D 46/82](#)>
- D B01D 46/0063 • • • {by heating only}
<administratively transferred to [B01D 46/84](#)>
- D B01D 46/0064 • • {by means of acting on the cake side and moving with respect to the filtering elements}
<administratively transferred to [B01D 46/68](#)>
- D B01D 46/0065 • • • {by scrapers, brushes, nozzles or the like}
<administratively transferred to [B01D 46/681](#)>
- D B01D 46/0067 • • {by acting counter-currently on the filtering surface (e.g. flushing)}
<administratively transferred to [B01D 46/70](#)>
- D B01D 46/0068 • • • {with pressurised gas, e.g. pulsed air}
<administratively transferred to [B01D 46/71](#)>

- N B01D 46/68
- • by means acting on the cake side involving movement with regard to the filter elements
- NOTE
Groups [B01D 46/68](#) - [B01D 46/78](#) are only for dry processes.
- Q B01D 46/681
- • • by scrapers, brushes or the like
- WARNING
Group [B01D 46/681](#) is impacted by reclassification into group [B01D 46/682](#).
Groups [B01D 46/681](#) and [B01D 46/682](#) should be considered in order to perform a complete search.
- N B01D 46/682
- • • by nozzles
- WARNING
Group [B01D 46/682](#) is incomplete pending reclassification of documents from group [B01D 46/681](#).
Groups [B01D 46/681](#) and [B01D 46/682](#) should be considered in order to perform a complete search.
- N B01D 46/69
- • by means acting on the cake side without movement with respect to the filter elements, e.g. fixed nozzles
- N B01D 46/70
- • by acting counter-currently on the filtering surface, e.g. by flushing on the non-cake side of the filter
- N B01D 46/71
- • • with pressurised gas, e.g. pulsed air
- N B01D 46/715
- • • • {Using pressurized gas at supersonic velocities}
- N B01D 46/72
- • • with backwash arms, shoes or nozzles
- N B01D 46/74
- • by forces created by movement of the filter element
- N B01D 46/76
- • • involving vibrations
- N B01D 46/762
- • • • involving sonic or ultrasonic waves
- N B01D 46/78
- • • involving centrifugal forces
- N B01D 46/785
- • {by electrical means, e.g. for the generation of electrostatic forces in order to reject particles}
- N B01D 46/79
- • by liquid process
- N B01D 46/80
- • Chemical processes for the removal of the retained particles, e.g. by burning
- N B01D 46/82
- • • with catalysts
- N B01D 46/84
- • • by heating only
- N B01D 46/86
- • Cleaning the filter surface by interrupting suction so that the filter cake falls by gravity
- N B01D 46/88
- Replacing filter elements
- N B01D 46/90
- Devices for taking out of action one or more units of multi-unit filters, e.g. for regeneration or maintenance

Project: RP0764 (B01D)

- M B01D 50/00
- Combinations of **methods or** devices for separating particles from gases or vapours
- NOTE
Group [B01D 50/10](#) takes precedence over groups [B01D 50/20](#) - [B01D 50/60](#).
- D B01D 50/002
- {Combinations of devices relating to groups B01D 45/00 and B01D 46/00}
<administratively transferred to [B01D 50/20](#)>

- D B01D 50/004 • {Combinations of devices relating to groups B01D 45/00 and B01D 47/00}
<administratively transferred to [B01D 50/40](#)>
- D B01D 50/006 • {Combinations of devices relating to groups B01D 46/00 and B01D 47/00}
<administratively transferred to [B01D 50/60](#)>
- D B01D 50/008 • {Combinations of devices relating to groups B01D 45/00 and B01D 46/00 and B01D 47/00}
<administratively transferred to [B01D 50/10](#)>
- N B01D 50/10 • Combinations of devices covered by groups [B01D 45/00](#), [B01D 46/00](#) and [B01D 47/00](#)
- N B01D 50/20 • Combinations of devices covered by groups [B01D 45/00](#) and [B01D 46/00](#)
- N B01D 50/40 • Combinations of devices covered by groups [B01D 45/00](#) and [B01D 47/00](#)
- N B01D 50/60 • Combinations of devices covered by groups [B01D 46/00](#) and [B01D 47/00](#)

Project: RP0757 (B01F)

- M B01F **MIXING, e.g. DISSOLVING, EMULSIFYING, OR DISPERSING**
(**{miscellaneous implements for preparing food, e.g. machines for domestic use for mixing, egg-whisks, cream beaters A47J 43/00}; mixing paints B44D 3/06; {apparatus specially adapted for mixing radioactively contaminated material G21F 9/008}**)

NOTE

1. This subclass covers:

- agitation or homogenisation of products formed by a combination of two or more components with the purpose of obtaining a homogeneous composition or homogeneous conditions in the mass of material;
- stirring of a single material with the purpose of obtaining homogeneous conditions in the mass of material;
- mixing, agitation and homogenisation of materials, irrespective of the application in which it is produced, whenever the device or the method are directed to achieve the desired effect.

~~1.~~ 2. In this subclass, the following term **or-expression** is used with the meaning indicated:

- "mixing" **also** covers stirring of a single material.

WARNING

~~1.~~ The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

B01F 17/02-B01F 17/56 covered by **B01F 17/00-B01F 17/0092**

~~2.~~ 1. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- D B01F 1/00 **Dissolving** (~~{without involving chemical reactions; B01F 3/04099 takes precedence;}~~ **separating by dissolving B01D; dissolving to effect cooling F25D 5/00**)
<administratively transferred to [B01F 21/00](#)>
- D B01F 1/0005 • {Methods}
<administratively transferred to [B01F 21/02](#)>
- D B01F 1/0011 • {using driven stirrers}
<administratively transferred to [B01F 21/10](#)>
- D B01F 1/0016 • {comprising constructions for blocking or redispersing undissolved solids, e.g. sieves, separators, guiding constructions (B01F 1/0033 takes precedence)}
<administratively transferred to [B01F 21/15](#)>

- D B01F 1/0022
- {using flow mixing}
- <administratively transferred to [B01F 21/20](#)>
- D B01F 1/0027
- • {using additional holders in conduits, containers or pools for keeping the solid material in place, e.g. supports, receptacles}
- <administratively transferred to [B01F 21/22](#)>
- D B01F 1/0033
- • • {comprising constructions for blocking or redispersing undissolved solids}
- <administratively transferred to [B01F 21/221](#)>
- D B01F 1/0038
- {Dissolving systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
- <administratively transferred to [B01F 21/30](#)>
- D B01F 2001/0044
- {characterized by the state of the material being dissolved}
- <administratively transferred to [B01F 21/40](#) INV>
- D B01F 2001/005
- • {Molten solids (mixing the melt B01F 3/08)}
- <administratively transferred to [B01F 21/401](#) INV>
- D B01F 2001/0055
- • {characterised by the configuration, form or shape of the solid material, e.g. in the form of tablets, blocks}
- <administratively transferred to [B01F 21/402](#) INV>
- D B01F 2001/0061
- • • {in the form of tablets stored in containers, canisters, receptacles}
- <administratively transferred to [B01F 21/4021](#) INV>
- D B01F 2001/0066
- • {Solid carbon dioxide or dry ice}
- <administratively transferred to [B01F 21/403](#) INV>
- D B01F 2001/0072
- {Elements used for separating or keeping undissolved material in the mixer}
- <administratively transferred to [B01F 21/50](#) INV>
- D B01F 2001/0077
- • {Tablet canisters provided with perforated walls, sieves, grids or filters}
- <administratively transferred to [B01F 21/501](#) INV>
- D B01F 2001/0083
- • {Baffles}
- <administratively transferred to [B01F 21/502](#) INV>
- D B01F 2001/0088
- • {Filters}
- <administratively transferred to [B01F 21/503](#) INV>
- D B01F 2001/0094
- • {Sieves, i.e. perforated plates or walls}
- <administratively transferred to [B01F 21/504](#) INV>
- D B01F 3/00
- Mixing, e.g. dispersing, emulsifying, according to the phases to be mixed**
{{C08J 3/02 takes precedence}}
- <administratively transferred to [B01F 23/00](#)>
- D B01F 2003/0007
- {Maintaining the aggregation state of the mixed materials}
- <administratively transferred to [B01F 23/02](#) INV>
- D B01F 2003/0014
- • {Maintaining mixed ingredients in movement to prevent crystallisation of the ingredients after mixing}
- <administratively transferred to [B01F 23/021](#) INV>
- D B01F 2003/0021
- • {Preventing precipitation of solid ingredients during or after mixing by adding a solvent}
- <administratively transferred to [B01F 23/022](#) INV>

- D B01F 2003/0028
- {Preventing sedimentation, conglomeration, agglomeration of solid ingredients during or after mixing by maintaining mixed ingredients in movement}
- <administratively transferred to [B01F 23/023](#) INV>
- D B01F 2003/0035
- {Maintaining mixed ingredients in movement to prevent separation of the ingredients after mixing}
- <administratively transferred to [B01F 23/024](#) INV>
- D B01F 2003/0042
- {Specific aggregation state of one or more of the phases to be mixed}
- <administratively transferred to [B01F 23/04](#) INV>
- D B01F 2003/005
- {Mixing ingredients in more than two different agglomeration states, phases}
- <administratively transferred to [B01F 23/041](#) INV>
- D B01F 2003/0057
- {Mixing cryogenic aerosols, i.e. mixtures of gas with solid particles in cryogenic condition, with other ingredients}
- <administratively transferred to [B01F 23/042](#) INV>
- D B01F 2003/0064
- {Mixing fluids or with fluids in a supercritical state, in supercritical conditions, variable density fluids}
- <administratively transferred to [B01F 23/043](#) INV>
- D B01F 2003/0071
- {Mixing phases by adding a very small quantity of one of the phases, microdosing}
- <administratively transferred to [B01F 23/06](#) INV>
- D B01F 2003/0078
- {Adding a small quantity or concentration of an additional phase in a main phase, e.g. acting as a carrier phase}
- <administratively transferred to [B01F 23/061](#) INV>
- D B01F 2003/0085
- {Mixing ingredients in very small quantity, adding microingredients, microconcentration, e.g. adding vitamins, minerals, proteins, enzymes, hormones, antibiotics, worm medicines}
- <administratively transferred to [B01F 23/062](#) INV>
- D B01F 3/0092
- {Mixing systems, i.e. flow charts or diagrams for components having more than two different of having undetermined agglomeration states, e.g. supercritical state (mixing plant B01F 13/10)}
- <administratively transferred to [B01F 23/09](#)>
- D B01F 3/02
- gases with gases or vapours {(for preparing respiratory gases or vapours A61M 16/12)}
- <administratively transferred to [B01F 23/10](#)>
- D B01F 3/022
- {with vaporisation of a liquid}
- <administratively transferred to [B01F 23/12](#)>
- D B01F 3/024
- {with moving mixing elements, e.g. with liquid seal (B01F 3/022 takes precedence)}
- <administratively transferred to [B01F 23/14](#)>
- D B01F 3/026
- {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
- <administratively transferred to [B01F 23/19](#)>
- D B01F 3/028
- • {characterised by the construction of the controlling means}
- <administratively transferred to [B01F 23/191](#)>
- D B01F 3/04
- gases or vapours with liquids (mixing non-alcoholic beverages with gases A23L 2/54 {- for medical purposes A61M 16/14})
- <administratively transferred to [B01F 23/20](#)>

- D B01F 3/04007 . . {Introducing a liquid into a gaseous medium, e.g. preparation of aerosols (for air-conditioning F24F 6/00)}
<administratively transferred to [B01F 23/21](#)>
- D B01F 3/04014 . . . {Methods}
<administratively transferred to [B01F 23/211](#)>
- D B01F 3/04021 . . . {by spraying or atomising of the liquid (apparatus for spraying or atomising *per se* B05B; evaporating by spraying B01D 1/16)}
<administratively transferred to [B01F 23/213](#)>
- D B01F 3/04028 {using rotating elements, e.g. rolls, brushes}
<administratively transferred to [B01F 23/2131](#)>
- D B01F 3/04035 {for spraying the liquid radially by centrifugal force}
<administratively transferred to [B01F 23/21311](#)>
- D B01F 3/04042 {with additional rotating elements mounted on the same axis, e.g. fans, for moving the gas}
<administratively transferred to [B01F 23/21312](#)>
- D B01F 3/04049 {using nozzles}
<administratively transferred to [B01F 23/2132](#)>
- D B01F 3/04056 {High pressure atomization, i.e. the liquid is atomized and sprayed by a jet at high pressure}
<administratively transferred to [B01F 23/21321](#)>
- D B01F 3/04063 {Internal mixer atomization, i.e. liquid and gas are mixed and atomized in a jet nozzle before spraying}
<administratively transferred to [B01F 23/21322](#)>
- D B01F 3/0407 {using electric, sonic or ultrasonic energy}
<administratively transferred to [B01F 23/2133](#)>
- D B01F 3/04078 . . . {using a gas-liquid mixing column or tower (absorbing units for separating gases or vapours B01D 53/18)}
<administratively transferred to [B01F 23/214](#)>
- D B01F 3/04085 . . . {by forcing the gas through absorbent pads containing the liquid}
<administratively transferred to [B01F 23/215](#)>
- D B01F 2003/04092 . . . {by using liquefied or cryogenic gases as liquid component}
<administratively transferred to [B01F 23/216](#) INV>
- D B01F 3/04099 . . {Introducing a gas or vapour into a liquid medium, e.g. producing aerated liquids (methods for the preparation of non-alcoholic beverages, e.g. of carbonated water A23L 2/00; bottling liquids, e.g. combined with aerating or carbonating B67C 3/00; dispensing beverages on draught combined with carbonating B67D 1/0057, B67D 1/025, B67D 1/0406, B67D 1/0418; dispensing beverages by gas pressure from storage containers, e.g. syphons B67D 1/04; biological treatment of water, waste water or sewage C02F 3/00; impregnating wine with carbon dioxide C12G 1/06; gas introduction means for enzymology or microbiology apparatus C12M 1/04)}
<administratively transferred to [B01F 23/23](#)>
- D B01F 3/04106 . . . {the gas being introduced by bubbling, e.g. within receptacles or tanks (B01F 3/04531, B01F 3/04787 take precedence; introducing gas for agitation only B01F 13/02)}
<administratively transferred to [B01F 23/231](#)>

- D B01F 3/04113 {Arrangement or manipulation of the gas bubbling devices}
<administratively transferred to [B01F 23/23105](#)>
- D B01F 3/0412 {Mounting the bubbling devices or the diffusers (B01F 3/04241 takes precedence)}
<administratively transferred to [B01F 23/2311](#)>
- D B01F 2003/04127 {comprising the use of flow guiding elements adjacent or above the gas stream}
<administratively transferred to [B01F 23/23112](#) INV>
- D B01F 2003/04134 {the flow guiding elements being baffles, tubes or walls}
<administratively transferred to [B01F 23/231121](#) INV>
- D B01F 2003/04141 {the flow guiding elements being dome-shaped elements, i.e. for trapping air, e.g. cap-, umbrella-, inversed cone-shaped}
<administratively transferred to [B01F 23/231122](#) INV>
- D B01F 2003/04148 {characterized by the disposition of the bubbling elements in particular configurations, patterns or arrays}
<administratively transferred to [B01F 23/23113](#) INV>
- D B01F 2003/04156 {characterized by the way in which the different elements of the bubbling installation are mounted}
<administratively transferred to [B01F 23/23114](#) INV>
- D B01F 2003/04163 {Mounting auxiliary devices, e.g. pumps, compressors in a particular place on the bubbling installation, e.g. under water}
<administratively transferred to [B01F 23/231141](#) INV>
- D B01F 2003/0417 {Mounting the gas transporting elements, i.e. connections between conduits}
<administratively transferred to [B01F 23/231142](#) INV>
- D B01F 2003/04177 {Mounting the bubbling elements, diffusers, e.g. on conduits, using connecting elements; Connections therefor}
<administratively transferred to [B01F 23/231143](#) INV>
- D B01F 2003/04184 {characterized by the way in which the bubbling devices are mounted within the receptacle}
<administratively transferred to [B01F 23/23115](#) INV>
- D B01F 2003/04191 {the bubbling devices being fixed, anchored in the bottom}
<administratively transferred to [B01F 23/231151](#) INV>
- D B01F 2003/04198 {the bubbling devices being supported, e.g. on cables or laying on the bottom}
<administratively transferred to [B01F 23/231152](#) INV>
- D B01F 2003/04205 {the bubbling devices being suspended on a supporting construction, i.e. not on a floating construction}
<administratively transferred to [B01F 23/231153](#) INV>
- D B01F 2003/04212 {the bubbling devices being provided with ballast to keep them floating under the surface, i.e. when the bubbling devices are lighter than the liquid}
<administratively transferred to [B01F 23/231154](#) INV>
- D B01F 2003/04219 {the bubbling devices floating and having a pendulum movement, going to and from, moving in alternating directions}
<administratively transferred to [B01F 23/231155](#) INV>

- D B01F 2003/04226 {the bubbling devices floating and having a rotating movement around a central vertical axis}
<administratively transferred to [B01F 23/231156](#) INV>
- D B01F 2003/04234 {Means for manipulating the bubbling constructions and/or elements, e.g. for raising or lowering them}
<administratively transferred to [B01F 23/23116](#) INV>
- D B01F 3/04241 {Diffusers}
<administratively transferred to [B01F 23/2312](#)>
- D B01F 3/04248 {having injection means, e.g. nozzles with circumferential outlet}
<administratively transferred to [B01F 23/23121](#)>
- D B01F 3/04255 {having elements opening under air pressure, e.g. valves}
<administratively transferred to [B01F 23/23122](#)>
- D B01F 3/04262 {consisting of rigid porous or perforated material}
<administratively transferred to [B01F 23/23123](#)>
- D B01F 3/04269 {consisting of flexible porous or perforated material, e.g. fabric}
<administratively transferred to [B01F 23/23124](#)>
- D B01F 2003/04276 {characterized by the way in which they are assembled or mounted; Fabricating the parts of the diffusers}
<administratively transferred to [B01F 23/23125](#) INV>
- D B01F 2003/04283 {characterized by the shape of the diffuser element}
<administratively transferred to [B01F 23/23126](#) INV>
- D B01F 2003/0429 {having a box- or bloc-shape, being in the form of aeration stones}
<administratively transferred to [B01F 23/231261](#) INV>
- D B01F 2003/04297 {having disc shape}
<administratively transferred to [B01F 23/231262](#) INV>
- D B01F 2003/04304 {having dome-, cap-, inversed cone-shape}
<administratively transferred to [B01F 23/231263](#) INV>
- D B01F 2003/04312 {being in the form of plates, flat beams, flat membranes or films}
<administratively transferred to [B01F 23/231264](#) INV>
- D B01F 2003/04319 {being tubes, tubular elements, cylindrical elements, set of tubes}
<administratively transferred to [B01F 23/231265](#) INV>
- D B01F 2003/04326 {being in the form of rings or annular elements}
<administratively transferred to [B01F 23/231266](#) INV>
- D B01F 2003/04333 {being axially stacked discs, rings, plates}
<administratively transferred to [B01F 23/231267](#) INV>
- D B01F 2003/0434 {being helically wound, coiled and joined bands, wires}
<administratively transferred to [B01F 23/231268](#) INV>
- D B01F 2003/04347 {being spirally wound, coiled tubes or spirally wound, coiled and joined bands, wires}
<administratively transferred to [B01F 23/231269](#) INV>
- D B01F 2003/04354 {characterized by the nature of the diffuser gas outlet}
<administratively transferred to [B01F 23/2312](#) INV>
- D B01F 2003/04361 {Perforations}
<administratively transferred to [B01F 23/231231](#) INV>

- D B01F 2003/04368 {Slits, cut-out openings}
<administratively transferred to [B01F 23/231232](#) INV>
- D B01F 2003/04375 {Screens, nets, grades, grids}
<administratively transferred to [B01F 23/23127](#) INV>
- D B01F 2003/04382 {Fabric in the form of woven, knitted, braided, non-woven or flocculated fibers or filaments}
<administratively transferred to [B01F 23/231245](#) INV>
- D B01F 2003/0439 {Pores}
<administratively transferred to [B01F 23/23123](#) INV>
- D B01F 2003/04397 {Foam-like}
<administratively transferred to [B01F 23/231233](#) INV>
- D B01F 2003/04404 {Dissolving, hollow fiber membranes}
<administratively transferred to [B01F 23/231244](#) INV>
- D B01F 2003/04411 {having specific properties or elements attached thereto}
<administratively transferred to [B01F 23/23128](#) INV>
- D B01F 2003/04418 {Made of or comprising a biocide}
<administratively transferred to [B01F 23/231281](#) INV>
- D B01F 2003/04425 {Made of or comprising a material able to store a gas which is released when water flows through it}
<administratively transferred to [B01F 23/231282](#) INV>
- D B01F 2003/04432 {Having elements to protect the parts of the diffusers, e.g. from clogging when not in use}
<administratively transferred to [B01F 23/231283](#) INV>
- D B01F 3/04439 . . . {Methods}
<administratively transferred to [B01F 23/2319](#)>
- D B01F 3/04446 . . . {Making foam (for cocoa products A23G 1/105; for sweet meats A23G 3/0221; for fire-extinguishing foam A62C 5/02; spray pistols for making foam B05B 7/0018; foam used in forming crevices or fractures for stimulation of oil production E21B 43/26)}
<administratively transferred to [B01F 23/235](#)>
- D B01F 3/04453 . . . {using driven stirrers}
<administratively transferred to [B01F 23/2351](#)>
- D B01F 3/0446 . . . {using flow mixing means for introducing the gas, e.g. in conduits or in vessels (B01F 3/04106, B01F 3/0876 take precedence; distillation in which liquids are contacted with gaseous media B01D 3/00; jet regulation with aerating means for fresh water plumbing installations E03C 1/084)}
<administratively transferred to [B01F 23/232](#)>
- D B01F 3/04468 . . . {by moving liquid and gas in counter current (absorbing units for separating gases or vapours B01D 53/18; in heat exchange apparatus F28C 3/06)}
<administratively transferred to [B01F 23/2321](#)>
- D B01F 3/04475 . . . {the liquid flowing in a thin film to absorb the gas (fractional distillation with fractionating columns in which vapour bubbles through liquid B01D 3/16)}
<administratively transferred to [B01F 23/23211](#)>

- D B01F 3/04482 {the liquid film or layer flowing over a horizontal or inclined surface, e.g. perforated}
<administratively transferred to [B01F 23/23211](#)>
- D B01F 3/04489 {the liquid film or layer flowing over a vertical surface, e.g. a mesh}
<administratively transferred to [B01F 23/23212](#)>
- D B01F 3/04496 {using columns, e.g. multistaged columns}
<administratively transferred to [B01F 23/2322](#)>
- D B01F 3/04503 {by circulating the flow in guiding constructions or conduits}
<administratively transferred to [B01F 23/2323](#)>
- D B01F 3/0451 {being at least partially immersed in the liquid, e.g. in a closed circuit (B01F 3/04602 takes precedence)}
<administratively transferred to [B01F 23/23231](#)>
- D B01F 3/04517 {The conduits being vertical draft pipes with a lower intake end and an upper exit end}
<administratively transferred to [B01F 23/232311](#)>
- D B01F 3/04524 {the guiding constructions being baffles for guiding the flow up-and-down or from left-to-right}
<administratively transferred to [B01F 23/232312](#)>
- D B01F 3/04531 . . . {using driven stirrers with completely immersed stirring elements (B01F 3/04453 takes precedence; surface aerating with stirrers near to the surface B01F 3/04765; flotation machines B03D 1/16)}
<administratively transferred to [B01F 23/233](#)>
- D B01F 3/04539 {characterised by the introduction of the gas along the axis of the stirrer or along the stirrer elements}
<administratively transferred to [B01F 23/2331](#)>
- D B01F 2003/04546 {through a hollow stirrer axis}
<administratively transferred to [B01F 23/23311](#) INV>
- D B01F 2003/04553 {through a conduit surrounding the stirrer axis}
<administratively transferred to [B01F 23/23312](#) INV>
- D B01F 2003/0456 {through a separate conduit substantially parallel with the stirrer axis}
<administratively transferred to [B01F 23/23313](#) INV>
- D B01F 2003/04567 {through a hollow stirrer element}
<administratively transferred to [B01F 23/23314](#) INV>
- D B01F 2003/04574 {through a hollow guide surrounding the stirrer element}
<administratively transferred to [B01F 23/23315](#) INV>
- D B01F 2003/04581 {through a separate hollow guide substantially parallel with the stirrer element}
<administratively transferred to [B01F 23/23316](#) INV>
- D B01F 3/04588 {the stirrer rotating about a horizontal axis; Stirrers therefor}
<administratively transferred to [B01F 23/2332](#)>
- D B01F 3/04595 {Single stirrer-drive aerating units, e.g. with the stirrer-head pivoting around an horizontal axis}
<administratively transferred to [B01F 23/2333](#)>
- D B01F 3/04602 {provided with stationary guiding means surrounding at least partially the stirrer}
<administratively transferred to [B01F 23/2334](#)>

- D B01F 3/04609 {with tubes surrounding the stirrer}
<administratively transferred to [B01F 23/23341](#)>
- D B01F 3/04617 {the stirrer being of the centrifugal type, e.g. with a surrounding stator}
<administratively transferred to [B01F 23/23342](#)>
- D B01F 2003/04624 {characterised by the direction of introduction of the gas relative to the stirrer}
<administratively transferred to [B01F 23/2335](#) INV>
- D B01F 2003/04631 {the gas moving along the axis of rotation}
<administratively transferred to [B01F 23/23351](#) INV>
- D B01F 2003/04638 {the gas moving perpendicular to the axis of rotation}
<administratively transferred to [B01F 23/23352](#) INV>
- D B01F 2003/04645 {the gas being sucked towards the rotating stirrer}
<administratively transferred to [B01F 23/23353](#) INV>
- D B01F 2003/04652 {the gas being driven away from the rotating stirrer}
<administratively transferred to [B01F 23/23354](#) INV>
- D B01F 2003/04659 {characterised by the location of the place of introduction of the gas relative to the stirrer}
<administratively transferred to [B01F 23/2336](#) INV>
- D B01F 2003/04666 {the gas being introduced in a guide tube surrounding at least partially the axis of the stirrer}
<administratively transferred to [B01F 23/23361](#) INV>
- D B01F 2003/04673 {the gas being introduced under the stirrer}
<administratively transferred to [B01F 23/23362](#) INV>
- D B01F 2003/0468 {the gas being introduced above the stirrer}
<administratively transferred to [B01F 23/23363](#) INV>
- D B01F 2003/04687 {the gas being introduced between the stirrer elements}
<administratively transferred to [B01F 23/23364](#) INV>
- D B01F 2003/04695 {at the stirrer axis}
<administratively transferred to [B01F 23/233641](#) INV>
- D B01F 2003/04702 {at the stirrer elements}
<administratively transferred to [B01F 23/233642](#) INV>
- D B01F 2003/04709 {the gas being introduced at the radial periphery of the stirrer}
<administratively transferred to [B01F 23/23365](#) INV>
- D B01F 2003/04716 {the gas being introduced in front of the stirrer}
<administratively transferred to [B01F 23/23366](#) INV>
- D B01F 2003/04723 {the gas being introduced behind the stirrer}
<administratively transferred to [B01F 23/23367](#) INV>
- D B01F 3/0473 . . . {Surface aerating, e.g. by cascading, spraying or projecting a liquid into a gaseous atmosphere (direct-contact heat exchange apparatus, the heat-exchange media being a liquid and a gas or a vapour F28C 3/06)}
<administratively transferred to [B01F 23/234](#)>
- D B01F 3/04737 {by cascading, spraying or projecting a liquid into a gaseous atmosphere (B01F 3/04765 takes precedence)}
<administratively transferred to [B01F 23/2341](#)>

- D B01F 3/04744 {Surface aerating by cascading the liquid}
<administratively transferred to [B01F 23/23411](#)>
- D B01F 3/04751 {Surface aerating using liquid falling from orifices in a gaseous atmosphere, the orifices being exits from perforations, tubes, chimneys}
<administratively transferred to [B01F 23/23412](#)>
- D B01F 3/04758 {Surface aerating using nozzles for projecting the liquid as a jet}
<administratively transferred to [B01F 23/23413](#)>
- D B01F 3/04765 {with stirrers near to the liquid surface, e.g. partially immersed, for spraying the liquid in the gas or for sucking gas into the liquid, e.g. using stirrers rotating around a horizontal axis or using centrifugal force}
<administratively transferred to [B01F 23/2342](#)>
- D B01F 3/04773 {the stirrers rotating about a vertical axis}
<administratively transferred to [B01F 23/23421](#)>
- D B01F 3/0478 {Stirrers therefor}
<administratively transferred to [B01F 23/234211](#)>
- D B01F 3/04787 . . . {Apparatus for aerating or carbonating beverages (B01F 3/0446, B01F 3/04978 take precedence; using effervescence-generating compositions, e.g. carbon dioxide tablets A23L 2/40)}
<administratively transferred to [B01F 23/236](#)>
- D B01F 3/04794 {for aerating or carbonating beverages within containers, e.g. bottles}
<administratively transferred to [B01F 23/2361](#)>
- D B01F 3/04801 {Portable appliances comprising a gas cartridge}
<administratively transferred to [B01F 23/23611](#)>
- D B01F 3/04808 {for aerating or carbonating within receptacles or tanks, e.g. distribution machines (B01F 3/04794 takes precedence)}
<administratively transferred to [B01F 23/2362](#)>
- D B01F 3/04815 {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
<administratively transferred to [B01F 23/2363](#)>
- D B01F 2003/04822 {Using security elements, e.g. valves, for relieving overpressure}
<administratively transferred to [B01F 23/2364](#) INV>
- D B01F 3/04829 . . . {Parts; Accessories}
<administratively transferred to [B01F 23/2366](#)>
- D B01F 3/04836 {Mixing receptacles, e.g. tanks, vessels, reactors, being completely closed, e.g. hermetically closed}
<administratively transferred to [B01F 23/2368](#)>
- D B01F 2003/04843 . . . {characterized by the gas being introduced or the material in which the gas is introduced}
<administratively transferred to [B01F 23/237](#) INV>
- D B01F 2003/04851 {characterized by the gas being introduced}
<administratively transferred to [B01F 23/2376](#) INV>
- D B01F 2003/04858 {in the form of microbubbles, e.g. to obtain aphrons}
<administratively transferred to [B01F 23/2373](#) INV>
- D B01F 2003/04865 {Aerating, i.e. introducing oxygen-containing gas in liquids}
<administratively transferred to [B01F 23/23761](#) INV>

- D B01F 2003/04872 {Normal-air}
<administratively transferred to [B01F 23/237611](#) INV>
- D B01F 2003/04879 {Oxygen}
<administratively transferred to [B01F 23/237612](#) INV>
- D B01F 2003/04886 {Ozone}
<administratively transferred to [B01F 23/237613](#) INV>
- D B01F 2003/04893 {Carbonating liquids}
<administratively transferred to [B01F 23/23762](#) INV>
- D B01F 2003/049 {Beverages}
<administratively transferred to [B01F 23/237621](#) INV>
- D B01F 2003/04907 {Chlorine or chlorine-containing gases}
<administratively transferred to [B01F 23/23763](#) INV>
- D B01F 2003/04914 {Hydrogenating liquids}
<administratively transferred to [B01F 23/23764](#) INV>
- D B01F 2003/04921 {Nitrogenating liquids}
<administratively transferred to [B01F 23/23765](#) INV>
- D B01F 2003/04929 {Sulphurating liquids, e.g. introducing sulphur dioxide}
<administratively transferred to [B01F 23/23766](#) INV>
- D B01F 2003/04936 {Introducing steam, damp in liquids}
<administratively transferred to [B01F 23/23767](#) INV>
- D B01F 2003/04943 {characterized by the material in which the gas is introduced}
- D B01F 2003/0495 {Dispersion or a suspension}
- D B01F 2003/04957 {Emulsion}
- D B01F 2003/04964 {Melt, i.e. in a molten, heated solid}
- D B01F 2003/04971 {Slurry}
- D B01F 3/04978 . . . {using vibrations, electrical or magnetical energy, radiations}
<administratively transferred to [B01F 23/238](#)>
- D B01F 3/04985 . . {Mixing systems, i.e. flow charts or diagrams}
<administratively transferred to [B01F 23/29](#)>
- D B01F 3/04992 . . . {for obtaining foams or aerosols}
<administratively transferred to [B01F 23/291](#)>
- D B01F 3/06 . gases or vapours with solids
<administratively transferred to [B01F 23/30](#)>
- D B01F 2003/061 . . {by introducing solids in gas volumes}
<administratively transferred to [B01F 23/32](#) INV>
- D B01F 2003/063 . . {by introducing gases in solid materials, e.g. in masses of powder or particles}
<administratively transferred to [B01F 23/34](#) INV>
- D B01F 2003/065 . . . {by introducing steam, e.g. for wetting the solids}
<administratively transferred to [B01F 23/341](#) INV>
- D B01F 2003/066 . . {by mixing in fluidised bed state}
<administratively transferred to [B01F 23/36](#) INV>
- D B01F 3/068 . . {Mixing systems, i.e. flow charts or diagrams}
<administratively transferred to [B01F 23/39](#)>

- D B01F 3/08
 - ~~liquids with liquids; Emulsifying~~ {(B01F 13/0222 takes precedence; dispensing beverages on draught combined with mixing B67D 1/0015; B67D 1/0043)}
 - <administratively transferred to [B01F 23/40](#)>
- D B01F 3/0803
 - • {Methods (B01F 3/0811 takes precedence)}
 - <administratively transferred to [B01F 23/405](#)>
- D B01F 3/0807
 - • {Emulsifying (homogenising milk A01J 11/16; for adding a water-fuel emulsion in engine-pertinent apparatus F02M 25/0228; for preparing emulsion of liquid fuel with other fluid(s) for feeding combustion apparatus F23K 5/12)}
 - <administratively transferred to [B01F 23/41](#)>
- D B01F 3/0811
 - • • {Methods}
 - <administratively transferred to [B01F 23/4105](#)>
- D B01F 3/0815
 - • • {using heat, vibrations, electrical or magnetical energy}
 - <administratively transferred to [B01F 23/411](#)>
- D B01F 3/0819
 - • • • {using vibrations}
 - <administratively transferred to [B01F 23/4111](#)>
- D B01F 2003/0823
 - • • {characterized by the internal structure of the emulsion}
 - <administratively transferred to [B01F 23/414](#) INV>
- D B01F 2003/0826
 - • • • {High internal phase ratio [HIPR] emulsions, e.g. having high percentage of internal phase, e.g. higher than 60-90 % of water in oil [W/O]}
 - <administratively transferred to [B01F 23/4141](#) INV>
- D B01F 2003/083
 - • • • {Inversed-type emulsions}
 - <administratively transferred to [B01F 23/4142](#) INV>
- D B01F 2003/0834
 - • • • {Microemulsions}
 - <administratively transferred to [B01F 23/4143](#) INV>
- D B01F 2003/0838
 - • • • {Multiple emulsions, in particular double emulsion, e.g. water in oil in water; Three-phase emulsion}
 - <administratively transferred to [B01F 23/4144](#) INV>
- D B01F 2003/0842
 - • • • {Emulsions of oils, e.g. fuel, and water}
 - <administratively transferred to [B01F 23/4145](#) INV>
- D B01F 2003/0846
 - • • • {Emulsions including solid particles, e.g. as solution or dispersion, i.e. molten material or material dissolved in a solvent or dispersed in a liquid}
 - <administratively transferred to [B01F 23/4146](#)>
- D B01F 2003/0849
 - • • {Homogenizing a raw emulsion; making monodisperse or fine emulsions}
 - <administratively transferred to [B01F 23/413](#)>
- D B01F 3/0853
 - • {Mixing liquids using driven stirrers}
 - <administratively transferred to [B01F 23/43](#)>
- D B01F 3/0857
 - • • {At least one of the liquids being introduced from the outside through or along the axis of a rotating stirrer, e.g. the stirrer being rotating due to the reaction of the introduced liquid}
 - <administratively transferred to [B01F 23/431](#)>
- D B01F 3/0861
 - • {Mixing liquids using flow mixing}
 - <administratively transferred to [B01F 23/45](#)>
- D B01F 3/0865
 - • • {by injecting or introducing one liquid into another}
 - <administratively transferred to [B01F 23/451](#)>

- D B01F 3/0869
 - • • {by uniting flows taken from different parts of a receptacle or silo; Sandglass-type mixing (for particulate material B01F 5/24)}
 - <administratively transferred to [B01F 23/452](#)>
- D B01F 3/0873
 - • • {by moving the liquids in countercurrent}
 - <administratively transferred to [B01F 23/453](#)>
- D B01F 3/0876
 - • • {by injecting a mixture of liquid and gas}
 - <administratively transferred to [B01F 23/454](#)>
- D B01F 3/088
 - • {Mixing systems, i.e. flow charts or diagrams}
 - <administratively transferred to [B01F 23/49](#)>
- D B01F 2003/0884
 - • {characterised by the nature of the liquids}
 - <administratively transferred to [B01F 23/48](#) INV>
- D B01F 2003/0888
 - • • {using liquefied or cryogenic gases}
 - <administratively transferred to [B01F 23/481](#) INV>
- D B01F 2003/0892
 - • • {using molten solids}
 - <administratively transferred to [B01F 23/482](#) INV>
- D B01F 2003/0896
 - • • {Using water for diluting a liquid ingredient, obtaining a predetermined concentration or making an aqueous solution of a concentrate}
 - <administratively transferred to [B01F 23/483](#) INV>
- D B01F 3/10
 - • Mixing very viscous liquids
 - <administratively transferred to [B01F 23/47](#)>
- D B01F 2003/105
 - • • {using a very viscous liquid and a liquid of low viscosity}
 - <administratively transferred to [B01F 23/471](#) INV>
- D B01F 3/12
 - liquids with solids ({B01F 1/00 takes precedence;}) displacing one liquid by another in dispersions of solids in liquids B01D 12/00}
 - <administratively transferred to [B01F 23/50](#)>
- D B01F 3/1207
 - • {Methods (B01F 3/1221 takes precedence; process features in the making of dispersions of dyestuffs preparations C09B 67/0091)}
 - <administratively transferred to [B01F 23/51](#)>
- D B01F 3/1214
 - • • {characterised by the composition of the liquids or solids}
 - <administratively transferred to [B01F 23/511](#)>
- D B01F 3/1221
 - • {using driven stirrers}
 - <administratively transferred to [B01F 23/53](#)>
- D B01F 3/1228
 - • {Wetting solids (B01F 5/18 takes precedence)}
 - <administratively transferred to [B01F 23/54](#)>
- D B01F 3/1235
 - • {the mixture being submitted to electrical, sonic or similar energy}
 - <administratively transferred to [B01F 23/55](#)>
- D B01F 3/1242
 - • • {using vibrations}
 - <administratively transferred to [B01F 23/551](#)>
- D B01F 2003/125
 - • {by introducing, e.g. dispersing, dissolving, solids in liquids}
 - <administratively transferred to [B01F 23/56](#) INV>
- D B01F 2003/1257
 - • {by introducing liquids in solid material, e.g. to obtain slurries}
 - <administratively transferred to [B01F 23/565](#) INV>
- D B01F 2003/1264
 - • • {by introducing liquids in a fluidised bed}
 - <administratively transferred to [B01F 23/566](#) INV>

- D B01F 3/1271
 - • {Mixing systems, i.e. flow charts or diagrams}
 - <administratively transferred to [B01F 23/59](#)>
- D B01F 2003/1278
 - • {characterized by the nature of the liquid}
 - <administratively transferred to [B01F 23/58](#) INV>
- D B01F 2003/1285
 - • • {Mixing liquids with solids, slurries, sludge, for obtaining a diluted slurry}
 - <administratively transferred to [B01F 23/581](#) INV>
- D B01F 2003/1292
 - • • {Mixing foam with solids}
 - <administratively transferred to [B01F 23/582](#) INV>
- D B01F 3/14
 - • Mixing very viscous liquids with solids
 - <administratively transferred to [B01F 23/57](#)>
- D B01F 3/18
 - solid with solids {(B01F 5/24 takes precedence; bulk material piled in a stack and unloaded from the stack to obtain an average product B65G 69/10)}
 - <administratively transferred to [B01F 23/60](#)>
- D B01F 3/182
 - • {using a receptacle provided at its bottom discharge opening with oscillating or vibrating opening and closing elements, or with elements fitted on moving chains}
 - <administratively transferred to [B01F 23/62](#)>
- D B01F 3/184
 - • {using rotatable mixing elements at the lower end of discharge hoppers}
 - <administratively transferred to [B01F 23/64](#)>
- D B01F 3/186
 - • {by evaporating or liquefying at least one of the components; using a fluid which is evaporated after mixing}
 - <administratively transferred to [B01F 23/66](#)>
- D B01F 3/188
 - • {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
 - <administratively transferred to [B01F 23/69](#)>
- D B01F 3/20
 - Pretreatment of the materials to be mixed {(B28C 5/404, B29B 7/905 take precedence)}
 - <administratively transferred to [B01F 23/70](#)>
- D B01F 3/2007
 - • {Coating solid components}
 - <administratively transferred to [B01F 23/701](#)>
- D B01F 3/2014
 - • {Cooling components}
 - <administratively transferred to [B01F 23/702](#)>
- D B01F 3/2021
 - • {Degassing, deaerating components; replacing one gas within the components by another gas}
 - <administratively transferred to [B01F 23/703](#)>
- D B01F 3/2028
 - • {Drying components, e.g. in order to mix them in solid state}
 - <administratively transferred to [B01F 23/704](#)>
- D B01F 3/2035
 - • {Submitting components to electrical energy fields to charge or ionize them}
 - <administratively transferred to [B01F 23/705](#)>
- D B01F 3/2042
 - • {Evaporating solvents, dispersion liquid, e.g. water, at least partially}
 - <administratively transferred to [B01F 23/706](#)>
- D B01F 3/205
 - • {Extracting components to be mixed from a stream of fluid or from a solid containing them, e.g. by adsorption, absorption or distillation}
 - <administratively transferred to [B01F 23/707](#)>

- D B01F 3/2057
 - • {Filtering components}
 - <administratively transferred to [B01F 23/708](#)>
- D B01F 3/2064
 - • {Freezing components, e.g. to mix them in solid state}
 - <administratively transferred to [B01F 23/709](#)>
- D B01F 3/2071
 - • {Grinding components}
 - <administratively transferred to [B01F 23/71](#)>
- D B01F 3/2078
 - • {Heating components, e.g. melting}
 - <administratively transferred to [B01F 23/711](#)>
- D B01F 3/2085
 - • {Irradiating components}
 - <administratively transferred to [B01F 23/712](#)>
- D B01F 3/2092
 - • {Sieving components}
 - <administratively transferred to [B01F 23/713](#)>
- D B01F 3/22
 - Aftertreatment of the mixture
 - <administratively transferred to [B01F 23/80](#)>
- D B01F 3/2207
 - • {Coating the solid mixture}
 - <administratively transferred to [B01F 23/801](#)>
- D B01F 3/2215
 - • {Cooling the mixture}
 - <administratively transferred to [B01F 23/802](#)>
- D B01F 3/2223
 - • {Venting, degassing, ventilating of gases, fumes or toxic vapours from the mixture}
 - <administratively transferred to [B01F 23/803](#)>
- D B01F 3/223
 - • {Drying the mixture}
 - <administratively transferred to [B01F 23/804](#)>
- D B01F 3/2238
 - • {Submitting a mixture to electrical energy fields, e.g. corona discharge}
 - <administratively transferred to [B01F 23/805](#)>
- D B01F 3/2246
 - • {Evaporating a carrier, e.g. liquid carbon dioxide, e.g. used to dissolve, disperse, emulsify, other components which are difficult to be mixed; Evaporating liquid components}
 - <administratively transferred to [B01F 23/806](#)>
- D B01F 3/2253
 - • {Extracting components from the mixture, e.g. by adsorption, absorption, distillation}
 - <administratively transferred to [B01F 23/807](#)>
- D B01F 3/2261
 - • {Filtering the mixture}
 - <administratively transferred to [B01F 23/808](#)>
- D B01F 3/2269
 - • {Freezing the mixture}
 - <administratively transferred to [B01F 23/809](#)>
- D B01F 3/2276
 - • {Grinding the mixture}
 - <administratively transferred to [B01F 23/81](#)>
- D B01F 3/2284
 - • {Heating the mixture}
 - <administratively transferred to [B01F 23/811](#)>
- D B01F 3/2292
 - • {Irradiating the mixture}
 - <administratively transferred to [B01F 23/812](#)>

D	B01F 5/00 - B01F 17/00	Mixers
D	B01F 5/00	Flow mixers (sprayers, atomisers B05B); Mixers for falling materials, e.g. solid particles (B01F 13/04 takes precedence; centrifugal mixers B04) <administratively transferred to B01F 25/00>
D	B01F 2005/0002	<ul style="list-style-type: none"> • {Direction of flow or arrangement of feed and discharge openings} <administratively transferred to B01F 2025/91 ADD>
D	B01F 2005/0005	<ul style="list-style-type: none"> • • {Axial flow} <administratively transferred to B01F 2025/911 ADD>
D	B01F 2005/0008	<ul style="list-style-type: none"> • • {Radial flow} <administratively transferred to B01F 2025/912 ADD>
D	B01F 2005/0011	<ul style="list-style-type: none"> • • • {from the center to the circumference, i.e. centrifugal flow} <administratively transferred to B01F 2025/9121 ADD>
D	B01F 2005/0014	<ul style="list-style-type: none"> • • • {from the circumference to the center} <administratively transferred to B01F 2025/9122 ADD>
D	B01F 2005/0017	<ul style="list-style-type: none"> • • {Vortex flow, i.e. flow spiraling in a tangential direction and moving in an axial direction} <administratively transferred to B01F 2025/913 ADD>
D	B01F 2005/002	<ul style="list-style-type: none"> • • {Tangential flow, i.e. flow spiraling in a tangential direction in a flat plane or beltlike area} <administratively transferred to B01F 2025/914 ADD>
D	B01F 2005/0022	<ul style="list-style-type: none"> • • {Reverse flow, i.e. flow changing substantially 180° in direction} <administratively transferred to B01F 2025/915 ADD>
D	B01F 2005/0025	<ul style="list-style-type: none"> • • {Turbulent flow, i.e. every point of the flow moves in random direction and intermixes} <administratively transferred to B01F 2025/916 ADD>
D	B01F 2005/0028	<ul style="list-style-type: none"> • • {Laminar or parallel flow, i.e. every point of the flow moves in layers which do not intermix} <administratively transferred to B01F 2025/917 ADD>
D	B01F 2005/0031	<ul style="list-style-type: none"> • • • {Parallel flow, i.e. every point of the flow moves in parallel layers where intermixing can occur by diffusion or which do not intermix; Focusing, i.e. compressing parallel layers without intermixing them} <administratively transferred to B01F 2025/9171 ADD>
D	B01F 2005/0034	<ul style="list-style-type: none"> • • {Counter current flow, i.e. flows moving in opposite direction and colliding} <administratively transferred to B01F 2025/918 ADD>
D	B01F 2005/0037	<ul style="list-style-type: none"> • • {Characterised by the disposition of the feed and discharge openings} <administratively transferred to B01F 2025/919 ADD>
D	B01F 2005/004	<ul style="list-style-type: none"> • • • {Characterised by the arrangement of the feed openings for one or more flows, e.g. for the mainflow and the flow of an additional component} <administratively transferred to B01F 2025/9191 ADD>
D	B01F 2005/0042	<ul style="list-style-type: none"> • • • • {with feed openings in the center of the main flow} <administratively transferred to B01F 2025/91911 ADD>
D	B01F 2005/0045	<ul style="list-style-type: none"> • • • • {with feed openings at the circumference of the main flow} <administratively transferred to B01F 2025/91912 ADD>

- D B01F 2005/0048 {with feed openings around the complete circumference of the main flow, e.g. being a perforated or porous part}
<administratively transferred to [B01F 2025/919121](#) ADD>
- D B01F 2005/0051 {with feed openings in the center and at the circumference of the main flow}
<administratively transferred to [B01F 2025/919125](#) ADD>
- D B01F 2005/0054 {with feed openings facing each other, e.g. for creating counter flows, for creating a series of vortex flows}
<administratively transferred to [B01F 2025/91913](#) ADD>
- D B01F 5/0057 . {Mixing by creating a vortex flow, e.g. by tangentially introducing jets (apparatus using free vortex flow in general B04C)}
<administratively transferred to [B01F 25/10](#)>
- D B01F 5/006 . . {wherein the vortex flows in a spherical shaped receptacle or chamber}
<administratively transferred to [B01F 25/101](#)>
- D B01F 5/0062 . . {wherein the vortex is created by two or more jets introduced tangentially in separate mixing chambers or consecutively in the same mixing chamber}
<administratively transferred to [B01F 25/102](#)>
- D B01F 5/0065 . . {with additional mixing means other than vortex mixers, e.g. the vortex chamber being positioned in another mixing chamber}
<administratively transferred to [B01F 25/103](#)>
- D B01F 5/0068 . . {Characterised by the arrangement of the discharge opening}
<administratively transferred to [B01F 25/104](#)>
- D B01F 5/0071 . . . {the mixing chamber being vertical with the outlet tube at its upper side}
<administratively transferred to [B01F 25/1041](#)>
- D B01F 5/0074 . . . {the mixing chamber being vertical and having an outlet tube at its bottom whose inlet is at a higher level than the inlet of the vortex creating jet, e.g. the jet being introduced at the bottom of the mixing chamber}
<administratively transferred to [B01F 25/1042](#)>
- D B01F 5/0077 . {Mixing heads, i.e. compact mixing units or modules, using mixing valves for feeding and mixing at least two components (for homogenizing mixtures B01F 5/0661, mixing valves F16K 11/00)}
<administratively transferred to [B01F 25/105](#)>
- D B01F 5/008 . . {of the mixing valve type}
<administratively transferred to [B01F 25/1051](#)>
- D B01F 5/0082 . {Interdigital mixers, i.e. the substances to be mixed are divided in substreams which are rearranged in an interdigital or interspersed manner (B01F 13/0066 takes precedence)}
<administratively transferred to [B01F 25/12](#)>
- D B01F 5/0085 . {Mixing drops, droplets, bodies of liquid which flow together or contact each other (B01F 13/0069 takes precedence)}
<administratively transferred to [B01F 25/14](#)>
- D B01F 2005/0088 . {Arrangement, nature or configuration of flow guiding elements}
<administratively transferred to [B01F 2025/93](#) ADD>
- D B01F 2005/0091 . . {Flow guiding elements surrounding feed openings, e.g. jet nozzles}
<administratively transferred to [B01F 2025/931](#) ADD>

- D B01F 2005/0094
 - • {Nature of the flow guiding elements}
 - <administratively transferred to [B01F 2025/932](#) ADD>
- D B01F 2005/0097
 - • • {Surface characteristics, e.g. coated, rough}
 - <administratively transferred to [B01F 2025/9321](#) ADD>
- D B01F 5/02
 - Jet mixers {(B01F 5/0057 take precedence; with gas agitation, i.e. for fluidisation B01F 13/02)}
 - <administratively transferred to [B01F 25/20](#)>
- D B01F 5/0206
 - • {comprising submerged injectors, e.g. nozzles, for injecting high pressure jets in a large volume or in a mixing chamber (B01F 3/04106 takes precedence; injecting an additional component in a conduit B01F 5/0403)}
 - <administratively transferred to [B01F 25/21](#)>
- D B01F 5/0212
 - • • {the injectors being surrounded by guiding tubes}
 - <administratively transferred to [B01F 25/211](#)>
- D B01F 5/0218
 - • • {the injectors being movable, e.g. rotating}
 - <administratively transferred to [B01F 25/212](#)>
- D B01F 5/0225
 - • • • {Pivoting, oscillating in a multidirectional way during jetting}
 - <administratively transferred to [B01F 25/2121](#)>
- D B01F 5/0231
 - • • • {Rotating during jetting}
 - <administratively transferred to [B01F 25/2122](#)>
- D B01F 5/0237
 - • • • {being vertically moved to bring the injector in or out of operative position}
 - <administratively transferred to [B01F 25/2123](#)>
- D B01F 5/0243
 - • • • {being moved or transported between different locations during jetting}
 - <administratively transferred to [B01F 25/2124](#)>
- D B01F 5/025
 - • • • {Moving to adjust the direction of jetting, the injectors being fixed during operation}
 - <administratively transferred to [B01F 25/2125](#)>
- D B01F 5/0256
 - • {Mixing by intersecting jets (in a stream-impingement mixing head for polymers B29B 7/76)}
 - <administratively transferred to [B01F 25/23](#)>
- D B01F 5/0262
 - • • {the intersecting jets having the configuration of sheets, cylinders or cones}
 - <administratively transferred to [B01F 25/231](#)>
- D B01F 5/0268
 - • {Mixing by jets impinging against a collision plate}
 - <administratively transferred to [B01F 25/25](#)>
- D B01F 5/0275
 - • {Mixing by jetting a component in a conduit for agitating its contents, i.e. using high pressure jets (injection under low pressure B01F 5/04; eductor type injector B01F 5/0413)}
 - <administratively transferred to [B01F 25/27](#)>
- D B01F 5/0281
 - • {characterized by the specific design of the jet injector}
 - <administratively transferred to [B01F 25/28](#)>
- D B01F 5/0287
 - • • {the jet injector being of the RESS (explosive rapid expansion of supercritical solutions) or FIMS (fluid injection of molecular spray) type; i.e. the liquid is jetted in an environment (gas or liquid) by nozzles, in conditions of significant pressure drop, with the possible generation of shock waves}
 - <administratively transferred to [B01F 25/281](#)>

- D B01F 5/0293
- • • {the jet injector being of coanda type, i.e. having a surface to attract the jet for adjusting its direction}
- <administratively transferred to [B01F 25/282](#)>
- D B01F 5/04
- Injector mixers {, i.e. one or more components being added to a flowing main component (B01F 5/0057 takes precedence)}
- <administratively transferred to [B01F 25/30](#)>
- D B01F 5/0401
- • {the additional component being axially fed and radially discharged through a circumferential outlet}
- <administratively transferred to [B01F 25/305](#)>
- D B01F 5/0403
- • {Mixing conduits or tubes, i.e. conduits or tubes through which the main component is flown (mixing devices for gas burners F23D 14/62)}
- <administratively transferred to [B01F 25/31](#)>
- D B01F 5/0405
- • • {for mixing more than two components; Devices specially adapted for generating foam, e.g. air foam}
- <administratively transferred to [B01F 25/311](#)>
- D B01F 5/0406
- • • • {Devices specially adapted for generating foam}
- <administratively transferred to [B01F 25/3111](#)>
- D B01F 5/0408
- • • • • {with additional mixing means other than injector mixers, e.g. screen, baffles (B01F 5/041 takes precedence)}
- <administratively transferred to [B01F 25/31112](#)>
- D B01F 5/041
- • • • • {with rotating elements, e.g. driven by one of the components for feeding or by the resulting mixture for additional mixing}
- <administratively transferred to [B01F 25/31113](#)>
- D B01F 5/0411
- • • • • {with means for introducing an additional component, e.g. in predetermined proportion, in the main component}
- <administratively transferred to [B01F 25/31114](#)>
- D B01F 5/0413
- • • {provided with a venturi element}
- <administratively transferred to [B01F 25/312](#)>
- D B01F 5/0415
- • • • {with additional mixing means other than injector mixers, e.g. screens, baffles or rotating elements}
- <administratively transferred to [B01F 25/3121](#)>
- D B01F 5/0416
- • • • {the material flowing at a supersonic velocity thereby creating shock waves}
- <administratively transferred to [B01F 25/3122](#)>
- D B01F 5/0418
- • • • {with two or more venturi elements}
- <administratively transferred to [B01F 25/3123](#)>
- D B01F 5/042
- • • • • {used alternatively}
- <administratively transferred to [B01F 25/31231](#)>
- D B01F 5/0421
- • • • • {used simultaneously}
- <administratively transferred to [B01F 25/31232](#)>
- D B01F 5/0423
- • • • • {used successively}
- <administratively transferred to [B01F 25/31233](#)>
- D B01F 5/0425
- • • • {characterized by the place of introduction of the main flow}
- <administratively transferred to [B01F 25/3124](#)>

- D B01F 5/0426 {the main flow being injected in the circumferential area of the venturi, creating an aspiration in the central part of the conduit}
<administratively transferred to [B01F 25/31241](#)>
- D B01F 5/0428 {the main flow being injected in the central area of the venturi, creating an aspiration in the circumferential part of the conduit (B01F 5/043 takes precedence)}
<administratively transferred to [B01F 25/31242](#)>
- D B01F 5/043 {Eductor or eductor type venturi, i.e. the main flow being injected through the venturi with high speed in the form of a jet}
<administratively transferred to [B01F 25/31243](#)>
- D B01F 2005/0431 {characteristics of the Venturi parts}
<administratively transferred to [B01F 25/3125](#) INV>
- D B01F 2005/0433 {Core}
<administratively transferred to [B01F 25/31251](#) INV>
- D B01F 2005/0435 {Adjustable Venturi core in the nozzle}
<administratively transferred to [B01F 25/312511](#) INV>
- D B01F 2005/0436 {Profiled, grooved, ribbed core, or being provided with baffles}
<administratively transferred to [B01F 25/312512](#) INV>
- D B01F 2005/0438 {Nozzle}
<administratively transferred to [B01F 25/31252](#) INV>
- D B01F 2005/044 {Adjustable Venturi nozzle}
<administratively transferred to [B01F 25/312521](#) INV>
- D B01F 2005/0441 {Profiled, grooved, ribbed nozzle, or being provided with baffles}
<administratively transferred to [B01F 25/312522](#) INV>
- D B01F 2005/0443 {Discharge}
<administratively transferred to [B01F 25/31253](#) INV>
- D B01F 2005/0445 {Adjustable discharge conduit or barrel, e.g. adjustable in width}
<administratively transferred to [B01F 25/312531](#) INV>
- D B01F 2005/0446 {Profiled, grooved, ribbed discharge conduit, or being provided with baffles}
<administratively transferred to [B01F 25/312532](#) INV>
- D B01F 2005/0448 {Constructional characteristics of the diverging discharge conduit or barrel, e.g. with zones of changing conicity}
<administratively transferred to [B01F 25/312533](#) INV>
- D B01F 5/045 . . . {the additional component being introduced in the centre of the conduit}
<administratively transferred to [B01F 25/313](#)>
- D B01F 5/0451 {with additional mixing means other than injector mixers, e.g. screens, baffles or rotating elements}
<administratively transferred to [B01F 25/3131](#)>
- D B01F 5/0453 {by using two or more injector devices}
<administratively transferred to [B01F 25/3132](#)>
- D B01F 5/0455 {used alternatively}
<administratively transferred to [B01F 25/31321](#)>
- D B01F 5/0456 {used simultaneously}
<administratively transferred to [B01F 25/31322](#)>

- D B01F 5/0458 {used successively}
<administratively transferred to [B01F 25/31323](#)>
- D B01F 5/046 {arranged concentrically}
<administratively transferred to [B01F 25/31324](#)>
- D B01F 5/0461 {characterized by the specific design of the injector}
<administratively transferred to [B01F 25/3133](#)>
- D B01F 5/0463 {Perforated, multi-opening, with a plurality of holes}
<administratively transferred to [B01F 25/31331](#)>
- D B01F 5/0465 {Porous injectors}
<administratively transferred to [B01F 25/313311](#)>
- D B01F 5/0466 {Ring, torus, toroidal or coiled configurations}
<administratively transferred to [B01F 25/31332](#)>
- D B01F 5/0468 {Rotatable injectors}
<administratively transferred to [B01F 25/31333](#)>
- D B01F 5/047 {the opening for introducing the supplementary stream being a slit}
<administratively transferred to [B01F 25/31334](#)>
- D B01F 5/0471 . . {the additional component being introduced at the circumference of the conduit}
<administratively transferred to [B01F 25/314](#)>
- D B01F 5/0473 . . . {with additional mixing means other than injector mixers}
<administratively transferred to [B01F 25/3141](#)>
- D B01F 5/0475 . . . {the conduit having a plurality of openings in the axial direction or in the circumferential direction}
<administratively transferred to [B01F 25/3142](#)>
- D B01F 5/0476 {the conduit being porous}
<administratively transferred to [B01F 25/31421](#)>
- D B01F 5/0478 {with a plurality of perforations in the axial direction only}
<administratively transferred to [B01F 25/31422](#)>
- D B01F 5/048 {with a plurality of perforations in the circumferential direction only and covering the whole circumference}
<administratively transferred to [B01F 25/31423](#)>
- D B01F 5/0481 {the perforations being a complete cut-out in the circumferential direction covering the whole diameter of the tube, i.e. having two consecutive tubes placed consecutively, the additional component being introduced between them}
<administratively transferred to [B01F 25/314231](#)>
- D B01F 5/0483 {with a plurality of perforations aligned in a row perpendicular to the flow direction}
<administratively transferred to [B01F 25/31424](#)>
- D B01F 5/0485 {with a plurality of perforations in the axial and circumferential direction covering the whole surface}
<administratively transferred to [B01F 25/31425](#)>
- D B01F 5/0486 . . . {characterized by the specific design of the injector}
<administratively transferred to [B01F 25/3143](#)>

- D B01F 5/0488 {A slit extending in the longitudinal direction only}
<administratively transferred to [B01F 25/31431](#)>
- D B01F 5/049 {A slit extending in the circumferential direction only}
<administratively transferred to [B01F 25/31432](#)>
- D B01F 5/0491 {Rotatable, e.g. placed on a rotatable housing or conduit}
<administratively transferred to [B01F 25/31433](#)>
- D B01F 5/0493 {A bundle of similar tubes, each of them having feedings on the circumferential wall, e.g. as mixer for a reactor}
<administratively transferred to [B01F 25/31434](#)>
- D B01F 5/0495 . . . {a difference of pressure at different points of the conduit provoking introduction of the additional component into the main component (B01F 5/0496 takes precedence)}
<administratively transferred to [B01F 25/315](#)>
- D B01F 5/0496 . . . {having a container for the additional component fixed to the conduit}
<administratively transferred to [B01F 25/316](#)>
- D B01F 5/0498 . . {the additional component being added in a by-pass of the main flow (B01F 5/0496, B01F 5/106 take precedence)}
<administratively transferred to [B01F 25/32](#)>
- D B01F 5/06 . . Mixers in which the components are pressed together through slits, orifices, or screens; {Static mixers; Mixers of the fractal type} (B01F 7/164, B01F 7/225 take precedence;); turbo-mixers B01F 5/16; colloid-mills B02C; mixing valves F16K 11/00)
<administratively transferred to [B01F 25/40](#)>
- D B01F 5/0601 . . {Fractal mixers}
<administratively transferred to [B01F 25/41](#)>
- D B01F 5/0602 . . {Static mixers, i.e. mixers in which the mixing is effected by moving the components jointly in changing directions, e.g. in tubes provided with baffles or obstructions (B01F 5/0661, B01F 5/0682 take precedence)}
<administratively transferred to [B01F 25/42](#)>
- D B01F 5/0603 . . . {the mixture or the components moving in an irregular path, e.g. radially (B01F 5/0646 takes precedence)}
<administratively transferred to [B01F 25/421](#)>
- D B01F 5/0604 {the mixer being composed of stacked plates between which the material is moving, e.g. the plates being provided with grooves or orifices}
<administratively transferred to [B01F 25/422](#)>
- D B01F 5/0605 {by means of elements placed in the receptacle for moving or guiding the components}
<administratively transferred to [B01F 25/423](#)>
- D B01F 5/0606 {using baffles}
<administratively transferred to [B01F 25/4231](#)>
- D B01F 5/0607 {using dams}
<administratively transferred to [B01F 25/4232](#)>
- D B01F 5/0608 {using plates with holes, the holes being displaced from one plate to the next one to force the flow to make a bending movement}
<administratively transferred to [B01F 25/4233](#)>

- D B01F 5/0609 . . . {Mixing tubes, e.g. the material being submitted to a substantially radial movement or to a movement partially in reverse direction}
<administratively transferred to [B01F 25/43](#)>
- D B01F 5/061 . . . {Straight mixing tubes, e.g. with smooth walls, having baffles or obstructions therein without substantial pressure drop; Baffles therefor (for falling-particle mixers B01F 5/246)}
<administratively transferred to [B01F 25/431](#)>
- D B01F 5/0611 . . . {the baffles being adjustable}
<administratively transferred to [B01F 25/4311](#)>
- D B01F 5/0612 . . . {having different kinds of baffles, e.g. plates alternating with screens}
<administratively transferred to [B01F 25/4312](#)>
- D B01F 5/0613 . . . {comprising a plurality of stacked ducts having their axes parallel to the tube axis}
<administratively transferred to [B01F 25/4313](#)>
- D B01F 5/0614 . . . {the baffles being helical elements}
<administratively transferred to [B01F 25/4314](#)>
- D B01F 5/0615 . . . {composed of consecutive sections of helical formed elements}
<administratively transferred to [B01F 25/43141](#)>
- D B01F 5/0616 . . . {the baffles being made by deforming flat pieces of material, e.g. by bonding, folding, deep drawing (B01F 5/0614 takes precedence)}
<administratively transferred to [B01F 25/4315](#)>
- D B01F 5/0617 . . . {composed of consecutive sections of deformed flat pieces of material}
<administratively transferred to [B01F 25/43151](#)>
- D B01F 5/0618 . . . {the baffles being flat pieces of material, e.g. intermeshing, fixed to the wall, fixed on a central rod}
<administratively transferred to [B01F 25/4316](#)>
- D B01F 5/0619 . . . {composed of consecutive sections of flat pieces of material}
<administratively transferred to [B01F 25/43161](#)>
- D B01F 2005/062 . . . {characterised by the configuration of the baffles or obstructions}
<administratively transferred to [B01F 25/431](#) INV>
- D B01F 2005/0621 . . . {Profiled elements, e.g. profiled blades, bars, pillars, columns or chevrons}
<administratively transferred to [B01F 25/4317](#) INV>
- D B01F 2005/0622 . . . {Profiled blades, wings, wedges, i.e. plate-like element having one side or part thicker than the other}
<administratively transferred to [B01F 25/43171](#) INV>
- D B01F 2005/0623 . . . {Profiles, pillars, chevrons, i.e. long elements having a polygonal cross-section}
<administratively transferred to [B01F 25/43172](#) INV>
- D B01F 2005/0625 . . . {Substantially flat elements, e.g. flat plates or blades}
<administratively transferred to [B01F 25/4316](#) INV>
- D B01F 2005/0626 . . . {Assembled flat elements}
<administratively transferred to [B01F 25/43162](#) INV>
- D B01F 2005/0627 . . . {in the form of small flat plate-like elements}
<administratively transferred to [B01F 25/43163](#) INV>

- D B01F 2005/0628 {Folded or bent blades or strips}
<administratively transferred to [B01F 25/4315](#) INV>
- D B01F 2005/0629 {Helically bent blades or strips}
<administratively transferred to [B01F 25/4314](#) INV>
- D B01F 2005/063 {Ring-shaped blades or strips}
<administratively transferred to [B01F 25/4318](#) INV>
- D B01F 2005/0631 {Tubular elements}
<administratively transferred to [B01F 25/4319](#) INV>
- D B01F 2005/0632 {Wires or coils}
<administratively transferred to [B01F 25/43195](#) INV>
- D B01F 2005/0633 {Spirally-shaped baffle}
<administratively transferred to [B01F 25/431951](#) INV>
- D B01F 2005/0634 {Conical or pyramidal elements}
<administratively transferred to [B01F 25/431952](#) INV>
- D B01F 2005/0635 {characterised by the mounting of the baffles or obstructions}
<administratively transferred to [B01F 25/43197](#) INV>
- D B01F 2005/0636 {Mounted on the wall}
<administratively transferred to [B01F 25/431971](#) INV>
- D B01F 2005/0637 {Mounted on an axial support member, e.g. a rod or bar}
<administratively transferred to [B01F 25/431972](#) INV>
- D B01F 2005/0638 {Mounted on a support member extending transversally through the mixing tube}
<administratively transferred to [B01F 25/431973](#) INV>
- D B01F 2005/0639 {Support members, e.g. tubular collars, with projecting baffles fitted inside the mixing tube or adjacent to the inner wall}
<administratively transferred to [B01F 25/431974](#) INV>
- D B01F 5/064 {with means for dividing a flow of material into separate subflows and for repositioning and recombining these subflows; Cross-mixing, e.g. conducting the outer layer of the material nearer to the axis of the tube or vice versa (B01F 5/0496 takes precedence; using baffles B01F 5/061, for falling particle mixers B01F 5/246)}
<administratively transferred to [B01F 25/432](#)>
- D B01F 5/0641 {the subflows consisting of at least two flat layers which are recombined, e.g. using means having restriction or expansion zones}
<administratively transferred to [B01F 25/4321](#)>
- D B01F 5/0642 {using a simple by-pass for separating and recombining the flow, e.g. by using branches of different length}
<administratively transferred to [B01F 25/43211](#)>
- D B01F 5/0643 {essentially composed of stacks of sheets, e.g. corrugated sheets}
<administratively transferred to [B01F 25/4322](#)>
- D B01F 5/0644 {using elements provided with a plurality of channels or using a plurality of tubes which can either be placed between common spaces or collectors}
<administratively transferred to [B01F 25/4323](#)>
- D B01F 5/0645 {the channels or tubes crossing each other several times}
<administratively transferred to [B01F 25/43231](#)>

- D B01F 5/0646 . . . {Mixers composed of several consecutive mixing tubes; Mixing tubes being deformed or bent, e.g. having varying cross-section or being provided with inwardly extending profiles, e.g. with internal screw-thread profile (B01F 5/0656 takes precedence)}
<administratively transferred to [B01F 25/433](#)>
- D B01F 5/0647 . . . {Mixers with bended, curved, coiled, wounded mixing tubes or comprising elements for bending the flow}
<administratively transferred to [B01F 25/4331](#)>
- D B01F 5/0648 . . . {Mixers with a strong change of direction in the conduit for homogenizing the flow}
<administratively transferred to [B01F 25/4332](#)>
- D B01F 5/065 . . . {Mixers with scallop-shaped tubes or surfaces facing each other}
<administratively transferred to [B01F 25/4333](#)>
- D B01F 5/0651 . . . {Mixers with a converging cross-section}
<administratively transferred to [B01F 25/4334](#)>
- D B01F 5/0652 . . . {Mixers with a converging-diverging cross-section}
<administratively transferred to [B01F 25/4335](#)>
- D B01F 5/0653 . . . {Mixers with a diverging cross-section}
<administratively transferred to [B01F 25/4336](#)>
- D B01F 5/0654 . . . {Mixers with a diverging-converging cross-section}
<administratively transferred to [B01F 25/4337](#)>
- D B01F 5/0655 . . . {Mixers with a succession of converging-diverging cross-sections, i.e. undulating cross-section}
<administratively transferred to [B01F 25/4338](#)>
- D B01F 5/0656 . . . {Mixing tubes having therein a cylindrical or conical insert provided with grooves, e.g. the tube being provided with inwardly extending profiles or grooves (B01F 5/0665 takes precedence)}
<administratively transferred to [B01F 25/434](#)>
- D B01F 5/0657 . . . {the insert being provided with helical grooves}
<administratively transferred to [B01F 25/4341](#)>
- D B01F 5/0658 . . . {the insert being provided with a labyrinth of grooves or a distribution of protrusions}
<administratively transferred to [B01F 25/4342](#)>
- D B01F 5/0659 . . . {Mixing tubes composed of concentric tubular members (pressing the components through tubular members provided with orifices B01F 5/0682)}
<administratively transferred to [B01F 25/435](#)>
- D B01F 5/066 . . . {with movable slits formed between reciprocating surfaces (with movable slits formed between stator-rotor or two rotor systems B01F 7/0075, B01F 7/0085, B01F 7/1625)}
<administratively transferred to [B01F 25/438](#)>
- D B01F 5/0661 . . . {Mixers in which the components are pressed through slits while introducing shear, e.g. the slits being formed by balls and their seats, by the spiroes of helical springs (B01F 7/0075 takes precedence)}
<administratively transferred to [B01F 25/44](#)>
- D B01F 5/0662 . . . {characterized by the configuration of the surfaces forming the slits}
<administratively transferred to [B01F 25/441](#)>

- D B01F 5/0663 . . . {the slits being formed between opposed planar surfaces, e.g. pushed again each other by springs}
<administratively transferred to [B01F 25/4412](#)>
- D B01F 5/0664 . . . {with a plurality of parallel slits, e.g. formed between stacked plates}
<administratively transferred to [B01F 25/44121](#)>
- D B01F 5/0665 . . . {the slits being formed between opposed conical or cylindrical surfaces}
<administratively transferred to [B01F 25/4413](#)>
- D B01F 5/0666 . . . {the slits being formed between the balls and the seats of a bearing-like construction}
<administratively transferred to [B01F 25/4414](#)>
- D B01F 5/0667 . . . {the slits being formed between the helical windings of a spring-like construction or by deforming a spring}
<administratively transferred to [B01F 25/4415](#)>
- D B01F 5/0668 . . . {the opposed surfaces being provided with grooves}
<administratively transferred to [B01F 25/4416](#)>
- D B01F 5/0669 . . . {Axial grooves formed on opposed surfaces, e.g. on cylinders or cones}
<administratively transferred to [B01F 25/44161](#)>
- D B01F 5/067 . . . {Circumferential grooves formed on opposed surfaces, e.g. on planar surfaces or on cylinders or cones}
<administratively transferred to [B01F 25/44162](#)>
- D B01F 5/0671 . . . {Helical grooves formed on opposed surfaces, e.g. on cylinders or cones}
<administratively transferred to [B01F 25/44163](#)>
- D B01F 5/0672 . . . {Crossing sets of grooves forming a labyrinth formed on opposed surfaces, e.g. on planar surfaces or on cylinders or cones}
<administratively transferred to [B01F 25/44164](#)>
- D B01F 5/0673 . . . {Radial grooves formed on opposed surfaces, e.g. on planar surfaces}
<administratively transferred to [B01F 25/44165](#)>
- D B01F 5/0675 . . . {Spiral grooves formed on opposed surfaces, e.g. on planar surfaces}
<administratively transferred to [B01F 25/44166](#)>
- D B01F 5/0676 . . . {the grooves being formed on the outer surface of the cylindrical or conical core of the slits}
<administratively transferred to [B01F 25/44167](#)>
- D B01F 5/0677 . . . {the grooves being formed on the inner surface of the cylindrical or conical housing of the slits}
<administratively transferred to [B01F 25/44168](#)>
- D B01F 5/0678 . . . {characterized by the relative position of the surfaces during operation}
<administratively transferred to [B01F 25/442](#)>
- D B01F 5/0679 . . . {the surfaces being maintained in a fixed position, spaced from each other, therefore maintaining the slit always open}
<administratively transferred to [B01F 25/4421](#)>
- D B01F 5/068 . . . {the surfaces being maintained in a fixed but adjustable position, spaced from each other, therefore allowing the slit spacing to be varied (B01F 5/0681 takes precedence)}
<administratively transferred to [B01F 25/4422](#)>

- D B01F 5/0681 . . . {the surfaces being part of a valve construction, formed by opposed members in contact, e.g. automatic positioning caused by spring pressure}
<administratively transferred to [B01F 25/4423](#)>
- D B01F 5/0682 . {Mixers in which the components are pressed together through screens, plates provided with orifices, foam-like inserts, or through a bed of loose bodies, e.g. beads (B01F 7/0075 takes precedence)}
<administratively transferred to [B01F 25/45](#)>
- D B01F 5/0683 . . . {characterised by the means for moving the components or the mixture, e.g. using a piston or having one or more rotor plates, e.g. driven by the components, on the same shaft provided with orifices and co-operating with stator plates provided with orifices}
<administratively transferred to [B01F 25/451](#)>
- D B01F 5/0684 . . . {with a rotor surrounded by a stator provided with orifices}
<administratively transferred to [B01F 25/4511](#)>
- D B01F 5/0685 . . . {with reciprocating pistons}
<administratively transferred to [B01F 25/4512](#)>
- D B01F 5/0687 . . {characterized by the elements through which the components are pressed together}
<administratively transferred to [B01F 25/452](#)>
- D B01F 5/0688 . . . {the components being pressed through orifices in elements, e.g. flat plates or cylinders, which obstruct the whole diameter of the tube}
<administratively transferred to [B01F 25/4521](#)>
- D B01F 5/0689 {the elements being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
<administratively transferred to [B01F 25/45211](#)>
- D B01F 5/069 {the elements comprising means for adjusting the orifices}
<administratively transferred to [B01F 25/45212](#)>
- D B01F 5/0691 . . . {the components being pressed through porous bodies, e.g. flat plates, blocks or cylinders, which obstruct the whole diameter of the tube (B01F 5/0698 takes precedence)}
<administratively transferred to [B01F 25/4522](#)>
- D B01F 5/0692 {the porous bodies being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
<administratively transferred to [B01F 25/45221](#)>
- D B01F 5/0693 . . . {the components being pressed through sieves, screens or meshes which obstruct the whole diameter of the tube}
<administratively transferred to [B01F 25/4523](#)>
- D B01F 5/0694 {the sieves, screens or meshes being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
<administratively transferred to [B01F 25/45231](#)>
- D B01F 5/0695 . . . {the components being pressed through foam-like inserts or through a bed of loose bodies, e.g. balls}
<administratively transferred to [B01F 25/4524](#)>

- D B01F 5/0696 {through a bed of balls}
<administratively transferred to [B01F 25/45241](#)>
- D B01F 5/0697 {through a bed of fibres, steel wool or wood chips}
<administratively transferred to [B01F 25/45242](#)>
- D B01F 5/0698 {through a foam or expanded material body}
<administratively transferred to [B01F 25/45243](#)>
- D B01F 5/08 . . Homogenising or emulsifying nozzles {(B01F 11/0208 takes precedence; mixing heads without moving stirrer for plastics B29B 7/7457)}
<administratively transferred to [B01F 25/46](#)>
- D B01F 5/10 . Circulation mixers {, e.g. at least part of the mixture being discharged from, and reintroduced into, a receptacle, e.g. with rotary stirrer (B01F 5/02 takes precedence)}
<administratively transferred to [B01F 25/50](#)>
- D B01F 5/102 . . {the mixture being circulated during mixing through a set of tubes, e.g. involving gradually introducing a component into a circulating flow}
<administratively transferred to [B01F 25/51](#)>
- D B01F 5/104 . . {provided with rotary stirrer}
<administratively transferred to [B01F 25/52](#)>
- D B01F 5/106 . . {the mixture being discharged from and reintroduced into a receptacle through a recirculation tube into which an additional component is introduced}
<administratively transferred to [B01F 25/53](#)>
- D B01F 5/108 . . {provided with an internal pump to recirculate the material inside the receptacle}
<administratively transferred to [B01F 25/54](#)>
- D B01F 5/12 . Pump mixers {, i.e. the mixing taking place in the pump itself}
<administratively transferred to [B01F 25/60](#)>
- D B01F 5/14 . . of the gear type
<administratively transferred to [B01F 25/62](#)>
- D B01F 5/145 . . . {using a Wankel pump}
<administratively transferred to [B01F 25/621](#)>
- D B01F 5/16 . . Turbo-mixers {, i.e. of the centrifugal-pump type}
<administratively transferred to [B01F 25/64](#)>
- D B01F 5/162 . . . {Multi-staged turbo-mixers}
<administratively transferred to [B01F 25/641](#)>
- D B01F 5/165 . . . {consisting of a stator-rotor system with intermeshing teeth or cages}
<administratively transferred to [B01F 25/642](#)>
- D B01F 5/167 . . . {with axial access to the mixing device at both its sides}
<administratively transferred to [B01F 25/643](#)>
- D B01F 5/18 . Spray-mixers {; Mixing intersecting sheets of material, e.g. conical liquid sheets (B01F 3/0473, B01F 7/022, B01F 9/025 take precedence)}
<administratively transferred to [B01F 25/70](#)>
- D B01F 5/20 . . with nozzles {(B01F 3/04049 takes precedence; nozzles per se B05B 1/00)}
<administratively transferred to [B01F 25/72](#)>
- D B01F 5/205 . . . {for spraying a fluid on falling particles or on a liquid curtain}
<administratively transferred to [B01F 25/721](#)>

- D B01F 5/22
 - • with rotary {parts, e.g.} discs {(B01F 3/04035, B01F 7/0075 take precedence)}
 - <administratively transferred to [B01F 25/74](#)>
- D B01F 5/221
 - • • {with a disc or a set of discs mounted on a shaft rotating about a vertical axis, on top of which the material to be thrown outwardly is fed}
 - <administratively transferred to [B01F 25/741](#)>
- D B01F 5/223
 - • • • {with repeated action, i.e. the material thrown outwardly being guided, by means provided on the surrounding casing, on top of the next lower disc}
 - <administratively transferred to [B01F 25/7411](#)>
- D B01F 5/225
 - • • {for spraying a liquid on falling particles or on a liquid curtain (B01F 5/223 takes precedence)}
 - <administratively transferred to [B01F 25/742](#)>
- D B01F 5/226
 - • • {the material being fed on both sides of a part rotating about a vertical axis}
 - <administratively transferred to [B01F 25/743](#)>
- D B01F 5/228
 - • • {the rotating part being composed of at least two cooperating members rotating independently about the same vertical axis}
 - <administratively transferred to [B01F 25/744](#)>
- D B01F 5/24
 - Falling-particle mixers, {e.g.} with repeated action {(spraying fluids on falling particles B01F 5/205, B01F 5/225)}
 - <administratively transferred to [B01F 25/80](#)>
- D B01F 5/241
 - • {Particle mixers uniting flows of material taken from different parts of a receptacle or from a set of receptacles (for liquids B01F 3/0869; devices for emptying containers from the top with vertical passage located inside the containers B65G 65/365)}
 - <administratively transferred to [B01F 25/82](#)>
- D B01F 5/242
 - • • {by means of conduits having inlet openings at different levels}
 - <administratively transferred to [B01F 25/821](#)>
- D B01F 5/243
 - • • • {by means of a central conduit or central set of conduits}
 - <administratively transferred to [B01F 25/8211](#)>
- D B01F 5/244
 - • • {the receptacle being divided into compartments for receiving or storing the different components}
 - <administratively transferred to [B01F 25/822](#)>
- D B01F 5/245
 - • • {Flow collectors therefor}
 - <administratively transferred to [B01F 25/823](#)>
- D B01F 5/246
 - • {Falling-particle mixers comprising receptacles provided with fixed guiding elements, e.g. baffles, therein; Cross-mixers comprising crossing channels for guiding the falling particles}
 - <administratively transferred to [B01F 25/83](#)>
- D B01F 5/247
 - • {Falling-particle mixers comprising superimposed receptacles, the material flowing from one to the other, e.g. of the sandglass type (for liquids B01F 3/0869)}
 - <administratively transferred to [B01F 25/84](#)>
- D B01F 5/248
 - • {the particles falling on a film flowing along the inner wall of a mixer}
 - <administratively transferred to [B01F 25/85](#)>
- D B01F 5/26
 - Falling-particle mixers with moving {or vibrating} means, e.g. stirrers, for increasing the mixing {(B01F 5/24 takes precedence)}
 - <administratively transferred to [B01F 25/90](#)>

- D B01F 5/265
- {using one central conveyor or several separate conveyors, e.g. belt or screw conveyors, vibrating tables, for discharging flows from receptacles, e.g. in layers}
- <administratively transferred to [B01F 25/901](#)>
- D B01F 7/00
- Mixers with rotary stirring devices in fixed receptacles {, i.e. movement of the receptacle not being meant to effect the mixing (B01F 13/08 takes precedence)}; Kneaders (B01F 13/04 takes precedence {; devices especially adapted for mixing foundry sand B22C 5/04})**
- <administratively transferred to [B01F 27/00](#)>
- D B01F 7/00008
- {Stirrers, i.e. rotary stirring devices (B01F 3/04539, B01F 3/04588, B01F 3/0478, B01F 7/028, B01F 11/0091 take precedence)}
- <administratively transferred to [B01F 27/05](#)>
- D B01F 7/00016
- {Nature of the rotating mixing element}
- <administratively transferred to [B01F 27/051](#)>
- D B01F 7/00025
- • {Stirrers with replaceable wearing elements; Wearing elements therefor}
- <administratively transferred to [B01F 27/052](#)>
- D B01F 7/00033
- • {Characterised by the materials the stirrers are made of}
- <administratively transferred to [B01F 27/053](#)>
- D B01F 7/00041
- • • {with particular surface characteristics, e.g. coated, rough}
- <administratively transferred to [B01F 27/0531](#)>
- D B01F 7/0005
- • {Deformable stirrers (B01F 7/00208 takes precedence)}
- <administratively transferred to [B01F 27/054](#)>
- D B01F 7/00058
- • • {with mechanical means to alter the position of the stirring elements}
- <administratively transferred to [B01F 27/0541](#)>
- D B01F 7/00066
- • • {deformable by centrifugal force}
- <administratively transferred to [B01F 27/0542](#)>
- D B01F 7/00075
- • • {the position of the stirring elements depending on the direction of rotation of the stirrer}
- <administratively transferred to [B01F 27/0543](#)>
- D B01F 7/00083
- • {Stirrers made by deforming a plate}
- <administratively transferred to [B01F 27/06](#)>
- D B01F 7/00091
- {Mounting of the stirring elements on the stirrer shaft (B01F 7/00208 takes precedence)}
- <administratively transferred to [B01F 27/07](#)>
- D B01F 7/001
- • {Fixing of the stirrer to the shaft}
- <administratively transferred to [B01F 27/071](#)>
- D B01F 7/00108
- • {Disposition with respect to the rotating axis}
- <administratively transferred to [B01F 27/072](#)>
- D B01F 7/00116
- • • {parallel with respect to the rotating axis}
- <administratively transferred to [B01F 27/0721](#)>
- D B01F 7/00125
- • • {perpendicular with respect to the rotating axis}
- <administratively transferred to [B01F 27/0722](#)>
- D B01F 7/00133
- • • {oblique with respect to the rotating axis}
- <administratively transferred to [B01F 27/0723](#)>

- | | | |
|---|--------------|---|
| D | B01F 7/00141 | <ul style="list-style-type: none"> • • • {directly mounted on the rotating axis} <p><administratively transferred to B01F 27/0724></p> |
| D | B01F 7/0015 | <ul style="list-style-type: none"> • • • {on the free end of the rotating axis} <p><administratively transferred to B01F 27/0725></p> |
| D | B01F 7/00158 | <ul style="list-style-type: none"> • • • {having stirring elements connected to the stirrer shaft each by a single radial rod, other than open frameworks} <p><administratively transferred to B01F 27/0726></p> |
| D | B01F 7/00166 | <ul style="list-style-type: none"> • • • • {of the anchor type, i.e. the stirring elements being connected to the rods by one end and extending parallel to the shaft axis} <p><administratively transferred to B01F 27/07261></p> |
| D | B01F 7/00175 | <ul style="list-style-type: none"> • • • • {having stirring elements connected to the stirrer shaft each by two or more radial rods, e.g. the shaft being interrupted between the rods, or of crankshaft type (B01F 7/00566 takes precedence)} <p><administratively transferred to B01F 27/0727></p> |
| D | B01F 7/00183 | <ul style="list-style-type: none"> • • • {with stirring elements moving with respect to the stirrer shaft, e.g. floating or comprising contracting chambers} <p><administratively transferred to B01F 27/073></p> |
| D | B01F 7/00191 | <ul style="list-style-type: none"> • • • {having two or more mixing elements being concentrically mounted on the same shaft} <p><administratively transferred to B01F 27/074></p> |
| D | B01F 7/002 | <ul style="list-style-type: none"> • • {Mounting of the rotating mixing element in respect to the receptacle} <p><administratively transferred to B01F 27/09></p> |
| D | B01F 7/00208 | <ul style="list-style-type: none"> • • • {having elements for co-operating with receptacle wall or bottom, e.g. for scraping (B01F 7/165 takes precedence)} <p><administratively transferred to B01F 27/091></p> |
| D | B01F 7/00216 | <ul style="list-style-type: none"> • • • {occupying substantially the whole interior space of the receptacle} <p><administratively transferred to B01F 27/092></p> |
| D | B01F 7/00225 | <ul style="list-style-type: none"> • • • {eccentrically arranged} <p><administratively transferred to B01F 27/093></p> |
| D | B01F 7/00233 | <ul style="list-style-type: none"> • • {Configuration of the rotating mixing element} <p><administratively transferred to B01F 27/11></p> |
| D | B01F 7/00241 | <ul style="list-style-type: none"> • • • {Centrifugal stirrers, i.e. having a radial outflow or turbine type, e.g. with means to guide the flow} <p><administratively transferred to B01F 27/111></p> |
| D | B01F 7/0025 | <ul style="list-style-type: none"> • • • {with arms, paddles, vanes or blades} <p><administratively transferred to B01F 27/112></p> |
| D | B01F 7/00258 | <ul style="list-style-type: none"> • • • • {pin-shaped} <p><administratively transferred to B01F 27/1121></p> |
| D | B01F 7/00266 | <ul style="list-style-type: none"> • • • • {anchor-shaped} <p><administratively transferred to B01F 27/1122></p> |
| D | B01F 7/00275 | <ul style="list-style-type: none"> • • • • {sickle-shaped, i.e. curved in at least one direction} <p><administratively transferred to B01F 27/1123></p> |
| D | B01F 7/00283 | <ul style="list-style-type: none"> • • • • {rake-shaped or grid-shaped} <p><administratively transferred to B01F 27/1124></p> |

- D B01F 7/00291 . . . {having vanes or blades, e.g. provided with orifices, extending parallel or oblique to the stirrer axis (B01F 7/00233 takes precedence)}
<administratively transferred to [B01F 27/1125](#)>
- D B01F 7/003 . . . {having holes in the surface}
<administratively transferred to [B01F 27/11251](#)>
- D B01F 7/00308 . . . {paddle wheels}
<administratively transferred to [B01F 27/11252](#)>
- D B01F 7/00316 . . . {the blades extending oblique to the stirrer axis}
<administratively transferred to [B01F 27/11253](#)>
- D B01F 7/00325 . . . {the stirrer being a bent rod supported at one end only}
<administratively transferred to [B01F 27/1126](#)>
- D B01F 7/00333 . . . {spoon-shaped}
<administratively transferred to [B01F 27/1127](#)>
- D B01F 7/00341 . . {Propellers, i.e. stirrers having an axial outflow, e.g. of the ship or aircraft propeller type or having means on the propeller to guide the flow}
<administratively transferred to [B01F 27/113](#)>
- D B01F 7/0035 . . . {having holes in the surface}
<administratively transferred to [B01F 27/1131](#)>
- D B01F 7/00358 . . . {with guiding tubes or tubular segments fixed to and surrounding the tips of the propeller blades, e.g. with supplementary mixing elements on the outside of the tubes or the segments}
<administratively transferred to [B01F 27/1132](#)>
- D B01F 7/00366 . . . {the impeller being of airfoil, aerofoil type}
<administratively transferred to [B01F 27/1133](#)>
- D B01F 7/00375 . . . {the impeller being of hydrofoil type}
<administratively transferred to [B01F 27/1134](#)>
- D B01F 7/00383 . . . {the impeller being of Rushton type}
<administratively transferred to [B01F 27/1111](#)>
- D B01F 7/00391 . . {Helices, i.e. stirrers comprising a helically shaped band; Stirrers composed of helically shaped band sections}
<administratively transferred to [B01F 27/114](#)>
- D B01F 7/004 . . . {having holes in the surface}
<administratively transferred to [B01F 27/1141](#)>
- D B01F 7/00408 . . . {of the corkscrew type composed of a helically shaped band, e.g. flexible spiral springs}
<administratively transferred to [B01F 27/1142](#)>
- D B01F 7/00416 . . . {screws; Worms; Stirrers composed of screw sections}
<administratively transferred to [B01F 27/1143](#)>
- D B01F 7/00425 . . . {blade shaped}
<administratively transferred to [B01F 27/1144](#)>
- D B01F 7/00433 . . . {ribbon shaped, i.e. with an open space between the helical ribbon flight and the rotating axis}
<administratively transferred to [B01F 27/1145](#)>
- D B01F 7/00441 . . . {forming open frameworks or cages}
<administratively transferred to [B01F 27/11451](#)>

- D B01F 7/0045 . . . {with discs or disc-like elements essentially perpendicular to the stirrer shaft axis, e.g. with stirring elements other than discs fixed thereon or with grooves on the sides of the discs}
<administratively transferred to [B01F 27/115](#)>
- D B01F 7/00458 . . . {having holes in the surface}
<administratively transferred to [B01F 27/1151](#)>
- D B01F 7/00466 . . . {with separate elements other than discs fixed on the discs}
<administratively transferred to [B01F 27/1152](#)>
- D B01F 7/00475 . . . {the discs being made by deforming flat discs}
<administratively transferred to [B01F 27/1153](#)>
- D B01F 7/00483 . . . {cup shaped, e.g. semi-sphere}
<administratively transferred to [B01F 27/1154](#)>
- D B01F 7/00491 . . . {with interconnected discs, forming open frameworks or cages}
<administratively transferred to [B01F 27/1155](#)>
- D B01F 7/005 . . . {shaped as cylinders, balls or rollers}
<administratively transferred to [B01F 27/116](#)>
- D B01F 7/00508 . . . {having holes in the surface}
<administratively transferred to [B01F 27/1161](#)>
- D B01F 7/00516 . . . {Balls}
<administratively transferred to [B01F 27/1162](#)>
- D B01F 7/00525 . . . {Rollers}
<administratively transferred to [B01F 27/1163](#)>
- D B01F 7/00533 . . . {comprising paddles fixed thereon, e.g. with a total diameter close to that of the surrounding receptacle}
<administratively transferred to [B01F 27/11631](#)>
- D B01F 7/00541 . . . {with cones, e.g. funnels}
<administratively transferred to [B01F 27/117](#)>
- D B01F 7/0055 . . . {having holes in the surface}
<administratively transferred to [B01F 27/1171](#)>
- D B01F 7/00558 . . . {provided with brushes, sieves, grids, chains or springs (B01F 7/00408 takes precedence)}
<administratively transferred to [B01F 27/118](#)>
- D B01F 7/00566 . . . {with rigid wires or flexible rods}
<administratively transferred to [B01F 27/119](#)>
- D B01F 7/00575 . . . {with a bent rod of non-helical configuration supported at one end}
<administratively transferred to [B01F 27/1191](#)>
- D B01F 7/00583 . . . {Openwork frame or cage stirrers not provided for elsewhere}
<administratively transferred to [B01F 27/13](#)>
- D B01F 7/00591 . . . {provided with tubes for guiding the material}
<administratively transferred to [B01F 27/15](#)>
- D B01F 7/006 . . . {having additional elements on the stirrer, other than for mixing}
<administratively transferred to [B01F 27/17](#)>

- D B01F 7/00608
 - • • {having elements for disintegrating, e.g. for milling (B01F 7/1625; B01F 7/00358 take precedence)}
 - <administratively transferred to [B01F 27/171](#)>
- D B01F 7/00616
 - • • {having elements for cutting, e.g. knives}
 - <administratively transferred to [B01F 27/172](#)>
- D B01F 7/00625
 - • • {Multistage systems, i.e. with a plurality of mixing elements mounted in sequence on the same axis}
 - <administratively transferred to [B01F 27/19](#)>
- D B01F 7/00633
 - • • {provided with a plurality of similar elements}
 - <administratively transferred to [B01F 27/191](#)>
- D B01F 7/00641
 - • • {provided with a plurality of dissimilar elements}
 - <administratively transferred to [B01F 27/192](#)>
- D B01F 7/0065
 - • • • {comprising helical elements and paddles}
 - <administratively transferred to [B01F 27/1921](#)>
- D B01F 7/00658
 - {Configuration of the rotating axis}
 - <administratively transferred to [B01F 27/21](#)>
- D B01F 7/00666
 - • {Nature of the axis}
 - <administratively transferred to [B01F 27/211](#)>
- D B01F 7/00675
 - • • {The axis being a flexible shaft}
 - <administratively transferred to [B01F 27/2111](#)>
- D B01F 7/00683
 - • {Construction of the axis}
 - <administratively transferred to [B01F 27/212](#)>
- D B01F 7/00691
 - • • {The axis being composed of interconnected parts}
 - <administratively transferred to [B01F 27/2121](#)>
- D B01F 7/007
 - • • {The axis being a hollow cylinder, e.g. for feeding a component (B01F 7/024 takes precedence)}
 - <administratively transferred to [B01F 27/2122](#)>
- D B01F 7/00708
 - • • {The axis comprising stirring means and feeding or discharging means fixed on the same axis}
 - <administratively transferred to [B01F 27/2123](#)>
- D B01F 7/00716
 - • • {the axis being adjustable in length, e.g. telescopic}
 - <administratively transferred to [B01F 27/2124](#)>
- D B01F 7/00725
 - • {Connection of the rotating axis with the drive}
 - <administratively transferred to [B01F 27/213](#)>
- D B01F 7/00733
 - {Submerged mixers, i.e. with a submerged stirrer and drive unit, e.g. displaceable on a vertical beam (submerged stirring devices for introducing a gas in a liquid B01F 3/04595)}
 - <administratively transferred to [B01F 27/25](#)>
- D B01F 7/00741
 - • {Vertical beam constructions therefor}
 - <administratively transferred to [B01F 27/251](#)>
- D B01F 7/0075
 - {the mixer being composed of a stator-rotor system with movable slits between surfaces facing each other, e.g. having intermeshing teeth or cylinders or having orifices (with axial inflow and radial outflow for batch mixing B01F 7/1625; for mixtures of cement with other substances B28C 5/0881; for plastics B29B 7/402)}
 - <administratively transferred to [B01F 27/27](#)>

- D B01F 7/00758
 - • {the stator-rotor system being formed by substantial flat surfaces}
 - <administratively transferred to [B01F 27/271](#)>
- D B01F 7/00766
 - • • {provided with intermeshing elements}
 - <administratively transferred to [B01F 27/2711](#)>
- D B01F 7/00775
 - • • {provided with ribs, ridges or grooves on one surface}
 - <administratively transferred to [B01F 27/2712](#)>
- D B01F 7/00783
 - • • {the surfaces having a conical shape}
 - <administratively transferred to [B01F 27/2713](#)>
- D B01F 7/00791
 - • • {the relative position of the stator and the rotor, gap in between or gap with the walls being adjustable}
 - <administratively transferred to [B01F 27/2714](#)>
- D B01F 7/008
 - • {the stator-rotor system being formed by conical or cylindrical surfaces, e.g. curved surfaces}
 - <administratively transferred to [B01F 27/272](#)>
- D B01F 7/00808
 - • • {provided with intermeshing elements}
 - <administratively transferred to [B01F 27/2721](#)>
- D B01F 7/00816
 - • • {provided with ribs, ridges or grooves on one surface}
 - <administratively transferred to [B01F 27/2722](#)>
- D B01F 7/00825
 - • • {the surfaces having a conical shape}
 - <administratively transferred to [B01F 27/2723](#)>
- D B01F 7/00833
 - • • {the relative position of the stator and the rotor, gap in between or gap with the walls being adjustable}
 - <administratively transferred to [B01F 27/2724](#)>
- D B01F 7/00841
 - • {the mixer being composed of a stator-rotor system being formed by bearing elements, e.g. roller bearings}
 - <administratively transferred to [B01F 27/276](#)>
- D B01F 7/0085
 - {the stirring devices being composed of two independently driven coaxial rotors facing each other, e.g. having intermeshing teeth}
 - <administratively transferred to [B01F 27/40](#)>
- D B01F 7/00858
 - • {with rotating surfaces facing each other}
 - <administratively transferred to [B01F 27/41](#)>
- D B01F 7/00866
 - • • {provided with intermeshing elements}
 - <administratively transferred to [B01F 27/411](#)>
- D B01F 7/00875
 - • • {provided with ribs, ridges or grooves on one surface}
 - <administratively transferred to [B01F 27/412](#)>
- D B01F 7/00883
 - • {with rotating surfaces next to one another, e.g. on parallel axis}
 - <administratively transferred to [B01F 27/42](#)>
- D B01F 7/00891
 - • • {provided with intermeshing elements}
 - <administratively transferred to [B01F 27/421](#)>
- D B01F 7/009
 - • • {provided with ribs, ridges or grooves on one surface}
 - <administratively transferred to [B01F 27/422](#)>
- D B01F 7/00908
 - {Pipe mixers, i.e. mixing material flowing continuously through pipes, e.g. column mixers}
 - <administratively transferred to [B01F 27/50](#)>

- D B01F 7/00916
 - {the stirrer being driven by the moving material}
 - <administratively transferred to [B01F 27/55](#)>
- D B01F 7/00925
 - {characterised by the orientation or disposition of the rotor axis, e.g. a plurality of mixing shafts with different or random orientation}
 - <administratively transferred to [B01F 27/23](#)>
- D B01F 7/00933
 - • {Variable, e.g. tiltable during the operation}
 - <administratively transferred to [B01F 27/231](#)>
- D B01F 7/00941
 - • • {the orientation of the rotating shaft being adjustable in the interior of the receptacle, e.g. by tilting the stirrer shaft during the mixing}
 - <administratively transferred to [B01F 27/2311](#)>
- D B01F 7/0095
 - • • {the position of the rotating shaft being adjustable in the interior of the receptacle, e.g. to locate the stirrer in different locations during the mixing}
 - <administratively transferred to [B01F 27/2312](#)>
- D B01F 7/00958
 - • {with a plurality of rotation axis}
 - <administratively transferred to [B01F 27/232](#)>
- D B01F 7/00966
 - • • {having different inclinations, e.g. non parallel}
 - <administratively transferred to [B01F 27/2321](#)>
- D B01F 7/00975
 - • • {parallel}
 - <administratively transferred to [B01F 27/2322](#)>
- D B01F 7/00983
 - • • {perpendicular}
 - <administratively transferred to [B01F 27/2323](#)>
- D B01F 7/00991
 - • • {planetary (B01F 7/14 and B01F 7/30 take precedence)}
 - <administratively transferred to [B01F 27/2324](#)>
- D B01F 7/02
 - with stirrers rotating about a horizontal or inclined axis
 - <administratively transferred to [B01F 27/60](#)>
- D B01F 7/021
 - • {rotating about an inclined axis}
 - <administratively transferred to [B01F 27/61](#)>
- D B01F 7/022
 - • {comprising liquid feeding, e.g. spraying means (in general B01F 15/0203)}
 - <administratively transferred to [B01F 27/62](#)>
- D B01F 7/024
 - • • {the liquid being fed through the shaft of the stirrer}
 - <administratively transferred to [B01F 27/621](#)>
- D B01F 7/025
 - • {the receptacle being divided into compartments, e.g. with porous divisions}
 - <administratively transferred to [B01F 27/625](#)>
- D B01F 7/027
 - • {the receptacles being tiltable, e.g. for emptying (for concrete B28C 5/141, B28C 5/161)}
 - <administratively transferred to [B01F 27/627](#)>
- D B01F 7/028
 - • {provided with buckets}
 - <administratively transferred to [B01F 27/65](#)>
- D B01F 7/04
 - • with paddles, {blades} or arms
 - <administratively transferred to [B01F 27/70](#)>
- D B01F 7/041
 - • • {comprising two or more shafts, e.g. in consecutive mixing chambers (B01F 7/025 takes precedence)}
 - <administratively transferred to [B01F 27/701](#)>

- D B01F 7/042 . . . {with intermeshing paddles}
<administratively transferred to [B01F 27/702](#)>
- D B01F 7/043 . . . {with stirrers rotating at different speeds, or rotating in opposite directions about the same axis, e.g. with a first stirrer surrounded by a tube inside a second stirrer (B01F 7/045 takes precedence)}
<administratively transferred to [B01F 27/703](#)>
- D B01F 7/045 . . . {with stirrers facing each other, i.e. being supported by opposite walls of the receptacle}
<administratively transferred to [B01F 27/704](#)>
- D B01F 7/046 . . . {characterised by the shape of the stirrer, i.e. of Z- or S-shape}
<administratively transferred to [B01F 27/708](#)>
- D B01F 7/047 . . . {with all the shafts in the same receptacle (B01F 7/042, B01F 7/043, B01F 7/045, B01F 7/046 take precedence)}
<administratively transferred to [B01F 27/706](#)>
- D B01F 7/048 . . {the paddles co-operating, e.g. intermeshing, with elements on the receptacle wall}
<administratively transferred to [B01F 27/707](#)>
- D B01F 7/06 . . with propellers
<administratively transferred to [B01F 27/71](#)>
- D B01F 7/063 . . {co-operating with stationary guiding means, e.g. baffles}
<administratively transferred to [B01F 27/711](#)>
- D B01F 7/066 . . . {the guiding means being tubes surrounding the propellers}
<administratively transferred to [B01F 27/7111](#)>
- D B01F 7/08 . . with helices {or sections of helices (with a housing closely surrounding the helices, i.e. extruders, B29C 48/395)}
<administratively transferred to [B01F 27/72](#)>
- D B01F 7/081 . . . {with at least two helices in the same receptacle}
<administratively transferred to [B01F 27/721](#)>
- D B01F 7/082 . . . {the helices being closely surrounded by a casing (for mixing or kneading plastics B29B 7/48)}
<administratively transferred to [B01F 27/722](#)>
- D B01F 7/083 {the stirrers being composed of helices and paddles on the same shaft, e.g. helically arranged ovally shaped paddles}
<administratively transferred to [B01F 27/7221](#)>
- D B01F 7/085 . . . {the helices intermeshing to knead the mixture}
<administratively transferred to [B01F 27/723](#)>
- D B01F 7/086 . . {having a single helice closely surrounded by a casing (for mixing or kneading plastics B29B 7/42)}
<administratively transferred to [B01F 27/724](#)>
- D B01F 7/087 . . . {with two or more helices in respective separate casings, e.g. one casing inside the other}
<administratively transferred to [B01F 27/725](#)>
- D B01F 7/088 . . {the stirrers being composed of two helices with opposite pitch on the same shaft; the stirrers being composed of two helices on the same axis, driven in opposite directions or at different speeds}
<administratively transferred to [B01F 27/726](#)>

- D B01F 7/10
- with rotary discs {, e.g. provided with orifices; or the receptacle being divided into compartments (pressing the components through orifices on rotating elements B01F 5/0682; pressing the components axially through a rotor-stator system, at least the stator being a perforated plate B01F 5/0683)}
- <administratively transferred to [B01F 27/73](#)>
- D B01F 7/105
- {with two or more parallel shafts provided with perpendicularly mounted discs, e.g. lens shaped, one against the other on each shaft and in circumferential contact with the discs on the other shafts, e.g. for cleaning}
- <administratively transferred to [B01F 27/731](#)>
- D B01F 7/12
- with {rotary} cylinders {, e.g. having special profile cross-section (B01F 7/145 takes precedence)}
- <administratively transferred to [B01F 27/74](#)>
- D B01F 7/14
- with stirrers having planetary motion {, i.e. rotating about their own axis and about a horizontal sun axis}
- <administratively transferred to [B01F 27/75](#)>
- D B01F 7/145
- {the stirrers being cylinders, balls or gears}
- <administratively transferred to [B01F 27/755](#)>
- D B01F 7/16
- with stirrers rotating about a substantially vertical axis
- <administratively transferred to [B01F 27/80](#)>
- D B01F 7/1605
- {with relative displacement, e.g. vertical, between stirrer and receptacle for bringing them into operative position, e.g. with an independent receptacle or with means to close the receptacle; Fixing elements for the receptacle}
- <administratively transferred to [B01F 27/805](#)>
- D B01F 7/161
- {with vertical displacement of the stirrer, e.g. with additional means for axially displacing or for pivoting the stirrer about a vertical axis in order to co-operate with several receptacles}
- <administratively transferred to [B01F 27/806](#)>
- D B01F 7/1615
- {with the stirrer-head pivoting about a horizontal axis to bring the stirrer in and out of operative position, e.g. with a receptacle pivoting about a horizontal axis for emptying}
- <administratively transferred to [B01F 27/807](#)>
- D B01F 7/162
- {the stirrers being driven from the bottom of the receptacle}
- <administratively transferred to [B01F 27/808](#)>
- D B01F 7/1625
- {the stirrers having a central axial inflow and a substantially radial outflow, e.g. centrifugal rotors with several rotors rotating in opposite direction}
- <administratively transferred to [B01F 27/81](#)>
- D B01F 7/163
- {with the inflow from one side only, e.g. stirrers placed on the bottom of the receptacle, or used as a bottom discharge pump}
- <administratively transferred to [B01F 27/811](#)>
- D B01F 7/1635
- {the stirrers co-operating with stationary guiding elements, e.g. surrounding stators or intermeshing stators (B01F 7/164 takes precedence)}
- <administratively transferred to [B01F 27/8111](#)>
- D B01F 7/164
- {the stirrers co-operating with surrounding stators, or with intermeshing stators, e.g. comprising slits, orifices or screens}
- <administratively transferred to [B01F 27/812](#)>

- D B01F 7/1645
 - • • {the stirrers co-operating with stationary guiding elements (B01F 7/164 takes precedence)}
 - <administratively transferred to [B01F 27/813](#)>
- D B01F 7/165
 - • {Pan-type mixers, i.e. mixers in which the stirring elements move along the bottom of a pan-shaped receptacle (with stirring elements moving along the wall or bottom of the receptacle for scraping in general B01F 7/00208)}
 - <administratively transferred to [B01F 27/82](#)>
- D B01F 7/1655
 - • {the stirrers being additionally moved radially, or oscillating about an axis perpendicular to the stirrer axis (B01F 7/30 takes precedence)}
 - <administratively transferred to [B01F 27/83](#)>
- D B01F 7/166
 - • {with stirrers rotating at different speeds or in opposite direction about the same axis}
 - <administratively transferred to [B01F 27/84](#)>
- D B01F 7/1665
 - • {having two or more stirrers on separate shafts, e.g. the shape of the receptacle matching with the periphery of the rotating stirrers (B01F 7/166 takes precedence)}
 - <administratively transferred to [B01F 27/85](#)>
- D B01F 7/167
 - • • {the receptacle being subdivided in adjacent compartments}
 - <administratively transferred to [B01F 27/851](#)>
- D B01F 7/1675
 - • {co-operating with deflectors or baffles fixed to the receptacle (B01F 7/1635; B01F 7/1645 take precedence)}
 - <administratively transferred to [B01F 27/86](#)>
- D B01F 7/168
 - • • {the baffles being of cylindrical shape, e.g. a mixing chamber surrounding the stirrer, the baffle being displaced axially to form an interior mixing chamber}
 - <administratively transferred to [B01F 27/861](#)>
- D B01F 7/1685
 - • • {the baffles being adjustable or movable (B01F 7/168 takes precedence)}
 - <administratively transferred to [B01F 27/862](#)>
- D B01F 7/169
 - • {the receptacle being divided into superimposed compartments}
 - <administratively transferred to [B01F 27/87](#)>
- D B01F 7/1695
 - • {with an independent receptacle-stirrer unit, the stirrer being adapted to be coupled to a drive mechanism}
 - <administratively transferred to [B01F 27/88](#)>
- D B01F 7/18
 - • with paddles or arms {(B01F 7/162; B01F 7/165 take precedence)}
 - <administratively transferred to [B01F 27/90](#)>
- D B01F 7/183
 - • • {the paddles co-operating, e.g. intermeshing, with elements fixed on the receptacle walls}
 - <administratively transferred to [B01F 27/902](#)>
- D B01F 7/186
 - • • {the elements being vertically arranged, e.g. fixed on the bottom}
 - <administratively transferred to [B01F 27/9021](#)>
- D B01F 7/20
 - • • with fixed axis
 - <administratively transferred to [B01F 27/906](#)>
- D B01F 7/22
 - • with propellers {(B01F 7/162 takes precedence)}
 - <administratively transferred to [B01F 27/91](#)>
- D B01F 7/225
 - • • {forcing the material through orifices or slits, e.g. in a stationary part}
 - <administratively transferred to [B01F 27/911](#)>

- D B01F 7/24
 - • with helices {or screws (B01F 7/30 takes precedence)}
 - <administratively transferred to [B01F 27/92](#)>
- D B01F 7/241
 - • • {with at least two helices, e.g. intermeshing helices}
 - <administratively transferred to [B01F 27/922](#)>
- D B01F 7/242
 - • • {the helices being mounted centrally in the receptacle for mixing in batches (B01F 7/241 takes precedence)}
 - <administratively transferred to [B01F 27/921](#)>
- D B01F 7/243
 - • • • {the helices being surrounded by a guiding tube}
 - <administratively transferred to [B01F 27/9211](#)>
- D B01F 7/244
 - • • • • {combined with means for uniting flows of material taken from different parts of the receptacle}
 - <administratively transferred to [B01F 27/92112](#)>
- D B01F 7/245
 - • • • {with conical helices}
 - <administratively transferred to [B01F 27/9212](#)>
- D B01F 7/246
 - • • • {the helices having a diameter only slightly less than the diameter of the receptacle (B01F 7/245 takes precedence)}
 - <administratively transferred to [B01F 27/9213](#)>
- D B01F 7/247
 - • • • {with additional mixing elements other than helices; having inner and outer helices; with helices surrounding a guiding tube}
 - <administratively transferred to [B01F 27/9214](#)>
- D B01F 7/248
 - • • {the material flowing continuously through the receptacle}
 - <administratively transferred to [B01F 27/923](#)>
- D B01F 7/26
 - • with rotary discs {, e.g. provided with orifices, or co-operating with loose mixing particles, provided with feeding or discharging means or provided with sieves for continuously mixing (pressing the components through orifices on rotating elements B01F 5/0682; pressing the components axially through a rotor-stator system, at least the stator being a perforated plate B01F 5/0683)}
 - <administratively transferred to [B01F 27/93](#)>
- D B01F 7/28
 - • with {rotary} cylinders {, e.g. having special profile cross-section}
 - <administratively transferred to [B01F 27/94](#)>
- D B01F 7/285
 - • • {with hollow cylinders or cones, e.g. perforated or having special stirring elements thereon}
 - <administratively transferred to [B01F 27/941](#)>
- D B01F 7/30
 - • with stirrers having planetary motion {, i.e. rotating about their own axis and about a vertical sun axis}
 - <administratively transferred to [B01F 27/95](#)>
- D B01F 7/302
 - • • {using only helical stirrers}
 - <administratively transferred to [B01F 27/953](#)>
- D B01F 7/305
 - • • {with at least one stirrer mounted on the sun axis}
 - <administratively transferred to [B01F 27/951](#)>
- D B01F 7/307
 - • • {the stirrers being cylinders with their circumference in contact with the bottom of the receptacle and rotating about an axis at an angle to the sun axis, e.g. mixers of the Muller type}
 - <administratively transferred to [B01F 27/952](#)>
- D B01F 7/32
 - • with openwork frames or cages
 - <administratively transferred to [B01F 27/96](#)>

- D B01F 9/00** **Mixers with rotating receptacles, (i.e. the rotary motion is imparted to effect the mixing){(B01F 11/0002,} B01F 13/04 take precedence); {Mixing the contents of packages or like independent containers by rotating them}**
<administratively transferred to [B01F 29/00](#)>
- D B01F 9/0001 • {the receptacles being submitted to rotation about two different axes, e.g. receptacles having planetary motion}
 <administratively transferred to [B01F 29/10](#)>
- D B01F 9/0003 • {Use of centrifuges for mixing}
 <administratively transferred to [B01F 29/15](#)>
- D B01F 9/0005 • {the receptacles rotating about an axis at an angle to their longitudinal axis}
 <administratively transferred to [B01F 29/20](#)>
- D B01F 9/0007 • {the material flowing continuously through the receptacles from feed to discharge, e.g. the feed and discharge being at the same end}
 <administratively transferred to [B01F 29/25](#)>
- D B01F 9/0009 • • {with at least one screw inside the receptacle for feeding or discharging, e.g. the axis of screw and receptacle being parallel}
 <administratively transferred to [B01F 29/251](#)>
- D B01F 9/001 • • {the feed and discharge openings being at opposite ends of the receptacle}
 <administratively transferred to [B01F 29/252](#)>
- D B01F 9/0012 • • {the feed and discharge openings being at the same side of the receptacle}
 <administratively transferred to [B01F 29/253](#)>
- D B01F 9/0014 • {Mixing the contents of packages or like independent containers, e.g. tins, bottles, by rotating them}
 <administratively transferred to [B01F 29/30](#)>
- D B01F 9/0016 • • {the containers being supported by driving means, e.g. by rotating rollers}
 <administratively transferred to [B01F 29/31](#)>
- D B01F 9/0018 • • {the containers being modified for coupling to rotating frames or the like; Containers therefor; Coupling means therefor}
 <administratively transferred to [B01F 29/32](#)>
- D B01F 9/002 • • • {for test-tubes or like small containers, e.g. containing blood samples}
 <administratively transferred to [B01F 29/321](#)>
- D B01F 9/0021 • • • {Several containers being held in a support for simultaneous mixing, optionally with feeding and discharging means, e.g. for bottles in crates}
 <administratively transferred to [B01F 29/322](#)>
- D B01F 9/0023 • • {Imparting a composite movement to a plurality of bottles}
 <administratively transferred to [B01F 29/33](#)>
- D B01F 9/0025 • • • {by means of a rotary table provided with a plurality of bottle grippers at its periphery, an additional movement being imparted to the grippers}
 <administratively transferred to [B01F 29/331](#)>
- D B01F 9/0027 • • • {the bottles being submitted to a screw-motion about an axis perpendicular to the axis of the bottles and lying intermediate the ends of the bottles}
 <administratively transferred to [B01F 29/332](#)>
- D B01F 9/0029 • • • {essentially by rotating bottles about an axis perpendicular to the bottle axis and lying outside the bottles, using a rotating drum provided with pockets for the bottles at its periphery}
 <administratively transferred to [B01F 29/333](#)>

- D B01F 9/003
 - • {Construction details of the holders for the independent packages or receptacles}
 - <administratively transferred to [B01F 29/34](#)>
- D B01F 9/0032
 - {Parts or components, e.g. receptacles, feeding or discharging means (B01F 9/0009 takes precedence)}
 - <administratively transferred to [B01F 29/40](#)>
- D B01F 9/0034
 - • {Receptacles, e.g. provided with liners}
 - <administratively transferred to [B01F 29/401](#)>
- D B01F 9/0036
 - • • {characterised by the shape or cross-section of the receptacle, e.g. of Y-, Z-, S-, or X-shape}
 - <administratively transferred to [B01F 29/4011](#)>
- D B01F 9/0038
 - • • • {Non-cylindrical sections, e.g. elliptical, irregular}
 - <administratively transferred to [B01F 29/40111](#)>
- D B01F 9/004
 - • • • {Polygonal sections, e.g. triangular, square}
 - <administratively transferred to [B01F 29/40112](#)>
- D B01F 9/0041
 - • • • {Conical, double-conical, diabolo shapes}
 - <administratively transferred to [B01F 29/40113](#)>
- D B01F 9/0043
 - • • • {Cubic, cubical, polyhedral shapes}
 - <administratively transferred to [B01F 29/40114](#)>
- D B01F 9/0045
 - • • • {S-shapes}
 - <administratively transferred to [B01F 29/40115](#)>
- D B01F 9/0047
 - • • • {Spherical shapes}
 - <administratively transferred to [B01F 29/40116](#)>
- D B01F 9/0049
 - • • • {Toroidal shapes}
 - <administratively transferred to [B01F 29/40117](#)>
- D B01F 9/005
 - • • • {V or W shapes}
 - <administratively transferred to [B01F 29/40118](#)>
- D B01F 9/0052
 - • • • {X-shapes}
 - <administratively transferred to [B01F 29/40119](#)>
- D B01F 9/0054
 - • • • {Y or double-Y shapes}
 - <administratively transferred to [B01F 29/401195](#)>
- D B01F 2009/0056
 - {Constructional aspects of the rotating receptacles}
 - <administratively transferred to [B01F 29/401](#) INV>
- D B01F 2009/0058
 - • {Disposition of the rotor axis}
 - <administratively transferred to [B01F 29/403](#) INV>
- D B01F 2009/0059
 - • • {horizontal}
 - <administratively transferred to [B01F 29/4031](#) INV>
- D B01F 2009/0061
 - • • {vertical}
 - <administratively transferred to [B01F 29/4032](#) INV>
- D B01F 2009/0063
 - • • {inclined}
 - <administratively transferred to [B01F 29/4033](#) INV>
- D B01F 2009/0065
 - • • {variable, e.g. tiltable during the operation}
 - <administratively transferred to [B01F 29/4034](#) INV>

- | | | |
|---|----------------|---|
| D | B01F 2009/0067 | <ul style="list-style-type: none"> • • • {with a receptacle rotating around two or more axes} <p><administratively transferred to B01F 29/4035 INV></p> |
| D | B01F 2009/0069 | <ul style="list-style-type: none"> • • • {having different, non-perpendicular inclinations, e.g. skew axes} <p><administratively transferred to B01F 29/40351 INV></p> |
| D | B01F 2009/007 | <ul style="list-style-type: none"> • • • {being parallel axes} <p><administratively transferred to B01F 29/40352 INV></p> |
| D | B01F 2009/0072 | <ul style="list-style-type: none"> • • • {being perpendicular axes} <p><administratively transferred to B01F 29/40353 INV></p> |
| D | B01F 2009/0074 | <ul style="list-style-type: none"> • • • {arranged for planetary motion} <p><administratively transferred to B01F 29/40354 INV></p> |
| D | B01F 2009/0076 | <ul style="list-style-type: none"> • • • {with a plurality of rotating receptacles} <p><administratively transferred to B01F 29/4036 INV></p> |
| D | B01F 2009/0078 | <ul style="list-style-type: none"> • • • {having axes of different, non-perpendicular inclinations} <p><administratively transferred to B01F 29/40361 INV></p> |
| D | B01F 2009/0079 | <ul style="list-style-type: none"> • • • {having parallel axes} <p><administratively transferred to B01F 29/40362 INV></p> |
| D | B01F 2009/0081 | <ul style="list-style-type: none"> • • • {having perpendicular axes} <p><administratively transferred to B01F 29/40363 INV></p> |
| D | B01F 2009/0083 | <ul style="list-style-type: none"> • • • {being concentrically arranged} <p><administratively transferred to B01F 29/40364 INV></p> |
| D | B01F 2009/0085 | <ul style="list-style-type: none"> • • • {arranged for planetary motion} <p><administratively transferred to B01F 29/40365 INV></p> |
| D | B01F 2009/0087 | <ul style="list-style-type: none"> • • {Disposition or configuration of the receptacles} <p><administratively transferred to B01F 29/402 INV></p> |
| D | B01F 2009/0089 | <ul style="list-style-type: none"> • • • {Multi-compartment receptacles} <p><administratively transferred to B01F 29/4021 INV></p> |
| D | B01F 2009/009 | <ul style="list-style-type: none"> • • • {Configuration of the interior} <p><administratively transferred to B01F 29/4022 INV></p> |
| D | B01F 2009/0092 | <ul style="list-style-type: none"> • • • {provided with baffles, plates or bars on the wall or the bottom} <p><administratively transferred to B01F 29/40221 INV></p> |
| D | B01F 2009/0094 | <ul style="list-style-type: none"> • • • {provided with guide tubes on the wall or the bottom} <p><administratively transferred to B01F 29/40222 INV></p> |
| D | B01F 2009/0096 | <ul style="list-style-type: none"> • • • {Nature of the receptacle} <p><administratively transferred to B01F 29/4023 INV></p> |
| D | B01F 2009/0098 | <ul style="list-style-type: none"> • • • {Surface characteristics, e.g. coated, rough} <p><administratively transferred to B01F 29/40231 INV></p> |
| D | B01F 9/02 | <ul style="list-style-type: none"> • rotating about a horizontal or inclined axis, e.g. drum mixers <p><administratively transferred to B01F 29/60></p> |
| D | B01F 9/025 | <ul style="list-style-type: none"> • • {comprising liquid spraying devices} <p><administratively transferred to B01F 29/61></p> |

- D B01F 9/04
 - without bars {, i.e. without mixing elements; Characterised by the shape or cross-section of the receptacle, e.g. of Y, Z, S or X shape; Cylindrical receptacles rotating about an axis at an angle to their longitudinal axis}
 - <administratively transferred to [B01F 29/62](#)>
- D B01F 9/06
 - with fixed bars {, i.e. stationary, or fixed on the receptacle}
 - <administratively transferred to [B01F 29/63](#)>
- D B01F 9/08
 - with {moving, e.g.} rotating stirring devices {, i.e. moving with respect to the receptacle}
 - <administratively transferred to [B01F 29/64](#)>
- D B01F 9/10
 - rotating about a {substantially} vertical axis
 - <administratively transferred to [B01F 29/80](#)>
- D B01F 9/103
 - {co-operating with stationary mixing elements (B01F 9/106 takes precedence)}
 - <administratively transferred to [B01F 29/81](#)>
- D B01F 9/106
 - {the receptacle comprising a rotary part, e.g. the bottom, and a stationary part, e.g. the wall, with optional use of a stirrer; the receptacle comprising parts moving in opposite directions}
 - <administratively transferred to [B01F 29/82](#)>
- D B01F 9/12
 - with {rotary} paddles or arms {, e.g. movable out of the receptacle (dough mixers or kneaders with stirrers rotating about an inclined axis A21C 1/04)}
 - <administratively transferred to [B01F 29/83](#)>
- D B01F 9/125
 - {Pan-type mixers, i.e. having stirrers moving along the bottom of a pan-shaped receptacle}
 - <administratively transferred to [B01F 29/835](#)>
- D B01F 9/14
 - with propellers
 - <administratively transferred to [B01F 29/84](#)>
- D B01F 9/16
 - with helices {, e.g. rotating about an inclined axis}
 - <administratively transferred to [B01F 29/85](#)>
- D B01F 9/18
 - with rotary discs
 - <administratively transferred to [B01F 29/86](#)>
- D B01F 9/20
 - with {rotary} cylinders
 - <administratively transferred to [B01F 29/87](#)>
- D B01F 9/22
 - with stirrers having planetary motion {(receptacles having planetary motion B01F 9/0001)}
 - <administratively transferred to [B01F 29/90](#)>
- D B01F 11/00

Mixers with shaking, oscillating, or vibrating mechanisms (B01F 13/04 takes precedence)

<administratively transferred to [B01F 31/00](#)>
- D B01F 11/0002
 - {with a mixing receptacle rotating alternately in opposite directions, or rotating about an axis which intersects the receptacle axis at an angle}
 - <administratively transferred to [B01F 31/10](#)>
- D B01F 11/0005
 - {Mixing the contents of independent containers, e.g. test-tubes, by shaking or oscillating them}
 - <administratively transferred to [B01F 31/20](#)>
- D B01F 11/0008
 - {Holders therefor}
 - <administratively transferred to [B01F 31/201](#)>

- D B01F 11/0011
 - {for beverage bottles, e.g. within crates or with feeding means for the bottles}
 - <administratively transferred to [B01F 31/202](#)>
- D B01F 11/0014
 - {with supporting means moving in a horizontal plane, e.g. describing an orbital path for moving the containers about an axis which intersects the receptacle axis at an angle (B01F 11/0017, B01F 11/0022, B01F 11/0031, B01F 11/0034 take precedence)}
 - <administratively transferred to [B01F 31/22](#)>
- D B01F 11/0017
 - {by pivoting the containers about an axis (B01F 11/0025, B01F 11/0031, B01F 11/0034 take precedence)}
 - <administratively transferred to [B01F 31/23](#)>
- D B01F 11/002
 - • {the containers being of the sandglass-type or being linked with their openings}
 - <administratively transferred to [B01F 31/231](#)>
- D B01F 11/0022
 - {the containers being submitted to a rectilinear movement (B01F 11/0025, B01F 11/0031, B01F 11/0034 take precedence)}
 - <administratively transferred to [B01F 31/24](#)>
- D B01F 11/0025
 - {the containers being submitted to a composite movement not in a horizontal plane, e.g. rectilinear and pivoting}
 - <administratively transferred to [B01F 31/25](#)>
- D B01F 11/0028
 - {the containers being submitted to a wobbling movement}
 - <administratively transferred to [B01F 31/26](#)>
- D B01F 11/0031
 - {the vibrations being caused by an unbalanced rotating member}
 - <administratively transferred to [B01F 31/265](#)>
- D B01F 11/0034
 - {the vibrations being caused by electromagnets}
 - <administratively transferred to [B01F 31/27](#)>
- D B01F 11/0037
 - {with means for transporting test tubes to and from the stirring device}
 - <administratively transferred to [B01F 31/275](#)>
- D B01F 11/004
 - {the vibrations being caused by piezoelectric elements}
 - <administratively transferred to [B01F 31/28](#)>
- D B01F 11/0042
 - {Comprising a receptacle to only a part of which the movement is imparted; Periodically deforming flexible tubular members through which the material is flowing}
 - <administratively transferred to [B01F 31/29](#)>
- D B01F 11/0045
 - {comprising a receptacle with a deformable part, e.g. a membrane, to which a motion is imparted}
 - <administratively transferred to [B01F 31/31](#)>
- D B01F 11/0048
 - • {the motion being a linear movement to one part of the receptacle}
 - <administratively transferred to [B01F 31/311](#)>
- D B01F 11/0051
 - • {the motion being a transversal movement to one part of the receptacle; e.g. by moving alternatively up and down the opposite edges of a closing lid to cause a pumping action}
 - <administratively transferred to [B01F 31/312](#)>
- D B01F 11/0054
 - {having a rotary stirrer oscillating axially (having rotary stirrers with additional radial movement, or oscillating about an axis perpendicular to the stirrer axis, B01F 7/1655)}
 - <administratively transferred to [B01F 31/40](#)>

- D B01F 11/0057
 - • {for material flowing continuously axially therethrough}
 - <administratively transferred to [B01F 31/401](#)>
- D B01F 11/006
 - {having an annular trough vibrating about its central axis}
 - <administratively transferred to [B01F 31/46](#)>
- D B01F 11/0062
 - {having a receptacle submitted to a composite movement, i.e. at least one movement being vibratory or oscillatory}
 - <administratively transferred to [B01F 31/50](#)>
- D B01F 11/0065
 - {the material being contained in a flexible bag submitted to periodical deformation}
 - <administratively transferred to [B01F 31/55](#)>
- D B01F 11/0068
 - {having a vibrating receptacle provided with stirring elements, e.g. independent stirring elements}
 - <administratively transferred to [B01F 31/56](#)>
- D B01F 11/0071
 - {the material being directly submitted to a pulsating movement, e.g. by means of an oscillating piston or air column (solvent extraction of liquid solution comprising vibrating mechanisms B01D 11/0438; stationary reactors of pulsating type B01J 19/185)}
 - <administratively transferred to [B01F 31/65](#)>
- D B01F 11/0074
 - • {Mixing by successively aspirating a part of the mixture in a conduit, e.g. a piston, and reinjecting it through the same conduit into the receptacle}
 - <administratively transferred to [B01F 31/651](#)>
- D B01F 11/0077
 - {for material continuously moving therethrough (B01F 11/0042, B01F 11/0057, B01F 11/006, B01F 11/0241 take precedence)}
 - <administratively transferred to [B01F 31/57](#)>
- D B01F 11/008
 - {the stirrers performing an oscillatory, vibratory or shaking movement (B01F 11/0054, B01F 11/04 take precedence)}
 - <administratively transferred to [B01F 31/44](#)>
- D B01F 11/0082
 - • {performing a rectilinear reciprocating movement}
 - <administratively transferred to [B01F 31/441](#)>
- D B01F 11/0085
 - • {performing a superposed additional movement other than oscillation, vibration or shaking}
 - <administratively transferred to [B01F 31/443](#)>
- D B01F 11/0088
 - • {performing an oscillatory movement about an axis}
 - <administratively transferred to [B01F 31/445](#)>
- D B01F 11/0091
 - • {Stirrers constructions}
 - <administratively transferred to [B01F 31/449](#)>
- D B01F 11/0094
 - {having a vibrating receptacle (B01F 11/0002, B01F 11/0005, B01F 11/006, B01F 11/0062, B01F 11/0068 take precedence)}
 - <administratively transferred to [B01F 31/60](#)>
- D B01F 11/0097
 - {Drives therefor, e.g. crank mechanisms (B01F 11/0005 takes precedence)}
 - <administratively transferred to [B01F 31/70](#)>
- D B01F 11/02
 - Mixing by means of {high-frequency, e.g.} ultrasonic vibrations {, e.g. jets impinging against a vibrating plate}
 - <administratively transferred to [B01F 31/80](#)>

- D B01F 11/0208
- {the vibrations being generated inside a mixing device without external drive, e.g. by a flow of material causing a knife to vibrate or using nozzles}
- <administratively transferred to [B01F 31/81](#)>
- D B01F 11/0216
- {the material being forced through a narrow vibrating slit}
- <administratively transferred to [B01F 31/82](#)>
- D B01F 11/0225
- {comprising a supplementary stirring element}
- <administratively transferred to [B01F 31/83](#)>
- D B01F 11/0233
- • {the vibrations being generated by the rotation of the stirring element}
- <administratively transferred to [B01F 31/831](#)>
- D B01F 11/0241
- {for material continuously moving through a tube, e.g. by deforming the tube (B01F 11/0208 takes precedence)}
- <administratively transferred to [B01F 31/84](#)>
- D B01F 11/025
- • {with a vibrating element inside the tube}
- <administratively transferred to [B01F 31/841](#)>
- D B01F 11/0258
- {using a vibrating element inside a receptacle}
- <administratively transferred to [B01F 31/85](#)>
- D B01F 11/0266
- {with vibrating the receptacle or part of it}
- <administratively transferred to [B01F 31/86](#)>
- D B01F 11/0275
- • {caused by hitting or striking the receptacle}
- <administratively transferred to [B01F 31/861](#)>
- D B01F 11/0283
- {transmitting the vibratory energy by means of a fluid, e.g. by means of air shock waves}
- <administratively transferred to [B01F 31/87](#)>
- D B01F 11/0291
- {Methodical aspects; Controlling}
- <administratively transferred to [B01F 31/89](#)>
- D B01F 11/04
- with pendulum stirrers {, i.e. with stirrers suspended so as to oscillate about fixed points or axes (stirrers per se B01F 11/0091)}
- <administratively transferred to [B01F 31/42](#)>
- D B01F 13/00 Other mixers; Mixing plant, including combinations of {mixers, e.g. of} dissimilar mixers**
- <administratively transferred to [B01F 33/00](#)>
- D B01F 13/0001
- {Mixers using electrical energy, other than for driving a motor (B01F 3/0407, B01F 3/04978, B01F 3/0815, B01F 3/1235 take precedence)}
- <administratively transferred to [B01F 33/05](#)>
- D B01F 13/0003
- {the energy being electrical energy working on the ingredients or compositions for mixing them}
- <administratively transferred to [B01F 33/051](#)>
- D B01F 13/0005
- {the energy being electric fields for electrostatically charging of the ingredients or compositions for mixing them}
- <administratively transferred to [B01F 33/052](#)>
- D B01F 13/0006
- {the energy being magnetic or electromagnetic energy, radiation working on the ingredients or compositions for or during mixing them}
- <administratively transferred to [B01F 33/053](#)>

- D B01F 13/0008
 - {the energy being in the form of a laser to modify the characteristics or conditions of the products, e.g. for heating}
 - <administratively transferred to [B01F 33/054](#)>
- D B01F 13/001
 - {the energy being particle radiation working on the ingredients or compositions for or during mixing them}
 - <administratively transferred to [B01F 33/055](#)>
- D B01F 13/0011
 - {Mixers in which the mixing of the components is achieved by natural or induced convection}
 - <administratively transferred to [B01F 33/12](#)>
- D B01F 13/0013
 - {Mixers with an endless belt for transport of the material, e.g. in layers or with mixing means above or at the end of the belt}
 - <administratively transferred to [B01F 33/26](#)>
- D B01F 13/0015
 - {Mixers having moving endless chains or belts, e.g. provided with paddles, as mixing elements}
 - <administratively transferred to [B01F 33/27](#)>
- D B01F 13/0016
 - {Movable or transportable mixing devices or plants}
 - <administratively transferred to [B01F 33/50](#)>
- D B01F 13/0018
 - {Movable mixing devices, i.e. apt to be shifted or displaced from one place to another, e.g. by human force}
 - <administratively transferred to [B01F 33/501](#)>
- D B01F 13/002
 - • {portable during use, e.g. hand-held (B05C 17/00553 takes precedence; whisks comprising mixing wires A47J 43/1087)}
 - <administratively transferred to [B01F 33/5011](#)>
- D B01F 13/0022
 - • • {Small portable bottles, flasks, vials, e.g. with means for mixing ingredients or for homogenizing their content, e.g. by hand shaking}
 - <administratively transferred to [B01F 33/50111](#)>
- D B01F 13/0023
 - • • {Of the syringe, cartridge type}
 - <administratively transferred to [B01F 33/50112](#)>
- D B01F 13/0025
 - • • {Of the pipette type}
 - <administratively transferred to [B01F 33/50113](#)>
- D B01F 13/0027
 - • • {Of the hand-held gun type}
 - <administratively transferred to [B01F 33/50114](#)>
- D B01F 13/0028
 - • • {Stirring devices adapted to be connected to a standard boring machine or other kind of domestic tool}
 - <administratively transferred to [B01F 33/50115](#)>
- D B01F 13/003
 - • {adapted to be mounted during use on a standard, base or support}
 - <administratively transferred to [B01F 33/5012](#)>
- D B01F 13/0032
 - • {movable by mechanical means, e.g. hoisting systems, grippers, lift trucks}
 - <administratively transferred to [B01F 33/5013](#)>
- D B01F 13/0033
 - • {movable by human force, e.g. kitchen or table devices}
 - <administratively transferred to [B01F 33/5014](#)>
- D B01F 13/0035
 - {vehicle mounted (mixing devices for cement mounted on vehicles with provisions for mixing during transport B28C 5/42)}
 - <administratively transferred to [B01F 33/502](#)>

- D B01F 13/0037
 - • • {the vehicle being self-propelled, e.g. truck mounted, provided with a motor, driven by tracks (B01F 13/0038 – B01F 13/0047 take precedence)}
 - <administratively transferred to [B01F 33/5021](#)>
- D B01F 13/0038
 - • • {the vehicle being a carriage moving or driving along fixed or movable beams or bridges}
 - <administratively transferred to [B01F 33/5022](#)>
- D B01F 13/004
 - • • {the vehicle being a trailer which is hand moved or coupled to self propelling vehicles}
 - <administratively transferred to [B01F 33/5023](#)>
- D B01F 13/0042
 - • • {the vehicle being moved by human force}
 - <administratively transferred to [B01F 33/5024](#)>
- D B01F 13/0044
 - • • {using rails for guiding the mixing installation during moving or displacing}
 - <administratively transferred to [B01F 33/5025](#)>
- D B01F 13/0045
 - • • {using sledges or skids for moving or displacing the mixing installation}
 - <administratively transferred to [B01F 33/5026](#)>
- D B01F 13/0047
 - • • {using driven tracks, caterpillars, crawler for moving or displacing the mixing installation}
 - <administratively transferred to [B01F 33/5027](#)>
- D B01F 13/0049
 - • {Floating}
 - <administratively transferred to [B01F 33/503](#)>
- D B01F 13/005
 - {Mixers with loose mixing elements, e.g. balls, in a receptacle}
 - <administratively transferred to [B01F 33/25](#)>
- D B01F 13/0052
 - • {using balls as loose mixing element}
 - <administratively transferred to [B01F 33/251](#)>
- D B01F 13/0054
 - • {using bubbles as loose mixing element}
 - <administratively transferred to [B01F 33/252](#)>
- D B01F 13/0055
 - • {using sliders or cylindrical elements as loose mixing element}
 - <administratively transferred to [B01F 33/253](#)>
- D B01F 13/0057
 - • {using springs as loose mixing element}
 - <administratively transferred to [B01F 33/254](#)>
- D B01F 13/0059
 - {Micromixers}
 - <administratively transferred to [B01F 33/30](#)>
- D B01F 13/0061
 - • {using specific means for arranging the streams to be mixed}
 - <administratively transferred to [B01F 33/301](#)>
- D B01F 13/0062
 - • • {Hydrodynamic focussing}
 - <administratively transferred to [B01F 33/3011](#)>
- D B01F 13/0064
 - • • {Mixing chamber}
 - <administratively transferred to [B01F 33/3017](#)>
- D B01F 13/0066
 - • • {Interdigital streams, i.e. lamellae}
 - <administratively transferred to [B01F 33/3012](#)>
- D B01F 13/0067
 - • • • {The interdigital streams being concentric lamellae}
 - <administratively transferred to [B01F 33/30121](#)>

- D B01F 13/0069
- • {the components flowing in the form of droplets (B01F 3/0807 take precedence)}
- <administratively transferred to [B01F 33/302](#)>
- D B01F 13/0071
- • • {the components to be mixed being combined in a single independent droplet, e.g. these droplets being divided by a non-miscible fluid or consisting of independent droplets}
- <administratively transferred to [B01F 33/3021](#)>
- D B01F 13/0072
- • • {the components being formed by independent droplets which are alternated, the mixing of the components being achieved by diffusion between droplets}
- <administratively transferred to [B01F 33/3022](#)>
- D B01F 13/0074
- • {using mixing means not otherwise provided for (B01F 5/00, B01F 7/00, B01F 9/00, B01F 11/00, B01F 13/02 and B01F 13/08 take precedence)}
- <administratively transferred to [B01F 33/305](#)>
- D B01F 13/0076
- • • {using electrohydrodynamic [EHD] or electrokinetic [EKI] phenomena to mix or move the fluids}
- <administratively transferred to [B01F 33/3031](#)>
- D B01F 13/0077
- • • {using magnetohydrodynamic [MHD] phenomena to mix or move the fluids}
- <administratively transferred to [B01F 33/3032](#)>
- D B01F 13/0079
- • • {using heat to mix or move the fluids}
- <administratively transferred to [B01F 33/3033](#)>
- D B01F 13/0081
- • • {using induced convection or movement in the mixture to mix or move the fluids without mechanical means, e.g. thermodynamic instability, strong gradients, etc.}
- <administratively transferred to [B01F 33/3034](#)>
- D B01F 13/0083
- • • {using surface tension to mix, move or hold the fluids}
- <administratively transferred to [B01F 33/3035](#)>
- D B01F 13/0084
- • • • {using hydrophilic/hydrophobic surfaces}
- <administratively transferred to [B01F 33/30351](#)>
- D B01F 13/0086
- • • • {using roughness of the surfaces}
- <administratively transferred to [B01F 33/30352](#)>
- D B01F 13/0088
- • • {using a biological motor, i.e. biological molecules which are activated and movement is induced to stir a fluid}
- <administratively transferred to [B01F 33/3036](#)>
- D B01F 13/0089
- • • {using coupled electrorotation [CER] phenomena to mix or move fluids, or to sense properties of the mixture}
- <administratively transferred to [B01F 33/3037](#)>
- D B01F 13/0091
- • • {using ciliary stirrers to move or stir the fluids}
- <administratively transferred to [B01F 33/3038](#)>
- D B01F 13/0093
- • • {the mixing being achieved by diffusion between layers (B01F 13/0069 takes precedence)}
- <administratively transferred to [B01F 33/3039](#)>
- D B01F 13/0094
- • • {the mixing being performed in a mixing chamber where the products are brought into contact}
- <administratively transferred to [B01F 33/304](#)>

- D B01F 13/0096
- • • {using turbulence on microscale}
- <administratively transferred to [B01F 33/3045](#)>
- D B01F 13/0098
- {Mixing after turning the mixing vessel upside down}
- <administratively transferred to [B01F 33/35](#)>
- D B01F 13/02
- Mixers with gas {or liquid} agitation, e.g. with air supply tubes {{B01F 3/04106 takes precedence; supplying ingredients in concrete mixers with a pneumatic or hydraulic conveyor B28C 7/062; fluidising devices facilitating filling or emptying of containers B65D 88/72}}
- NOTE
- The agitating fluid is not meant to mix with the material
- <administratively transferred to [B01F 33/40](#)>
- D B01F 13/0205
- • {Methods}
- <administratively transferred to [B01F 33/401](#)>
- D B01F 13/0211
- • {comprising supplementary stirring elements}
- <administratively transferred to [B01F 33/402](#)>
- D B01F 13/0216
- • • {the gas being introduced through the shaft of the stirring element}
- <administratively transferred to [B01F 33/4021](#)>
- D B01F 13/0222
- • {for mixing liquids (B01F 13/0211, B01F 13/0233, B01F 13/0255 take precedence)}
- <administratively transferred to [B01F 33/403](#)>
- D B01F 13/0227
- • {for mixing material moving continuously therethrough, e.g. using impinging jets}
- <administratively transferred to [B01F 33/404](#)>
- D B01F 13/0233
- • {in receptacles having guiding conduits therein, e.g. for feeding the gas to the bottom of the receptacle}
- <administratively transferred to [B01F 33/405](#)>
- D B01F 13/0238
- • • {with vertical conduits through which the material is being moved upwardly driven by the fluid}
- <administratively transferred to [B01F 33/4051](#)>
- D B01F 13/0244
- • • • {with a central conduit or a central set of conduits}
- <administratively transferred to [B01F 33/40511](#)>
- D B01F 13/025
- • • • {involving gas diffusers at the bottom}
- <administratively transferred to [B01F 33/40512](#)>
- D B01F 13/0255
- • {in receptacles with gas supply only at the bottom (B01F 13/0233 takes precedence)}
- <administratively transferred to [B01F 33/406](#)>
- D B01F 13/0261
- • • {through orifices arranged around a central cone (B01F 13/0266 takes precedence)}
- <administratively transferred to [B01F 33/4061](#)>
- D B01F 13/0266
- • • {with means for modifying the gas pressure or for supplying gas at different pressures or in different volumes at different parts of the bottom}
- <administratively transferred to [B01F 33/4062](#)>
- D B01F 13/0272
- • {by blowing gas on the material from above}
- <administratively transferred to [B01F 33/407](#)>
- D B01F 13/0277
- • {Controlling}
- <administratively transferred to [B01F 33/408](#)>

- D B01F 13/0283
 - • {Parts, e.g. diffusion elements; Accessories}
 - <administratively transferred to [B01F 33/409](#)>
- D B01F 13/0288
 - • {Storing receptacles provided with separate mixing chambers}
 - <administratively transferred to [B01F 33/4092](#)>
- D B01F 13/0294
 - • {Plants}
 - <administratively transferred to [B01F 33/4094](#)>
- D B01F 13/04
 - Mixers combined with safety devices {(safety devices in general F16P)}
 - <administratively transferred to [B01F 35/60](#)>
- D B01F 13/042
 - • {with a safety or relief valve}
 - <administratively transferred to [B01F 35/602](#)>
- D B01F 13/045
 - • {Safety devices concerning the operation of the mixer}
 - <administratively transferred to [B01F 35/605](#)>
- D B01F 13/047
 - • • {with locking, blocking or interlocking mechanisms for preventing operation of the actuation mechanism of the mixing device}
 - <administratively transferred to [B01F 35/6052](#)>
- D B01F 13/06
 - Mixers adapted for working at sub- or super-atmospheric pressure {, e.g. combined with defoaming}
 - <administratively transferred to [B01F 33/70](#)>
- D B01F 13/065
 - • {Working at super-atmospheric pressure}
 - <administratively transferred to [B01F 33/71](#)>
- D B01F 13/08
 - Magnetic mixers {; Mixers having magnetically driven stirrers}
 - <administratively transferred to [B01F 33/45](#)>
- D B01F 13/0809
 - • {the mixture being directly submitted to an electromagnetic field without use of a stirrer, e.g. for material comprising ferromagnetic particles, or for molten metal}
 - <administratively transferred to [B01F 33/451](#)>
- D B01F 13/0818
 - • {using independent floating stirring elements}
 - <administratively transferred to [B01F 33/452](#)>
- D B01F 13/0827
 - • {using supported or suspended stirring elements}
 - <administratively transferred to [B01F 33/453](#)>
- D B01F 13/0836
 - • • {using an axis supported in several points for mounting the stirring element}
 - <administratively transferred to [B01F 33/4531](#)>
- D B01F 13/0845
 - • • {using a bearing, tube, opening or gap for internally supporting the stirring element}
 - <administratively transferred to [B01F 33/4532](#)>
- D B01F 13/0854
 - • • {supporting the stirring element in one point}
 - <administratively transferred to [B01F 33/4533](#)>
- D B01F 13/0863
 - • • {using a rod for supporting the stirring element, e.g. stirrer sliding on a rod or mounted on a rod sliding in a tube}
 - <administratively transferred to [B01F 33/4534](#)>
- D B01F 13/0872
 - • • {using a stud for supporting the stirring element}
 - <administratively transferred to [B01F 33/4535](#)>
- D B01F 13/0881
 - • • {using a wire for supporting or suspending the stirring element, e.g. stirrer sliding on a wire}
 - <administratively transferred to [B01F 33/4536](#)>

- D B01F 13/089
 - • • {the stirring element being suspended by one point}
 - <administratively transferred to [B01F 33/4537](#)>
- D B01F 13/10
 - Mixing plant, including combinations of {mixers, e.g. of} dissimilar mixers {{B01F 13/0294 takes precedence}}
 - <administratively transferred to [B01F 33/80](#)>
- D B01F 13/1002
 - • {for granular material}
 - <administratively transferred to [B01F 33/805](#)>
- D B01F 13/1005
 - • • {with several silos arranged in a row or around a central delivery point, e.g. provided with proportioning means}
 - <administratively transferred to [B01F 33/8051](#)>
- D B01F 13/1008
 - • • • {the silos being arranged in a circular configuration, i.e. in a circle around a central delivery point}
 - <administratively transferred to [B01F 33/80514](#)>
- D B01F 13/1011
 - • • {involving other than mixing operations, e.g. milling, sieving, drying}
 - <administratively transferred to [B01F 33/8052](#)>
- D B01F 13/1013
 - • {Combinations of similar mixers, e.g. with rotary stirring devices in two or more receptacles (B01F 13/1002 takes precedence)}
 - <administratively transferred to [B01F 33/81](#)>
- D B01F 13/1016
 - • • {in two or more consecutive, i.e. successive, mixing receptacles or being consecutively arranged}
 - <administratively transferred to [B01F 33/811](#)>
- D B01F 13/1019
 - • • {in two or more alternative mixing receptacles, e.g. mixing in one receptacle and dispensing from another receptacle}
 - <administratively transferred to [B01F 33/812](#)>
- D B01F 13/1022
 - • • {mixing simultaneously in two or more mixing receptacles}
 - <administratively transferred to [B01F 33/813](#)>
- D B01F 13/1025
 - • {Combinations of dissimilar mixers (B01F 13/1002 takes precedence)}
 - <administratively transferred to [B01F 33/82](#)>
- D B01F 13/1027
 - • • {with consecutive receptacles}
 - <administratively transferred to [B01F 33/821](#)>
- D B01F 13/103
 - • • • {with moving and non-moving stirring devices}
 - <administratively transferred to [B01F 33/8212](#)>
- D B01F 13/1033
 - • • {with moving and non-moving stirring devices in the same receptacle}
 - <administratively transferred to [B01F 33/822](#)>
- D B01F 13/1036
 - • • {in two or more alternative mixing receptacles, e.g. mixing in one receptacle and dispensing from another receptacle}
 - <administratively transferred to [B01F 33/823](#)>
- D B01F 13/1038
 - • • {mixing simultaneously in two or more mixing receptacles}
 - <administratively transferred to [B01F 33/824](#)>
- D B01F 13/1041
 - • {comprising mixers specially adapted for mixing in combination with disintegrating (B01F 7/048, B01F 13/1002 take precedence)}
 - <administratively transferred to [B01F 33/83](#)>
- D B01F 13/1044
 - • • {Devices with one shaft, provided with mixing and milling tools, e.g. using balls or rollers as working tools; Devices with two or more tools rotating about the same axis}
 - <administratively transferred to [B01F 33/8305](#)>

- D B01F 13/1047
 - • • {Devices with consecutive working receptacles, e.g. with two intermeshing tools in one of the receptacles (B01F 13/1044 takes precedence)}
 - <administratively transferred to [B01F 33/831](#)>
- D B01F 13/105
 - • • {Devices with several tools rotating about different axis in the same receptacle}
 - <administratively transferred to [B01F 33/833](#)>
- D B01F 2013/1052
 - • {Mixing in several steps, e.g. successive steps}
 - <administratively transferred to [B01F 33/834](#) INV>
- D B01F 13/1055
 - • {Mixing plant with mixing receptacles receiving material dispensed from several component receptacles, e.g. paint tins}
 - <administratively transferred to [B01F 33/84](#)>
- D B01F 13/1058
 - • • {with component receptacles fixed in a circular configuration on a horizontal table, e.g. the table being able to be indexed about a vertical axis}
 - <administratively transferred to [B01F 33/841](#)>
- D B01F 13/1061
 - • • {with means for customizing the mixture on the point of sale, e.g. by sensing, receiving, analysing information about the characteristics of the mixture to be made}
 - <administratively transferred to [B01F 33/844](#)>
- D B01F 13/1063
 - • • • {using a computer for controlling information and converting it in a formula and a set of operation instructions, e.g. on the point of sale}
 - <administratively transferred to [B01F 33/8442](#)>
- D B01F 13/1066
 - • • {using stored recipes for determining the composition of the mixture to be produced, i.e. for determining the amounts of the basic components to be dispensed from the component receptacles}
 - <administratively transferred to [B01F 33/846](#)>
- D B01F 13/1069
 - • • {using data, i.e. barcodes, 3D codes or similar type of tagging information, as instruction or identification codes for controlling the dispensing and mixing operations}
 - <administratively transferred to [B01F 33/848](#)>
- D B01F 13/1072
 - • {Plants with a plurality of mixing receptacles or mixing tools, e.g. the receptacles or tools being able to be indexed into different working positions along a line or along a circle}
 - <administratively transferred to [B01F 33/85](#)>
- D B01F 2013/1075
 - • {combining mixing with other treatments}
 - <administratively transferred to [B01F 33/836](#) INV>
- D B01F 2013/1077
 - • • {with disintegrating}
 - <administratively transferred to [B01F 33/8361](#) INV>
- D B01F 2013/108
 - • • • {by cutting}
 - <administratively transferred to [B01F 33/83611](#) INV>
- D B01F 2013/1083
 - • • • {by crushing or breaking}
 - <administratively transferred to [B01F 33/83612](#) INV>
- D B01F 2013/1086
 - • • • {by grinding or milling}
 - <administratively transferred to [B01F 33/83613](#) INV>
- D B01F 2013/1088
 - • • • {and irradiating}
 - <administratively transferred to [B01F 33/83614](#) INV>

- D B01F 2013/1091 . . . {with chemical reactions}
<administratively transferred to [B01F 33/8362](#) INV>
- D B01F 2013/1094 . . . {with coating}
<administratively transferred to [B01F 33/8363](#) INV>
- D B01F 2013/1097 . . . {with drying}
<administratively transferred to [B01F 33/8364](#) INV>
- D B01F 15/00 ~~Accessories for mixers~~; ~~Auxiliary operations or auxiliary devices~~; ~~Parts or details of general application~~**
<administratively transferred to [B01F 35/00](#)>
- D B01F 15/00006 . {Mixing heads comprising a driven stirrer (mixing heads without driven stirrer B01F 5/0077)}
<administratively transferred to [B01F 33/86](#)>
- D B01F 15/00012 . . {the stirrer being provided with a surrounding stator}
<administratively transferred to [B01F 33/862](#)>
- D B01F 15/00019 . {Washing or cleaning mixers, e.g. using knockers or scrapers; Inhibiting build-up of material on machine parts (cleaning in general B08B)}
<administratively transferred to [B01F 35/145](#)>
- D B01F 15/00025 . . {using a fluid}
<administratively transferred to [B01F 35/1452](#)>
- D B01F 15/00032 . . . {by means of jets of fluid, e.g. air}
<administratively transferred to [B01F 35/1453](#)>
- D B01F 15/00038 . . {using mechanical elements}
<administratively transferred to [B01F 35/12](#)>
- D B01F 15/00045 . . . {using a brush for cleaning out rests of products}
<administratively transferred to [B01F 35/121](#)>
- D B01F 15/00051 . . . {using pushers, i.e. a piston, for pushing out rests of products}
<administratively transferred to [B01F 35/122](#)>
- D B01F 15/00058 . . . {using scrapers for cleaning mixers}
<administratively transferred to [B01F 35/123](#)>
- D B01F 15/00064 . . {using one or some of the components of the mixture to wash out the mixer}
<administratively transferred to [B01F 35/13](#)>
- D B01F 15/00071 . . {Working under sterile conditions; Sterilizing the mixer or parts thereof (sterilizing in general A61L)}
<administratively transferred to [B01F 35/146](#)>
- D B01F 2015/00077 . {Use of general mechanical engineering elements in mixing devices}
<administratively transferred to [B01F 2035/35](#) ADD>
- D B01F 2015/00084 . . {Sealings}
<administratively transferred to [B01F 2035/351](#) ADD>
- D B01F 2015/0009 . . . {for laboratory mixers}
<administratively transferred to [B01F 2035/3511](#) ADD>
- D B01F 2015/00097 . . . {Fluid sealings, e.g. using liquids or air under pressure which is leaking into the mixing receptacle}
<administratively transferred to [B01F 2035/3512](#) ADD>

- D B01F 2015/00103 . . . {comprising a stationary member in frontal contact with a movable member}
<administratively transferred to [B01F 2035/3513](#) ADD>
- D B01F 2015/0011 . . {Bearings}
<administratively transferred to [B01F 2035/352](#) ADD>
- D B01F 2015/00116 . . {Lubricating systems}
<administratively transferred to [B01F 2035/353](#) ADD>
- D B01F 15/00123 . {Controlling; Testing; Measuring (B01F 15/0408 takes precedence)}
<administratively transferred to [B01F 35/20](#)>
- D B01F 15/00129 . . {Measuring operational parameters (B01F 15/00201 and B01F 15/00207 take precedence)}
<administratively transferred to [B01F 35/211](#)>
- D B01F 15/00136 . . . {Measuring flow rate}
<administratively transferred to [B01F 35/2111](#)>
- D B01F 15/00142 {Measuring mass flow rate}
<administratively transferred to [B01F 35/21111](#)>
- D B01F 15/00149 {Measuring volumetric flow rate}
<administratively transferred to [B01F 35/21112](#)>
- D B01F 15/00155 . . . {Measuring the level of material in a container or the position or shape of the upper surface of the material}
<administratively transferred to [B01F 35/2112](#)>
- D B01F 15/00162 . . . {Measuring pressure}
<administratively transferred to [B01F 35/2113](#)>
- D B01F 15/00168 . . . {Measuring speed of feeding material, e.g. bands or strips}
<administratively transferred to [B01F 35/2114](#)>
- D B01F 15/00175 . . . {Measuring temperature}
<administratively transferred to [B01F 35/2115](#)>
- D B01F 15/00181 {using infrared radiation thermometer or pyrometer, infrared sensors for temperature measurement without contact}
<administratively transferred to [B01F 35/21151](#)>
- D B01F 15/00188 . . . {Measuring volume}
<administratively transferred to [B01F 35/2116](#)>
- D B01F 15/00194 . . . {Measuring weight}
<administratively transferred to [B01F 35/2117](#)>
- D B01F 15/00201 . . {Measuring data of the driving system, e.g. torque, speed, power; Motor control}
<administratively transferred to [B01F 35/212](#)>
- D B01F 15/00207 . . {Measuring properties of the mixtures, e.g. temperature, density, colour, vibration, noise (B01F 15/00201 takes precedence)}
<administratively transferred to [B01F 35/213](#)>
- D B01F 15/00214 . . . {Measuring colour or luminiscence}
<administratively transferred to [B01F 35/2131](#)>
- D B01F 15/0022 . . . {Measuring concentration, pH, pOH, p(ION), oxygen-demand (B01F 15/00227 takes precedence)}
<administratively transferred to [B01F 35/2132](#)>

- D B01F 15/00331 • • {characterized by the parameter being controlled}
 <administratively transferred to [B01F 35/221](#)>
- D B01F 15/00337 • • • {Controlling the position of baffles used to modify the flow in a conduit or a container}
 <administratively transferred to [B01F 35/222](#)>
- D B01F 15/00344 • • • {Controlling the amount of delivered fluid during a period}
 <administratively transferred to [B01F 35/2211](#)>
- D B01F 15/0035 • • • {Controlling the level of the material in the mixer}
 <administratively transferred to [B01F 35/2212](#)>
- D B01F 15/00357 • • • {Controlling pressure}
 <administratively transferred to [B01F 35/2213](#)>
- D B01F 15/00363 • • • {Controlling speed during the operation}
 <administratively transferred to [B01F 35/2214](#)>
- D B01F 15/0037 • • • • {Controlling the speed of feeding of at least one component to be mixed}
 <administratively transferred to [B01F 35/22141](#)>
- D B01F 15/00376 • • • • {Controlling the speed of the mixing device during the operation}
 <administratively transferred to [B01F 35/22142](#)>
- D B01F 15/00383 • • • • {Controlling the linear speed of the tip of a moving stirrer during the operation}
 <administratively transferred to [B01F 35/221421](#)>
- D B01F 15/00389 • • • • {Controlling the speed of rotation of the mixing axis, stirrer or receptacle during the operation}
 <administratively transferred to [B01F 35/221422](#)>
- D B01F 15/00396 • • • {Controlling temperature}
 <administratively transferred to [B01F 35/2215](#)>
- D B01F 15/00402 • • • {Controlling time, i.e. duration, of at least one parameter during the operation}
 <administratively transferred to [B01F 35/2216](#)>
- D B01F 15/00409 • • • • {Controlling the duration of the mixing process or parts of it}
 <administratively transferred to [B01F 35/22161](#)>
- D B01F 15/00415 • • • • {Controlling the time of feeding of at least one of the components to be mixed}
 <administratively transferred to [B01F 35/22162](#)>
- D B01F 15/00422 • • • {Controlling the volume of at least one component to be mixed}
 <administratively transferred to [B01F 35/2217](#)>
- D B01F 15/00428 • • • {Controlling the weight of at least one component to be mixed}
 <administratively transferred to [B01F 35/2218](#)>
- D B01F 15/00435 • {Drives, e.g. for reciprocating motion; Transmissions; Brakes; Couplings (B01F 15/00201, B01F 15/00668 take precedence; drives using magnetic couplings B01F 13/08)}
 <administratively transferred to [B01F 35/30](#)>
- D B01F 15/00441 • • {Construction of driving shafts}
 <administratively transferred to [B01F 35/322](#)>
- D B01F 15/00448 • • {for vertical stirrer shafts (B01F 15/00461 takes precedence)}
 <administratively transferred to [B01F 35/323](#)>

- D B01F 15/00454 . . . {Driving several stirrer shafts, e.g. about the same axis}
<administratively transferred to [B01F 35/3231](#)>
- D B01F 15/00461 . . {Driving independent stirrer shafts, i.e. not fitted on the container}
<administratively transferred to [B01F 35/324](#)>
- D B01F 15/00467 . . {Driving reciprocating or oscillating stirrers}
<administratively transferred to [B01F 35/325](#)>
- D B01F 15/00474 . . {Electrical circuits therefor}
<administratively transferred to [B01F 35/30](#)>
- D B01F 15/0048 . . {Couplings therefor, e.g. with torque sensing means (couplings or clutches in general F16D; measuring torque G01L 3/00)}
<administratively transferred to [B01F 35/31](#)>
- D B01F 15/00487 . . {Nature of the drive}
<administratively transferred to [B01F 35/32005](#)>
- D B01F 15/00493 . . . {Driven by acoustic force, e.g. acoustically induced bubbles, acoustic windmill, acoustic scallop}
<administratively transferred to [B01F 35/3201](#)>
- D B01F 15/005 . . . {Flow driven}
<administratively transferred to [B01F 35/32015](#)>
- D B01F 15/00506 . . . {Hand driven}
<administratively transferred to [B01F 35/3202](#)>
- D B01F 15/00512 . . . {Shaking by hand a portable receptacle or stirrer for mixing}
<administratively transferred to [B01F 35/32021](#)>
- D B01F 15/00519 . . . {Battery driven}
<administratively transferred to [B01F 35/32025](#)>
- D B01F 15/00525 . . . {Gas driven}
<administratively transferred to [B01F 35/3203](#)>
- D B01F 15/00532 . . . {Gravity driven, e.g. by means of weights out of balance, plunger-weights moving in a cylinder}
<administratively transferred to [B01F 35/32035](#)>
- D B01F 15/00538 . . . {Motor driven, i.e. by means of an electric or IC motor}
<administratively transferred to [B01F 35/3204](#)>
- D B01F 15/00545 . . . {Hydraulically driven}
<administratively transferred to [B01F 35/32045](#)>
- D B01F 15/00551 . . . {Driven by optical pressure force, e.g. produced by a laser beam}
<administratively transferred to [B01F 35/3205](#)>
- D B01F 15/00558 . . . {Driven by solar energy}
<administratively transferred to [B01F 35/32055](#)>
- D B01F 15/00564 . . . {Driven by the rotation of the wheels during movement}
<administratively transferred to [B01F 35/3206](#)>
- D B01F 15/00571 . . . {Wind driven}
<administratively transferred to [B01F 35/32065](#)>
- D B01F 2015/00577 . . {Disposition of the drive}
<administratively transferred to [B01F 35/321](#) INV>

- D B01F 2015/00584 . . . {independent from the receptacle}
<administratively transferred to [B01F 35/3211](#) INV>
- D B01F 2015/0059 . . . {mounted on the receptacle}
<administratively transferred to [B01F 35/3212](#) INV>
- D B01F 2015/00597 . . . {at the lower side of the axis, e.g. driving the stirrer from the bottom of a receptacle}
<administratively transferred to [B01F 35/3213](#) INV>
- D B01F 2015/00603 . . . {at the upper side of the axis, e.g. driving the stirrer from the top of a receptacle}
<administratively transferred to [B01F 35/3214](#) INV>
- D B01F 2015/0061 . . . {the driving system comprising more than one motor, e.g. having an auxiliary motor or comprising independently driven elements}
<administratively transferred to [B01F 35/3215](#) INV>
- D B01F 2015/00616 . . . {Driving the stirrer axis from both ends of the axis, i.e. using at least two motors per shaft}
<administratively transferred to [B01F 35/32151](#) INV>
- D B01F 2015/00623 . . {Transmissions}
<administratively transferred to [B01F 35/33](#) INV>
- D B01F 2015/00629 . . . {the transmission alternately changes the speed of rotation}
<administratively transferred to [B01F 35/331](#) INV>
- D B01F 2015/00636 . . . {the transmission alternately changes the direction of rotation}
<administratively transferred to [B01F 35/332](#) INV>
- D B01F 2015/00642 . . . {the transmission or the motor can change the rotation sense, e.g. to mix or aerate, to move a fluid forward or backward, to suck or blow}
<administratively transferred to [B01F 35/333](#) INV>
- D B01F 2015/00649 . . {Couplings}
<administratively transferred to [B01F 35/31](#) INV>
- D B01F 2015/00655 . . {Brake mechanisms}
<administratively transferred to [B01F 35/34](#) INV>
- D B01F 15/00662 . {Mounting or supporting mixing devices, e.g. independent stirrer units on receptacles; Mounting or supporting receptacles on frames or stands; Clamping or holding arrangements therefor}
<administratively transferred to [B01F 35/40](#)>
- D B01F 15/00668 . . {Mounting or supporting stirrer shafts on receptacles}
<administratively transferred to [B01F 35/41](#)>
- D B01F 15/00675 . . . {by supporting only one extremity of the shaft}
<administratively transferred to [B01F 35/411](#)>
- D B01F 15/00681 {at the top of the receptacle}
<administratively transferred to [B01F 35/4111](#)>
- D B01F 15/00688 {at the bottom of the receptacle, e.g. by studs}
<administratively transferred to [B01F 35/4112](#)>
- D B01F 15/00694 {at a side wall of the receptacle}
<administratively transferred to [B01F 35/4113](#)>
- D B01F 15/00701 . . . {by supporting both extremities of the shaft}
<administratively transferred to [B01F 35/412](#)>

- D B01F 15/00707
 - • • {at the top and at the bottom of the receptacle, e.g. for performing a conical orbital movement about a vertical axis}
 - <administratively transferred to [B01F 35/4121](#)>
- D B01F 15/00714
 - • • {at the side walls of the receptacle}
 - <administratively transferred to [B01F 35/4122](#)>
- D B01F 15/0072
 - • • {by means of clamps, clamping arrangements for fixing attached stirrers or independent stirrer units}
 - <administratively transferred to [B01F 35/413](#)>
- D B01F 15/00727
 - • • {using inflatable arrangements for supporting a stirring element}
 - <administratively transferred to [B01F 35/414](#)>
- D B01F 15/00733
 - • {Clamping or holding arrangements for mounting receptacles on mixing devices, e.g. for shaking, vibrating or rotating the receptacle}
 - <administratively transferred to [B01F 35/42](#)>
- D B01F 15/0074
 - • • {having a cup-shaped or cage-type form}
 - <administratively transferred to [B01F 35/421](#)>
- D B01F 15/00746
 - • • {having a jaw-type or finger-type shape}
 - <administratively transferred to [B01F 35/422](#)>
- D B01F 15/00753
 - • • {of the vertically movable, two-plates-type}
 - <administratively transferred to [B01F 35/423](#)>
- D B01F 2015/00759
 - • • {by means of an air cushion used for supporting the mixing receptacle}
 - <administratively transferred to [B01F 35/424](#) INV>
- D B01F 15/00766
 - • • {Holding arrangements for retaining loose elements of the mixing receptacle, e.g. for holding the handle of a can while it is being shaken}
 - <administratively transferred to [B01F 35/425](#)>
- D B01F 15/00772
 - • {Supporting receptacles on frames or stands (B01F 15/00733 takes precedence; frames of machines, stands as support for apparatus, in general F16M)}
 - <administratively transferred to [B01F 35/43](#)>
- D B01F 15/00779
 - {Receptacle closures, covers or doors; Mechanisms for operating them}
 - <administratively transferred to [B01F 35/45](#)>
- D B01F 15/00785
 - • {by rotating them about an axis parallel to the plane of the opening}
 - <administratively transferred to [B01F 35/451](#)>
- D B01F 15/00792
 - • {by moving them in the plane of the opening (B01F 15/00818 takes precedence)}
 - <administratively transferred to [B01F 35/452](#)>
- D B01F 15/00798
 - • • {by rotating them about an axis perpendicular to the plane of the opening}
 - <administratively transferred to [B01F 35/4521](#)>
- D B01F 15/00805
 - • {by moving them perpendicular to the plane of the opening}
 - <administratively transferred to [B01F 35/453](#)>
- D B01F 15/00811
 - • • {and moving them afterwards in another direction}
 - <administratively transferred to [B01F 35/4531](#)>
- D B01F 15/00818
 - • {Moving covers on a cylindrical drum in a circular path along the drum}
 - <administratively transferred to [B01F 35/454](#)>
- D B01F 15/00824
 - {Receptacles (B01F 9/0032, B01F 15/00779 take precedence)}
 - <administratively transferred to [B01F 35/50](#)>

- D B01F 15/00831
 - • {Nature of the receptacle}
 - <administratively transferred to [B01F 35/51](#)>
- D B01F 15/00837
 - • • {provided with liners, e.g. wear resistant or flexible liners}
 - <administratively transferred to [B01F 35/511](#)>
- D B01F 15/00844
 - • • {Surface characteristics, e.g. coated, rough}
 - <administratively transferred to [B01F 35/512](#)>
- D B01F 15/0085
 - • • {the mixing receptacle being flexible, e.g. flexible bags supported by rigid containers}
 - <administratively transferred to [B01F 35/513](#)>
- D B01F 15/00857
 - • • {the mixing receptacle or conduit being transparent or comprising transparent parts}
 - <administratively transferred to [B01F 35/514](#)>
- D B01F 15/00863
 - • {Multi-compartment receptacles}
 - <administratively transferred to [B01F 35/52](#)>
- D B01F 15/0087
 - • • {comprising compartments keeping the materials to be mixed separated until the mixing is initiated (B65D 81/32 takes precedence)}
 - <administratively transferred to [B01F 35/522](#)>
- D B01F 15/00876
 - • {Configuration of the interior}
 - <administratively transferred to [B01F 35/53](#)>
- D B01F 15/00883
 - • • {provided with baffles, plates or bars on the wall or the bottom}
 - <administratively transferred to [B01F 35/531](#)>
- D B01F 15/00889
 - • • • {with horizontal baffles mounted on the walls}
 - <administratively transferred to [B01F 35/5311](#)>
- D B01F 15/00896
 - • • • {with vertical baffles mounted on the walls}
 - <administratively transferred to [B01F 35/5312](#)>
- D B01F 15/00902
 - • • {provided with guide tubes on the wall or the bottom}
 - <administratively transferred to [B01F 35/532](#)>
- D B01F 15/00909
 - • {Closely surrounding the rotating element}
 - <administratively transferred to [B01F 35/54](#)>
- D B01F 15/00915
 - {Baffles; Flow breakers}
 - <administratively transferred to [B01F 35/55](#)>
- D B01F 15/00922
 - {Maintenance, e.g. replacing, repairing or inspecting; Making mixers or parts thereof}
 - <administratively transferred to [B01F 35/10](#)>
- D B01F 15/00928
 - {General build-up of the mixers}
 - <administratively transferred to [B01F 35/56](#)>
- D B01F 15/00935
 - • {the mixer being built-up from a plurality of modules or stacked plates comprising complete or partial elements of the mixer}
 - <administratively transferred to [B01F 35/561](#)>
- D B01F 15/00941
 - • {the mixer or mixing elements being collapsible, i.e. when discharging the products}
 - <administratively transferred to [B01F 35/562](#)>
- D B01F 15/00948
 - • • {the complete mixer being collapsible, i.e. the housing can be collapsed}
 - <administratively transferred to [B01F 35/5621](#)>

- D B01F 15/00954
- {Preventing generation of dust or dirt; Sieves; Filters (B01F 15/00019; B01F 15/00779 take precedence)}
 - <administratively transferred to [B01F 35/181](#)>
- D B01F 15/00961
- • {Preventing generation of dust}
 - <administratively transferred to [B01F 35/184](#)>
- D B01F 15/00967
- • {using splash guards in mixers for avoiding dirt or projection of material}
 - <administratively transferred to [B01F 35/186](#)>
- D B01F 15/00974
- • {using filters in mixers, e.g. during venting}
 - <administratively transferred to [B01F 35/187](#)>
- D B01F 15/0098
- • • {Filters for microliving organisms, i.e. filtering of the mixture}
 - <administratively transferred to [B01F 35/1872](#)>
- D B01F 15/00987
- • {using sieves in mixers for purposes other than mixing, e.g. eliminating dust during venting}
 - <administratively transferred to [B01F 35/188](#)>
- D B01F 15/00993
- • {Venting, degassing, ventilating of gases, fumes or toxic vapours during mixing}
 - <administratively transferred to [B01F 35/189](#)>
- D B01F 15/02
- Feed or discharge mechanisms
 - <administratively transferred to [B01F 35/71](#)>
- D B01F 15/0201
- • {Feed mechanisms (with proportioning B01F 15/04)}
 - <administratively transferred to [B01F 35/71](#)>
- D B01F 15/0202
- • • {for feeding a mixture of components, i.e. solids in liquid, solids in a gas stream}
 - <administratively transferred to [B01F 35/711](#)>
- D B01F 15/0203
- • • {for feeding fluids}
 - <administratively transferred to [B01F 35/712](#)>
- D B01F 15/0204
- • • {using screws, transporting belts or hoppers}
 - <administratively transferred to [B01F 35/71705](#) INV>
- D B01F 15/0205
- • • {comprising breaking packages or parts thereof, e.g. piercing or opening sealing elements between compartments or cartridges (B65D 25/08; B65D 81/32 take precedence)}
 - <administratively transferred to [B01F 35/713](#)>
- D B01F 15/0206
- • • • {Breaking or perforating packages, containers, vials}
 - <administratively transferred to [B01F 35/7131](#)>
- D B01F 15/0207
- • • • {the package containing one of the components dissolves when in contact with the other component of the mixture (B65D 65/46 takes precedence)}
 - <administratively transferred to [B01F 35/7132](#)>
- D B01F 15/0208
- • • • {Opening clips which seal openings between the compartments}
 - <administratively transferred to [B01F 35/7133](#)>
- D B01F 15/0209
- • • • {Dissolving the seal when in contact with one of the products to be mixed, thereby bringing the compartments in communication}
 - <administratively transferred to [B01F 35/7134](#)>
- D B01F 15/021
- • • • {Opening the seal between the compartments by application of heat}
 - <administratively transferred to [B01F 35/7135](#)>

- D B01F 15/0211 . . . {Opening hooks which lock, close-off openings between compartments}
<administratively transferred to [B01F 35/7136](#)>
- D B01F 15/0212 . . . {Piercing, perforating, melting membranes, closures which seal the compartments}
<administratively transferred to [B01F 35/7137](#)>
- D B01F 15/0213 . . . {Opening valves which close-off openings between compartments}
<administratively transferred to [B01F 35/7138](#)>
- D B01F 15/0215 . . . {Removing separation walls, plugs which close off the different compartments, e.g. by rotation, axially sliding}
<administratively transferred to [B01F 35/7139](#)>
- D B01F 15/0216 . . {for feeding predetermined amounts (B01F 15/0441 takes precedence)}
<administratively transferred to [B01F 35/714](#)>
- D B01F 15/0217 . . . {using measuring chambers moving between a loading and unloading position, e.g. reciprocating feed frames}
<administratively transferred to [B01F 35/7141](#)>
- D B01F 15/0218 {rotating or oscillating about an axis}
<administratively transferred to [B01F 35/71411](#)>
- D B01F 15/0219 {the measuring chambers being pockets on the circumference of a drum rotating about a horizontal axis with discharging by gravity}
<administratively transferred to [B01F 35/714111](#)>
- D B01F 15/022 {the measuring chambers being channels extending between both front faces of a rotating cylinder or disc}
<administratively transferred to [B01F 35/714112](#)>
- D B01F 2015/0221 . . {Feeding the components in several steps, e.g. successive steps}
<administratively transferred to [B01F 35/715 INV](#)>
- D B01F 15/0222 . . {characterized by the relative arrangement of the containers for feeding or mixing the components}
<administratively transferred to [B01F 35/716](#)>
- D B01F 15/0223 . . . {the containers being connected coaxially before contacting the contents}
<administratively transferred to [B01F 35/7161](#)>
- D B01F 15/0224 . . . {A container being placed inside the other before contacting the contents}
<administratively transferred to [B01F 35/7162](#)>
- D B01F 15/0225 . . . {the containers being connected in a mouth-to-mouth, end-to-end disposition, i.e. the openings are juxtaposed before contacting the contents}
<administratively transferred to [B01F 35/7163](#)>
- D B01F 15/0226 {the containers being placed in parallel before contacting the contents}
<administratively transferred to [B01F 35/7164](#)>
- D B01F 15/0227 . . {characterized by the means for feeding the components to the mixer}
<administratively transferred to [B01F 35/717](#)>
- D B01F 15/0229 {using belts}
<administratively transferred to [B01F 35/71705](#)>
- D B01F 15/023 . . . {using boxes, closable containers, sacks, carts}
<administratively transferred to [B01F 35/7171](#)>

- D B01F 15/0231 {using buckets, cups, open containers}
<administratively transferred to [B01F 35/71715](#)>
- D B01F 15/0232 {using capillary forces}
<administratively transferred to [B01F 35/7172](#)>
- D B01F 15/0233 {using centrifugal forces}
<administratively transferred to [B01F 35/71725](#)>
- D B01F 15/0234 {using gravity, e.g. from a hopper}
<administratively transferred to [B01F 35/7173](#)>
- D B01F 15/0235 {using a hopper}
<administratively transferred to [B01F 35/71731](#)>
- D B01F 15/0236 {using grippers}
<administratively transferred to [B01F 35/71735](#)>
- D B01F 15/0237 {using pistons, plungers, syringes}
<administratively transferred to [B01F 35/7174](#)>
- D B01F 15/0238 {using pneumatic pressure, overpressure, gas or air pressure in a closed receptacle or circuit system}
<administratively transferred to [B01F 35/71745](#)>
- D B01F 15/0239 {using propellers}
<administratively transferred to [B01F 35/7175](#)>
- D B01F 15/024 {using means for feeding components in a pulsating or intermittent manner}
<administratively transferred to [B01F 35/71755](#)>
- D B01F 15/0241 {using electrical pulses}
<administratively transferred to [B01F 35/717551](#)>
- D B01F 15/0243 {using pumps}
<administratively transferred to [B01F 35/7176](#)>
- D B01F 15/0244 {membrane pumps}
<administratively transferred to [B01F 35/71761](#)>
- D B01F 15/0245 {peristaltic pumps}
<administratively transferred to [B01F 35/717611](#)>
- D B01F 15/0246 {piezoelectric pumps}
<administratively transferred to [B01F 35/717612](#)>
- D B01F 15/0247 {piston pumps}
<administratively transferred to [B01F 35/717613](#)>
- D B01F 15/0248 {venturi pumps}
<administratively transferred to [B01F 35/717614](#)>
- D B01F 15/0249 {using rakes, plain plates with raking movement}
<administratively transferred to [B01F 35/71765](#)>
- D B01F 15/025 {using rollers}
<administratively transferred to [B01F 35/7177](#)>
- D B01F 15/0251 {using helical screws}
<administratively transferred to [B01F 35/71775](#)>

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|---|----------------|---|
| D | B01F 15/0252 | <ul style="list-style-type: none"> • • • {using shovels, scoops} <p><administratively transferred to B01F 35/7178></p> |
| D | B01F 15/0253 | <ul style="list-style-type: none"> • • • {using slides, vibrating tables} <p><administratively transferred to B01F 35/71785></p> |
| D | B01F 15/0254 | <ul style="list-style-type: none"> • • • {using sprayers, nozzles, jets} <p><administratively transferred to B01F 35/7179></p> |
| D | B01F 15/0255 | <ul style="list-style-type: none"> • • • • {using ink jet heads or cartridges, e.g. of the thermal bubble jet or piezoelectric type} <p><administratively transferred to B01F 35/71791></p> |
| D | B01F 15/0256 | <ul style="list-style-type: none"> • • • {Squeezing a flexible container} <p><administratively transferred to B01F 35/71795></p> |
| D | B01F 15/0258 | <ul style="list-style-type: none"> • • • {using vacuum, underpressure in a closed receptacle or circuit system} <p><administratively transferred to B01F 35/718></p> |
| D | B01F 15/0259 | <ul style="list-style-type: none"> • • • • {using a syphon to create a suction of a component} <p><administratively transferred to B01F 35/71801></p> |
| D | B01F 15/026 | <ul style="list-style-type: none"> • • • {using valves, gates, orifices, openings} <p><administratively transferred to B01F 35/71805></p> |
| D | B01F 15/0261 | <ul style="list-style-type: none"> • • • • {being adjustable} <p><administratively transferred to B01F 35/718051></p> |
| D | B01F 15/0262 | <ul style="list-style-type: none"> • • • {using fans, turbines} <p><administratively transferred to B01F 35/7181></p> |
| D | B01F 15/0263 | <ul style="list-style-type: none"> • • • {using vibrations, e.g. standing waves, ultrasonic vibrations} <p><administratively transferred to B01F 35/71815></p> |
| D | B01F 15/0264 | <ul style="list-style-type: none"> • • • {With means for feeding the material with a fractal or tree-type distribution in a surface} <p><administratively transferred to B01F 35/7182></p> |
| D | B01F 15/0265 | <ul style="list-style-type: none"> • • • {using means for feeding one phase surrounded by another phase without mixing during the feeding} <p><administratively transferred to B01F 35/71825></p> |
| D | B01F 15/0266 | <ul style="list-style-type: none"> • • {Discharge mechanism} <p><administratively transferred to B01F 35/75></p> |
| D | B01F 15/0267 | <ul style="list-style-type: none"> • • {Discharging by opening a gate, e.g. using discharge paddles} <p><administratively transferred to B01F 35/751></p> |
| D | B01F 15/0268 | <ul style="list-style-type: none"> • • • {the gate carrying a stirrer acting as discharge pump} <p><administratively transferred to B01F 35/7511></p> |
| D | B01F 2015/0269 | <ul style="list-style-type: none"> • • {using a rotary discharge means, e.g. a screw beneath the receptacle (B01F 15/0267 takes precedence)} <p><administratively transferred to B01F 35/75455 INV></p> |
| D | B01F 15/027 | <ul style="list-style-type: none"> • • {with arrangements for converting the mechanism from mixing to discharging, e.g. by either guiding a mixture back into a receptacle or discharging it} <p><administratively transferred to B01F 35/752></p> |
| D | B01F 15/0272 | <ul style="list-style-type: none"> • • {Discharging at the upper side of the receptacle, e.g. by pressurising the liquid in the receptacle or by centrifugal force} <p><administratively transferred to B01F 35/753></p> |

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|---|----------------|---|
| D | B01F 2015/0273 | . . . {using a piston reciprocating in the mixing receptacle} |
| | | <administratively transferred to B01F 35/754251 INV> |
| D | B01F 15/0274 | . . . {characterized by the means for discharging the components from the mixer} |
| | | <administratively transferred to B01F 35/754 > |
| D | B01F 15/0275 | . . . {using belts} |
| | | <administratively transferred to B01F 35/7541 > |
| D | B01F 15/0276 | . . . {using gravity} |
| | | <administratively transferred to B01F 35/75415 > |
| D | B01F 15/0277 | . . . {Discharging the components by overflow} |
| | | <administratively transferred to B01F 35/7542 > |
| D | B01F 15/0278 | . . . {using pistons or plungers} |
| | | <administratively transferred to B01F 35/75425 > |
| D | B01F 15/0279 | . . . {reciprocating in the mixing receptacle} |
| | | <administratively transferred to B01F 35/754251 > |
| D | B01F 15/028 | . . . {using pneumatic pressure, overpressure, gas pressure in a closed receptacle or circuit system} |
| | | <administratively transferred to B01F 35/7543 > |
| D | B01F 15/0281 | . . . {using means for discharging the mixture in a pulsating or intermittent manner} |
| | | <administratively transferred to B01F 35/75435 > |
| D | B01F 15/0282 | . . . {using electrical pulses} |
| | | <administratively transferred to B01F 35/754351 > |
| D | B01F 15/0283 | . . . {using pumps} |
| | | <administratively transferred to B01F 35/7544 > |
| D | B01F 15/0284 | . . . {using venturi pumps} |
| | | <administratively transferred to B01F 35/75441 > |
| D | B01F 15/0286 | . . . {using pushers} |
| | | <administratively transferred to B01F 35/75445 > |
| D | B01F 15/0287 | . . . {using slides} |
| | | <administratively transferred to B01F 35/7545 > |
| D | B01F 15/0288 | . . . {using a rotary discharge means, e.g. a screw beneath the receptacle (B01F 15/0267 takes precedence)} |
| | | <administratively transferred to B01F 35/75455 > |
| D | B01F 15/0289 | . . . {using helical screws} |
| | | <administratively transferred to B01F 35/754551 > |
| D | B01F 15/029 | . . . {using squeezing means on a deformable container} |
| | | <administratively transferred to B01F 35/7546 > |
| D | B01F 15/0291 | . . . {using suction, vacuum, e.g. with a pipette} |
| | | <administratively transferred to B01F 35/75465 > |
| D | B01F 15/0292 | . . . {using valves, gates, orifices, openings} |
| | | <administratively transferred to B01F 35/7547 > |
| D | B01F 15/0293 | . . . {being adjustable} |
| | | <administratively transferred to B01F 35/75471 > |

- D B01F 15/0294
 - • • {using fans or ventilators}
 - <administratively transferred to [B01F 35/75475](#)>
- D B01F 15/0295
 - • • {using tilting or pivoting means for emptying the mixing receptacle}
 - <administratively transferred to [B01F 35/7548](#)>
- D B01F 15/0296
 - • • {the mixing receptacle rotating in opposite directions for mixing and for discharging}
 - <administratively transferred to [B01F 35/75485](#)>
- D B01F 15/0297
 - • • {using distributing means, e.g. manifold valves, multiple fittings for supplying the discharge components to a plurality of dispensing places}
 - <administratively transferred to [B01F 35/7549](#)>
- D B01F 15/0298
 - • {Preventing lumping, or comminuting lumps, during feeding or discharging, e.g. by means of vibrations, or by scrapers}
 - <administratively transferred to [B01F 35/79](#)>
- D B01F 15/04
 - Forming a predetermined ratio of the substances to be mixed (controlling ratio of two or more flows of fluid or fluent material G05D 11/02 {-; G05D 11/00 takes precedence})
 - <administratively transferred to [B01F 35/80](#)>
- D B01F 15/0404
 - • {Forming mixtures with changing ratio or gradient}
 - <administratively transferred to [B01F 35/81](#)>
- D B01F 15/0408
 - • {Adding a component to a mixture in response to a detected feature, e.g. density, radioactivity, consumed power, colour}
 - <administratively transferred to [B01F 35/82](#)>
- D B01F 15/0412
 - • {Forming a predetermined ratio of two or more flows, e.g. using flow-sensing or flow-controlling devices (B01F 15/0408 takes precedence)}
 - <administratively transferred to [B01F 35/83](#)>
- D B01F 15/0416
 - • • {using one or more pump or other dispensing mechanisms for feeding the flows in predetermined proportion, e.g. one of the pumps being driven by one of the flows (B01F 15/0425 takes precedence)}
 - <administratively transferred to [B01F 35/831](#)>
- D B01F 15/042
 - • • {with means for controlling the motor driving the pumps or the other dispensing mechanisms}
 - <administratively transferred to [B01F 35/8311](#)>
- D B01F 15/0425
 - • • {Flow control by weighing}
 - <administratively transferred to [B01F 35/832](#)>
- D B01F 15/0429
 - • • {Flow control by valves, e.g. opening intermittently}
 - <administratively transferred to [B01F 35/833](#)>
- D B01F 15/0433
 - • • {the flow of one component operating the actuator of the valve, e.g. by deforming a membrane which operates de valve actuator}
 - <administratively transferred to [B01F 35/8331](#)>
- D B01F 15/0437
 - • • {the flow of substances to be mixed circulating in a closed circuit, e.g. from a container through valve, driving means, metering means, dispensing means, e.g. 3-way valve, and back to the container}
 - <administratively transferred to [B01F 35/834](#)>
- D B01F 15/0441
 - • {by feeding the components in predetermined amounts}
 - <administratively transferred to [B01F 35/88](#)>

- D B01F 15/0445
 - • • {by weighing, e.g. with automatic discharge}
 - <administratively transferred to [B01F 35/881](#)>
- D B01F 15/045
 - • • {the weighing being effected by material receiving containers rotating or tilting under the influence of the weight of the material in those containers}
 - <administratively transferred to [B01F 35/8811](#)>
- D B01F 15/0454
 - • • {using measuring chambers, e.g. volumetric pumps, for feeding the substances (for amalgam mixers A61C 5/60; specially adapted for mixing plastic material B29B 7/242, B29B 7/603, B29B 7/7626; feeding plastic material in general B29C 31/06, B29C 31/10; for presses B30B 15/302, B30B 15/304; pumps for delivering fixed or variable measured quantities of two or more fluids at the same time F04B 13/02; measuring and separating a predetermined volume of fluid or fluent solid material G01F 11/00)}
 - <administratively transferred to [B01F 35/882](#)>
- D B01F 15/0458
 - • • • {involving controlling}
 - <administratively transferred to [B01F 35/8821](#)>
- D B01F 15/0462
 - • • • {using measuring chambers of the piston or plunger type (B01F 15/0475 takes precedence)}
 - <administratively transferred to [B01F 35/8822](#)>
- D B01F 15/0466
 - • • • • {with double acting pistons (B01F 15/047 takes precedence)}
 - <administratively transferred to [B01F 35/88221](#)>
- D B01F 15/047
 - • • • • {without external means for driving the piston, e.g. the piston being driven by one of the components}
 - <administratively transferred to [B01F 35/88222](#)>
- D B01F 15/0475
 - • • • {using diaphragms or bellows}
 - <administratively transferred to [B01F 35/8823](#)>
- D B01F 15/0479
 - • • {using flow rate controls for feeding the substances}
 - <administratively transferred to [B01F 35/883](#)>
- D B01F 15/0483
 - • {for solid materials, e.g. using belts, vibrations, hoppers with variable outlets or hoppers with rotating elements, e.g. screws, at their outlet (B01F 15/0408 - B01F 15/0441 take precedence)}
 - <administratively transferred to [B01F 35/892](#)>
- D B01F 15/0487
 - • • {the material after falling on a, e.g. rotatable, plate being wiped from this plate by means of a scraper}
 - <administratively transferred to [B01F 35/8921](#)>
- D B01F 15/0491
 - • {Measuring receptacles therefor}
 - <administratively transferred to [B01F 35/894](#)>
- D B01F 15/0495
 - • {characterised by the build-up of the device}
 - <administratively transferred to [B01F 35/896](#)>
- D B01F 15/06
 - Heating or cooling systems
 - <administratively transferred to [B01F 35/90](#)>
- D B01F 2015/061
 - • {Cooling}
 - <administratively transferred to [B01F 2035/98](#) ADD>
- D B01F 2015/062
 - • {Heating}
 - <administratively transferred to [B01F 2035/99](#) ADD>

- D B01F 15/063
- {using gas or liquid injected into the material, e.g. using liquefied CO₂ or steam}
- <administratively transferred to [B01F 35/91](#)>
- D B01F 15/065
- {using heating or cooling elements at the outside of the receptacle, e.g. heated jackets, burners, spraying devices}
- <administratively transferred to [B01F 35/92](#)>
- D B01F 15/066
- {using heating or cooling elements inside the receptacle}
- <administratively transferred to [B01F 35/93](#)>
- D B01F 15/067
- {using radiation or high frequency energy, e.g. microwaves or electromagnetic radiation}
- <administratively transferred to [B01F 35/94](#)>
- D B01F 15/068
- {using heated or cooled stirrers}
- <administratively transferred to [B01F 35/95](#)>

D B01F 17/00 **Use of substances as emulsifying, wetting, dispersing or foam-producing agents** ~~{(see for particular applications relevant classes, e.g. lubricant emulsions C10M; fuel emulsions C10L 1/32; detergents C11D; colour and dye dispersions C09; textile applications D06; cosmetics A61K; food A23L 29/10; biocides A01N; petrol winning E21B; hydrometallurgy, metal liquid-liquid extraction C22B; mixers B01F 3/00; polymers mixing; waxes C08; paper D21H; demulsification (anti foam) B01D 19/04)}~~

NOTE

A compound is always classified in the last appropriate place

<administratively transferred to [C09K 23/00](#)>

- D B01F 17/0007
- {Inorganic compounds}
- <administratively transferred to [C09K 23/002](#)>
- D B01F 17/0014
- {Organic compounds containing only carbon and hydrogen}
- <administratively transferred to [C09K 23/003](#)>
- D B01F 17/0021
- {Organic compounds containing oxygen}
- <administratively transferred to [C09K 23/00](#)>
- D B01F 17/0028
- {Macromolecular compounds}
- <administratively transferred to [C09K 23/00](#)>
- D B01F 17/0035
- {Organic compounds containing halogen}
- <administratively transferred to [C09K 23/007](#)>
- D B01F 17/0042
- {Organic compounds containing nitrogen}
- <administratively transferred to [C09K 23/00](#)>
- D B01F 17/005
- {Macromolecular compounds}
- <administratively transferred to [C09K 23/16](#)>
- D B01F 17/0057
- {Organic compounds containing sulfur, selenium, or tellurium}
- <administratively transferred to [C09K 23/00](#)>
- D B01F 17/0064
- {Organic compounds containing phosphorus}
- <administratively transferred to [C09K 23/14](#)>
- D B01F 17/0071
- {Organic compounds containing silicon}
- <administratively transferred to [C09K 23/54](#)>
- D B01F 17/0078
- {Organic compounds not provided for in groups B01F 17/0014 - B01F 17/0071}
- <administratively transferred to [C09K 23/00](#)>

- D B01F 17/0085 • {Mixtures of compounds}
 <administratively transferred to [C09K 23/017](#)>
- D B01F 17/0092 • {Mixtures of 2 or more different organic oxygen-containing compounds}
 <administratively transferred to [C09K 23/018](#)>
- N B01F 21/00 *Dissolving (separating by dissolving [B01D](#); dissolving to effect cooling [F25D 5/00](#))***
- N B01F 21/02 • {Methods}
- N B01F 21/10 • using driven stirrers
- N B01F 21/15 • {comprising constructions for blocking or redispersing undissolved solids, e.g. sieves, separators or guiding constructions ([B01F 21/221](#) takes precedence)}
- N B01F 21/20 • using flow mixing
- N B01F 21/22 • • {using additional holders in conduits, containers or pools for keeping the solid material in place, e.g. supports or receptacles}
- N B01F 21/221 • • • {comprising constructions for blocking or redispersing undissolved solids}
- N B01F 21/30 • {Workflow diagrams or layout of plants, e.g. flow charts; Details of workflow diagrams or layout of plants, e.g. controlling means}
- N B01F 21/40 • {characterised by the state of the material being dissolved}
- N B01F 21/401 • • {Molten solids}
- N B01F 21/402 • • {characterised by the configuration, form or shape of the solid material, e.g. in the form of tablets or blocks}
- N B01F 21/4021 • • • {in the form of tablets stored in containers, canisters or receptacles}
- N B01F 21/403 • • {Solid carbon dioxide or dry ice}
- N B01F 21/50 • {Elements used for separating or keeping undissolved material in the mixer}
- N B01F 21/501 • • {Tablet canisters provided with perforated walls, sieves, grids or filters}
- N B01F 21/502 • • {Baffles}
- N B01F 21/503 • • {Filters}
- N B01F 21/504 • • {Sieves, i.e. perforated plates or walls}
- N B01F 23/00 *Mixing according to the phases to be mixed, e.g. dispersing or emulsifying***
- NOTE**
In this group, the following term is used with the meaning indicated:
- "gases" covers also vapours.
- N B01F 23/02 • {Maintaining the aggregation state of the mixed materials}
- N B01F 23/021 • • {Maintaining mixed ingredients in movement to prevent crystallisation of the ingredients after mixing}
- N B01F 23/022 • • {Preventing precipitation of solid ingredients during or after mixing by adding a solvent}
- N B01F 23/023 • • {Preventing sedimentation, conglomeration or agglomeration of solid ingredients during or after mixing by maintaining mixed ingredients in movement}
- N B01F 23/024 • • {Maintaining mixed ingredients in movement to prevent separation of the ingredients after mixing}
- N B01F 23/04 • {Specific aggregation state of one or more of the phases to be mixed}
- N B01F 23/041 • • {Mixing ingredients in more than two different agglomeration states, phases}
- N B01F 23/042 • • {Mixing cryogenic aerosols, i.e. mixtures of gas with solid particles in cryogenic condition, with other ingredients}

- N B01F 23/043 • • {Mixing fluids or with fluids in a supercritical state, in supercritical conditions or variable density fluids}
- N B01F 23/06 • {Mixing phases by adding a very small quantity of one of the phases or microdosing}
- N B01F 23/061 • • {Adding a small quantity or concentration of an additional phase in a main phase, e.g. acting as a carrier phase}
- N B01F 23/062 • • {Mixing ingredients in very small quantity, adding microingredients or microconcentration, e.g. adding vitamins, minerals, proteins, enzymes, hormones, antibiotics or worm medicines}
- N B01F 23/09 • {Mixing systems, i.e. flow charts or diagrams for components having more than two different of undetermined agglomeration states, e.g. supercritical states}
- N B01F 23/10 • Mixing gases with gases
- N B01F 23/12 • • {with vaporisation of a liquid (disinfection, sterilisation or deodorisation of air [A61L 9/00](#))}
- N B01F 23/14 • • {with moving mixing elements, e.g. with liquid seal}
- N B01F 23/19 • • {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
- N B01F 23/191 • • • {characterised by the construction of the controlling means}
- N B01F 23/20 • Mixing gases with liquids
- N B01F 23/21 • • by introducing liquids into gaseous media
- N B01F 23/211 • • • {Methods}
- N B01F 23/213 • • • by spraying or atomising of the liquids
- N B01F 23/2131 • • • • {using rotating elements, e.g. rolls or brushes}
- N B01F 23/21311 • • • • • {for spraying the liquid radially by centrifugal force}
- N B01F 23/21312 • • • • • {with additional rotating elements mounted on the same axis, e.g. fans, for moving the gas}
- N B01F 23/2132 • • • • {using nozzles}
- N B01F 23/21321 • • • • • {High pressure atomization, i.e. the liquid is atomized and sprayed by a jet at high pressure}
- N B01F 23/21322 • • • • • {Internal mixer atomization, i.e. liquid and gas are mixed and atomized in a jet nozzle before spraying}
- N B01F 23/2133 • • • • {using electric, sonic or ultrasonic energy}
- N B01F 23/214 • • • {using a gas-liquid mixing column or tower}
- N B01F 23/215 • • • {by forcing the gas through absorbent pads containing the liquid}
- N B01F 23/216 • • • {by using liquefied or cryogenic gases as liquid component}
- N B01F 23/23 • • by introducing gases into liquid media, e.g. for producing aerated liquids
- N B01F 23/231 • • • by bubbling (mixers with gas or liquid agitation, e.g. with air supply tubes [B01F 33/40](#))
- N B01F 23/23105 • • • • {Arrangement or manipulation of the gas bubbling devices}
- N B01F 23/2311 • • • • • {Mounting the bubbling devices or the diffusers}
- N B01F 23/23112 • • • • • • {comprising the use of flow guiding elements adjacent or above the gas stream}
- N B01F 23/231121 • • • • • • • {the flow guiding elements being baffles, tubes or walls}
- N B01F 23/231122 • • • • • • • {the flow guiding elements being dome-shaped elements, i.e. for trapping air, e.g. cap-, umbrella- or inversed cone-shaped}
- N B01F 23/23113 • • • • • • {characterised by the disposition of the bubbling elements in particular configurations, patterns or arrays}

- N B01F 23/23114 {characterised by the way in which the different elements of the bubbling installation are mounted}
- N B01F 23/231141 {Mounting auxiliary devices, e.g. pumps or compressors in a particular place on the bubbling installation, e.g. under water}
- N B01F 23/231142 {Mounting the gas transporting elements, i.e. connections between conduits}
- N B01F 23/231143 {Mounting the bubbling elements or diffusers, e.g. on conduits, using connecting elements; Connections therefor}
- N B01F 23/23115 {characterised by the way in which the bubbling devices are mounted within the receptacle}
- N B01F 23/231151 {the bubbling devices being fixed or anchored in the bottom}
- N B01F 23/231152 {the bubbling devices being supported, e.g. on cables or laying on the bottom}
- N B01F 23/231153 {the bubbling devices being suspended on a supporting construction, i.e. not on a floating construction}
- N B01F 23/231154 {the bubbling devices being provided with ballast to keep them floating under the surface, i.e. when the bubbling devices are lighter than the liquid}
- N B01F 23/231155 {the bubbling devices floating and having a pendulum movement, going to and from or moving in alternating directions}
- N B01F 23/231156 {the bubbling devices floating and having a rotating movement around a central vertical axis}
- N B01F 23/23116 {Means for manipulating the bubbling constructions or elements, e.g. for raising or lowering them}
- Q B01F 23/2312 {Diffusers}

WARNING

Group [B01F 23/2312](#) is impacted by reclassification into groups [B01F 23/23121](#), [B01F 23/23122](#), [B01F 23/23123](#), [B01F 23/231231](#), [B01F 23/231232](#), [B01F 23/231233](#), [B01F 23/23124](#), [B01F 23/231241](#), [B01F 23/231242](#), [B01F 23/231243](#), [B01F 23/231244](#), [B01F 23/231245](#), [B01F 23/23125](#), [B01F 23/23126](#), [B01F 23/231261](#), [B01F 23/231262](#), [B01F 23/231263](#), [B01F 23/231264](#), [B01F 23/231265](#), [B01F 23/231266](#), [B01F 23/231267](#), [B01F 23/231268](#), [B01F 23/231269](#) and [B01F 23/23127](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 23/23121 {having injection means, e.g. nozzles with circumferential outlet}

WARNING

Group [B01F 23/23121](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Groups [B01F 23/2312](#) and [B01F 23/23121](#) should be considered in order to perform a complete search.

- N B01F 23/23122 {having elements opening under air pressure, e.g. valves}

WARNING

Group [B01F 23/23122](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Groups [B01F 23/2312](#) and [B01F 23/23122](#) should be considered in order to perform a complete search.

Q B01F 23/23123 {consisting of rigid porous or perforated material}

WARNING

Group [B01F 23/23123](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Group [B01F 23/23123](#) is also impacted by reclassification into groups [B01F 23/23124](#), [B01F 23/231241](#), [B01F 23/231242](#), [B01F 23/231243](#), [B01F 23/231244](#) and [B01F 23/231245](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B01F 23/231231 {the outlets being in the form of perforations}

WARNING

Group [B01F 23/231231](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Group [B01F 23/231231](#) is also impacted by reclassification into groups [B01F 23/231241](#) and [B01F 23/231242](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B01F 23/231232 {in the form of slits or cut-out openings}

WARNING

Group [B01F 23/231232](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Group [B01F 23/231232](#) is also impacted by reclassification into group [B01F 23/231242](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q B01F 23/231233 {comprising foam-like gas outlets}

WARNING

Group [B01F 23/231233](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).

Group [B01F 23/231233](#) is also impacted by reclassification into group [B01F 23/231243](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 23/23124 {consisting of flexible porous or perforated material, e.g. fabric}

WARNING

Groups [B01F 23/23124](#), [B01F 23/231244](#), and [B01F 23/231245](#) are incomplete pending reclassification of documents from groups [B01F 23/2312](#) and [B01F 23/23123](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 23/231241 {the outlets being in the form of perforations}

WARNING

Group [B01F 23/231241](#) is incomplete pending reclassification of documents from groups [B01F 23/2312](#), [B01F 23/23123](#), and [B01F 23/231231](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 23/231242 {in the form of slits or cut-out openings}
- WARNING
Group [B01F 23/231242](#) is incomplete pending reclassification of documents from groups [B01F 23/2312](#), [B01F 23/23123](#), [B01F 23/231231](#), and [B01F 23/231232](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/231243 {comprising foam-like gas outlets}
- WARNING
Group [B01F 23/231243](#) is incomplete pending reclassification of documents from groups [B01F 23/2312](#), [B01F 23/23123](#) and [B01F 23/231233](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/231244 {Dissolving, hollow fiber membranes}
- WARNING
Group [B01F 23/231244](#) is incomplete pending reclassification of documents from groups [B01F 23/2312](#) and [B01F 23/23123](#).
Groups [B01F 23/2312](#) and [B01F 23/231244](#) should be considered in order to perform a complete search.
- N B01F 23/231245 {Fabric in the form of woven, knitted, braided, non-woven or flocculated fibers or filaments}
- WARNING
Group [B01F 23/231245](#) is incomplete pending reclassification of documents from groups [B01F 23/2312](#) and [B01F 23/23123](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/23125 {characterised by the way in which they are assembled or mounted; Fabricating the parts of the diffusers}
- WARNING
Group [B01F 23/23125](#) is incomplete pending reclassification of documents from group [B01F 23/2312](#).
Groups [B01F 23/2312](#) and [B01F 23/23125](#) should be considered in order to perform a complete search.
- N B01F 23/23126 {characterised by the shape of the diffuser element}
- WARNING
Groups [B01F 23/23126](#) - [B01F 23/23127](#) are incomplete pending reclassification of documents from group [B01F 23/2312](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/231261 {having a box- or block-shape, being in the form of aeration stones}
- N B01F 23/231262 {having disc shape}
- N B01F 23/231263 {having dome-, cap- or inversed cone-shape}
- N B01F 23/231264 {being in the form of plates, flat beams, flat membranes or films}
- N B01F 23/231265 {being tubes, tubular elements, cylindrical elements or set of tubes}
- N B01F 23/231266 {being in the form of rings or annular elements}
- N B01F 23/231267 {being axially stacked discs, rings or plates}

- N B01F 23/231268 {being helically wound, coiled and joined bands or wires}
- N B01F 23/231269 {being spirally wound, coiled tubes or spirally wound, coiled and joined bands or wires}
- N B01F 23/23127 {Screens, nets, grades or grids}
- N B01F 23/23128 {having specific properties or elements attached thereto}
- N B01F 23/231281 {made of or comprising a biocide}
- N B01F 23/231282 {made of or comprising a material able to store a gas which is released when water flows through it}
- N B01F 23/231283 {having elements to protect the parts of the diffusers, e.g. from clogging when not in use}
- N B01F 23/2319 . . . {Methods of introducing gases into liquid media}
- Q B01F 23/232 . . . using flow-mixing means for introducing the gases, e.g. baffles

WARNING

Group [B01F 23/232](#) is impacted by reclassification into group [B01F 23/2326](#).

Groups [B01F 23/232](#) and [B01F 23/2326](#) should be considered in order to perform a complete search.

- N B01F 23/2321 {by moving liquid and gas in counter current}
- N B01F 23/23211 {the liquid flowing in a thin film to absorb the gas}
- N B01F 23/232111 {the liquid film or layer flowing over a horizontal or inclined surface, e.g. perforated}
- N B01F 23/232112 {the liquid film or layer flowing over a vertical surface, e.g. a mesh}
- N B01F 23/2322 {using columns, e.g. multi-staged columns}
- N B01F 23/2323 {by circulating the flow in guiding constructions or conduits}
- N B01F 23/23231 {being at least partially immersed in the liquid, e.g. in a closed circuit}
- N B01F 23/232311 {the conduits being vertical draft pipes with a lower intake end and an upper exit end}
- N B01F 23/232312 {the guiding constructions being baffles for guiding the flow up-and-down or from left-to-right}
- N B01F 23/2326 adding the flowing main component by suction means, e.g. using an ejector

WARNING

Group [B01F 23/2326](#) is incomplete pending reclassification of documents from group [B01F 23/232](#).

Groups [B01F 23/232](#) and [B01F 23/2326](#) should be considered in order to perform a complete search.

- N B01F 23/233 . . . using driven stirrers with completely immersed stirring elements
- N B01F 23/2331 {characterised by the introduction of the gas along the axis of the stirrer or along the stirrer elements}
- N B01F 23/23311 {through a hollow stirrer axis}
- N B01F 23/23312 {through a conduit surrounding the stirrer axis}
- N B01F 23/23313 {through a separate conduit substantially parallel with the stirrer axis}
- N B01F 23/23314 {through a hollow stirrer element}
- N B01F 23/23315 {through a hollow guide surrounding the stirrer element}
- N B01F 23/23316 {through a separate hollow guide substantially parallel with the stirrer element}
- N B01F 23/2332 {the stirrer rotating about a horizontal axis; Stirrers therefor}

- N B01F 23/2333 {Single stirrer-drive aerating units, e.g. with the stirrer-head pivoting around an horizontal axis}
- N B01F 23/2334 {provided with stationary guiding means surrounding at least partially the stirrer}
- N B01F 23/23341 {with tubes surrounding the stirrer}
- N B01F 23/23342 {the stirrer being of the centrifugal type, e.g. with a surrounding stator}
- N B01F 23/2335 {characterised by the direction of introduction of the gas relative to the stirrer}
- N B01F 23/23351 {the gas moving along the axis of rotation}
- N B01F 23/23352 {the gas moving perpendicular to the axis of rotation}
- N B01F 23/23353 {the gas being sucked towards the rotating stirrer}
- N B01F 23/23354 {the gas being driven away from the rotating stirrer}
- N B01F 23/2336 {characterised by the location of the place of introduction of the gas relative to the stirrer}
- N B01F 23/23361 {the gas being introduced in a guide tube surrounding at least partially the axis of the stirrer}
- N B01F 23/23362 {the gas being introduced under the stirrer}
- N B01F 23/23363 {the gas being introduced above the stirrer}
- N B01F 23/23364 {the gas being introduced between the stirrer elements}
- N B01F 23/233641 {at the stirrer axis}
- N B01F 23/233642 {at the stirrer elements}
- N B01F 23/23365 {the gas being introduced at the radial periphery of the stirrer}
- N B01F 23/23366 {the gas being introduced in front of the stirrer}
- N B01F 23/23367 {the gas being introduced behind the stirrer}
- N B01F 23/234 Surface aerating
- N B01F 23/2341 {by cascading, spraying or projecting a liquid into a gaseous atmosphere ([B01F 23/2342](#) takes precedence)}
- N B01F 23/23411 {by cascading the liquid}
- N B01F 23/23412 {using liquid falling from orifices in a gaseous atmosphere, the orifices being exits from perforations, tubes or chimneys}
- N B01F 23/23413 {using nozzles for projecting the liquid into the gas atmosphere}
- N B01F 23/2342 {with stirrers near to the liquid surface, e.g. partially immersed, for spraying the liquid in the gas or for sucking gas into the liquid, e.g. using stirrers rotating around a horizontal axis or using centrifugal force}
- N B01F 23/23421 {the stirrers rotating about a vertical axis}
- N B01F 23/234211 {Stirrers thereof}
- N B01F 23/235 for making foam
- N B01F 23/2351 {using driven stirrers}
- N B01F 23/236 specially adapted for aerating or carbonating beverages
- N B01F 23/2361 within small containers, e.g. within bottles
- N B01F 23/23611 {Portable appliances comprising a gas cartridge}
- N B01F 23/2362 {for aerating or carbonating within receptacles or tanks, e.g. distribution machines ([B01F 23/2361](#) takes precedence)}
- N B01F 23/2363 {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
- N B01F 23/2364 {using security elements, e.g. valves, for relieving overpressure}
- N B01F 23/2366 {Parts; Accessories}

- N B01F 23/2368 {Mixing receptacles, e.g. tanks, vessels or reactors, being completely closed, e.g. hermetically closed}
- N B01F 23/237 characterised by the physical or chemical properties of gases or vapours introduced in the liquid media
- Q B01F 23/2373 for obtaining fine bubbles, i.e. bubbles with a size below 100 μm
- WARNING
Group [B01F 23/2373](#) is impacted by reclassification into group [B01F 23/2375](#).
Groups [B01F 23/2373](#) and [B01F 23/2375](#) should be considered in order to perform a complete search.
- N B01F 23/2375 for obtaining bubbles with a size below 1 μm
- WARNING
Group [B01F 23/2375](#) is incomplete pending reclassification of documents from group [B01F 23/2373](#).
Groups [B01F 23/2373](#) and [B01F 23/2375](#) should be considered in order to perform a complete search.
- Q B01F 23/2376 {characterised by the gas being introduced}
- WARNING
Group [B01F 23/2376](#) is impacted by reclassification into groups [B01F 23/23761](#), [B01F 23/237611](#), [B01F 23/237612](#), [B01F 23/237613](#), [B01F 23/23762](#), [B01F 23/237621](#), [B01F 23/23763](#), [B01F 23/23764](#), [B01F 23/23765](#), [B01F 23/23766](#) and [B01F 23/23767](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/23761 {Aerating, i.e. introducing oxygen containing gas in liquids}
- WARNING
Groups [B01F 23/23761](#), [B01F 23/237611](#), [B01F 23/237612](#) and [B01F 23/237613](#) are incomplete pending reclassification of documents from group [B01F 23/2376](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 23/237611 {Air}
- N B01F 23/237612 {Oxygen}
- N B01F 23/237613 {Ozone}
- N B01F 23/23762 {Carbon dioxide}
- WARNING
Groups [B01F 23/23762](#) and [B01F 23/237621](#) are incomplete pending reclassification of documents from group [B01F 23/2376](#).
Groups [B01F 23/2376](#), [B01F 23/23762](#) and [B01F 23/237621](#) should be considered in order to perform a complete search.
- N B01F 23/237621 {in beverages}
- N B01F 23/23763 {Chlorine or chlorine containing gases}
- WARNING
Group [B01F 23/23763](#) is incomplete pending reclassification of documents from group [B01F 23/2376](#).
Groups [B01F 23/2376](#) and [B01F 23/23763](#) should be considered in order to perform a complete search.

- N B01F 23/23764 {Hydrogen}
WARNING
 Group [B01F 23/23764](#) is incomplete pending reclassification of documents from group [B01F 23/2376](#).
 Groups [B01F 23/2376](#) and [B01F 23/23764](#) should be considered in order to perform a complete search.
- N B01F 23/23765 {Nitrogen}
WARNING
 Group [B01F 23/23765](#) is incomplete pending reclassification of documents from group [B01F 23/2376](#).
 Groups [B01F 23/2376](#) and [B01F 23/23765](#) should be considered in order to perform a complete search.
- N B01F 23/23766 {Sulphur containing gas}
WARNING
 Group [B01F 23/23766](#) is incomplete pending reclassification of documents from group [B01F 23/2376](#).
 Groups [B01F 23/2376](#) and [B01F 23/23766](#) should be considered in order to perform a complete search.
- N B01F 23/23767 {Introducing steam or damp in liquids}
WARNING
 Group [B01F 23/23767](#) is incomplete pending reclassification of documents from group [B01F 23/2376](#).
 Groups [B01F 23/2376](#) and [B01F 23/23767](#) should be considered in order to perform a complete search.
- N B01F 23/238 . . . {using vibrations, electrical or magnetic energy, radiations}
- N B01F 23/29 . . {Mixing systems, i.e. flow charts or diagrams}
- N B01F 23/291 . . . {for obtaining foams or aerosols}
- N B01F 23/30 . Mixing gases with solids
- N B01F 23/32 . . {by introducing solids in gas volumes}
- N B01F 23/34 . . {by introducing gases in solid materials, e.g. in masses of powder or particles}
- N B01F 23/341 . . . {by introducing steam, e.g. for wetting the solids}
- N B01F 23/36 . . {by mixing in fluidised bed state}
- N B01F 23/39 . . {Mixing systems, i.e. flow charts or diagrams}
- N B01F 23/40 . Mixing liquids with liquids; Emulsifying
- N B01F 23/405 . . {Methods of mixing liquids with liquids ([B01F 23/4105](#) takes precedence)}
- N B01F 23/41 . . Emulsifying
- N B01F 23/4105 . . . {Methods of emulsifying}
- N B01F 23/411 . . . using electrical or magnetic fields, heat or vibrations
- N B01F 23/4111 {using vibrations}
- N B01F 23/413 . . . {Homogenising a raw emulsion or making monodisperse or fine emulsions}
- N B01F 23/414 . . . {characterised by the internal structure of the emulsion}
- N B01F 23/4141 {High internal phase ratio [HIPR] emulsions, e.g. having high percentage of internal phase, e.g. higher than 60-90 % of water in oil [W/O]}
- N B01F 23/4142 {Inversed-type emulsions}
- N B01F 23/4143 {Microemulsions}

- N B01F 23/4144 . . . {Multiple emulsions, in particular double emulsions, e.g. water in oil in water; Three-phase emulsions}
- N B01F 23/4145 . . . {Emulsions of oils, e.g. fuel, and water}
- N B01F 23/4146 . . . {Emulsions including solid particles, e.g. as solution or dispersion, i.e. molten material or material dissolved in a solvent or dispersed in a liquid}
- N B01F 23/43 . . using driven stirrers
- N B01F 23/431 . . {the liquids being introduced from the outside through or along the axis of a rotating stirrer, e.g. the stirrer rotating due to the reaction of the introduced liquid}
- N B01F 23/45 . . using flow mixing
- N B01F 23/451 . . . by injecting one liquid into another
- N B01F 23/452 . . . {by uniting flows taken from different parts of a receptacle or silo; Sandglass-type mixing (for particulate material [B01F 25/80](#))}
- N B01F 23/453 . . . {by moving the liquids in countercurrent}
- N B01F 23/454 . . . by injecting a mixture of liquid and gas
- N B01F 23/47 . . involving high-viscosity liquids, e.g. asphalt
- N B01F 23/471 . . . {using a very viscous liquid and a liquid of low viscosity}
- N B01F 23/48 . . {characterised by the nature of the liquids ([B01F 23/47](#) takes precedence)}
- N B01F 23/481 . . . {using liquefied or cryogenic gases}
- N B01F 23/482 . . . {using molten solids}
- N B01F 23/483 . . . {using water for diluting a liquid ingredient, obtaining a predetermined concentration or making an aqueous solution of a concentrate}
- N B01F 23/49 . . {Mixing systems, i.e. flow charts or diagrams}
- N B01F 23/50 . Mixing liquids with solids (displacing one liquid by another in dispersions of solids in liquids [B01D 12/00](#))
- N B01F 23/51 . . {Methods thereof}
- N B01F 23/511 . . . {characterised by the composition of the liquids or solids}
- N B01F 23/53 . . using driven stirrers
- N B01F 23/54 . . {wetting solids}
- N B01F 23/55 . . {the mixture being submitted to electrical, sonic or similar energy}
- N B01F 23/551 . . . {using vibrations}
- N B01F 23/56 . . {by introducing solids in liquids, e.g. dispersing or dissolving}
- N B01F 23/565 . . {by introducing liquids in solid material, e.g. to obtain slurries}
- N B01F 23/566 . . . {by introducing liquids in a fluidised bed}
- N B01F 23/57 . . Mixing high-viscosity liquids with solids
- N B01F 23/58 . . {characterised by the nature of the liquid ([B01F 23/57](#) takes precedence)}
- N B01F 23/581 . . . {Mixing liquids with solids, slurries or sludge, for obtaining a diluted slurry}
- N B01F 23/582 . . . {Mixing foam with solids}
- N B01F 23/59 . . {Mixing systems, i.e. flow charts or diagrams}
- N B01F 23/60 . Mixing solids with solids
- N B01F 23/62 . . using a receptacle with a bottom discharge with oscillating or vibrating opening and closing elements; using a receptacle with a bottom discharge with elements fitted on moving chains
- N B01F 23/64 . . using rotatable mixing elements at the lower end of discharge hoppers
- N B01F 23/66 . . {by evaporating or liquefying at least one of the components; using a fluid which is evaporated after mixing}

N	B01F 23/69	<ul style="list-style-type: none"> • {Mixing systems, i.e. flow charts or diagrams; Arrangements, e.g. comprising controlling means}
N	B01F 23/70	<ul style="list-style-type: none"> • Pre-treatment of the materials to be mixed
N	B01F 23/701	<ul style="list-style-type: none"> • {Coating solid materials}
N	B01F 23/702	<ul style="list-style-type: none"> • {Cooling materials}
N	B01F 23/703	<ul style="list-style-type: none"> • {Degassing or de-aerating materials; Replacing one gas within the materials by another gas}
N	B01F 23/704	<ul style="list-style-type: none"> • {Drying materials, e.g. in order to mix them in solid state}
N	B01F 23/705	<ul style="list-style-type: none"> • {Submitting materials to electrical energy fields to charge or ionize them}
N	B01F 23/706	<ul style="list-style-type: none"> • {Evaporating solvents or dispersion liquids, e.g. water, at least partially}
N	B01F 23/707	<ul style="list-style-type: none"> • {Extracting materials to be mixed from a stream of fluid or from a solid containing them, e.g. by adsorption, absorption or distillation}
N	B01F 23/708	<ul style="list-style-type: none"> • {Filtering materials}
N	B01F 23/709	<ul style="list-style-type: none"> • {Freezing materials, e.g. to mix them in solid state}
N	B01F 23/71	<ul style="list-style-type: none"> • {Grinding materials}
N	B01F 23/711	<ul style="list-style-type: none"> • {Heating materials, e.g. melting}
N	B01F 23/712	<ul style="list-style-type: none"> • {Irradiating materials}
N	B01F 23/713	<ul style="list-style-type: none"> • {Sieving materials}
N	B01F 23/80	<ul style="list-style-type: none"> • After-treatment of the mixture
N	B01F 23/801	<ul style="list-style-type: none"> • {Coating the solid mixture}
N	B01F 23/802	<ul style="list-style-type: none"> • {Cooling the mixture}
N	B01F 23/803	<ul style="list-style-type: none"> • {Venting, degassing or ventilating of gases, fumes or toxic vapours from the mixture}
N	B01F 23/804	<ul style="list-style-type: none"> • {Drying the mixture}
N	B01F 23/805	<ul style="list-style-type: none"> • {Submitting a mixture to electrical energy fields, e.g. corona discharge}
N	B01F 23/806	<ul style="list-style-type: none"> • {Evaporating a carrier, e.g. liquid carbon dioxide used to dissolve, disperse, emulsify or other components that are difficult to be mixed; Evaporating liquid components}
N	B01F 23/807	<ul style="list-style-type: none"> • {Extracting components from the mixture, e.g. by adsorption, absorption or distillation}
N	B01F 23/808	<ul style="list-style-type: none"> • {Filtering the mixture}
N	B01F 23/809	<ul style="list-style-type: none"> • {Freezing the mixture}
N	B01F 23/81	<ul style="list-style-type: none"> • {Grinding the mixture}
N	B01F 23/811	<ul style="list-style-type: none"> • {Heating the mixture}
N	B01F 23/812	<ul style="list-style-type: none"> • {Irradiating the mixture}
N	B01F 25/00 - B01F 35/00	<u>Mixers</u>
N	B01F 25/00	Flow mixers; Mixers for falling materials, e.g. solid particles (centrifugal mixers B04)
N	B01F 25/10	<ul style="list-style-type: none"> • Mixing by creating a vortex flow, e.g. by tangential introduction of flow components
N	B01F 25/101	<ul style="list-style-type: none"> • {wherein the vortex flows in a spherical shaped receptacle or chamber}
N	B01F 25/102	<ul style="list-style-type: none"> • {wherein the vortex is created by two or more jets introduced tangentially in separate mixing chambers or consecutively in the same mixing chamber}
N	B01F 25/103	<ul style="list-style-type: none"> • {with additional mixing means other than vortex mixers, e.g. the vortex chamber being positioned in another mixing chamber}
N	B01F 25/104	<ul style="list-style-type: none"> • {characterised by the arrangement of the discharge opening}

- N B01F 25/1041
 - • • {the mixing chamber being vertical with the outlet tube at its upper side}
- N B01F 25/1042
 - • • {the mixing chamber being vertical and having an outlet tube at its bottom whose inlet is at a higher level than the inlet of the vortex creating jet, e.g. the jet being introduced at the bottom of the mixing chamber}
- N B01F 25/105
 - {Mixing heads, i.e. compact mixing units or modules, using mixing valves for feeding and mixing at least two components}
- N B01F 25/1051
 - • {of the mixing valve type}
- N B01F 25/12
 - {Interdigital mixers, i.e. the substances to be mixed are divided in sub-streams which are rearranged in an interdigital or interspersed manner (micromixers using interdigital streams [B01F 33/3012](#))}
- N B01F 25/14
 - {Mixing drops, droplets or bodies of liquid which flow together or contact each other (micromixers using where the materials to be mixed are in the form of droplets [B01F 33/302](#))}
- N B01F 25/20
 - Jet mixers, i.e. mixers using high-speed fluid streams (using jets to create vortex flow [B01F 25/10](#))
- N B01F 25/21
 - • with submerged injectors, e.g. nozzles, for injecting high-pressure jets into a large volume or into mixing chambers
- N B01F 25/211
 - • • {the injectors being surrounded by guiding tubes}
- N B01F 25/212
 - • • {the injectors being movable, e.g. rotating}
- N B01F 25/2121
 - • • • {Pivoting or oscillating in a multidirectional way during jetting}
- N B01F 25/2122
 - • • • {Rotating during jetting}
- N B01F 25/2123
 - • • • {being vertically moved to bring the injector in or out of operative position}
- N B01F 25/2124
 - • • • {being moved or transported between different locations during jetting}
- N B01F 25/2125
 - • • • {Moving to adjust the direction of jetting, the injectors being fixed during operation}
- N B01F 25/23
 - • Mixing by intersecting jets
- N B01F 25/231
 - • • {the intersecting jets having the configuration of sheets, cylinders or cones}
- N B01F 25/25
 - • Mixing by jets impinging against collision plates
- N B01F 25/27
 - • Mixing by jetting components into a conduit for agitating its contents
- N B01F 25/28
 - • {characterised by the specific design of the jet injector}
- N B01F 25/281
 - • • {the jet injector being of the explosive rapid expansion of supercritical solutions [RESS] or fluid injection of molecular spray [FIMS] type, i.e. the liquid is jetted in an environment (gas or liquid) by nozzles, in conditions of significant pressure drop, with the possible generation of shock waves}
- N B01F 25/282
 - • • {the jet injector being of Coanda-type, i.e. having a surface to attract the jet for adjusting its direction}
- N B01F 25/30
 - Injector mixers (mixing by creating vortex flow [B01F 25/10](#))
- N B01F 25/305
 - • {the additional component being axially fed and radially discharged through a circumferential outlet}
- N B01F 25/31
 - • in conduits or tubes through which the main component flows
- N B01F 25/311
 - • • {for mixing more than two components; Devices specially adapted for generating foam}
- N B01F 25/3111
 - • • • {Devices specially adapted for generating foam, e.g. air foam}
- N B01F 25/31112
 - • • • • {with additional mixing means other than injector mixers, e.g. screen or baffles ([B01F 25/31113](#) takes precedence)}
- N B01F 25/31113
 - • • • • {with rotating elements, e.g. driven by one of the components for feeding or by the resulting mixture for additional mixing}
- N B01F 25/31114
 - • • • • {with means for introducing an additional component, e.g. in predetermined proportion or in the main component}

- N B01F 25/312 . . . with Venturi elements; Details thereof
- N B01F 25/3121 {with additional mixing means other than injector mixers, e.g. screens, baffles or rotating elements}
- N B01F 25/3122 {the material flowing at a supersonic velocity thereby creating shock waves}
- N B01F 25/3123 {with two or more Venturi elements}
- N B01F 25/31231 {used alternatively}
- N B01F 25/31232 {used simultaneously}
- N B01F 25/31233 {used successively}
- N B01F 25/3124 {characterised by the place of introduction of the main flow}
- N B01F 25/31241 {the main flow being injected in the circumferential area of the venturi, creating an aspiration in the central part of the conduit}
- N B01F 25/31242 {the main flow being injected in the central area of the venturi, creating an aspiration in the circumferential part of the conduit ([B01F 25/31243](#) takes precedence)}
- N B01F 25/31243 {Eductor or eductor-type venturi, i.e. the main flow being injected through the venturi with high speed in the form of a jet}
- N B01F 25/3125 {characteristics of the Venturi parts}
- N B01F 25/31251 {Throats}
- N B01F 25/312511 {Adjustable Venturi throat}
- N B01F 25/312512 {Profiled, grooved, ribbed throat, or being provided with baffles}
- N B01F 25/31252 {Nozzles}
- N B01F 25/312521 {Adjustable Venturi nozzle}
- N B01F 25/312522 {Profiled, grooved, ribbed nozzle, or being provided with baffles}
- N B01F 25/31253 {Discharge}
- N B01F 25/312531 {Adjustable discharge conduit or barrel, e.g. adjustable in width}
- N B01F 25/312532 {Profiled, grooved, ribbed discharge conduit, or being provided with baffles}
- N B01F 25/312533 {Constructional characteristics of the diverging discharge conduit or barrel, e.g. with zones of changing conicity}
- N B01F 25/313 . . . wherein additional components are introduced in the centre of the conduit
- N B01F 25/3131 {with additional mixing means other than injector mixers, e.g. screens, baffles or rotating elements}
- N B01F 25/3132 {by using two or more injector devices}
- N B01F 25/31321 {used alternatively}
- N B01F 25/31322 {used simultaneously}
- N B01F 25/31323 {used successively}
- N B01F 25/31324 {arranged concentrically}
- N B01F 25/3133 {characterised by the specific design of the injector}
- N B01F 25/31331 {Perforated, multi-opening, with a plurality of holes}
- N B01F 25/313311 {Porous injectors}
- N B01F 25/31332 {Ring, torus, toroidal or coiled configurations}
- N B01F 25/31333 {Rotatable injectors}
- N B01F 25/31334 {the opening for introducing the supplementary stream being a slit}
- N B01F 25/314 . . . wherein additional components are introduced at the circumference of the conduit
- N B01F 25/3141 {with additional mixing means other than injector mixers}

- N B01F 25/3142 {the conduit having a plurality of openings in the axial direction or in the circumferential direction}
- N B01F 25/31421 {the conduit being porous}
- N B01F 25/31422 {with a plurality of perforations in the axial direction only}
- N B01F 25/31423 {with a plurality of perforations in the circumferential direction only and covering the whole circumference}
- N B01F 25/314231 {the perforations being a complete cut-out in the circumferential direction covering the whole diameter of the tube, i.e. having two consecutive tubes placed consecutively, the additional component being introduced between them}
- N B01F 25/31424 {with a plurality of perforations aligned in a row perpendicular to the flow direction}
- N B01F 25/31425 {with a plurality of perforations in the axial and circumferential direction covering the whole surface}
- N B01F 25/3143 {characterised by the specific design of the injector}
- N B01F 25/31431 {being a slit extending in the longitudinal direction only}
- N B01F 25/31432 {being a slit extending in the circumferential direction only}
- N B01F 25/31433 {being rotatable, e.g. placed on a rotatable housing or conduit}
- N B01F 25/31434 {being a bundle of similar tubes, each of them having feedings on the circumferential wall, e.g. as mixer for a reactor}
- N B01F 25/315 wherein a difference of pressure at different points of the conduit causes introduction of the additional component into the main component
([B01F 25/316](#) takes precedence)
- N B01F 25/316 with containers for additional components fixed to the conduit
- N B01F 25/32 wherein the additional components are added in a by-pass of the main flow
- N B01F 25/40 Static mixers (colloid-mills [B02C](#); mixing valves [F16K 11/00](#))
- N B01F 25/41 Mixers of the fractal type
- N B01F 25/42 in which the mixing is affected by moving the components jointly in changing directions, e.g. in tubes provided with baffles or obstructions
- N B01F 25/421 by moving the components in a convoluted or labyrinthine path
([B01F 25/433](#) takes precedence)
- N B01F 25/422 between stacked plates, e.g. grooved or perforated plates
- N B01F 25/423 {by means of elements placed in the receptacle for moving or guiding the components}
- N B01F 25/4231 {using baffles}
- N B01F 25/4232 {using dams}
- N B01F 25/4233 {using plates with holes, the holes being displaced from one plate to the next one to force the flow to make a bending movement}
- N B01F 25/43 Mixing tubes, e.g. wherein the material is moved in a radial or partly reversed direction
- Q B01F 25/431 Straight mixing tubes with baffles or obstructions that do not cause substantial pressure drop; Baffles therefor

WARNING

Group [B01F 25/431](#) is impacted by reclassification into groups [B01F 25/4311](#), [B01F 25/4312](#), [B01F 25/4313](#), [B01F 25/4314](#), [B01F 25/43141](#), [B01F 25/4315](#), [B01F 25/43151](#), [B01F 25/4316](#), [B01F 25/43161](#), [B01F 25/43162](#), [B01F 25/43163](#), [B01F 25/4317](#), [B01F 25/43171](#), [B01F 25/43172](#), [B01F 25/4318](#), [B01F 25/4319](#), [B01F 25/43195](#), [B01F 25/431951](#), [B01F 25/431952](#), [B01F 25/43197](#),

[B01F 25/431971](#), [B01F 25/431972](#), [B01F 25/431973](#) and [B01F 25/431974](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 25/4311 {the baffles being adjustable}

WARNING

Group [B01F 25/4311](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).

Groups [B01F 25/431](#) and [B01F 25/4311](#) should be considered in order to perform a complete search.

N B01F 25/4312 {having different kinds of baffles, e.g. plates alternating with screens}

WARNING

Group [B01F 25/4312](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).

Groups [B01F 25/431](#) and [B01F 25/4312](#) should be considered in order to perform a complete search.

N B01F 25/4313 {comprising a plurality of stacked ducts having their axes parallel to the tube axis}

WARNING

Group [B01F 25/4313](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).

Groups [B01F 25/431](#) and [B01F 25/4313](#) should be considered in order to perform a complete search.

N B01F 25/4314 with helical baffles

WARNING

Groups [B01F 25/4314](#) and [B01F 25/43141](#) are incomplete pending reclassification of documents from groups [B01F 25/431](#) and [B01F 25/4315](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 25/43141 {composed of consecutive sections of helical formed elements}

Q B01F 25/4315 {the baffles being deformed flat pieces of material ([B01F 25/4314](#) takes precedence)}

WARNING

Group [B01F 25/4315](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).

Group [B01F 25/4315](#) is also impacted by reclassification into groups [B01F 25/43151](#), [B01F 25/4314](#) and [B01F 25/43141](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 25/43151 {composed of consecutive sections of deformed flat pieces of material}

WARNING

Group [B01F 25/43151](#) is incomplete pending reclassification of documents from groups [B01F 25/431](#) and [B01F 25/4315](#).

Groups [B01F 25/431](#), [B01F 25/4315](#) and [B01F 25/43151](#) should be considered in order to perform a complete search.

- Q B01F 25/4316 {the baffles being flat pieces of material, e.g. intermeshing, fixed to the wall or fixed on a central rod}
- WARNING
Group [B01F 25/4316](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).
Group [B01F 25/4316](#) is also impacted by reclassification into group [B01F 25/43161](#).
Groups [B01F 25/431](#), [B01F 25/4316](#) and [B01F 25/43161](#) should be considered in order to perform a complete search.
- N B01F 25/43161 {composed of consecutive sections of flat pieces of material}
- WARNING
Group [B01F 25/43161](#) is incomplete pending reclassification of documents from groups [B01F 25/431](#) and [B01F 25/4316](#).
Groups [B01F 25/431](#), [B01F 25/4316](#) and [B01F 25/43161](#) should be considered in order to perform a complete search.
- N B01F 25/43162 {Assembled flat elements}
- WARNING
Group [B01F 25/43162](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).
Groups [B01F 25/431](#) and [B01F 25/43162](#) should be considered in order to perform a complete search.
- N B01F 25/43163 {in the form of small flat plate-like elements}
- WARNING
Group [B01F 25/43163](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).
Groups [B01F 25/431](#) and [B01F 25/43163](#) should be considered in order to perform a complete search.
- N B01F 25/4317 {Profiled elements, e.g. profiled blades, bars, pillars, columns or chevrons}
- WARNING
Groups [B01F 25/4317](#) - [B01F 25/43172](#) are incomplete pending reclassification of documents from group [B01F 25/431](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 25/43171 {Profiled blades, wings, wedges, i.e. plate-like element having one side or part thicker than the other}
- N B01F 25/43172 {Profiles, pillars, chevrons, i.e. long elements having a polygonal cross-section}
- N B01F 25/4318 {Ring-shaped blades or strips}
- WARNING
Group [B01F 25/4318](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).
Groups [B01F 25/431](#) and [B01F 25/4318](#) should be considered in order to perform a complete search.
- N B01F 25/4319 {Tubular elements}
- WARNING
Group [B01F 25/4319](#) is incomplete pending reclassification of documents from group [B01F 25/431](#).

Groups [B01F 25/431](#) and [B01F 25/4319](#) should be considered in order to perform a complete search.

N B01F 25/43195 {Wires or coils}

WARNING

Groups [B01F 25/43195](#) - [B01F 25/431952](#) are incomplete pending reclassification of documents from group [B01F 25/431](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 25/431951 {Spirally-shaped baffle}

N B01F 25/431952 {Conical or pyramidal elements}

N B01F 25/43197 {characterised by the mounting of the baffles or obstructions}

WARNING

Groups [B01F 25/43197](#) - [B01F 25/431974](#) are incomplete pending reclassification of documents from group [B01F 25/431](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 25/431971 {Mounted on the wall}

N B01F 25/431972 {Mounted on an axial support member, e.g. a rod or bar}

N B01F 25/431973 {Mounted on a support member extending transversally through the mixing tube}

N B01F 25/431974 {Support members, e.g. tubular collars, with projecting baffles fitted inside the mixing tube or adjacent to the inner wall}

N B01F 25/432 with means for dividing the material flow into separate sub-flows and for repositioning and recombining these sub-flows; Cross-mixing, e.g. conducting the outer layer of the material nearer to the axis of the tube or vice-versa

N B01F 25/4321 {the subflows consisting of at least two flat layers which are recombined, e.g. using means having restriction or expansion zones}

N B01F 25/43211 {using a simple by-pass for separating and recombining the flow, e.g. by using branches of different length}

N B01F 25/4322 {essentially composed of stacks of sheets, e.g. corrugated sheets}

N B01F 25/4323 {using elements provided with a plurality of channels or using a plurality of tubes which can either be placed between common spaces or collectors}

N B01F 25/43231 {the channels or tubes crossing each other several times}

N B01F 25/433 Mixing tubes wherein the shape of the tube influences the mixing, e.g. mixing tubes with varying cross-section or provided with inwardly extending profiles

N B01F 25/4331 {Mixers with bended, curved, coiled, wounded mixing tubes or comprising elements for bending the flow}

N B01F 25/4332 {Mixers with a strong change of direction in the conduit for homogenizing the flow}

N B01F 25/4333 {Mixers with scallop-shaped tubes or surfaces facing each other}

N B01F 25/4334 {Mixers with a converging cross-section}

N B01F 25/4335 {Mixers with a converging-diverging cross-section}

N B01F 25/4336 {Mixers with a diverging cross-section}

N B01F 25/4337 {Mixers with a diverging-converging cross-section}

- N B01F 25/4338 {Mixers with a succession of converging-diverging cross-sections, i.e. undulating cross-section}
- N B01F 25/434 Mixing tubes comprising cylindrical or conical inserts provided with grooves or protrusions
- N B01F 25/4341 {the insert being provided with helical grooves}
- N B01F 25/4342 {the insert being provided with a labyrinth of grooves or a distribution of protrusions}
- N B01F 25/435 Mixing tubes composed of concentric tubular members
- N B01F 25/438 . . {with movable slits formed between reciprocating surfaces}
- N B01F 25/44 . . Mixers in which the components are pressed through slits
- N B01F 25/441 . . . characterised by the configuration of the surfaces forming the slits
- N B01F 25/4412 {the slits being formed between opposed planar surfaces, e.g. pushed again each other by springs}
- N B01F 25/44121 {with a plurality of parallel slits, e.g. formed between stacked plates}
- N B01F 25/4413 {the slits being formed between opposed conical or cylindrical surfaces}
- N B01F 25/4414 {the slits being formed between the balls and the seats of a bearing-like construction}
- N B01F 25/4415 {the slits being formed between the helical windings of a spring-like construction or by deforming a spring}
- N B01F 25/4416 {the opposed surfaces being provided with grooves}
- N B01F 25/44161 {Axial grooves formed on opposed surfaces, e.g. on cylinders or cones}
- N B01F 25/44162 {Circumferential grooves formed on opposed surfaces, e.g. on planar surfaces or on cylinders or cones}
- N B01F 25/44163 {Helical grooves formed on opposed surfaces, e.g. on cylinders or cones}
- N B01F 25/44164 {Crossing sets of grooves forming a labyrinth formed on opposed surfaces, e.g. on planar surfaces or on cylinders or cones}
- N B01F 25/44165 {Radial grooves formed on opposed surfaces, e.g. on planar surfaces}
- N B01F 25/44166 {Spiral grooves formed on opposed surfaces, e.g. on planar surfaces}
- N B01F 25/44167 {the grooves being formed on the outer surface of the cylindrical or conical core of the slits}
- N B01F 25/44168 {the grooves being formed on the inner surface of the cylindrical or conical housing of the slits}
- N B01F 25/442 . . . characterised by the relative position of the surfaces during operation
- N B01F 25/4421 {the surfaces being maintained in a fixed position, spaced from each other, therefore maintaining the slit always open}
- N B01F 25/4422 {the surfaces being maintained in a fixed but adjustable position, spaced from each other, therefore allowing the slit spacing to be varied ([B01F 25/4423](#) takes precedence)}
- N B01F 25/4423 {the surfaces being part of a valve construction, formed by opposed members in contact, e.g. automatic positioning caused by spring pressure}
- N B01F 25/45 . . Mixers in which the materials to be mixed are pressed together through orifices or interstitial spaces, e.g. between beads ([B01F 25/44](#) takes precedence)
- N B01F 25/451 . . . characterised by means for moving the materials to be mixed or the mixture
- N B01F 25/4511 {with a rotor surrounded by a stator provided with orifices}
- N B01F 25/4512 {with reciprocating pistons}
- N B01F 25/452 . . . characterised by elements provided with orifices or interstitial spaces

- N B01F 25/4521 {the components being pressed through orifices in elements, e.g. flat plates or cylinders, which obstruct the whole diameter of the tube}
- N B01F 25/45211 {the elements being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
- N B01F 25/45212 {the elements comprising means for adjusting the orifices}
- N B01F 25/4522 {the components being pressed through porous bodies, e.g. flat plates, blocks or cylinders, which obstruct the whole diameter of the tube ([B01F 25/45243](#) takes precedence)}
- N B01F 25/45221 {the porous bodies being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
- N B01F 25/4523 {the components being pressed through sieves, screens or meshes which obstruct the whole diameter of the tube}
- N B01F 25/45231 {the sieves, screens or meshes being cylinders or cones which obstruct the whole diameter of the tube, the flow changing from axial in radial and again in axial}
- N B01F 25/4524 {the components being pressed through foam-like inserts or through a bed of loose bodies, e.g. balls}
- N B01F 25/45241 {through a bed of balls}
- N B01F 25/45242 {through a bed of fibres, steel wool or wood chips}
- N B01F 25/45243 {through a foam or expanded material body}
- N B01F 25/46 . . Homogenising or emulsifying nozzles
- N B01F 25/50 . Circulation mixers, e.g. wherein at least part of the mixture is discharged from and reintroduced into a receptacle
- N B01F 25/51 . . in which the mixture is circulated through a set of tubes, e.g. with gradual introduction of a component into the circulating flow
- N B01F 25/52 . . with a rotary stirrer in the recirculation tube
- N B01F 25/53 . . in which the mixture is discharged from and reintroduced into a receptacle through a recirculation tube, into which an additional component is introduced
- N B01F 25/54 . . provided with a pump inside the receptacle to recirculate the material within the receptacle
- N B01F 25/60 . Pump mixers, i.e. mixing within a pump
- N B01F 25/62 . . of the gear type
- N B01F 25/621 . . . {Wankel pump}
- N B01F 25/64 . . of the centrifugal-pump type, i.e. turbo-mixers
- N B01F 25/641 . . . {Multi-staged turbo-mixers}
- N B01F 25/642 . . . {consisting of a stator-rotor system with intermeshing teeth or cages}
- N B01F 25/643 . . . {with axial access to the mixing device at both its sides}
- N B01F 25/70 . Spray-mixers, e.g. for mixing intersecting sheets of material
- N B01F 25/72 . . with nozzles
- N B01F 25/721 . . . for spraying a fluid on falling particles or on a liquid curtain
- N B01F 25/74 . . with rotating parts, e.g. discs
- N B01F 25/741 . . . {with a disc or a set of discs mounted on a shaft rotating about a vertical axis, on top of which the material to be thrown outwardly is fed}
- N B01F 25/7411 {with repeated action, i.e. the material thrown outwardly being guided, by means provided on the surrounding casing or on top of the next lower disc}

- N B01F 25/742 . . . {for spraying a liquid on falling particles or on a liquid curtain ([B01F 25/7411](#) takes precedence)}
- N B01F 25/743 . . . {the material being fed on both sides of a part rotating about a vertical axis}
- N B01F 25/744 . . . {the rotating part being composed of at least two cooperating members rotating independently about the same vertical axis}
- N B01F 25/80 . Falling particle mixers, e.g. with repeated agitation along a vertical axis
- N B01F 25/82 . . uniting flows of material taken from different parts of a receptacle or from a set of different receptacles
- N B01F 25/821 . . . {by means of conduits having inlet openings at different levels}
- N B01F 25/8211 {by means of a central conduit or central set of conduits}
- N B01F 25/822 . . . {the receptacle being divided into compartments for receiving or storing the different components}
- N B01F 25/823 . . . {Flow collectors therefor}
- N B01F 25/83 . . with receptacles provided with fixed guiding elements therein, e.g. baffles; Cross-mixers comprising crossing channels for guiding the falling particles
- N B01F 25/84 . . {Falling-particle mixers comprising superimposed receptacles, the material flowing from one to the other, e.g. of the sandglass type}
- N B01F 25/85 . . wherein the particles fall onto a film that flows along the inner wall of a mixer
- N B01F 25/90 . . with moving or vibrating means, e.g. stirrers, for enhancing the mixing
- N B01F 25/901 . . . {using one central conveyor or several separate conveyors, e.g. belt, screw conveyors or vibrating tables, for discharging flows from receptacles, e.g. in layers}
- N B01F 2025/91 . {Direction of flow or arrangement of feed and discharge openings}
- N B01F 2025/911 . . {Axial flow}
- N B01F 2025/912 . . {Radial flow}
- N B01F 2025/9121 . . . {from the center to the circumference, i.e. centrifugal flow}
- N B01F 2025/9122 . . . {from the circumference to the center}
- N B01F 2025/913 . . {Vortex flow, i.e. flow spiraling in a tangential direction and moving in an axial direction}
- N B01F 2025/914 . . {Tangential flow, i.e. flow spiraling in a tangential direction in a flat plane or belt-like area}
- N B01F 2025/915 . . {Reverse flow, i.e. flow changing substantially 180° in direction}
- N B01F 2025/916 . . {Turbulent flow, i.e. every point of the flow moves in a random direction and intermixes}
- N B01F 2025/917 . . {Laminar or parallel flow, i.e. every point of the flow moves in layers which do not intermix}
- N B01F 2025/9171 . . . {Parallel flow, i.e. every point of the flow moves in parallel layers where intermixing can occur by diffusion or which do not intermix; Focusing, i.e. compressing parallel layers without intermixing them}
- N B01F 2025/918 . . {Counter current flow, i.e. flows moving in opposite direction and colliding}
- N B01F 2025/919 . . {characterised by the disposition of the feed and discharge openings}
- N B01F 2025/9191 . . . {characterised by the arrangement of the feed openings for one or more flows, e.g. for the mainflow and the flow of an additional component}
- N B01F 2025/91911 {with feed openings in the center of the main flow}
- N B01F 2025/91912 {with feed openings at the circumference of the main flow}
- N B01F 2025/919121 {with feed openings around the complete circumference of the main flow, e.g. being a perforated or porous part}

- N B01F 2025/919125 . . . {with feed openings in the center and at the circumference of the main flow}
- N B01F 2025/91913 . . . {with feed openings facing each other, e.g. for creating counter flows, for creating a series of vortex flows}
- N B01F 2025/93 . {Arrangements, nature or configuration of flow guiding elements}
- N B01F 2025/931 . . {Flow guiding elements surrounding feed openings, e.g. jet nozzles}
- N B01F 2025/932 . . {Nature of the flow guiding elements}
- N B01F 2025/932.1 . . . {Surface characteristics, e.g. coated or rough}
- N B01F 27/00 *Mixers with rotary stirring devices in fixed receptacles (magnetic mixers [B01F 33/45](#)); Kneaders***
- N B01F 27/05 . Stirrers
- N B01F 27/051 . . characterised by their elements, materials or mechanical properties
- N B01F 27/052 . . . Stirrers with replaceable wearing elements; Wearing elements therefor
- N B01F 27/053 . . . characterised by their materials
- N B01F 27/053.1 {with particular surface characteristics, e.g. coated or rough}
- N B01F 27/054 . . . Deformable stirrers, e.g. deformed by a centrifugal force applied during operation
- N B01F 27/054.1 {with mechanical means to alter the position of the stirring elements}
- N B01F 27/054.2 {deformable by centrifugal force}
- N B01F 27/054.3 {the position of the stirring elements depending on the direction of rotation of the stirrer}
- N B01F 27/06 . . . {Stirrers made by deforming a plate}
- N B01F 27/07 . . characterised by their mounting on the shaft
- N B01F 27/07.1 . . . {Fixing of the stirrer to the shaft}
- N B01F 27/07.2 . . . characterised by the disposition of the stirrers with respect to the rotating axis
- N B01F 27/07.2.1 {parallel with respect to the rotating axis}
- N B01F 27/07.2.2 {perpendicular with respect to the rotating axis}
- N B01F 27/07.2.3 {oblique with respect to the rotating axis}
- N B01F 27/07.2.4 {directly mounted on the rotating axis}
- N B01F 27/07.2.5 {on the free end of the rotating axis}
- N B01F 27/07.2.6 {having stirring elements connected to the stirrer shaft each by a single radial rod, other than open frameworks}
- N B01F 27/07.2.6.1 {of the anchor type, i.e. the stirring elements being connected to the rods by one end and extending parallel to the shaft axis}
- N B01F 27/07.2.7 {having stirring elements connected to the stirrer shaft each by two or more radial rods, e.g. the shaft being interrupted between the rods, or of crankshaft type}
- N B01F 27/07.3 . . . {with stirring elements moving with respect to the stirrer shaft, e.g. floating or comprising contracting chambers}
- N B01F 27/07.4 . . . {having two or more mixing elements being concentrically mounted on the same shaft}
- N B01F 27/09 . . characterised by the mounting of the stirrers with respect to the receptacle
- N B01F 27/09.1 . . . with elements co-operating with receptacle wall or bottom, e.g. for scraping the receptacle wall
- N B01F 27/09.2 . . . {occupying substantially the whole interior space of the receptacle}
- N B01F 27/09.3 . . . eccentrically arranged

- N B01F 27/11 . . characterised by the configuration of the stirrers
- N B01F 27/111 . . . Centrifugal stirrers, i.e. stirrers with radial outlets; Stirrers of the turbine type, e.g. with means to guide the flow
- N B01F 27/1111 with a flat disc or with a disc-like element equipped with blades, e.g. Rushton turbine
- N B01F 27/112 with arms, paddles, vanes or blades
- N B01F 27/1121 pin-shaped
- N B01F 27/1122 anchor-shaped
- N B01F 27/1123 sickle-shaped, i.e. curved in at least one direction
- N B01F 27/1124 rake-shaped or grid-shaped
- N B01F 27/1125 with vanes or blades extending parallel or oblique to the stirrer axis
- N B01F 27/11251 {having holes in the surface}
- N B01F 27/11252 {paddle wheels}
- N B01F 27/11253 {the blades extending oblique to the stirrer axis}
- N B01F 27/1126 the stirrer being a bent rod supported at one end only
- N B01F 27/1127 spoon-shaped
- N B01F 27/113 . . Propeller-shaped stirrers for producing an axial flow, e.g. shaped like a ship or aircraft propeller
- N B01F 27/1131 with holes in the propeller blade surface
- N B01F 27/1132 with guiding tubes or tubular segments fixed to and surrounding the tips of the propeller blades, e.g. for supplementary mixing
- N B01F 27/1133 {the impeller being of airfoil or aerofoil type}
- N B01F 27/1134 {the impeller being of hydrofoil type}
- N B01F 27/114 . . Helically shaped stirrers, i.e. stirrers comprising a helically shaped band or helically shaped band sections
- N B01F 27/1141 {having holes in the surface}
- N B01F 27/1142 of the corkscrew type
- N B01F 27/1143 screw-shaped, e.g. worms
- N B01F 27/1144 with a plurality of blades following a helical path on a shaft or a blade support
- N B01F 27/1145 ribbon shaped with an open space between the helical ribbon flight and the rotating axis
- N B01F 27/11451 {forming open frameworks or cages}
- N B01F 27/115 . . comprising discs or disc-like elements essentially perpendicular to the stirrer shaft axis
- N B01F 27/1151 with holes on the surface
- N B01F 27/1152 with separate elements other than discs fixed on the discs, e.g. vanes fixed on the discs
- N B01F 27/1153 {the discs being made by deforming flat discs}
- N B01F 27/1154 {the discs being cup shaped, e.g. semi sphere}
- N B01F 27/1155 {with interconnected discs, forming open frameworks or cages}
- N B01F 27/116 . . Stirrers shaped as cylinders, balls or rollers
- N B01F 27/1161 {having holes in the surface}
- N B01F 27/1162 {Balls}
- N B01F 27/1163 {Rollers}
- N B01F 27/11631 {comprising paddles fixed thereon, e.g. with a total a diameter close to that of the surrounding receptacle}

- N B01F 27/117 . . . *Stirrers provided with conical-shaped elements, e.g. funnel-shaped*
- N B01F 27/1171 *{having holes in the surface}*
- N B01F 27/118 . . . *Stirrers in the form of brushes, sieves, grids, chains or springs*
- N B01F 27/119 . . . *Stirrers with rigid wires or flexible rods*
- N B01F 27/1191 *{with a bent rod of non-helical configuration supported at one end}*
- N B01F 27/13 . . . *Openwork frame or cage stirrers not provided for in other groups of this subclass*
- N B01F 27/15 . . . *Stirrers with tubes for guiding the material*
- N B01F 27/17 . . . *Stirrers with additional elements mounted on the stirrer, for purposes other than mixing*
- N B01F 27/171 *for disintegrating, e.g. for milling*
- N B01F 27/172 *for cutting, e.g. with knives*
- N B01F 27/19 . . . *Stirrers with two or more mixing elements mounted in sequence on the same axis*
- N B01F 27/191 *with similar elements*
- N B01F 27/192 *with dissimilar elements*
- N B01F 27/1921 *{comprising helical elements and paddles}*
- N B01F 27/21 . *characterised by their rotating shafts*
- N B01F 27/211 . . *characterised by the material of the shaft*
- N B01F 27/2111 . . . *Flexible shafts*
- N B01F 27/212 . . *{Construction of the shaft ([B01F 27/2121](#), [B01F 27/2122](#), [B01F 27/2123](#), [B01F 27/2124](#) take precedence)}*
- N B01F 27/2121 . . *composed of interconnected parts*
- N B01F 27/2122 . . *Hollow shafts*
- N B01F 27/2123 . . *Shafts with both stirring means and feeding or discharging means*
- N B01F 27/2124 . . *Shafts with adjustable length, e.g. telescopic shafts*
- N B01F 27/213 . . *characterised by the connection with the drive*
- N B01F 27/23 . *characterised by the orientation or disposition of the rotor axis*
- N B01F 27/231 . . *with a variable orientation during mixing operation, e.g. with tiltable rotor axis*
- N B01F 27/2311 . . . *{the orientation of the rotating shaft being adjustable in the interior of the receptacle, e.g. by tilting the stirrer shaft during the mixing}*
- N B01F 27/2312 . . . *{the position of the rotating shaft being adjustable in the interior of the receptacle, e.g. to locate the stirrer in different locations during the mixing}*
- N B01F 27/232 . . *with two or more rotation axes*
- N B01F 27/2321 . . . *{having different inclinations, e.g. non parallel}*
- N B01F 27/2322 . . . *with parallel axes*
- N B01F 27/2323 . . . *with perpendicular axes*
- N B01F 27/2324 . . . *{planetary}*
- N B01F 27/25 . *Mixers with both stirrer and drive unit submerged in the material being mixed*
- N B01F 27/251 . . *{Vertical beam constructions therefor}*
- N B01F 27/27 . *Mixers with stator-rotor systems, e.g. with intermeshing teeth or cylinders or having orifices (the stirrers having a central axial inflow and a substantially radial outflow [B01F 27/81](#))*
- N B01F 27/271 . . *with means for moving the materials to be mixed radially between the surfaces of the rotor and the stator*
- N B01F 27/2711 . . . *{provided with intermeshing elements}*

- N B01F 27/2712 • • • {provided with ribs, ridges or grooves on one surface}
- N B01F 27/2713 • • • {the surfaces having a conical shape}
- N B01F 27/2714 • • • {the relative position of the stator and the rotor, gap in between or gap with the walls being adjustable}
- N B01F 27/272 • • with means for moving the materials to be mixed axially between the surfaces of the rotor and the stator, e.g. the stator rotor system formed by conical or cylindrical surfaces
- N B01F 27/2721 • • • {provided with intermeshing elements}
- N B01F 27/2722 • • • {provided with ribs, ridges or grooves on one surface}
- N B01F 27/2723 • • • {the surfaces having a conical shape}
- N B01F 27/2724 • • • {the relative position of the stator and the rotor, gap in between or gap with the walls being adjustable}
- N B01F 27/276 • • {the mixer being composed of a stator-rotor system being formed by bearing elements, e.g. roller bearings}
- N B01F 27/40 • Mixers with rotor-rotor system, e.g. with intermeshing teeth
- N B01F 27/41 • • with the mutually rotating surfaces facing each other
- N B01F 27/411 • • • {provided with intermeshing elements}
- N B01F 27/412 • • • {provided with ribs, ridges or grooves on one surface}
- N B01F 27/42 • • with rotating surfaces next to each other, i.e. on substantially parallel axes
- N B01F 27/421 • • • {provided with intermeshing elements}
- N B01F 27/422 • • • {provided with ribs, ridges or grooves on one surface}
- N B01F 27/50 • Pipe mixers, i.e. mixers wherein the materials to be mixed flow continuously through pipes, e.g. column mixers
- N B01F 27/55 • with stirrers driven by the moving material
- N B01F 27/60 • with stirrers rotating about a horizontal or inclined axis
- N B01F 27/61 • • about an inclined axis
- N B01F 27/62 • • {comprising liquid feeding, e.g. spraying means}
- N B01F 27/621 • • • {the liquid being fed through the shaft of the stirrer}
- N B01F 27/625 • • {the receptacle being divided into compartments, e.g. with porous divisions}
- N B01F 27/627 • • {the receptacles being tiltable, e.g. for emptying}
- N B01F 27/63 • • co-operating with deflectors or baffles fixed to the receptacle

WARNING

Group [B01F 27/63](#) is incomplete pending reclassification of documents from group [B01F 35/55](#).

Groups [B01F 35/55](#) and [B01F 27/63](#) should be considered in order to perform a complete search.

- N B01F 27/65 • • with buckets
- N B01F 27/70 • • with paddles, blades or arms
- N B01F 27/701 • • • comprising two or more shafts, e.g. in consecutive mixing chambers
- N B01F 27/702 • • • • with intermeshing paddles

WARNING

Group [B01F 27/702](#) is incomplete pending reclassification of documents from groups [B01F 27/706](#) and [B01F 27/708](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q B01F 27/703 . . . with stirrers rotating at different speeds
- WARNING
Group [B01F 27/703](#) is incomplete pending reclassification of documents from groups [B01F 27/706](#) and [B01F 27/708](#).
Group [B01F 27/703](#) is also impacted by reclassification into group [B01F 27/705](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 27/704 . . . with stirrers facing each other, i.e. supported by opposite walls of the receptacle
- WARNING
Group [B01F 27/704](#) is incomplete pending reclassification of documents from groups [B01F 27/706](#) and [B01F 27/708](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 27/705 . . . with stirrers rotating in opposite directions about the same axis, e.g. with a first stirrer surrounded by a tube inside a second stirrer
- WARNING
Group [B01F 27/705](#) is incomplete pending reclassification of documents from groups [B01F 27/703](#), [B01F 27/706](#) and [B01F 27/708](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q B01F 27/706 . . . with all the shafts in the same receptacle ([B01F 27/702](#)-[B01F 27/705](#) take precedence)
- WARNING
Group [B01F 27/706](#) is incomplete pending reclassification of documents from group [B01F 27/708](#).
Group [B01F 27/706](#) is also impacted by reclassification into groups [B01F 27/702](#), [B01F 27/703](#), [B01F 27/704](#) and [B01F 27/705](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 27/707 . . . the paddles co-operating, e.g. intermeshing, with elements on the receptacle wall
- Q B01F 27/708 . . . characterised by the shape of the stirrer as a whole, i.e. of Z- or S-shape
- WARNING
Group [B01F 27/708](#) is impacted by reclassification into groups [B01F 27/702](#), [B01F 27/703](#), [B01F 27/704](#), [B01F 27/705](#) and [B01F 27/706](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 27/71 . . . with propellers
- N B01F 27/711 . . . {co-operating with stationary guiding means, e.g. baffles}
- N B01F 27/7111 . . . {the guiding means being tubes surrounding the propellers}
- N B01F 27/72 . . . with helices or sections of helices
- N B01F 27/721 . . . with two or more helices in the same receptacle
- N B01F 27/722 . . . the helices closely surrounded by a casing
- N B01F 27/7221 . . . {the stirrers being composed of helices and paddles on the same shaft, e.g. helically arranged ovally shaped paddles}
- N B01F 27/723 . . . the helices intermeshing to knead the mixture

- N B01F 27/724 . . . with a single helix closely surrounded by a casing
- N B01F 27/725 . . . {with two or more helices in respective separate casings, e.g. one casing inside the other}
- N B01F 27/726 . . . with two helices with opposite pitch on the same shaft; with two helices on the same axis, driven in opposite directions or at different speeds
- N B01F 27/73 . . with rotary discs
- N B01F 27/731 . . . {with two or more parallel shafts provided with perpendicularly mounted discs, e.g. lens shaped, one against the other on each shaft and in circumferential contact with the discs on the other shafts, e.g. for cleaning}
- N B01F 27/74 . . with rotary cylinders
- N B01F 27/75 . . with stirrers having planetary motion, i.e. rotating about their own axis and about a sun axis
- N B01F 27/755 . . . {the stirrers being cylinders, balls or gears}
- N B01F 27/80 . . with stirrers rotating about a substantially vertical axis
- N B01F 27/805 . . wherein the stirrers or the receptacles are moved in order to bring them into operative position; Means for fixing the receptacle
- N B01F 27/806 . . . with vertical displacement of the stirrer, e.g. in combination with means for pivoting the stirrer about a vertical axis in order to co-operate with different receptacles
- N B01F 27/807 . . . with the stirrer-head pivoting about a horizontal axis to bring it in and out of operative position, e.g. with receptacles pivoting about a horizontal axis for emptying
- N B01F 27/808 . . with stirrers driven from the bottom of the receptacle
- N B01F 27/81 . . the stirrers having central axial inflow and substantially radial outflow
- N B01F 27/811 . . . {with the inflow from one side only, e.g. stirrers placed on the bottom of the receptacle, or used as a bottom discharge pump}
- N B01F 27/8111 {the stirrers co-operating with stationary guiding elements, e.g. surrounding stators or intermeshing stators ([B01F 27/812](#) takes precedence)}
- N B01F 27/812 . . . {the stirrers co-operating with surrounding stators, or with intermeshing stators, e.g. comprising slits, orifices or screens}
- N B01F 27/813 . . . {the stirrers co-operating with stationary guiding elements ([B01F 27/812](#) takes precedence)}
- N B01F 27/82 . . Pan-type mixers, i.e. mixers in which the stirring elements move along the bottom of a pan-shaped receptacle (with stirring elements moving along the wall or bottom of the receptacle [B01F 27/091](#))
- N B01F 27/83 . . the stirrers being additionally moved radially, or oscillating about an axis perpendicular to the stirrer axis
- N B01F 27/84 . . with two or more stirrers rotating at different speeds or in opposite directions about the same axis
- N B01F 27/85 . . with two or more stirrers on separate shafts
- N B01F 27/851 . . . {the receptacle being subdivided in adjacent compartments}
- N B01F 27/86 . . co-operating with deflectors or baffles fixed to the receptacle
- N B01F 27/861 . . . {the baffles being of cylindrical shape, e.g. a mixing chamber surrounding the stirrer, the baffle being displaced axially to form an interior mixing chamber}
- N B01F 27/862 . . . {the baffles being adjustable or movable ([B01F 27/861](#) takes precedence)}
- N B01F 27/87 . . the receptacle being divided into superimposed compartments
- N B01F 27/88 . . with a separate receptacle-stirrer unit that is adapted to be coupled to a drive mechanism

- N B01F 27/90 • • with paddles or arms
- N B01F 27/902 • • • cooperating with intermeshing elements fixed on the receptacle walls
- N B01F 27/9021 • • • • {the elements being vertically arranged, e.g. fixed on the bottom}
- N B01F 27/906 • • • with fixed axis
- N B01F 27/91 • • with propellers
- N B01F 27/911 • • • {forcing the material through orifices or slits, e.g. in a stationary part}
- N B01F 27/92 • • with helices or screws
- N B01F 27/921 • • • with helices centrally mounted in the receptacle
- N B01F 27/9211 • • • • {the helices being surrounded by a guiding tube}
- N B01F 27/92112 • • • • • {combined with means for uniting flows of material taken from different parts of the receptacle}
- N B01F 27/9212 • • • • with conical helices
- N B01F 27/9213 • • • • {the helices having a diameter only slightly less than the diameter of the receptacle}
- N B01F 27/9214 • • • • {with additional mixing elements other than helices; having inner and outer helices; with helices surrounding a guiding tube}
- N B01F 27/922 • • • with two or more helices, e.g. with intermeshing helices
- N B01F 27/923 • • • {the material flowing continuously through the receptacle}
- N B01F 27/93 • • with rotary discs
- N B01F 27/94 • • with rotary cylinders or cones
- N B01F 27/941 • • • {being hollow, perforated or having special stirring elements thereon}
- N B01F 27/95 • • with stirrers having planetary motion, i.e. rotating about their own axis and about a sun axis
- N B01F 27/951 • • • {with at least one stirrer mounted on the sun axis}
- N B01F 27/952 • • • the stirrers being cylinders with their circumference in contact with the bottom of the receptacle and rotating about an axis at an angle to the sun axis, e.g. mixers of the Muller type
- N B01F 27/953 • • • {using only helical stirrers}
- N B01F 27/96 • • with openwork frames or cages

N B01F 29/00 Mixers with rotating receptacles

- N B01F 29/10 • with receptacles rotated about two different axes, e.g. receptacles having planetary motion
- N B01F 29/15 • Use of centrifuges for mixing
- Q B01F 29/20 • with receptacles rotating about an axis at an angle to their longitudinal axis ([B01F 29/62](#) takes precedence)

WARNING

Group [B01F 29/20](#) is impacted by reclassification into group [B01F 29/62](#). Groups [B01F 29/20](#) and [B01F 29/62](#) should be considered in order to perform a complete search.

- N B01F 29/25 • with material flowing continuously through the receptacles from inlet to discharge
- N B01F 29/251 • • {with at least one screw inside the receptacle for feeding or discharging, e.g. the axis of screw and receptacle being parallel}
- N B01F 29/252 • • {the feed and discharge openings being at opposite ends of the receptacle}
- N B01F 29/253 • • {the feed and discharge openings being at the same side of the receptacle}
- N B01F 29/30 • Mixing the contents of individual packages or containers, e.g. by rotating tins or bottles

- N B01F 29/31 . . the containers being supported by driving means, e.g. by rotating rollers
- N B01F 29/32 . . Containers specially adapted for coupling to rotating frames or the like; Coupling means therefor
- N B01F 29/321 . . . of test-tubes or the like
- N B01F 29/322 . . . of two or more containers supported for simultaneous mixing, e.g. for bottles in crates
- N B01F 29/33 . . by imparting a combination of movements to two or more containers
- N B01F 29/331 . . {by means of a rotary table provided with a plurality of bottle grippers at its periphery, an additional movement being imparted to the grippers}
- N B01F 29/332 . . {the bottles being submitted to a screw-motion about an axis perpendicular to the axis of the bottles and lying intermediate the ends of the bottles}
- N B01F 29/333 . . {essentially by rotating bottles about an axis perpendicular to the bottle axis and lying outside the bottles, using a rotating drum provided with pockets for the bottles at its periphery}
- N B01F 29/34 . . Constructional details of holders for the individual packages or containers
- N B01F 29/40 . {Parts or components, e.g. receptacles, feeding or discharging means ([B01F 29/251](#) takes precedence)}
- Q B01F 29/401 . . {Receptacles, e.g. provided with liners}

WARNING

Group [B01F 29/401](#) is impacted by reclassification into groups [B01F 29/4011](#), [B01F 29/40111](#), [B01F 29/40112](#), [B01F 29/40113](#), [B01F 29/40114](#), [B01F 29/40115](#), [B01F 29/40116](#), [B01F 29/40117](#), [B01F 29/40118](#), [B01F 29/40119](#), [B01F 29/401195](#), [B01F 29/402](#), [B01F 29/4021](#), [B01F 29/4022](#), [B01F 29/40221](#), [B01F 29/40222](#), [B01F 29/4023](#), [B01F 29/40231](#), [B01F 29/403](#), [B01F 29/4031](#), [B01F 29/4032](#), [B01F 29/4033](#), [B01F 29/4034](#), [B01F 29/4035](#), [B01F 29/40351](#), [B01F 29/40352](#), [B01F 29/40353](#), [B01F 29/40354](#), [B01F 29/4036](#), [B01F 29/40361](#), [B01F 29/40362](#), [B01F 29/40363](#), [B01F 29/40364](#) and [B01F 29/40365](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 29/4011 . . {characterised by the shape or cross-section of the receptacle, e.g. of Y-, Z-, S-, or X shape}

WARNING

Groups [B01F 29/4011](#) - [B01F 29/401195](#) are incomplete pending reclassification of documents from group [B01F 29/401](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 29/40111 . . . {Non-cylindrical sections, e.g. elliptical or irregular}
- N B01F 29/40112 . . . {Polygonal sections, e.g. triangular or square}
- N B01F 29/40113 . . . {Conical, double-conical or diabolo shapes}
- N B01F 29/40114 . . . {Cubic, cubical or polyhedronal shapes}
- N B01F 29/40115 . . . {S shapes}
- N B01F 29/40116 . . . {Spherical shapes}
- N B01F 29/40117 . . . {Toroidal shapes}
- N B01F 29/40118 . . . {V or W shapes}
- N B01F 29/40119 . . . {X shapes}
- N B01F 29/401195 . . . {Y or double Y shapes}

- N B01F 29/402 . . . {characterised by the relative disposition or configuration of the interior of the receptacles}
- WARNING
Groups [B01F 29/402](#) - [B01F 29/4023](#) are incomplete pending reclassification of documents from group [B01F 29/401](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 29/4021 {Multi-compartment receptacles}
- N B01F 29/4022 {Configuration of the interior}
- N B01F 29/40221 {provided with baffles, plates or bars on the wall or the bottom}
- N B01F 29/40222 {provided with guide tubes on the wall or the bottom}
- N B01F 29/4023 {Nature of the receptacle}
- N B01F 29/40231 . . . {Surface characteristics, e.g. coated, rough}
- WARNING
Group [B01F 29/40231](#) is incomplete pending reclassification of documents from group [B01F 29/401](#).
Groups [B01F 29/401](#) and [B01F 29/40231](#) should be considered in order to perform a complete search.
- N B01F 29/403 . . {Disposition of the rotor axis}
- WARNING
Groups [B01F 29/403](#) - [B01F 29/40365](#) are incomplete pending reclassification of documents from group [B01F 29/401](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 29/4031 . . . {horizontal}
- N B01F 29/4032 . . . {vertical}
- N B01F 29/4033 . . . {inclined}
- N B01F 29/4034 . . . {variable, e.g. tiltable during the operation}
- N B01F 29/4035 . . . {with a receptacle rotating around two or more axes}
- N B01F 29/40351 {having different, non-perpendicular inclinations, e.g. skew axes}
- N B01F 29/40352 {being parallel axes}
- N B01F 29/40353 {being perpendicular axes}
- N B01F 29/40354 {arranged for planetary motion}
- N B01F 29/4036 . . . {with a plurality of rotating receptacles}
- N B01F 29/40361 {having axes of different, non-perpendicular inclinations}
- N B01F 29/40362 {having parallel axes}
- N B01F 29/40363 {having perpendicular axes}
- N B01F 29/40364 {being concentrically arranged}
- N B01F 29/40365 {arranged for planetary motion}
- N B01F 29/60 . . . rotating about a horizontal or inclined axis, e.g. drum mixers
- N B01F 29/61 . . . {comprising liquid spraying devices}

- N B01F 29/62
- without bars, i.e. without mixing elements; characterised by the shape or cross section of the receptacle, e.g. of Y-, Z-, S- or X- shape; with cylindrical receptacles rotating about an axis at an angle to their longitudinal axis
- WARNING
Group [B01F 29/62](#) is incomplete pending reclassification of documents from group [B01F 29/20](#).
Groups [B01F 29/20](#) and [B01F 29/62](#) should be considered in order to perform a complete search.
- N B01F 29/63
- with fixed bars, i.e. stationary, or fixed on the receptacle
- N B01F 29/64
- with stirring devices moving in relation to the receptacle, e.g. rotating
- N B01F 29/80
- rotating about a substantially vertical axis
- N B01F 29/81
- with stationary mixing elements
- N B01F 29/82
- {the receptacle comprising a rotary part, e.g. the bottom, and a stationary part, e.g. the wall, with optional use of a stirrer; the receptacle comprising parts moving in opposite directions}
- N B01F 29/83
- with rotary paddles or arms, e.g. movable out of the receptacle
- N B01F 29/835
- {Pan-type mixers, i.e. having stirrers moving along the bottom of a pan-shaped receptacle}
- N B01F 29/84
- with propellers
- N B01F 29/85
- with helices, e.g. rotating about an inclined axis
- N B01F 29/86
- with rotary discs
- N B01F 29/87
- with rotary cylinders
- N B01F 29/90
- with stirrers having planetary motion
- N B01F 31/00**
- Mixers with shaking, oscillating, or vibrating mechanisms**
- N B01F 31/10
- with a mixing receptacle rotating alternately in opposite directions
- N B01F 31/20
- Mixing the contents of independent containers, e.g. test tubes
- N B01F 31/201
- {Holders therefor}
- N B01F 31/202
- {for beverage bottles, e.g. within crates or with feeding means for the bottles}
- N B01F 31/22
- with supporting means moving in a horizontal plane, e.g. describing an orbital path for moving the containers about an axis which intersects the receptacle axis at an angle
- N B01F 31/23
- by pivoting the containers about an axis
- N B01F 31/231
- {the containers being of the sandglass-type or being linked with their openings}
- N B01F 31/24
- the containers being submitted to a rectilinear movement
- Q B01F 31/25
- the containers being submitted to a combination of movements other than within a horizontal plane, e.g. rectilinear and pivoting movement (with a receptacle submitted to a combination of movements, i.e. at least one movement being vibratory or oscillatory [B01F 31/50](#))
- WARNING
Group [B01F 31/25](#) is impacted by reclassification into group [B01F 31/50](#).
Groups [B01F 31/25](#) and [B01F 31/50](#) should be considered in order to perform a complete search.
- N B01F 31/26
- {the containers being submitted to a wobbling movement}
- N B01F 31/265
- {the vibrations being caused by an unbalanced rotating member}
- N B01F 31/27
- {the vibrations being caused by electromagnets}
- N B01F 31/275
- {with means for transporting test tubes to and from the stirring device}

- N B01F 31/28 • • {the vibrations being caused by piezoelectric elements}
- Q B01F 31/29 • Mixing by periodically deforming flexible tubular members through which the material is flowing
- WARNING
Group [B01F 31/29](#) is incomplete pending reclassification of documents from group [B01F 31/57](#).
Group [B01F 31/29](#) is also impacted by reclassification into group [B01F 31/30](#).
Groups [B01F 31/57](#), [B01F 31/29](#) and [B01F 31/30](#) should be considered in order to perform a complete search.
- N B01F 31/30 • comprising a receptacle to only a part of which the shaking, oscillating, or vibrating movement is imparted
- WARNING
Group [B01F 31/30](#) is incomplete pending reclassification of documents from groups [B01F 31/29](#) and [B01F 31/57](#).
Groups [B01F 31/29](#), [B01F 31/57](#) and [B01F 31/30](#) should be considered in order to perform a complete search.
- N B01F 31/31 • • using receptacles with deformable parts, e.g. membranes, to which a motion is imparted
- N B01F 31/311 • • • {the motion being a linear movement to one part of the receptacle}
- N B01F 31/312 • • • {the motion being a transversal movement to one part of the receptacle, e.g. by moving alternatively up and down the opposite edges of a closing lid to cause a pumping action}
- N B01F 31/40 • with an axially oscillating rotary stirrer
- WARNING
Group [B01F 31/40](#) is incomplete pending reclassification of documents from group [B01F 31/44](#).
Groups [B01F 31/40](#) and [B01F 31/44](#) should be considered in order to perform a complete search.
- N B01F 31/401 • • {for material flowing continuously axially therethrough}
- WARNING
Group [B01F 31/401](#) is incomplete pending reclassification of documents from groups [B01F 31/44](#) and [B01F 31/57](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 31/42 • with pendulum stirrers, i.e. with stirrers suspended so as to oscillate about fixed points or axes
- WARNING
Group [B01F 31/42](#) is incomplete pending reclassification of documents from group [B01F 31/44](#).
Groups [B01F 31/42](#) and [B01F 31/44](#) should be considered in order to perform a complete search.
- Q B01F 31/44 • with stirrers performing an oscillatory, vibratory or shaking movement ([B01F 31/40](#), [B01F 31/42](#) take precedence)
- WARNING
Group [B01F 31/44](#) is impacted by reclassification into groups [B01F 31/40](#), [B01F 31/401](#) and [B01F 31/42](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 31/441
- performing a rectilinear reciprocating movement
- N B01F 31/443
- {performing a superposed additional movement other than oscillation, vibration or shaking}
- N B01F 31/445
- performing an oscillatory movement about an axis
- N B01F 31/449
- {Stirrers constructions}
- N B01F 31/46
- with an annular vibrating trough
- WARNING
- Group [B01F 31/46](#) is incomplete pending reclassification of documents from group [B01F 31/57](#).
Groups [B01F 31/57](#) and [B01F 31/46](#) should be considered in order to perform a complete search.
- N B01F 31/50
- with a receptacle submitted to a combination of movements, i.e. at least one vibratory or oscillatory movement
- WARNING
- Group [B01F 31/50](#) is incomplete pending reclassification of documents from group [B01F 31/25](#).
Groups [B01F 31/25](#) and [B01F 31/50](#) should be considered in order to perform a complete search.
- N B01F 31/55
- the materials to be mixed being contained in a flexible bag submitted to periodical deformation
- N B01F 31/56
- {having a vibrating receptacle provided with stirring elements, e.g. independent stirring elements}
- Q B01F 31/57
- {for material continuously moving therethrough ([B01F 31/29](#), [B01F 31/30](#), [B01F 31/401](#), [B01F 31/46](#), [B01F 31/84](#) take precedence)}
- WARNING
- Group [B01F 31/57](#) is impacted by reclassification into groups [B01F 31/29](#), [B01F 31/30](#), [B01F 31/401](#), [B01F 31/46](#) and [B01F 31/84](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 31/60
- with a vibrating receptacle ([B01F 31/10](#), [B01F 31/20](#), [B01F 31/50](#) take precedence)
- N B01F 31/65
- the materials to be mixed being directly submitted to a pulsating movement, e.g. by means of an oscillating piston or air column
- N B01F 31/651
- {Mixing by successively aspirating a part of the mixture in a conduit, e.g. a piston, and reinjecting it through the same conduit into the receptacle}
- N B01F 31/70
- {Drives therefor, e.g. crank mechanisms}
- N B01F 31/80
- Mixing by means of high-frequency vibrations above one kHz, e.g. ultrasonic vibrations
- N B01F 31/81
- by vibrations generated inside a mixing device not coming from an external drive, e.g. by the flow of material causing a knife to vibrate or by vibrating nozzles
- N B01F 31/82
- {the material being forced through a narrow vibrating slit}
- N B01F 31/83
- {comprising a supplementary stirring element}
- N B01F 31/831
- {the vibrations being generated by the rotation of the stirring element}
- N B01F 31/84
- {for material continuously moving through a tube, e.g. by deforming the tube}
- WARNING
- Group [B01F 31/84](#) is incomplete pending reclassification of documents from group [B01F 31/57](#).

Groups [B01F 31/57](#) and [B01F 31/84](#) should be considered in order to perform a complete search.

- N B01F 31/841 • • • {with a vibrating element inside the tube}
- N B01F 31/85 • • with a vibrating element inside the receptacle
- N B01F 31/86 • • with vibration of the receptacle or part of it
- N B01F 31/861 • • • {caused by hitting or striking the receptacle}
- N B01F 31/87 • • transmitting the vibratory energy by means of a fluid, e.g. by means of air shock waves
- N B01F 31/89 • • {Methodical aspects; Controlling}

Q B01F 33/00

Other mixers; Mixing plants; Combinations of mixers

WARNING

Group [B01F 33/00](#) is impacted by reclassification into group [B01F 33/87](#).

Groups [B01F 33/00](#) and [B01F 33/87](#) should be considered in order to perform a complete search.

- N B01F 33/05 • Mixers using radiation, e.g. magnetic fields or microwaves to mix the material ({[B01F 23/2133](#), [B01F 23/238](#), [B01F 23/55](#),} [B01F 33/3031](#), [B01F 33/3032](#) take precedence)
- N B01F 33/051 • • {the energy being electrical energy working on the ingredients or compositions for mixing them}
- N B01F 33/052 • • {the energy being electric fields for electrostatically charging of the ingredients or compositions for mixing them}
- N B01F 33/053 • • {the energy being magnetic or electromagnetic energy, radiation working on the ingredients or compositions for or during mixing them}
- N B01F 33/054 • • {the energy being in the form of a laser to modify the characteristics or conditions of the products, e.g. for heating}
- N B01F 33/055 • • {the energy being particle radiation working on the ingredients or compositions for or during mixing them}
- N B01F 33/12 • Mixers in which the mixing of the components is achieved by natural convection
- N B01F 33/25 • Mixers with loose mixing elements, e.g. loose balls in a receptacle
- N B01F 33/251 • • {using balls as loose mixing element}
- N B01F 33/252 • • {using bubbles as loose mixing element}
- N B01F 33/253 • • {using sliders or cylindrical elements as loose mixing element}
- N B01F 33/254 • • {using springs as loose mixing element}
- N B01F 33/26 • {Mixers with an endless belt for transport of the material, e.g. in layers or with mixing means above or at the end of the belt}
- N B01F 33/27 • {Mixers having moving endless chains or belts, e.g. provided with paddles, as mixing elements}
- N B01F 33/30 • Micromixers
- N B01F 33/301 • • using specific means for arranging the streams to be mixed, e.g. channel geometries or dispositions
- N B01F 33/3011 • • • using a sheathing stream of a fluid surrounding a central stream of a different fluid, e.g. for reducing the cross-section of the central stream or to produce droplets from the central stream
- N B01F 33/3012 • • • Interdigital streams, e.g. lamellae
- N B01F 33/30121 • • • • {the interdigital streams being concentric lamellae}
- N B01F 33/3017 • • • {Mixing chamber}
- N B01F 33/302 • • the materials to be mixed flowing in the form of droplets

- N B01F 33/3021
 - • • {the components to be mixed being combined in a single independent droplet, e.g. these droplets being divided by a non-miscible fluid or consisting of independent droplets}
- N B01F 33/3022
 - • • {the components being formed by independent droplets which are alternated, the mixing of the components being achieved by diffusion between droplets}
- N B01F 33/3031
 - • using electro-hydrodynamic [EHD] or electro-kinetic [EKI] phenomena to mix or move the fluids
- N B01F 33/3032
 - • using magneto-hydrodynamic [MHD] phenomena to mix or move the fluids
- N B01F 33/3033
 - • using heat to mix or move the fluids
- N B01F 33/3034
 - • {using induced convection or movement in the mixture to mix or move the fluids without mechanical means, e.g. thermodynamic instability, strong gradients, etc.}
- N B01F 33/3035
 - • {using surface tension to mix, move or hold the fluids}
- N B01F 33/30351
 - • • {using hydrophilic/hydrophobic surfaces}
- N B01F 33/30352
 - • • {using roughness of the surfaces}
- N B01F 33/3036
 - • {using a biological motor, i.e. biological molecules which are activated and movement is induced to stir a fluid}
- N B01F 33/3037
 - • {using coupled electrorotation [CER] phenomena to mix or move fluids, or to sense properties of the mixture}
- N B01F 33/3038
 - • {using ciliary stirrers to move or stir the fluids}
- N B01F 33/3039
 - • with mixing achieved by diffusion between layers
- N B01F 33/304
 - • {the mixing being performed in a mixing chamber where the products are brought into contact}
- N B01F 33/3045
 - • {using turbulence on microscale}
- N B01F 33/305
 - • {using mixing means not otherwise provided for ([B01F 25/00](#), [B01F 27/00](#), [B01F 29/00](#), [B01F 31/00](#), [B01F 33/301](#) - [B01F 33/3045](#), [B01F 33/40](#) and [B01F 33/45](#) take precedence)}
- N B01F 33/35
 - Mixing after turning the mixing vessel upside down
- N B01F 33/40
 - Mixers using gas or liquid agitation, e.g. with air supply tubes

NOTE

{The agitating fluid is not meant to mix with the material.}

- N B01F 33/401
 - • {Methods}
- N B01F 33/402
 - • {comprising supplementary stirring elements}
- N B01F 33/4021
 - • • {the gas being introduced through the shaft of the stirring element}
- N B01F 33/403
 - • {for mixing liquids ([B01F 33/402](#), [B01F 33/405](#), [B01F 33/406](#) take precedence)}
- N B01F 33/404
 - • {for mixing material moving continuously therethrough, e.g. using impinging jets}
- N B01F 33/405
 - • {in receptacles having guiding conduits therein, e.g. for feeding the gas to the bottom of the receptacle}
- N B01F 33/4051
 - • • {with vertical conduits through which the material is being moved upwardly driven by the fluid}
- N B01F 33/40511
 - • • • {with a central conduit or a central set of conduits}
- N B01F 33/40512
 - • • • {involving gas diffusers at the bottom}
- N B01F 33/406
 - • {in receptacles with gas supply only at the bottom ([B01F 33/405](#) takes precedence)}

- N B01F 33/4061 . . . {through orifices arranged around a central cone ([B01F 33/4062](#) takes precedence)}
- N B01F 33/4062 . . . {with means for modifying the gas pressure or for supplying gas at different pressures or in different volumes at different parts of the bottom}
- N B01F 33/407 . . {by blowing gas on the material from above}
- N B01F 33/408 . . {Controlling}
- N B01F 33/409 . . {Parts, e.g. diffusion elements; Accessories}
- N B01F 33/4092 . . {Storing receptacles provided with separate mixing chambers}
- N B01F 33/4094 . . {Plants}
- N B01F 33/45 . . Magnetic mixers; Mixers with magnetically driven stirrers
- N B01F 33/451 . . wherein the mixture is directly exposed to an electromagnetic field without use of a stirrer, e.g. for material comprising ferromagnetic particles or for molten metal
- N B01F 33/452 . . using independent floating stirring elements
- N B01F 33/453 . . using supported or suspended stirring elements
- N B01F 33/4531 . . . {using an axis supported in several points for mounting the stirring element}
- N B01F 33/4532 . . . {using a bearing, tube, opening or gap for internally supporting the stirring element}
- N B01F 33/4533 . . . {supporting the stirring element in one point}
- N B01F 33/4534 . . . {using a rod for supporting the stirring element, e.g. stirrer sliding on a rod or mounted on a rod sliding in a tube}
- N B01F 33/4535 . . . {using a stud for supporting the stirring element}
- N B01F 33/4536 . . . {using a wire for supporting or suspending the stirring element, e.g. stirrer sliding on a wire}
- N B01F 33/4537 . . . {the stirring element being suspended by one point}
- N B01F 33/50 . . Movable or transportable mixing devices or plants
- N B01F 33/501 . . Movable mixing devices, i.e. readily shifted or displaced from one place to another, e.g. portable during use
- N B01F 33/5011 . . . {portable during use, e.g. hand-held}
- N B01F 33/50111 {Small portable bottles, flasks, vials, e.g. with means for mixing ingredients or for homogenizing their content, e.g. by hand shaking}
- N B01F 33/50112 {of the syringe or cartridge type}
- N B01F 33/50113 {of the pipette type}
- N B01F 33/50114 {of the hand-held gun type}
- N B01F 33/50115 {Stirring devices adapted to be connected to a standard boring machine or other kind of domestic tool}
- N B01F 33/5012 . . . {adapted to be mounted during use on a standard, base or support}
- N B01F 33/5013 . . . {movable by mechanical means, e.g. hoisting systems, grippers or lift trucks}
- N B01F 33/5014 . . . {movable by human force, e.g. kitchen or table devices}
- N B01F 33/502 . . Vehicle-mounted mixing devices
- N B01F 33/5021 . . . {the vehicle being self-propelled, e.g. truck mounted, provided with a motor, driven by tracks ([B01F 33/5022](#) - [B01F 33/5027](#) take precedence)}
- N B01F 33/5022 . . . {the vehicle being a carriage moving or driving along fixed or movable beams or bridges}
- N B01F 33/5023 . . . {the vehicle being a trailer which is hand moved or coupled to self-propelling vehicles}
- N B01F 33/5024 . . . {the vehicle being moved by human force}

- N B01F 33/5025 . . . {using rails for guiding the mixing installation during moving or displacing}
 - N B01F 33/5026 . . . {using sledges or skids for moving or displacing the mixing installation}
 - N B01F 33/5027 . . . {using driven tracks, caterpillars or crawler for moving or displacing the mixing installation}
 - N B01F 33/503 . . Floating mixing devices
 - N B01F 33/70 . Mixers specially adapted for working at sub- or super-atmospheric pressure, e.g. combined with de-foaming
 - N B01F 33/71 . . working at super-atmospheric pressure, e.g. in pressurised vessels
 - N B01F 33/80 . Mixing plants; Combinations of mixers
 - N B01F 33/805 . . {for granular material}
 - N B01F 33/8051 . . . {with several silos arranged in a row or around a central delivery point, e.g. provided with proportioning means}
 - N B01F 33/80514 {the silos being arranged in a circular configuration, i.e. in a circle around a central delivery point}
 - N B01F 33/8052 . . . {involving other than mixing operations, e.g. milling, sieving or drying}
 - N B01F 33/81 . . Combinations of similar mixers, e.g. with rotary stirring devices in two or more receptacles
 - N B01F 33/811 . . . {in two or more consecutive, i.e. successive, mixing receptacles or being consecutively arranged}
 - N B01F 33/812 . . . {in two or more alternative mixing receptacles, e.g. mixing in one receptacle and dispensing from another receptacle}
 - N B01F 33/813 . . . {mixing simultaneously in two or more mixing receptacles}
 - N B01F 33/82 . . Combinations of dissimilar mixers
 - N B01F 33/821 . . . {with consecutive receptacles}
 - N B01F 33/8212 {with moving and non-moving stirring devices}
 - N B01F 33/822 . . . {with moving and non-moving stirring devices in the same receptacle}
 - N B01F 33/823 . . . {in two or more alternative mixing receptacles, e.g. mixing in one receptacle and dispensing from another receptacle}
 - N B01F 33/824 . . . {mixing simultaneously in two or more mixing receptacles}
 - N B01F 33/83 . . Mixing plants specially adapted for mixing in combination with disintegrating operations
 - N B01F 33/8305 . . . {Devices with one shaft, provided with mixing and milling tools, e.g. using balls or rollers as working tools; Devices with two or more tools rotating about the same axis}
 - N B01F 33/831 . . . {Devices with consecutive working receptacles, e.g. with two intermeshing tools in one of the receptacles ([B01F 33/8305](#) takes precedence)}
 - N B01F 33/833 . . . {Devices with several tools rotating about different axis in the same receptacle}
 - N B01F 33/834 . . {Mixing in several steps, e.g. successive steps ([B01F 33/81](#), [B01F 33/82](#) and [B01F 33/85](#) take precedence)}
- WARNING
Group [B01F 33/834](#) is impacted by reclassification into group [B01F 33/85](#). Groups [B01F 33/834](#) and [B01F 33/85](#) should be considered in order to perform a complete search.
- N B01F 33/836 . . {combining mixing with other treatments}
 - N B01F 33/8361 . . . {with disintegrating}
 - N B01F 33/83611 {by cutting}
 - N B01F 33/83612 {by crushing or breaking}

- N B01F 33/83613 . . . {by grinding or milling}
- N B01F 33/83614 . . . {with irradiating}
- N B01F 33/8362 . . . {with chemical reactions}
- N B01F 33/8363 . . . {with coating}
- N B01F 33/8364 . . . {with drying}
- N B01F 33/84 . . . Mixing plants with mixing receptacles receiving material dispensed from several component receptacles, e.g. paint tins
- N B01F 33/841 . . . with component receptacles fixed in a circular configuration on a horizontal table, e.g. the table being able to be indexed about a vertical axis
- N B01F 33/844 . . . {with means for customizing the mixture on the point of sale, e.g. by sensing, receiving or analysing information about the characteristics of the mixture to be made}
- N B01F 33/8442 . . . {using a computer for controlling information and converting it in a formula and a set of operation instructions, e.g. on the point of sale}
- N B01F 33/846 . . . {using stored recipes for determining the composition of the mixture to be produced, i.e. for determining the amounts of the basic components to be dispensed from the component receptacles}
- N B01F 33/848 . . . {using data, i.e. barcodes, 3D codes or similar type of tagging information, as instruction or identification codes for controlling the dispensing and mixing operations}
- N B01F 33/85 . . . Mixing plants with mixing receptacles or mixing tools that can be indexed into different working positions

WARNING

Group [B01F 33/85](#) is incomplete pending reclassification of documents from group [B01F 33/834](#).

Groups [B01F 33/834](#) and [B01F 33/85](#) should be considered in order to perform a complete search.

- N B01F 33/86 . . . {Mixing heads comprising a driven stirrer}
- N B01F 33/862 . . . {the stirrer being provided with a surrounding stator}
- N B01F 33/87 . . . Roll-type mixers

WARNING

Group [B01F 33/87](#) is incomplete pending reclassification of documents from group [B01F 33/00](#).

Groups [B01F 33/00](#) and [B01F 33/87](#) should be considered in order to perform a complete search.

N B01F 35/00 Accessories for mixers; Auxiliary operations or auxiliary devices; Parts or details of general application

- Q B01F 35/10 . . . Maintenance of mixers

WARNING

Group [B01F 35/10](#) is impacted by reclassification into groups [B01F 35/11](#), [B01F 35/12](#), [B01F 35/121](#), [B01F 35/122](#), [B01F 35/123](#), and [B01F 35/165](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/11 . . . using fluids

WARNING

Group [B01F 35/11](#) is incomplete pending reclassification of documents from group [B01F 35/10](#).

Groups [B01F 35/10](#) and [B01F 35/11](#) should be considered in order to perform a complete search.

N B01F 35/12

- • using mechanical means

WARNING

Groups [B01F 35/12](#), [B01F 35/121](#), [B01F 35/122](#), and [B01F 35/123](#) are incomplete pending reclassification of documents from group [B01F 35/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

N B01F 35/121

- • • {using a brush for cleaning out rests of products}

N B01F 35/122

- • • {using pushers, i.e. a piston, for pushing out rests of products}

N B01F 35/123

- • • {using scrapers for cleaning mixers}

N B01F 35/13

- • using one or more of the components of the mixture to wash-out the mixer

N B01F 35/145

- • {Washing or cleaning mixers not provided for in other groups in this subclass; Inhibiting build-up of material on machine parts using other means}

N B01F 35/1452

- • • {using fluids}

N B01F 35/1453

- • • • {by means of jets of fluid, e.g. air}

N B01F 35/146

- • • {Working under sterile conditions; Sterilizing the mixer or parts thereof}

N B01F 35/165

- {Making mixers or parts thereof}

WARNING

Group [B01F 35/165](#) is incomplete pending reclassification of documents from group [B01F 35/10](#).

Groups [B01F 35/10](#) and [B01F 35/165](#) should be considered in order to perform a complete search.

N B01F 35/181

- {Preventing generation of dust or dirt; Sieves; Filters ([B01F 35/145](#), [B01F 35/43](#) take precedence)}

N B01F 35/184

- • {Preventing generation of dust}

N B01F 35/186

- • {using splash guards in mixers for avoiding dirt or projection of material}

N B01F 35/187

- • {using filters in mixers, e.g. during venting}

N B01F 35/1872

- • • {Filters for micro-living organisms, i.e. filtering of the mixture}

N B01F 35/188

- • {using sieves in mixers for purposes other than mixing, e.g. eliminating dust during venting}

N B01F 35/189

- • {Venting, degassing or ventilating of gases, fumes or toxic vapours during mixing}

Q B01F 35/20

- Measuring; Control or regulation

WARNING

Group [B01F 35/20](#) is impacted by reclassification into group [B01F 35/21](#).

Groups [B01F 35/20](#) and [B01F 35/21](#) should be considered in order to perform a complete search.

N B01F 35/21

- • Measuring

WARNING

Group [B01F 35/21](#) is incomplete pending reclassification of documents from group [B01F 35/20](#).

Groups [B01F 35/20](#) and [B01F 35/21](#) should be considered in order to perform a complete search.

N B01F 35/211

- • • {of the operational parameters ([B01F 35/212](#) and [B01F 35/213](#) take precedence)}

N B01F 35/2111

- • • • {Flow rate}

- N B01F 35/21111 {Mass flow rate}
- N B01F 35/21112 {Volumetric flow rate}
- N B01F 35/2112 {Level of material in a container or the position or shape of the upper surface of the material}
- N B01F 35/2113 {Pressure}
- N B01F 35/2114 {Speed of feeding material, e.g. bands or strips}
- N B01F 35/2115 {Temperature}
- N B01F 35/21151 {using infrared radiation thermometer or pyrometer or infrared sensors for temperature measurement without contact}
- N B01F 35/2116 {Volume}
- N B01F 35/2117 {Weight}
- N B01F 35/212 . . . of the driving system data, e.g. torque, speed or power data
- N B01F 35/213 . . . of the properties of the mixtures, e.g. temperature, density or colour
- N B01F 35/2131 . . . {Colour or luminescence}
- N B01F 35/2132 . . . {Concentration, pH, pOH, p(ION) or oxygen-demand ([B01F 35/2133](#) takes precedence)}
- N B01F 35/2133 . . . {Electrical conductivity or dielectric constant of the mixture}
- N B01F 35/2134 . . . {Density or solids or particle number}
- N B01F 35/2135 . . . {Humidity, e.g. moisture content}
- N B01F 35/2136 . . . {Viscosity}
- N B01F 35/214 . . . characterised by the means for measuring

WARNING

Groups [B01F 35/214](#) - [B01F 35/2144](#) are incomplete pending reclassification of documents from group [B01F 35/222](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/2142 {using wireless sensors introduced in the mixture, e.g. transponders or RFID tags, for measuring the parameters of the mixture or components to be mixed}
- N B01F 35/2144 {using radiation for measuring the parameters of the mixture or components to be mixed}
- Q B01F 35/22 . . . Control or regulation

WARNING

Group [B01F 35/22](#) is impacted by reclassification into groups [B01F 35/2201](#), [B01F 35/2202](#), [B01F 35/2203](#), [B01F 35/2204](#), [B01F 35/2205](#), [B01F 35/2206](#), [B01F 35/2207](#), [B01F 35/2208](#) and [B01F 35/2209](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/2201 . . . {characterised by the type of control technique used}

WARNING

Groups [B01F 35/2201](#) - [B01F 35/2209](#) are incomplete pending reclassification of documents from group [B01F 35/22](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/2202 {Controlling the mixing process by feed-back, i.e. a measured parameter of the mixture is measured, compared with the set-value and the feed values are corrected}

- N B01F 35/2203 . . . {Controlling the mixing process by feed-forward, i.e. a parameter of the components to be mixed is measured and the feed values are calculated}
- N B01F 35/2204 . . . {Controlling the mixing process by fuzzy control, i.e. a prescribed fuzzy rule}
- N B01F 35/2205 . . . {Controlling the mixing process from a remote server, e.g. by sending commands using radio, telephone, internet, local network, GPS or other means}
- N B01F 35/2206 . . . {Use of stored recipes for controlling the computer programs, e.g. for manipulation, handling, production or composition in mixing plants ([B01F 33/846](#) takes precedence)}
- N B01F 35/2207 . . . {Use of data, i.e. barcodes, 3D codes or similar type of tagging information, as instruction or identification codes for controlling the computer programs, e.g. for manipulation, handling, production or compounding in mixing plants ([B01F 33/848](#) takes precedence)}
- N B01F 35/2208 . . . {Controlling using ultrasonic waves during the operation}
- N B01F 35/2209 . . . {Controlling the mixing process as a whole, i.e. involving a complete monitoring and controlling of the mixing process during the whole mixing cycle}
- N B01F 35/221 . . . of operational parameters, e.g. level of material in the mixer, temperature or pressure
- N B01F 35/2211 . . . {Amount of delivered fluid during a period}
- N B01F 35/2212 . . . {Level of the material in the mixer}
- N B01F 35/2213 . . . {Pressure}
- N B01F 35/2214 . . . {Speed during the operation}
- N B01F 35/22141 . . . {Speed of feeding of at least one component to be mixed}
- N B01F 35/22142 . . . {Speed of the mixing device during the operation}
- N B01F 35/221421 . . . {Linear speed of the tip of a moving stirrer during the operation}
- N B01F 35/221422 . . . {Speed of rotation of the mixing axis, stirrer or receptacle during the operation}
- N B01F 35/2215 . . . {Temperature}
- N B01F 35/2216 . . . {Time, i.e. duration, of at least one parameter during the operation}
- N B01F 35/22161 . . . {duration of the mixing process or parts of it}
- N B01F 35/22162 . . . {Time of feeding of at least one of the components to be mixed}
- N B01F 35/2217 . . . {Volume of at least one component to be mixed}
- N B01F 35/2218 . . . {Weight of at least one component to be mixed}
- Q B01F 35/222 . . . of the operation of the driving system, e.g. torque, speed or power of motors; of the position of mixing devices or elements

WARNING

Group [B01F 35/222](#) is impacted by reclassification into groups [B01F 35/214](#), [B01F 35/2142](#), [B01F 35/2144](#) and [B01F 35/2221](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/2221 . . . {the position of baffles used to modify the flow in a conduit or a container}

WARNING

Group [B01F 35/2221](#) is incomplete pending reclassification of documents from group [B01F 35/222](#).

Groups [B01F 35/222](#) and [B01F 35/2221](#) should be considered in order to perform a complete search.

- Q B01F 35/30
- Driving arrangements; Transmissions; Couplings; Brakes
- WARNING
Group [B01F 35/30](#) is impacted by reclassification into group [B01F 35/32](#). Groups [B01F 35/30](#) and [B01F 35/32](#) should be considered in order to perform a complete search.
- N B01F 35/31
- • Couplings
- N B01F 35/32
- • Driving arrangements
- WARNING
Group [B01F 35/32](#) is incomplete pending reclassification of documents from group [B01F 35/30](#). Groups [B01F 35/30](#) and [B01F 35/32](#) should be considered in order to perform a complete search.
- N B01F 35/32005
- • • {Type of drive}
- N B01F 35/3201
- • • • {by using acoustic force, e.g. acoustically induced bubbles, acoustic windmill, acoustic scallop}
- N B01F 35/32015
- • • • {Flow driven}
- N B01F 35/3202
- • • • {Hand driven}
- N B01F 35/32021
- • • • • {Shaking by hand a portable receptacle or stirrer for mixing}
- N B01F 35/32025
- • • • • {Battery driven}
- N B01F 35/3203
- • • • • {Gas driven}
- N B01F 35/32035
- • • • • {Gravity driven, e.g. by means of weights out of balance or plunger-weights moving in a cylinder}
- N B01F 35/3204
- • • • • {Motor driven, i.e. by means of an electric or IC motor}
- N B01F 35/32045
- • • • • {Hydraulically driven}
- N B01F 35/3205
- • • • • {by using optical pressure force, e.g. produced by a laser beam}
- N B01F 35/32055
- • • • • {by using solar energy}
- N B01F 35/3206
- • • • • {by the rotation of the wheels during movement}
- N B01F 35/32065
- • • • • {Wind driven}
- N B01F 35/321
- • • {Disposition of the drive}
- N B01F 35/3211
- • • • {independent from the receptacle}
- N B01F 35/3212
- • • • {mounted on the receptacle}
- N B01F 35/3213
- • • • • {at the lower side of the axis, e.g. driving the stirrer from the bottom of a receptacle}
- N B01F 35/3214
- • • • • {at the upper side of the axis, e.g. driving the stirrer from the top of a receptacle}
- N B01F 35/3215
- • • • • {the driving system comprising more than one motor, e.g. having an auxiliary motor or comprising independently driven elements}
- N B01F 35/32151
- • • • • • {Driving the stirrer axis from both ends of the axis, i.e. using at least two motors per shaft}
- N B01F 35/322
- • • {Construction of driving shafts}
- N B01F 35/323
- • • {for vertical stirrer shafts ([B01F 35/324](#) takes precedence)}
- N B01F 35/3231
- • • • {Driving several stirrer shafts, e.g. about the same axis}
- N B01F 35/324
- • • {Driving independent stirrer shafts, i.e. not fitted on the container}
- N B01F 35/325
- • • {Driving reciprocating or oscillating stirrers}
- N B01F 35/33
- • Transmissions; Means for modifying the speed or direction of rotation
- N B01F 35/331
- • • {alternately changing the speed of rotation}

- N B01F 35/332 . . . {alternately changing the direction of rotation}
- N B01F 35/333 . . . {the rotation sense being changeable, e.g. to mix or aerate, to move a fluid forward or backward or to suck or blow}
- N B01F 35/34 . . {Brake mechanisms}
- N B01F 2035/35 . . {Use of other general mechanical engineering elements in mixing devices}
- N B01F 2035/351 . . . {Sealings}
- N B01F 2035/3511 {for laboratory mixers}
- N B01F 2035/3512 {Fluid sealings, e.g. using liquids or air under pressure which is leaking into the mixing receptacle}
- N B01F 2035/3513 {comprising a stationary member in frontal contact with a movable member}
- N B01F 2035/352 . . . {Bearings}
- N B01F 2035/353 . . . {Lubricating systems}
- N B01F 35/40 . Mounting or supporting mixing devices or receptacles; Clamping or holding arrangements therefor
- N B01F 35/41 . . Mounting or supporting stirrer shafts or stirrer units on receptacles
- N B01F 35/411 . . . {by supporting only one extremity of the shaft}
- N B01F 35/4111 {at the top of the receptacle}
- N B01F 35/4112 {at the bottom of the receptacle, e.g. by studs}
- N B01F 35/4113 {at a side wall of the receptacle}
- N B01F 35/412 . . . {by supporting both extremities of the shaft}
- N B01F 35/4121 {at the top and at the bottom of the receptacle, e.g. for performing a conical orbital movement about a vertical axis}
- N B01F 35/4122 {at the side walls of the receptacle}
- N B01F 35/413 . . . {by means of clamps or clamping arrangements for fixing attached stirrers or independent stirrer units}
- N B01F 35/414 . . . {using inflatable arrangements for supporting a stirring element}
- N B01F 35/42 . . Clamping or holding arrangements for mounting receptacles on mixing devices
- N B01F 35/421 . . . {having a cup-shaped or cage-type form}
- N B01F 35/422 . . . {having a jaw-type or finger-type shape}
- N B01F 35/423 . . . {of the vertically movable, two-plates type}
- N B01F 35/424 . . . {by means of an air cushion used for supporting the mixing receptacle}
- N B01F 35/425 . . . {Holding arrangements for retaining loose elements of the mixing receptacle, e.g. for holding the handle of a can, while it is being shaken}
- N B01F 35/43 . . Supporting receptacles on frames or stands
- N B01F 35/45 . Closures or doors specially adapted for mixing receptacles; Operating mechanisms therefor
- N B01F 35/451 . . {by rotating them about an axis parallel to the plane of the opening}
- N B01F 35/452 . . {by moving them in the plane of the opening ([B01F 35/454](#) takes precedence)}
- N B01F 35/4521 . . . {by rotating them about an axis perpendicular to the plane of the opening}
- N B01F 35/453 . . {by moving them perpendicular to the plane of the opening}
- N B01F 35/4531 . . . {and moving them afterwards in another direction}
- N B01F 35/454 . . {Moving covers on a cylindrical drum in a circular path along the drum}
- N B01F 35/50 . Mixing receptacles
- N B01F 35/51 . . characterised by their material

- N B01F 35/511
 - • provided with liners, e.g. wear resistant or flexible liners
- N B01F 35/512
 - • characterised by surface properties, e.g. coated or rough
- N B01F 35/513
 - • Flexible receptacles, e.g. bags supported by rigid containers
- N B01F 35/514
 - • {the mixing receptacle or conduit being transparent or comprising transparent parts}
- N B01F 35/52
 - • Receptacles with two or more compartments
- N B01F 35/522
 - • • {comprising compartments keeping the materials to be mixed separated until the mixing is initiated (containers or packages for packaging two or more different materials which must be maintained separate prior to use in admixture [B65D 81/32](#))}
- N B01F 35/53
 - • characterised by the configuration of the interior, e.g. baffles for facilitating the mixing of components
- N B01F 35/531
 - • • {with baffles, plates or bars on the wall or the bottom}

WARNING
 Groups [B01F 35/531](#), [B01F 35/5311](#), and [B01F 35/5312](#) are incomplete pending reclassification of documents from group [B01F 35/55](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/5311
 - • • • {with horizontal baffles mounted on the walls}
- N B01F 35/5312
 - • • • {with vertical baffles mounted on the walls}
- N B01F 35/532
 - • • {with guide tubes on the wall or the bottom}
- N B01F 35/54
 - • {Closely surrounding the rotating element}
- Q B01F 35/55
 - {Baffles; Flow breakers ([B01F 35/531](#) takes precedence)}

WARNING
 Group [B01F 35/55](#) is impacted by reclassification into groups [B01F 27/63](#), [B01F 35/531](#), [B01F 35/5311](#) and [B01F 35/5312](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/56
 - {General build-up of the mixers}
- N B01F 35/561
 - • {the mixer being built-up from a plurality of modules or stacked plates comprising complete or partial elements of the mixer}
- N B01F 35/562
 - • {the mixer or mixing elements being collapsible, i.e. when discharging the products}
- N B01F 35/5621
 - • • {the complete mixer being collapsible, i.e. the housing can be collapsed}
- N B01F 35/60
 - Safety arrangements
- N B01F 35/602
 - • {with a safety or relief valve}
- N B01F 35/605
 - • {Safety devices concerning the operation of the mixer}
- N B01F 35/6052
 - • • {with locking, blocking or interlocking mechanisms for preventing operation of the actuation mechanism of the mixing device}
- Q B01F 35/71
 - Feed mechanisms (with proportioning [B01F 35/80](#))

WARNING
 Group [B01F 35/71](#) is impacted by reclassification into groups [B01F 35/711-B01F 35/71825](#), [B01F 35/75-B01F 35/7549](#), [B01F 35/80-B01F 35/896](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/711
- {for feeding a mixture of components, i.e. solids in liquid, solids in a gas stream}
- WARNING
Group [B01F 35/711](#) is incomplete pending reclassification of documents from group [B01F 35/71](#).
Groups [B01F 35/71](#) and [B01F 35/711](#) should be considered in order to perform a complete search.
- N B01F 35/712
- {for feeding fluids}
- WARNING
Group [B01F 35/712](#) is incomplete pending reclassification of documents from group [B01F 35/71](#).
Groups [B01F 35/71](#) and [B01F 35/712](#) should be considered in order to perform a complete search.
- N B01F 35/713
- {comprising breaking packages or parts thereof, e.g. piercing or opening sealing elements between compartments or cartridges (containers or packages *per se* [B65D](#))}
- WARNING
Groups [B01F 35/713](#) - [B01F 35/7139](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/7131
- • {Breaking or perforating packages, containers or vials}
- N B01F 35/7132
- • {the package containing one of the components dissolves when in contact with the other component of the mixture (disintegrable, dissolvable or edible packaging materials [B65D 65/46](#))}
- N B01F 35/7133
- • {Opening clips which seal openings between the compartments}
- N B01F 35/7134
- • {Dissolving the seal when in contact with one of the products to be mixed, thereby bringing the compartments in communication}
- N B01F 35/7135
- • {Opening the seal between the compartments by application of heat}
- N B01F 35/7136
- • {Opening hooks which lock or close-off openings between compartments}
- N B01F 35/7137
- • {Piercing, perforating or melting membranes or closures which seal the compartments}
- N B01F 35/7138
- • {Opening valves which close-off openings between compartments}
- N B01F 35/7139
- • {Removing separation walls, plugs which close off the different compartments, e.g. by rotation or axially sliding}
- N B01F 35/714
- {for feeding predetermined amounts ([B01F 35/88](#) takes precedence)}
- WARNING
Groups [B01F 35/714](#) - [B01F 35/714112](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/7141
- • {using measuring chambers moving between a loading and unloading position, e.g. reciprocating feed frames}
- N B01F 35/71411
- • • {rotating or oscillating about an axis}
- N B01F 35/714111
- • • • {the measuring chambers being pockets on the circumference of a drum rotating about a horizontal axis with discharging by gravity}
- N B01F 35/714112
- • • • {the measuring chambers being channels extending between both front faces of a rotating cylinder or disc}

- N B01F 35/715
- • {Feeding the components in several steps, e.g. successive steps}
- WARNING
Group [B01F 35/715](#) is incomplete pending reclassification of documents from group [B01F 35/71](#).
Groups [B01F 35/71](#) and [B01F 35/715](#) should be considered in order to perform a complete search.
- N B01F 35/716
- • {characterised by the relative arrangement of the containers for feeding or mixing the components}
- WARNING
Groups [B01F 35/716](#) - [B01F 35/7164](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/7161
- • • {the containers being connected coaxially before contacting the contents}
- N B01F 35/7162
- • • {A container being placed inside the other before contacting the contents}
- N B01F 35/7163
- • • {the containers being connected in a mouth-to-mouth, end-to-end disposition, i.e. the openings are juxtaposed before contacting the contents}
- N B01F 35/7164
- • • {the containers being placed in parallel before contacting the contents}
- N B01F 35/717
- • {characterised by the means for feeding the components to the mixer}
- WARNING
Groups [B01F 35/717](#), [B01F 35/7171](#), [B01F 35/71715](#), [B01F 35/7172](#), [B01F 35/71725](#), [B01F 35/7173](#), [B01F 35/71735](#), [B01F 35/7174](#), [B01F 35/71745](#), [B01F 35/7175](#), [B01F 35/71755](#), [B01F 35/717551](#), [B01F 35/7176](#), [B01F 35/71761](#), [B01F 35/717611](#), [B01F 35/717612](#), [B01F 35/717613](#), [B01F 35/717614](#), [B01F 35/71765](#), [B01F 35/7177](#), [B01F 35/7178](#), [B01F 35/71785](#), [B01F 35/7179](#), [B01F 35/71791](#), [B01F 35/71795](#), [B01F 35/718](#), [B01F 35/71801](#), [B01F 35/71805](#), [B01F 35/718051](#), [B01F 35/7181](#), [B01F 35/71815](#), [B01F 35/7182](#) and [B01F 35/71825](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q B01F 35/71705
- • • {using belts}
- WARNING
Group [B01F 35/71705](#) is incomplete pending reclassification of documents from group [B01F 35/71](#).
Group [B01F 35/71705](#) is also impacted by reclassification into groups [B01F 35/71775](#) and [B01F 35/71731](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/7171
- • • {using boxes, closable containers, sacks or carts}
- N B01F 35/71715
- • • {using buckets, cups or open containers}
- N B01F 35/7172
- • • {using capillary forces}
- N B01F 35/71725
- • • {using centrifugal forces}
- N B01F 35/7173
- • • {using gravity, e.g. from a hopper}
- N B01F 35/71731
- • • • {using a hopper}
- WARNING
Group [B01F 35/71731](#) is incomplete pending reclassification of documents from groups [B01F 35/71](#) and [B01F 35/71705](#).

Groups [B01F 35/71](#), [B01F 35/71705](#) and [B01F 35/71731](#) should be considered in order to perform a complete search.

- N B01F 35/71735 . . . {using grippers}
- N B01F 35/7174 . . . {using pistons, plungers or syringes}
- N B01F 35/71745 . . . {using pneumatic pressure, overpressure, gas or air pressure in a closed receptacle or circuit system}
- N B01F 35/7175 . . . {using propellers}
- N B01F 35/71755 . . . {using means for feeding components in a pulsating or intermittent manner}
- N B01F 35/717551 {using electrical pulses}
- N B01F 35/7176 . . . {using pumps}
- N B01F 35/71761 {Membrane pumps}
- N B01F 35/717611 {Peristaltic pumps}
- N B01F 35/717612 {Piezoelectric pumps}
- N B01F 35/717613 {Piston pumps}
- N B01F 35/717614 {Venturi pumps}
- N B01F 35/71765 . . . {using rakes or plain plates with raking movement}
- N B01F 35/7177 . . . {using rollers}
- N B01F 35/71775 . . . {using helical screws}

WARNING

Group [B01F 35/71775](#) is incomplete pending reclassification of documents from groups [B01F 35/71](#) and [B01F 35/71705](#).

Groups [B01F 35/71](#), [B01F 35/71705](#) and [B01F 35/71775](#) should be considered in order to perform a complete search.

- N B01F 35/7178 . . . {using shovels or scoops}
- N B01F 35/71785 . . . {using slides or vibrating tables}
- N B01F 35/7179 . . . {using sprayers, nozzles or jets}
- N B01F 35/71791 {using ink jet heads or cartridges, e.g. of the thermal bubble jet or piezoelectric type}
- N B01F 35/71795 . . . {Squeezing a flexible container}
- N B01F 35/718 . . . {using vacuum, under pressure in a closed receptacle or circuit system}
- N B01F 35/71801 {using a syphon to create a suction of a component}
- N B01F 35/71805 . . . {using valves, gates, orifices or openings}
- N B01F 35/718051 {being adjustable}
- N B01F 35/7181 . . . {using fans or turbines}
- N B01F 35/71815 . . . {using vibrations, e.g. standing waves or ultrasonic vibrations}
- N B01F 35/7182 . . . {with means for feeding the material with a fractal or tree-type distribution in a surface}
- N B01F 35/71825 . . . {using means for feeding one phase surrounded by another phase without mixing during the feeding}
- N B01F 35/75 . Discharge mechanisms

WARNING

Groups [B01F 35/75](#) - [B01F 35/7549](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B01F 35/751 . {Discharging by opening a gate, e.g. using discharge paddles}

- N B01F 35/7511 . . . {the gate carrying a stirrer acting as discharge pump}
 - N B01F 35/752 . . {with arrangements for converting the mechanism from mixing to discharging, e.g. by either guiding a mixture back into a receptacle or discharging it}
 - N B01F 35/753 . . {Discharging at the upper side of the receptacle, e.g. by pressurising the liquid in the receptacle or by centrifugal force}
 - N B01F 35/754 . . {characterised by the means for discharging the components from the mixer}
 - N B01F 35/7541 . . . {using belts}
 - N B01F 35/75415 . . . {using gravity}
 - N B01F 35/7542 . . . {Discharging the components by overflow}
 - N B01F 35/75425 . . . {using pistons or plungers}
 - N B01F 35/754251 {reciprocating in the mixing receptacle}
 - N B01F 35/7543 . . . {using pneumatic pressure, overpressure or gas pressure in a closed receptacle or circuit system}
 - N B01F 35/75435 . . . {using means for discharging the mixture in a pulsating or intermittent manner}
 - N B01F 35/754351 {using electrical pulses}
 - N B01F 35/7544 . . . {using pumps}
 - N B01F 35/75441 {Venturi pumps}
 - N B01F 35/75445 . . . {using pushers}
 - N B01F 35/7545 . . . {using slides}
 - N B01F 35/75455 . . . {using a rotary discharge means, e.g. a screw beneath the receptacle ([B01F 35/751](#) takes precedence)}
 - N B01F 35/754551 {using helical screws}
 - N B01F 35/7546 . . . {using squeezing means on a deformable container}
 - N B01F 35/75465 . . . {using suction, vacuum, e.g. with a pipette}
 - N B01F 35/7547 . . . {using valves, gates, orifices or openings}
 - N B01F 35/75471 {being adjustable}
 - N B01F 35/75475 . . . {using fans or ventilators}
 - N B01F 35/7548 . . . {using tilting or pivoting means for emptying the mixing receptacle}
 - N B01F 35/75485 . . . {the mixing receptacle rotating in opposite directions for mixing and for discharging}
 - N B01F 35/7549 . . . {using distributing means, e.g. manifold valves or multiple fittings for supplying the discharge components to a plurality of dispensing places}
 - N B01F 35/79 . . {Preventing lumping, or comminuting lumps, during feeding or discharging, e.g. by means of vibrations, or by scrapers}
 - N B01F 35/80 . . {Forming a predetermined ratio of the substances to be mixed (controlling ratio of two or more flows of fluid or fluent material [G05D 11/02](#))}
- WARNING
Groups [B01F 35/80](#) - [B01F 35/896](#) are incomplete pending reclassification of documents from group [B01F 35/71](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B01F 35/81 . . {Forming mixtures with changing ratios or gradients}
 - N B01F 35/82 . . {by adding a material to be mixed to a mixture in response to a detected feature, e.g. density, radioactivity, consumed power or colour}
 - N B01F 35/83 . . {by controlling the ratio of two or more flows, e.g. using flow sensing or flow controlling devices}

- N B01F 35/831
 - • • {using one or more pump or other dispensing mechanisms for feeding the flows in predetermined proportion, e.g. one of the pumps being driven by one of the flows ([B01F 35/832](#) takes precedence)}
- N B01F 35/8311
 - • • • {with means for controlling the motor driving the pumps or the other dispensing mechanisms}
- N B01F 35/832
 - • • {Flow control by weighing}
- N B01F 35/833
 - • • {Flow control by valves, e.g. opening intermittently}
- N B01F 35/8331
 - • • • {the flow of one component operating the actuator of the valve, e.g. by deforming a membrane which operates de valve actuator}
- N B01F 35/834
 - • • {the flow of substances to be mixed circulating in a closed circuit, e.g. from a container through valve, driving means, metering means or dispensing means, e.g. 3-way valve, and back to the container}
- N B01F 35/88
 - • by feeding the materials batchwise
- N B01F 35/881
 - • • {by weighing, e.g. with automatic discharge}
- N B01F 35/8811
 - • • • {the weighing being effected by material receiving containers rotating or tilting under the influence of the weight of the material in those containers}
- N B01F 35/882
 - • • {using measuring chambers, e.g. volumetric pumps, for feeding the substances}
- N B01F 35/8821
 - • • • {involving controlling}
- N B01F 35/8822
 - • • • {using measuring chambers of the piston or plunger type ([B01F 35/8823](#) takes precedence)}
- N B01F 35/88221
 - • • • • {with double acting pistons ([B01F 35/88222](#) takes precedence)}
- N B01F 35/88222
 - • • • • {without external means for driving the piston, e.g. the piston being driven by one of the components}
- N B01F 35/8823
 - • • • {using diaphragms or bellows}
- N B01F 35/883
 - • • {using flow rate controls for feeding the substances}
- N B01F 35/892
 - • {for solid materials, e.g. using belts, vibrations, hoppers with variable outlets or hoppers with rotating elements, e.g. screws, at their outlet ([B01F 35/82](#) - [B01F 35/88](#) take precedence)}
- N B01F 35/8921
 - • • {the material after falling on a, e.g. rotatable, plate being wiped from this plate by means of a scraper}
- N B01F 35/894
 - • {Measuring receptacles therefor}
- N B01F 35/896
 - • {characterised by the build-up of the device}
- N B01F 35/90
 - Heating or cooling systems
- N B01F 35/91
 - • using gas or liquid injected into the material, e.g. using liquefied carbon dioxide or steam
- N B01F 35/92
 - • for heating the outside of the receptacle, e.g. heated jackets or burners
- N B01F 35/93
 - • arranged inside the receptacle
- N B01F 35/94
 - • using radiation, e.g. microwaves or electromagnetic radiation
- N B01F 35/95
 - • using heated or cooled stirrers
- N B01F 2035/98
 - • {Cooling}
- N B01F 2035/99
 - • {Heating}
- N **B01F 2101/00 - B01F 2101/00**
 - Indexing schemes associated with groups [B01F 21/00](#) - [B01F 35/00](#) and relating to the nature of the mixed materials, the field of application and complementary technical information about mixing**
- N **B01F 2101/00**
 - Mixing characterised by the nature of the mixed materials or by the application field**
- N B01F 2101/005
 - {Mixing or agitating manure, dung}

- N B01F 2101/02 *• Mixing or agitating during harvesting or mowing, e.g. mixing with solid harvested products or particles*
- N B01F 2101/04 *• Mixing biocidal, pesticidal or herbicidal ingredients used in agriculture or horticulture, e.g. for spraying*
- N B01F 2101/06 *• Mixing of food ingredients*
- N B01F 2101/07 *• • Mixing ingredients into milk or cream, e.g. aerating*
- N B01F 2101/08 *• • Mixing of dough*
- N B01F 2101/09 *• • Mixing of cereals, grains or seeds materials*
- N B01F 2101/10 *• • Mixing of butter or margarine ingredients*
- N B01F 2101/11 *• • Mixing of cheese ingredients*
- N B01F 2101/12 *• • Mixing of chocolate ingredients*
- N B01F 2101/13 *• • Mixing of ice-cream ingredients*
- N B01F 2101/14 *• • Mixing of ingredients for non-alcoholic beverages; Dissolving sugar in water*
- N B01F 2101/15 *• • Mixing of beer ingredients*
- N B01F 2101/16 *• • Mixing wine or other alcoholic beverages; Mixing ingredients thereof*
- N B01F 2101/17 *• • • Aeration of wine*
- N B01F 2101/18 *• • Mixing animal food ingredients*
- N B01F 2101/1805 *• {Kitchen, household equipment for mixing}*
- N B01F 2101/19 *• Mixing dentistry compositions*
- N B01F 2101/20 *• Mixing of ingredients for bone cement*
- N B01F 2101/21 *• Mixing of ingredients for cosmetic or perfume compositions*
- N B01F 2101/22 *• Mixing of ingredients for pharmaceutical or medical compositions*
- N B01F 2101/2202 *• {Mixing compositions or mixers in the medical or veterinary field}*
- N B01F 2101/2204 *• {Mixing chemical components in generals in order to improve chemical treatment or reactions, independently from the specific application}*
- N B01F 2101/23 *• Mixing of laboratory samples e.g. in preparation of analysing or testing properties of materials*
- N B01F 2101/2305 *• {Mixers of the two-component package type, i.e. where at least two components are separately stored, and are mixed in the moment of application}*
- N B01F 2101/24 *• Mixing of ingredients for cleaning compositions*
- N B01F 2101/25 *• Mixing waste with other ingredients*
- N B01F 2101/26 *• Mixing ingredients for casting metals*
- N B01F 2101/27 *• Mixing ingredients for grinding, polishing or lapping materials*
- N B01F 2101/28 *• Mixing cement, mortar, clay, plaster or concrete ingredients*
- N B01F 2101/2805 *• {Mixing plastics, polymer material ingredients, monomers or oligomers}*
- N B01F 2101/30 *• Mixing paints or paint ingredients, e.g. pigments, dyes, colours, lacquers or enamel*
- N B01F 2101/305 *• {Treatment of water, waste water or sewage}*
- N B01F 2101/32 *• Mixing fertiliser ingredients*
- N B01F 2101/33 *• • Mixing compost ingredients or organic waste*
- N B01F 2101/34 *• Mixing fuel and prill, i.e. water or other fluids mixed with solid explosives, to obtain liquid explosive fuel emulsions or slurries*
- N B01F 2101/35 *• Mixing inks or toners*
- N B01F 2101/36 *• Mixing of ingredients for adhesives or glues; Mixing adhesives and gas*
- N B01F 2101/38 *• Mixing of asphalt, bitumen, tar or pitch or their ingredients*
- N B01F 2101/39 *• Mixing of ingredients for grease or lubricating compositions*

N	B01F 2101/40	• <i>Mixing of ingredients for oils, fats or waxes</i>
N	B01F 2101/44	• <i>Mixing of ingredients for microbiology, enzymology, <u>in vitro</u> culture or genetic manipulation</i>
N	B01F 2101/45	• <i>Mixing in metallurgical processes of ferrous or non-ferrous materials</i>
N	B01F 2101/4505	• <i>{Mixing ingredients comprising detergents, soaps, for washing, e.g. washing machines}</i>
N	B01F 2101/47	• <i>Mixing of ingredients for making paper pulp, e.g. wood fibres or wood pulp</i>
N	B01F 2101/48	• <i>Mixing water in water-taps with other ingredients, e.g. air, detergents or disinfectants</i>
N	B01F 2101/49	• <i>Mixing drilled material or ingredients for well-drilling, earth-drilling or deep-drilling compositions with liquids to obtain slurries</i>
N	B01F 2101/50	• <i>Mixing mined ingredients and liquid to obtain slurries</i>
N	B01F 2101/501	• <i>{Mixing combustion ingredients, e.g. gases, for burners or combustion chambers}</i>
N	B01F 2101/503	• <i>{Mixing fuel or propellant and water or gas, e.g. air, or other fluids, e.g. liquid additives to obtain fluid fuel}</i>
N	B01F 2101/505	• <i>{Mixing fuel and water or other fluids to obtain liquid fuel emulsions}</i>
N	B01F 2101/54	• <i>Mixing liquid fragrances with air</i>
N	B01F 2101/55	• <i>Mixing liquid air humidifiers with air</i>
N	B01F 2101/56	• <i>Mixing photosensitive chemicals or photographic base materials</i>
N	B01F 2101/57	• <i>Mixing radioactive materials, e.g. nuclear materials</i>
N	B01F 2101/58	• <i>Mixing semiconducting materials, e.g. during semiconductor or wafer manufacturing processes</i>
N	B01F 2101/59	• <i>Mixing reaction ingredients for fuel cells</i>
D	B01F 2201/00	Dissolving gases <administratively transferred to B01F 23/2376 >
D	B01F 2201/01	• To be deleted with administrative transfer to parent group <administratively transferred to B01F 23/2376 >
U	B01F 2215/00	Auxiliary or complementary information in relation with mixing
D	B01F 2215/0001	• Field of application of the mixing device <administratively transferred to B01F 2101/00 ADD>
D	B01F 2215/0003	• Mixing or agitating manure, dung (storage of manure with mixing or agitation devices A01C 3/026) <administratively transferred to B01F 2101/005 ADD>
D	B01F 2215/0004	• Mixing or agitating during harvesting or moving, e.g. mixing with solid harvested products or particles (harvesting or mowing A01D) <administratively transferred to B01F 2101/02 ADD>
D	B01F 2215/0006	• Mixing or aerating milk or cream ingredients (ice-cream B01F 2215/0021; homogenising milk A01J 11/16) <administratively transferred to B01F 2101/07 ADD>
D	B01F 2215/0008	• Mixing cattle, poultry, stock or game food, possibly combined with distribution (fodder distributors with mixer or shredder A01K 5/001) <administratively transferred to B01F 2101/18 ADD>

- D B01F 2215/0009
 - • Mixing biocide, pesticide, herbicide, ingredients used, e.g. for spraying, in agriculture, horticulture (liquid spraying apparatus for catching or trapping animals A01M 7/00)
 - <administratively transferred to [B01F 2101/04](#) ADD>
- D B01F 2215/0011
 - • Mixing dough
 - <administratively transferred to [B01F 2101/08](#) ADD>
- D B01F 2215/0013
 - • Mixing cereals, grains, seeds materials (treatment of foods A23)
 - <administratively transferred to [B01F 2101/09](#) ADD>
- D B01F 2215/0014
 - • Mixing food ingredients (treatment of foods A23)
 - <administratively transferred to [B01F 2101/06](#) ADD>
- D B01F 2215/0016
 - • Mixing butter, margarine ingredients (treatment of dairy products A23C)
 - <administratively transferred to [B01F 2101/10](#) ADD>
- D B01F 2215/0018
 - • Mixing cheese ingredients (treatment of dairy products A23C)
 - <administratively transferred to [B01F 2101/11](#) ADD>
- D B01F 2215/0019
 - • Mixing chocolate ingredients (mixing of cocoa or cocoa products A23G 1/0026)
 - <administratively transferred to [B01F 2101/12](#) ADD>
- D B01F 2215/0021
 - • Mixing ice-cream ingredients (milk or cream B01F 2215/0006; production of ice-cream A23G 9/04)
 - <administratively transferred to [B01F 2101/13](#) ADD>
- D B01F 2215/0022
 - • Mixing beverage ingredients for non-alcoholic beverages; Dissolving sugar in water (preparation or treatment of foodstuffs A23L)
 - <administratively transferred to [B01F 2101/14](#) ADD>
- D B01F 2215/0024
 - • Mixing animal food ingredients (B01F 2215/0008 takes precedence; apparatus for preparing animal feeding-stuffs A23N 17/00)
 - <administratively transferred to [B01F 2101/18](#) ADD>
- D B01F 2215/0026
 - • Kitchen, household equipment for mixing (mixing equipment for kitchen and household, kitchen equipment A47J)
 - <administratively transferred to [B01F 2101/1805](#) ADD>
- D B01F 2215/0027
 - • Mixing dentistry compositions (dentistry A61C)
 - <administratively transferred to [B01F 2101/19](#) ADD>
- D B01F 2215/0029
 - • Mixing ingredients for bone cement (equipment for handling bone cement A61B 17/8802)
 - <administratively transferred to [B01F 2101/20](#) ADD>
- D B01F 2215/0031
 - • Mixing ingredients for cosmetic, perfume compositions (mixtures with detergents for washing machines B01F 2215/0077; cosmetics or toilet preparations A61K 8/00)
 - <administratively transferred to [B01F 2101/21](#) ADD>
- D B01F 2215/0032
 - • Mixing ingredients for pharmaceutical, homeopathical compositions
 - <administratively transferred to [B01F 2101/22](#) ADD>
- D B01F 2215/0034
 - • Mixing compositions and mixers in the medical or veterinary field (preparation of medical media for introduction into, or onto, the body A61M)
 - <administratively transferred to [B01F 2101/2202](#) ADD>

- D B01F 2215/0036
- Mixing chemical components in general, chemical components in order to improve chemical treatment, reactions, independently from the specific application
<administratively transferred to [B01F 2101/2204](#) ADD>
- D B01F 2215/0037
- Mixers used as laboratory equipment, e.g. for analyzing, testing and investigating chemical, physical or biological properties of materials (laboratory equipment B01L; investigating or analyzing materials in general G01N)
<administratively transferred to [B01F 2101/23](#) ADD>
- D B01F 2215/0039
- Mixers of the two-component package type, i.e. where at least two components are separately stored, and are mixed in the moment of application (tools for applying liquids or other fluent materials to surfaces B05C 17/00)
<administratively transferred to [B01F 2101/2305](#) ADD>
- D B01F 2215/004
- Mixing ingredients for cleaning compositions, during cleaning operations (cleaning in general B08B)
<administratively transferred to [B01F 2101/24](#) ADD>
- D B01F 2215/0042
- Mixing waste with other ingredients (disposal of solid waste B09)
<administratively transferred to [B01F 2101/25](#) ADD>
- D B01F 2215/0044
- Mixing ingredients for casting metals (mixing in metallurgical processes in general B01F 2215/0075; casting of metals B22D)
<administratively transferred to [B01F 2101/26](#) ADD>
- D B01F 2215/0045
- Mixing ingredients for grinding, polishing, lapping (grinding, polishing B24)
<administratively transferred to [B01F 2101/27](#) ADD>
- D B01F 2215/0047
- Mixing cement, mortars, clay, plaster or concrete ingredients
<administratively transferred to [B01F 2101/28](#) ADD>
- D B01F 2215/0049
- Mixing plastics, polymer material ingredients, monomers or oligomers (hot melt adhesives see B01F 2215/0062)
<administratively transferred to [B01F 2101/2805](#) ADD>
- D B01F 2215/005
- Mixing paints, paint ingredients, e.g. pigments, dyes, colours, lacquer-, enamel ingredients (implements for stirring or mixing paints B44D 3/06)
<administratively transferred to [B01F 2101/30](#) ADD>
- D B01F 2215/0052
- Treatment of water, waste water or sewage (treatment of water, waste water, sewage or sludge C02F)
<administratively transferred to [B01F 2101/305](#) ADD>
- D B01F 2215/0054
- Mixing compost ingredients or organic waste for preparing fertilizers (organic fertilizers C05F)
<administratively transferred to [B01F 2101/33](#) ADD>
- D B01F 2215/0055
- Mixing fertilizer ingredients from other sources than compost or organic waste (fertilizers C05)
<administratively transferred to [B01F 2101/32](#) ADD>
- D B01F 2215/0057
- Mixing fuel and prill, i.e. water or other fluids mixed with explosive solid, to obtain liquid explosive fuel emulsions or slurries (mixing fuel and propellant B01F 2215/0086; mixing fuel and water B01F 2215/0088; working-up explosives C06B 21/00)
<administratively transferred to [B01F 2101/34](#) ADD>
- D B01F 2215/0059
- Mixing inks, toner (ink agitators B41F 31/03; inks C09D 11/00)
<administratively transferred to [B01F 2101/35](#) ADD>

- D B01F 2215/006
- ~~Mixing adhesives ingredients; glues; adhesive and gas (mixing ingredients of hot-melt adhesives B01F 2215/0062; adhesives C09J)~~
<administratively transferred to [B01F 2101/36](#) ADD>
- D B01F 2215/0062
- ~~Mixing ingredients of hot-melt adhesives; hot-melt adhesive and gas (adhesives C09J)~~
<administratively transferred to [B01F 2101/36](#) ADD>
- D B01F 2215/0063
- ~~Mixing asphalt, bitumen, tar or pitch or their ingredients (working-up pitch; asphalt, bitumen C10C)~~
<administratively transferred to [B01F 2101/38](#) ADD>
- D B01F 2215/0065
- ~~Mixing ingredients for grease, lubricating compositions (lubricating compositions C10M)~~
<administratively transferred to [B01F 2101/39](#) ADD>
- D B01F 2215/0067
- ~~Mixing ingredients for oils, fats or waxes (producing, refining and preserving fats, fatty substances, waxes C11B)~~
<administratively transferred to [B01F 2101/40](#) ADD>
- D B01F 2215/0068
- ~~Mixing beer or the ingredients therefore (brewing of beer C12C)~~
<administratively transferred to [B01F 2101/15](#) ADD>
- D B01F 2215/007
- ~~Mixing wine or other alcoholic beverages; Mixing the ingredients therefore (wine aeration prior to consumption B01F 2215/0072; wine, other alcoholic beverages C12G)~~
<administratively transferred to [B01F 2101/16](#) ADD>
- D B01F 2215/0072
- ~~Aeration of wine prior to consumption (wine, other alcoholic beverages C12G)~~
<administratively transferred to [B01F 2101/17](#) ADD>
- D B01F 2215/0073
- ~~Mixing ingredients for microbiology, enzymology, in vitro culture, genetic manipulation (apparatus for microbiology or enzymology C12M)~~
<administratively transferred to [B01F 2101/44](#) ADD>
- D B01F 2215/0075
- ~~Mixing in metallurgical processes of ferrous or non ferrous materials (for casting metal B01F 2215/0044; metallurgy of iron C21; metallurgy C22)~~
<administratively transferred to [B01F 2101/45](#) ADD>
- D B01F 2215/0077
- ~~Mixing ingredients comprising detergents, soaps, for washing, e.g. washing machines (laundry, drying of textile articles D06F)~~
<administratively transferred to [B01F 2101/4505](#) ADD>
- D B01F 2215/0078
- ~~Mixing ingredients for paper pulp, e.g. wood fibres, wood pulp (paper making, production of cellulose D21)~~
<administratively transferred to [B01F 2101/47](#) ADD>
- D B01F 2215/008
- ~~Mixing water with other ingredients, e.g. air, detergents, disinfectants, in water-taps (domestic plumbing installations E03C)~~
<administratively transferred to [B01F 2101/48](#) ADD>
- D B01F 2215/0081
- ~~Mixing ingredients for well-, earth-, deep-drilling compositions or drilled material with liquids to obtain slurries (compositions for drilling C09K 8/00; earth drilling E21B)~~
<administratively transferred to [B01F 2101/49](#) ADD>
- D B01F 2215/0083
- ~~Mixing mined ingredients and liquid to obtain slurries (mining or quarrying E21C)~~
<administratively transferred to [B01F 2101/50](#) ADD>

- D B01F 2215/0085
 - • Mixing combustion ingredients, e.g. gases, for burners or combustion chambers (feeding or distributing fuel to combustion apparatus F23K 5/00)
 - <administratively transferred to [B01F 2101/501](#) ADD>
- D B01F 2215/0086
 - • Mixing fuel or propellant and water or gas, e.g. air, or other fluids, e.g. liquid additives to obtain fluid fuel (mixing fuel and prill B01F 2215/0057; feeding or distributing fuel to combustion apparatus F23K 5/00)
 - <administratively transferred to [B01F 2101/503](#) ADD>
- D B01F 2215/0088
 - • Mixing fuel and water or other fluids to obtain liquid fuel emulsions (mixing fuel and prill B01F 2215/0057; feeding or distributing fuel to combustion apparatus F23K 5/00)
 - <administratively transferred to [B01F 2101/505](#) ADD>
- D B01F 2215/009
 - • Aromatizing, smell generation, sense simulation by introducing liquid in gas or air
 - <administratively transferred to [B01F 2101/54](#) ADD>
- D B01F 2215/0091
 - • Introducing liquid in air for air humidification
 - <administratively transferred to [B01F 2101/55](#) ADD>
- D B01F 2215/0093
 - • Mixing photosensitive chemicals, photographic base materials (photosensitive materials for photographic purposes G03G)
 - <administratively transferred to [B01F 2101/56](#) ADD>
- D B01F 2215/0095
 - • Mixing nuclear, radioactive materials (nuclear physics and engineering G21)
 - <administratively transferred to [B01F 2101/57](#) ADD>
- D B01F 2215/0096
 - • Mixing during semiconductor or wafer manufacturing processes (semiconductor devices H01L)
 - <administratively transferred to [B01F 2101/58](#) ADD>
- D B01F 2215/0098
 - • Mixing reaction ingredients for fuel cells (fuel cells H01M 8/00)
 - <administratively transferred to [B01F 2101/59](#) ADD>

Project: RP0757 (B01J)

- U B01J 2219/00 **Chemical, physical or physico-chemical processes in general; Their relevant apparatus**
- U B01J 2219/00781
 - Aspects relating to microreactors
- B01J 2219/00889
 - • Mixing (micromixers [B01F 13/0059](#) [B01F 33/30](#))

Project: RP0757 (B01L)

- U B01L 3/00 **Containers or dishes for laboratory use, e.g. laboratory glassware (bottles [B65D](#); apparatus for enzymology or microbiology {specially adapted for culturing} [C12M 1/00](#)); Droppers (receptacles for volumetric purposes [G01F](#))**
- U B01L 3/50
 - {Containers for the purpose of retaining a material to be analysed, e.g. test tubes (devices for taking samples of blood [A61B 5/15](#))}
- U B01L 3/502
 - • {with fluid transport, e.g. in multi-compartment structures (centrifugal-type cuvettes [G01N 21/07](#); analysis by separation into components [G01N 30/00](#); automatic analysers [G01N 35/00](#))}
- B01L 3/5027
 - • • {by integrated microfluidic structures, i.e. dimensions of channels and chambers are such that surface tension forces are important, e.g. lab-on-a-chip ([B01L 3/5023](#) takes precedence; micromixers [B01F 13/0059](#) [B01F 33/30](#); microreactors for synthesis [B01J 19/0093](#); microcapillary devices in general [B81B 1/00](#))}

Project: RP0754 (B02C)

- U B02C 19/00** Other disintegrating devices or methods (for grain [B02C 9/00](#))
- U B02C 19/0056** • {specially adapted for specific materials not otherwise provided for}
- B02C 19/0075** • • {specially adapted for disintegrating medical waste (*sterilisation of refuse* [A61L 11/00](#); disposal of medical waste [B09B 3/0075](#); *sterilisation of refuse* [A61L 11/00](#) [B09B 3/00](#))}

Project: RP0757 (B03D)

- U B03D 1/00** Flotation (conditioning for flotation, general arrangement of plan [B03B](#))
- U B03D 1/14** • Flotation machines (devices for feeding measured quantities of reagents [B01J 4/02](#); flotation apparatus for enzymology or microbiology [C12M 1/09](#))
- B03D 1/16** • • with impellers; Subaeration machines {(mixing gases or vapours with liquids [B01F 3/04](#) [B01F 23/20](#))}
- B03D 1/24** • • Pneumatic {(mixing gases or vapours with liquids [B01F 3/04](#) [B01F 23/20](#))}
- B03D 2201/00** Specified effects produced by the flotation agents (*use of substances as emulsifying, wetting, dispersing or foam-producing agents* [B01F 17/00](#) *use of substances as emulsifying, wetting, dispersing or foam-producing agents* [C09K 23/00](#))

Project: RP0757 (B05B)

B05B SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES ({sprayers or atomisers specially adapted for therapeutic purposes [A61M 11/00](#)}; {spray-mixers with nozzles [B01F 5/20](#) [B01F 25/72](#); processes for applying liquids or other fluent materials to surfaces by spraying [B05D](#)}; {nozzles specially adapted for injection moulding of plastics or substances in a plastic state [B29C 45/1603](#), [B29C 45/20](#); nozzles specially adapted for windscreen washers [B60S 1/52](#)}; means for pumping fluids [F04](#); valves, e.g. water-taps, [F16K](#))

NOTES

1. This subclass covers particularly apparatus for the release or projection of drops or droplets into the atmosphere or into a chamber to form a mist or the like. For this purpose, the materials to be projected may be suspended in a stream of gas or vapour.
2. Attention is drawn to the Note following the title of class [B05](#).
3. In this subclass, "means for controlling volume of flow" is used in the most general meaning and includes also means allowing only starting and stopping the flow
4. In this subclass, the meaning of the expression "apparatus carried on or by a person" includes all apparatus comprising at least one container for the material to be sprayed carried on or by a person during use
5. In this subclass, the word "container" is to be understood as the innermost enclosure containing the material to be sprayed

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- U B05B 7/00** Spraying apparatus for discharge of liquids or other fluent materials from two or more sources, e.g. of liquid and air, of powder and gas ([B05B 3/00](#), [B05B 5/00](#) {, [B05B 11/06](#)} take precedence)

- U B05B 7/02 • Spray pistols; Apparatus for discharge (for spraying particulate material [B05B 7/14](#); with means for heating the material to be sprayed [B05B 7/16](#); with means for supplying fluent material to a discharge device [B05B 7/24](#))
- B05B 7/04 • • with arrangements for mixing liquids or other fluent materials before discharge (mixing in general [B01F](#), e.g. [B01F 5/00](#)[B01F 25/00](#); mixing valves [F16K 11/00](#))

Project: RP0757 (B08B)

- U B08B 3/00 **Cleaning by methods involving the use or presence of liquid or steam ([B08B 9/00](#) takes precedence)**
- U B08B 3/04 • Cleaning involving contact with liquid
- B08B 3/044 • • {using agitated containers in which the liquid and articles or material are placed (by means of ultrasonic vibrations [B08B 3/12](#); cleaning casks or barrels by agitating [B08B 9/0817](#); mixers with shaking, oscillating or vibrating mechanisms [B01F 11/00](#)[B01F 31/00](#))}

Project: RP0754 (B09B)

M B09B **DISPOSAL OF SOLID WASTE****NOTES**

1. This subclass covers only single or combined, e.g. multistage, operations not fully classifiable in a single other subclass

2. In this subclass the following terms or expressions are added with the meanings indicated :

- "disposal" means the discarding, e.g. dumping, or destroying of waste or its transformation into something useful or harmless;
- "solid waste" includes waste which, although it has liquid content, is for practical purposes handled as solid

3. Attention is drawn to the following places:

- [A23J 1/16](#) Obtaining proteins from waste water of starch manufacturing plants of like wastes
- [A23K 10/26](#),
[A23K 10/37](#) *Animal feeding-stuffs from waste products of animal origin or of plant origin*
- [A23K 10/38](#) Animal feeding-stuffs from distillers' or brewers' waste
- [A23K 10/28](#) Animal feeding-stuffs from waste ~~products of dairy~~*dairy products*
- [A23K 10/20](#) Animal feeding-stuffs from kitchen waste
- [A43B 1/12](#) Footwear made of rubber waste
- [A61L 11/00](#) Disinfection or sterilisation methods specially adapted for refuse
- [A62D 3/00](#) Chemical means for combatting harmful chemical agents; processes for making harmful chemical agents harmless
- [B01D 53/34](#) Chemical purification of smoke or fumes, e.g. flue gas
- [B02C 18/0084](#) } Disintegrating by knives or other cutting or tearing members, which chop material into fragments, ~~specially~~*specially* adapted for disintegrating garbage, waste or sewage
- [B03B 7/00](#) Combinations of wet processes or apparatus with other processes or apparatus, e.g. for dressing ores or garbage
- [B03B 9/06](#) General arrangement of separating plant, e.g. flow sheets, specially adapted for refuse
- [B05B 12/16](#),
[B05B 12/32](#)
~~[B05B 14/00](#)~~ Control of spray area of spraying plant, e.g. masking, side shields; Means for collection or re-use of excess material

B08B 15/00	Prevent escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area
B22F 8/00	<i>Manufacture of articles from scrap or waste metal particles</i>
B23D 25/14	Machines or arrangements for shearing stock while the latter is travelling otherwise than in the direction of the cut without regard to the exact dimensions of the resulting material, e.g. for cutting up scrap
B24B 55/12	<i>Devices for recovering materials from grinding or polishing</i>
B27B 33/20	Edge trimming saw blades or tools combined with means to disintegrate waste
B29B 17/00	Recovery of plastics or other constituents of waste material containing plastics
B30B 9/32	Presses for consolidating scrap metal or for compacting used cars
B62D 67/00	<i>Systematic disassembly of vehicles for recovery of salvageable components, e.g. for recycling</i>
B63B 17/06	<i>Refuse discharge from vessels, e.g. for ash</i>
B63B 17/06 {B63J 4/006}	Refuse discharge from vessels, e.g. for ash {B63J 4/006} Arrangements of installation for treating waste water or sewage on vessels
B63J 4/00	<i>Arrangements of installations for treating waste water or sewage on vessels</i>
B65F 1/00	Refuse receptacles
B65F 3/00	Vehicles particularly adapted for collecting refuse
B65F 5/00	Gathering or removal of refuse otherwise than by receptacles or vehicles
B65F 7/00	Cleaning or disinfecting devices combined with refuse receptacles or refuse vehicles
C03C 1/00	Ingredients generally applicable to manufacture of glasses, glazes or vitreous enamels
C04B 7/24	Hydraulic cements from oil shales, residues or waste other than slag
C04B 11/26	Calcium sulfate cements from phosphogypsum or from waste, e.g. purification products of smoke
C04B 18/04	Waste materials or refuse used as fillers for mortars, concrete, artificial stone or the like
{C04B 22/0006}	Waste inorganic materials used as active ingredients for mortars, concrete, artificial stone or the like
{C04B 24/001}	Waste organic materials used as active ingredients for mortars, concrete, artificial stone or the like
C04B 33/132	<i>Waste materials or refuse used as compounding for clay-ware</i>
C05F 9/00	Fertilisers made from household or town refuse
C08B 16/00	<i>Regeneration of cellulose</i>
C08J 11/00	Recovery of waste materials of macromolecular substances
C08L 17/00	Compositions of reclaimed rubber
C09K 11/01	<i>Recovery of luminescent materials</i>
C10B 53/00	Destructive distillation, specially adapted for particular solid raw materials or solid raw materials in special form
C10B 57/00	Other processes not covered before; Features of destructive distillation processes in general
C10G 1/10	Production of liquid hydrocarbon mixtures from rubber or rubber waste

C10L 5/46	Solid fuels essentially based on sewage, house or town refuse
C10L 5/48	Solid fuels essentially based on industrial residues and waste materials
C10M 175/02	Working-up used lubricants based on mineral oils
C11B 13/00	Recovery of fats, fatty oils, or fatty acids from waste materials
C11D 19/00	Recovery of glycerol from a saponification liquor
C12F 3/00	Recovery of by-products
C12F 3/08	Recovery of alcohol from press residues or other waste material
C12P 7/08	Biochemical production of ethanol from waste
C22B 7/00	Working-up raw materials other than ores, e.g. scrap, to produce non-ferrous metals or compounds thereof
C22B 19/28	Obtaining zinc or zinc oxide from muffle furnace residues
C22B 19/30	Obtaining zinc or zinc oxide from metallic residues or scrap
C22B 25/06	Obtaining tin from scrap
C25D 13/24	<i>Regeneration of process liquids used in electrophoretic coatings</i>
C25D 21/16	<i>Regeneration of process solutions used in electrolytic coating</i>
D01B	Mechanical treatment of natural fibrous or filamentary material to obtain fibres or filaments, e.g. for spinning
D01C 5/00	Carbonising rags to recover animal fibres
D01F 13/00	Recovery of starting material, waste material or solvents during the manufacture of artificial filaments or the like
D01G 11/00	Disintegrating fibre-containing articles to obtain fibres for re-use
D01H 11/00	Arrangements for confining or removing dust, fly, or the like
D06L 1/10	Regeneration of used chemical baths used for dry-cleaning or washing fibres, fabrics or the like
D21B 1/08	Dry treatment of waste paper or rags for making paper or for the production of cellulose
D21B 1/32	Defibrating waste paper
D21C 5/02	Processes for obtaining cellulose by working-up waste paper
D21C 11/14	Regeneration of pulp liquors by wet combustion
D21F 1/66	Re-use of pulp-water in wet end machines for making continuous webs of paper
D21H 17/01	Waste products added to the pulp or used in paper-impregnating material
E03F	Sewers, Cesspools
E04F 17/10	Arrangements in building for the disposal of refuse
F23B 5/00	Combustion apparatus arrangements for burning uncombusted material from primary combustion
F23G	Consuming waste products by combustion
F23J	Removal or treatment of combustion products or combustion residues
G03C 11/24	Removing emulsion from waste photographic material
G03G 21/10	<i>Collecting or recycling waste developer used in electrophotography, electrophotography, magnetography</i>
G21F 9/28	<i>Treating radioactively contaminated solids</i>

[H01B 15/00](#) Apparatus or processes for salvaging material from electric cables

[H01J 9/52](#) *Recovery of material from discharge tubes or lamps*

[H01M 6/52](#) Reclaiming serviceable parts of waste cells or batteries

[H01M 10/54](#) Reclaiming serviceable parts of waste accumulators

4. In this subclass, it is desirable to add the indexing codes of group B09B 2101/00.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

C B09B 3/00

Destroying solid waste or transforming solid waste ~~for contaminated solids~~ into something useful or harmless

WARNING

Group B09B 3/00 is incomplete pending reclassification of documents from groups B09B 3/0066 and B09B 3/0075.

Group B09B 3/00 is also impacted by reclassification into groups B09B 3/30, B09B 3/32, B09B 3/35, B09B 3/38, B09B 3/50, B09B 3/60, B09B 3/65 and B09B 3/70.

All groups listed in this Warning should be considered in order to perform a complete search.

- D B09B 3/0008 • {comprising an adsorption step (separating processes involving the treatment of liquids with solid sorbents B01D 15/00; separation of gases or vapors by adsorption B01D 53/02)}
<administratively transferred to [B09B 3/10](#)>
- D B09B 3/0016 • {comprising an extraction step (separation by solvent extraction B01D 11/00)}
<administratively transferred to [B09B 3/80](#)>
- D B09B 3/0025 • {Agglomeration, binding or encapsulation of solid waste (solidification of sludge C02F 11/008; waste materials as compounding ingredients in polymers C08K 11/005)}
<administratively transferred to [B09B 3/20](#)>
- D B09B 3/0033 • • {using an organic binder or matrix}
<administratively transferred to [B09B 3/21](#)>
- D B09B 3/0041 • • {using a mineral binder or matrix, e.g. to obtain a soil like material (C04B takes precedence); Apparatus therefor}
<administratively transferred to [B09B 3/25](#)>
- D B09B 3/005 • • • {involving a melting step}
<administratively transferred to [B09B 3/29](#)>
- D B09B 3/0058 • {Removing gases or liquids enclosed in discarded articles, e.g. aerosol cans; cooling systems of refrigerators (arrangements for charging or discharging refrigerant from refrigerators F25B 45/00); Removing gases from discarded plastic foam products}
<administratively transferred to [B09B 3/00](#) and [B09B 2101/02](#) ADD>
- F B09B 3/0066
(Frozen) • {Disposal of asbestos}

WARNING

Group B09B 3/0066 is no longer used for the classification of documents as of January 1, 2022.

The content of this group is being reclassified into groups B09B 3/00, B09B 3/30, B09B 3/32, B09B 3/35, B09B 3/38, B09B 3/50, B09B 3/60, B09B 3/65, B09B 3/70 and B09B 2101/35.

All groups listed in this Warning should be considered in order to perform a complete search.

- F B09B 3/0075
(Frozen)
- {Disposal of medical waste (casings for used articles, e.g. sharps [A61B 50/362](#); sterilisation of refuse [A61L 11/00](#); disposal of used needles or syringes [A61M 5/3205](#); disintegrating medical waste [B02C 19/0075](#))}

WARNING

Group B09B 3/0075 is no longer used for the classification of documents as of January 1, 2022.

The content of this group is being reclassified into groups [B09B 3/00](#), [B09B 3/30](#), [B09B 3/32](#), [B09B 3/35](#), [B09B 3/38](#), [B09B 3/50](#), [B09B 3/60](#), [B09B 3/65](#), [B09B 3/70](#), [B09B 2101/65](#) and [B09B 2101/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- D B09B 3/0083
- {by means of a thermal treatment, e.g. evaporation (treatment of waste by pyrolysis or by combustion F23G 5/00)}

<administratively transferred to [B09B 3/40](#)>

- D B09B 3/0091
- {Steam treatment}

<administratively transferred to [B09B 3/45](#)>

- N B09B 3/10
- involving an adsorption step

- Q B09B 3/20
- Agglomeration, binding or encapsulation of solid waste

WARNING

Group [B09B 3/20](#) is impacted by reclassification into group [B09B 3/32](#).

Groups [B09B 3/20](#) and [B09B 3/32](#) should be considered in order to perform a complete search.

- Q B09B 3/21
- using organic binders or matrix

WARNING

Group [B09B 3/21](#) is impacted by reclassification into groups [B09B 3/23](#) and [B09B 3/24](#).

Groups [B09B 3/21](#), [B09B 3/23](#) and [B09B 3/24](#) should be considered in order to perform a complete search.

- N B09B 3/23
- Binders with asphalt

WARNING

Group [B09B 3/23](#) is incomplete pending reclassification of documents from group [B09B 3/21](#).

Groups [B09B 3/21](#) and [B09B 3/23](#) should be considered in order to perform a complete search.

- N B09B 3/24
- Binders with plastic

WARNING

Group [B09B 3/24](#) is incomplete pending reclassification of documents from group [B09B 3/21](#).

Groups [B09B 3/21](#) and [B09B 3/24](#) should be considered in order to perform a complete search.

- Q B09B 3/25
- using mineral binders or matrix

WARNING

Group [B09B 3/25](#) is impacted by reclassification into group [B09B 3/27](#).

Groups [B09B 3/25](#) and [B09B 3/27](#) should be considered in order to perform a complete search.

- N B09B 3/27
- • Binding by sodium silicate, e.g. cement or water glass
- WARNING
Group [B09B 3/27](#) is incomplete pending reclassification of documents from group [B09B 3/25](#).
Groups [B09B 3/25](#) and [B09B 3/27](#) should be considered in order to perform a complete search.
- N B09B 3/29
- N B09B 3/30
- • involving a melting or softening step
 - involving mechanical treatment (involving an extraction step [B09B 3/80](#))
- WARNING
Group [B09B 3/30](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B09B 3/32
- • Compressing or compacting
- WARNING
Group [B09B 3/32](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#), [B09B 3/20](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B09B 3/35
- • Shredding, crushing or cutting
- WARNING
Group [B09B 3/35](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B09B 3/38
- • Stirring or kneading
- WARNING
Group [B09B 3/38](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q B09B 3/40
- involving thermal treatment, e.g. evaporation (processes using mineral binders involving a melting or softening step [B09B 3/29](#); involving radiation [B09B 3/50](#))
- WARNING
Group [B09B 3/40](#) is impacted by reclassification into group [B09B 3/50](#).
Groups [B09B 3/40](#) and [B09B 3/50](#) should be considered in order to perform a complete search.
- N B09B 3/45
- N B09B 3/50
- • Steam treatment, e.g. supercritical water gasification or oxidation
 - involving radiation, e.g. electro-magnetic waves
- WARNING
Group [B09B 3/50](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#), [B09B 3/40](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N B09B 3/60
- Biochemical treatment, e.g. by using enzymes
- WARNING
Groups [B09B 3/60](#) and [B09B 3/65](#) are incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B09B 3/65
- N B09B 3/70
- Anaerobic treatment
 - Chemical treatment, e.g. pH adjustment or oxidation (involving an extraction step [B09B 3/80](#); processes for making harmful chemical substances harmless by effecting a chemical change in the substances [A62D 3/00](#))
- WARNING
Group [B09B 3/70](#) is incomplete pending reclassification of documents from groups [B09B 3/00](#), [B09B 3/0066](#), [B09B 3/0075](#), [B09B 3/80](#) and [B09B 5/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q B09B 3/80
- involving an extraction step
- WARNING
Group [B09B 3/80](#) is impacted by reclassification into group [B09B 3/70](#).
Groups [B09B 3/80](#) and [B09B 3/70](#) should be considered in order to perform a complete search.
- C B09B 5/00
- Operations not covered by a single other subclass or by a single other group in this subclass**
- WARNING
Group [B09B 5/00](#) is impacted by reclassification into groups [B09B 3/30](#), [B09B 3/32](#), [B09B 3/35](#), [B09B 3/38](#), [B09B 3/50](#), [B09B 3/60](#), [B09B 3/65](#) and [B09B 3/70](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B09B 2101/00 - B09B 2101/00
- Indexing scheme associated with groups [B09B 1/00](#) – [B09B 5/00](#), relating to the type of disposed solid waste**
- N B09B 2101/00
- Type of solid waste**
- N B09B 2101/007
- {Fuel tanks, especially draining thereof}
- N B09B 2101/014
- {Shock absorbers, especially draining thereof}
- N B09B 2101/018
- {Animal meals}
- Q B09B 2101/02
- Gases or liquids enclosed in discarded articles, e.g. aerosol cans or cooling systems of refrigerators
- WARNING
Group [B09B 2101/02](#) is impacted by reclassification into group [B09B 2101/78](#).
Groups [B09B 2101/02](#) and [B09B 2101/78](#) should be considered in order to perform a complete search.
- N B09B 2101/05
- Vehicles; Vehicle parts
- N B09B 2101/10
- Cans
- N B09B 2101/15
- Electronic waste
- N B09B 2101/16
- Batteries
- N B09B 2101/17
- Printed circuit boards [PCBs]
- N B09B 2101/18
- Mobile phones; Tablets

- N B09B 2101/20 • Filters, e.g. oil filters
- N B09B 2101/25 • Non-industrial waste, e.g. household waste
- N B09B 2101/30 • Incineration ashes
- N B09B 2101/35 • Asbestos

WARNING

Group [B09B 2101/35](#) is incomplete pending reclassification of documents from group [B09B 3/0066](#).

Groups [B09B 3/0066](#) and [B09B 2101/35](#) should be considered in order to perform a complete search.

- N B09B 2101/40 • Asphalt
- N B09B 2101/45 • Concrete
- N B09B 2101/50 • Glass
- N B09B 2101/55 • Slag
- N B09B 2101/60 • Ceramics, e.g. pottery
- N B09B 2101/65 • Medical waste

WARNING

Groups [B09B 2101/65](#) and [B09B 2101/67](#) are incomplete pending reclassification of documents from group [B09B 3/0075](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B09B 2101/67 • • Diapers or nappies
- N B09B 2101/68 • • Transdermal patches
- N B09B 2101/70 • Kitchen refuse; Food waste
- N B09B 2101/75 • Plastic waste
- N B09B 2101/77 • • containing chlorine
- N B09B 2101/78 • • containing foamed plastics, e.g. polystyrol

WARNING

Group [B09B 2101/78](#) is incomplete pending reclassification of documents from group [B09B 2101/02](#).

Groups [B09B 2101/02](#) and [B09B 2101/78](#) should be considered in order to perform a complete search.

- N B09B 2101/80 • Rubber waste, e.g. scrap tyres
- N B09B 2101/85 • Paper; Wood; Fabrics, e.g. cloths
- N B09B 2101/90 • Soil, e.g. excavated soil from construction sites
- N B09B 2101/95 • Waste catalysts; Waste ion exchange materials; Waste adsorbents

D B09B 2220/00**Type of waste materials treated**

<administratively transferred to [B09B 2101/00](#) ADD>

- D B09B 2220/02 • Aerosol cans, especially draining thereof
 <administratively transferred to [B09B 2101/02](#) ADD>
- D B09B 2220/04 • Animal meals
 <administratively transferred to [B09B 2101/018](#) ADD>
- D B09B 2220/06 • Incineration ashes
 <administratively transferred to [B09B 2101/30](#) ADD>
- D B09B 2220/08 • Discarded filters, especially draining thereof
 <administratively transferred to [B09B 2101/20](#) ADD>

- D B09B 2220/10 • Fuel tanks, especially draining thereof
<administratively transferred to [B09B 2101/007](#) ADD>
- D B09B 2220/12 • Shock absorbers, especially draining thereof
<administratively transferred to [B09B 2101/014](#) ADD>
- D B09B 2220/14 • Transdermal patches
<administratively transferred to [B09B 2101/68](#) ADD>

Project: RP0730 (B22F)

M B22F

WORKING METALLIC POWDER; MANUFACTURE OF ARTICLES FROM METALLIC POWDER; MAKING METALLIC POWDER (~~processes or devices for granulating materials in general B01J 2/00; making ceramics by compacting or sintering C04B, e.g. C04B 35/64; for the production of metals as such, see class C22; reduction or decomposition of metal compounds in general C22B; making alloys by powder metallurgy C22C; electrolytic production of metal powder C25C 5/00~~); **APPARATUS OR DEVICES SPECIALLY ADAPTED FOR METALLIC POWDER**

NOTES

1. This subclass covers the making of metallic powder only insofar as powder with specific physical characteristics is made;

2. In this subclass, the following terms or expressions are used with the meanings indicated:

- "metallic powder" covers powders containing a substantial proportion of non-metallic material;
- "powder" includes somewhat larger particles which are worked, obtained or behave in a manner similar to powder, e.g. fibres.

2. In this subclass, the term "powder" includes somewhat larger particles which are worked, obtained or behave in a manner similar to powder, e.g. fibres.

3. In this subclass, the expression "metallic powder" covers:

- powders consisting of metal particles;
- powders consisting of coated metal particles;
- powders consisting of metal-coated non-metallic particles;
- mixtures of powders of the kinds mentioned above;
- powders of the kinds mentioned above as the main component mixed with or containing non-metallic material, e.g. lubricating or binding agents or organic material.

3-4. {In this subclass, combination sets (C-Sets) are used. Detailed information about C-Sets construction and the associated syntax rules is found in the definitions for [B22F](#).}

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[B22F 3/035](#) covered by [B22F 3/03](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

C B22F 1/00

Metallic powder; Special treatment ~~Treatment~~ of metallic powder, e.g. to facilitate working, or to improve properties ~~{(treatment of powder by mechanical means, e.g. by grinding, milling, rolling B22F 9/04)}~~; **Metallic powders per se**, e.g. mixtures of particles of different composition (C04, C08 take precedence; ~~{amorphous powder B22F 9/002}~~)

WARNING

Group [B22F 1/00](#) is incomplete pending reclassification of documents from group [B22F 1/0003](#).

Group B22F 1/00 is also impacted by reclassification into groups B22F 1/08 and B22F 1/12.

All groups listed in this Warning should be considered in order to perform a complete search.

- F B22F 1/0003
(Frozen)
- {Metallic powders per se; Mixtures of metallic powders; Metallic powders mixed with a lubricating or binding agent (making ferrous alloys using a mixture of prealloyed powders [C22C 33/0207](#))}

WARNING

Group B22F 1/0003 is no longer used for the classification of documents as of January 1, 2022.

The content of this group is being reclassified into groups B22F 1/00, B22F 1/08, B22F 1/09 and B22F 1/12.

All groups listed in this Warning should be considered in order to perform a complete search.

- F B22F 1/0007
(Frozen)
- {Metallic powder characterised by its shape or structure, e.g. fibre structure}

WARNING

Group B22F 1/0007 is no longer used for the classification of documents as of January 1, 2022.

The content of this group is being reclassified into groups B22F 1/06, B22F 1/07 and B22F 1/08.

All groups listed in this Warning should be considered in order to perform a complete search.

- D B22F 1/0011
- • {Metallic powder characterised by size or surface area only}
 - <administratively transferred to [B22F 1/05](#)>
- D B22F 1/0014
- • • {by size mixtures or distribution}
 - <administratively transferred to [B22F 1/052](#)>
- D B22F 1/0018
- • • {Nanometer sized particles}
 - <administratively transferred to [B22F 1/054](#)>
- D B22F 1/0022
- • • • {Dispersions or suspensions thereof}
 - <administratively transferred to [B22F 1/0545](#)>
- D B22F 1/0025
- • • • {Nanofibres or nanotubes}
 - <administratively transferred to [B22F 1/0547](#)>
- D B22F 2001/0029
- • • • {Hollow particles, including tubes and shells}
 - <administratively transferred to [B22F 1/0549](#) INV>
- D B22F 2001/0033
- • • • {Flake form nanoparticles}
 - <administratively transferred to [B22F 1/0551](#) INV>
- D B22F 2001/0037
- • • • {Complex form nanoparticles, e.g.. prism, pyramid, octahedron}
 - <administratively transferred to [B22F 1/0553](#) INV>
- D B22F 1/004
- • {Fibre structure (B22F 1/0025 takes precedence)}
 - <administratively transferred to [B22F 1/062](#)>
- D B22F 1/0044
- • {Nanometer size structures}
 - <administratively transferred to [B22F 1/07](#)>
- D B22F 1/0048
- • {Spherical powder}
 - <administratively transferred to [B22F 1/065](#)>
- D B22F 1/0051
- • • {Hollow particles}
 - <administratively transferred to [B22F 1/0655](#)>

- D B22F 1/0055 . . . {Flake form powders}
<administratively transferred to [B22F 1/068](#)>
- D B22F 1/0059 . . {Metallic powders mixed with a lubricating or binding agent or organic material}
<administratively transferred to [B22F 1/10](#)>
- D B22F 1/0062 . . . {Powders coated with organic material}
<administratively transferred to [B22F 1/102](#)>
- D B22F 2001/0066 . . . {Organic binder comprising a mixture or obtained by reaction of more than one component other than solvent, lubricant}
<administratively transferred to [B22F 1/103](#) INV>
- D B22F 1/007 . . . {Non-organic or metal salt binders or lubricants}
<administratively transferred to [B22F 1/105](#)>
- D B22F 1/0074 . . . {Organic materials comprising a solvent, e.g. for slip casting}
<administratively transferred to [B22F 1/107](#)>
- D B22F 1/0077 . . . {Mixtures obtained by warm mixing}
<administratively transferred to [B22F 1/108](#)>
- D B22F 1/0081 . {Special treatment of metallic powder, e.g. to facilitate working, to improve properties (coating with organic material B22F 1/0062)}
<administratively transferred to [B22F 1/14](#)>
- D B22F 1/0085 . . {Thermal or thermo-mechanical treatment}
<administratively transferred to [B22F 1/142](#)>
- D B22F 1/0088 . . {Chemical treatment, e.g. passivation}
<administratively transferred to [B22F 1/145](#)>
- D B22F 2001/0092 . . . {Making a dispersion}
<administratively transferred to [B22F 1/147](#) INV>
- D B22F 1/0096 . . {Treatment resulting in the production of agglomerates}
<administratively transferred to [B22F 1/148](#)>
- D B22F 1/02 . comprising coating of the powder {(coating with organic material B22F 1/0062; chemical surface treatment B22F 1/0088)}
<administratively transferred to [B22F 1/16](#)>
- D B22F 1/025 . . {Metallic coating}
<administratively transferred to [B22F 1/17](#)>
- Q B22F 1/05 . *Metallic powder characterised by the size or surface area of the particles*
WARNING
Group [B22F 1/05](#) is impacted by reclassification into group [B22F 1/08](#).
Groups [B22F 1/05](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/052 . . *characterised by a mixture of particles of different sizes or by the particle size distribution*
WARNING
Group [B22F 1/052](#) is impacted by reclassification into group [B22F 1/08](#).
Groups [B22F 1/052](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

- Q B22F 1/054 • • Nanosized particles
WARNING
 Group [B22F 1/054](#) is impacted by reclassification into groups [B22F 1/056](#) and [B22F 1/08](#).
 Groups [B22F 1/054](#), [B22F 1/056](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0545 • • Dispersions or suspensions of nanosized particles
WARNING
 Group [B22F 1/0545](#) is impacted by reclassification into group [B22F 1/08](#).
 Groups [B22F 1/0545](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0547 • • {Nanofibres or nanotubes}
WARNING
 Group [B22F 1/0547](#) is impacted by reclassification into group [B22F 1/08](#).
 Groups [B22F 1/0547](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0549 • • {Hollow particles, including tubes and shells}
WARNING
 Group [B22F 1/0549](#) is impacted by reclassification into group [B22F 1/08](#).
 Groups [B22F 1/0549](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0551 • • {Flake form nanoparticles}
WARNING
 Group [B22F 1/0551](#) is impacted by reclassification into group [B22F 1/08](#).
 Groups [B22F 1/0551](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0553 • • {Complex form nanoparticles, e.g. prism, pyramid, octahedron}
WARNING
 Group [B22F 1/0553](#) is impacted by reclassification into group [B22F 1/08](#).
 Groups [B22F 1/0553](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- N B22F 1/056 • • {Submicron particles having a size above 100 nm up to 300 nm}
WARNING
 Group [B22F 1/056](#) is incomplete pending reclassification of documents from group [B22F 1/054](#).
 Groups [B22F 1/054](#) and [B22F 1/056](#) should be considered in order to perform a complete search.
- N B22F 1/06 • • Metallic powder characterised by the shape of the particles (nanosized particles [B22F 1/054](#))
WARNING
 Group [B22F 1/06](#) is incomplete pending reclassification of documents from group [B22F 1/0007](#).
 Groups [B22F 1/0007](#) and [B22F 1/06](#) should be considered in order to perform a complete search.

- Q B22F 1/062
- Fibrous particles
- WARNING
Group [B22F 1/062](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/062](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/065
- Spherical particles
- WARNING
Group [B22F 1/065](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/065](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/0655
- Hollow particles
- WARNING
Group [B22F 1/0655](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/0655](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- Q B22F 1/068
- Flake-like particles
- WARNING
Group [B22F 1/068](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/068](#) and [B22F 1/08](#) should be considered in order to perform a complete search.
- N B22F 1/07
- Metallic powder characterised by particles having a nanoscale microstructure (nanosized particles [B22F 1/054](#))
- WARNING
Group [B22F 1/07](#) is incomplete pending reclassification of documents from group [B22F 1/0007](#). Groups [B22F 1/0007](#) and [B22F 1/07](#) should be considered in order to perform a complete search.
- N B22F 1/08
- Metallic powder characterised by particles having an amorphous microstructure
- WARNING
Group [B22F 1/08](#) is incomplete pending reclassification of documents from groups [B22F 1/00](#), [B22F 1/0003](#), [B22F 1/0007](#), [B22F 1/05](#), [B22F 1/052](#), [B22F 1/054](#), [B22F 1/0545](#), [B22F 1/0547](#), [B22F 1/0549](#), [B22F 1/0551](#), [B22F 1/0553](#), [B22F 1/062](#), [B22F 1/065](#), [B22F 1/0655](#), [B22F 1/068](#), [B22F 1/10](#), [B22F 1/102](#), [B22F 1/103](#), [B22F 1/105](#), [B22F 1/107](#), [B22F 1/108](#), [B22F 1/14](#), [B22F 1/142](#), [B22F 1/145](#), [B22F 1/147](#), [B22F 1/148](#), [B22F 1/16](#) and [B22F 1/17](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N B22F 1/09
- {Mixtures of metallic powders}
- WARNING
Group [B22F 1/09](#) is incomplete pending reclassification of documents from group [B22F 1/0003](#). Groups [B22F 1/0003](#) and [B22F 1/09](#) should be considered in order to perform a complete search.
- Q B22F 1/10
- Metallic powder containing lubricating or binding agents; Metallic powder containing organic material
- WARNING
Group [B22F 1/10](#) is impacted by reclassification into group [B22F 1/08](#).

Groups [B22F 1/10](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/102

- Metallic powder coated with organic material

WARNING

Group [B22F 1/102](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/102](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/103

- containing an organic binding agent comprising a mixture of, or obtained by reaction of, two or more components other than a solvent or a lubricating agent

WARNING

Group [B22F 1/103](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/103](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/105

- containing inorganic lubricating or binding agents, e.g. metal salts

WARNING

Group [B22F 1/105](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/105](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/107

- containing organic material comprising solvents, e.g. for slip casting

WARNING

Group [B22F 1/107](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/107](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/108

- {Mixtures obtained by warm mixing}

WARNING

Group [B22F 1/108](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/108](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

N B22F 1/12

- Metallic powder containing non-metallic particles (containing lubricating or binding agents or organic material [B22F 1/10](#))

WARNING

Group [B22F 1/12](#) is incomplete pending reclassification of documents from groups [B22F 1/00](#) and [B22F 1/0003](#). Groups [B22F 1/00](#), [B22F 1/0003](#) and [B22F 1/12](#) should be considered in order to perform a complete search.

Q B22F 1/14

- Treatment of metallic powder (mixing with lubricating or binding agents or with organic material [B22F 1/10](#))

WARNING

Group [B22F 1/14](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/14](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/142

- Thermal or thermo-mechanical treatment

WARNING

Group [B22F 1/142](#) is impacted by reclassification into group [B22F 1/08](#).

Groups [B22F 1/142](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/145

- Chemical treatment, e.g. passivation or decarburisation

WARNING

Group [B22F 1/145](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/145](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/147

- • {Making a dispersion}

WARNING

Group [B22F 1/147](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/147](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/148

- Agglomerating

WARNING

Group [B22F 1/148](#) is impacted by reclassification into group [B22F 1/08](#). Groups [B22F 1/148](#) and [B22F 1/08](#) should be considered in order to perform a complete search.

Q B22F 1/16

- Metallic particles coated with a non-metal (coated with lubricating or binding agents or with organic material [B22F 1/10](#))

WARNING

Group [B22F 1/16](#) is impacted by reclassification into groups [B22F 1/08](#) and [B22F 1/18](#). Groups [B22F 1/16](#), [B22F 1/08](#) and [B22F 1/18](#) should be considered in order to perform a complete search.

Q B22F 1/17

- Metallic particles coated with metal

WARNING

Group [B22F 1/17](#) is impacted by reclassification into groups [B22F 1/08](#) and [B22F 1/18](#). Groups [B22F 1/17](#), [B22F 1/08](#) and [B22F 1/18](#) should be considered in order to perform a complete search.

N B22F 1/18

- Non-metallic particles coated with metal

WARNING

Group [B22F 1/18](#) is incomplete pending reclassification of documents from groups [B22F 1/16](#) and [B22F 1/17](#). Groups [B22F 1/16](#), [B22F 1/17](#) and [B22F 1/18](#) should be considered in order to perform a complete search.

Project: RP0363 (B23B)

C B23B 51/00

Tools for drilling machines ~~{for drilling wood B27G 15/00; for drilling stone or stone-like materials, e.g. brick, concrete, glass B28D 1/00; drill bits for earth or rock drilling E21B 10/00}~~

WARNING

Group [B23B 51/00](#) is impacted by reclassification into groups [B23B 51/0002](#), [B23B 51/0003](#), [B23B 51/00035](#), [B23B 51/0004](#), [B23B 51/0005](#), [B23B 51/0006](#), [B23B 51/0007](#), [B23B 51/0008](#), [B23B 51/0011](#), [B23B 51/0095](#), [B23B 51/011](#) and [B23B 2251/249](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N B23B 51/0002
- {Drills with connected cutting heads, e.g. with non-exchangeable cutting heads; Drills with a single insert extending across the rotational axis and having at least two radially extending cutting edges in the working position}
- WARNING
Group [B23B 51/0002](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0003
- {with exchangeable heads or inserts}
- WARNING
Groups [B23B 51/0003](#), [B23B 51/0004](#) and [B23B 51/0005](#) are incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#), [B23B 2251/02](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/00035
- • {Spade drills}
- WARNING
Group [B23B 51/00035](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0004
- • {with cutting heads or inserts attached by screw means}
- N B23B 51/0005
- • {with cutting heads or inserts attached by wedge means}
- N B23B 51/0006
- {Drills with cutting inserts ([B23B 51/0002](#) takes precedence)}
- WARNING
Group [B23B 51/0006](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0007
- {with exchangeable cutting insert}
- WARNING
Groups [B23B 51/0007](#) and [B23B 51/0008](#) are incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#), [B23B 51/04](#), [B23B 51/0426](#), [B23B 51/044](#), [B23B 51/0453](#), [B23B 51/0466](#), [B23B 51/0493](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0008
- • {with indexable or reversible cutting inserts}
- D B23B 51/0009
- {Spade-drills}
- <administratively transferred to [B23B 51/00035](#)>
- N B23B 51/0011
- {with radially inner and outer cutting inserts}
- WARNING
Group [B23B 51/0011](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#), [B23B 2251/50](#) and [B23B 2251/505](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- U B23B 51/009 • {Stepped drills}
- N B23B 51/0095 • {Spade drills ([B23B 51/00035](#) takes precedence)}
- WARNING
Group [B23B 51/0095](#) is incomplete pending reclassification of documents from group [B23B 51/00](#).
Groups [B23B 51/00](#) and [B23B 51/0095](#) should be considered in order to perform a complete search.
- N B23B 51/011 • {Micro drills}
- WARNING
Group [B23B 51/011](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#) and [B23B 51/02](#).
Groups [B23B 51/00](#), [B23B 51/02](#) and [B23B 51/011](#) should be considered in order to perform a complete search.
- C B23B 51/02 • Twist drills
- WARNING
Group [B23B 51/02](#) is impacted by reclassification into groups [B23B 51/0002](#), [B23B 51/0003](#), [B23B 51/0004](#), [B23B 51/0005](#), [B23B 51/0006](#), [B23B 51/0007](#), [B23B 51/0008](#), [B23B 51/0011](#), [B23B 51/011](#) and [B23B 2251/249](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C B23B 51/04 • ~~Drills~~{Drills} for trepanning
- WARNING
Group [B23B 51/04](#) is incomplete pending reclassification of documents from group [B23B 51/0466](#).
Group [B23B 51/04](#) is also impacted by reclassification into groups [B23B 51/0007](#), [B23B 51/0008](#), [B23B 51/0411](#), [B23B 51/0417](#), [B23B 51/0426](#), [B23B 51/044](#), [B23B 51/0461](#), [B23B 51/0467](#), [B23B 51/0468](#) and [B23B 51/0469](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D B23B 51/0406 • • {Drills with a tubular body (saw cylinders, e.g. having their cutting rim equipped with abrasive particles, for working stone or glass B28D 1/041)}
- <administratively transferred to [B23B 51/04](#)>
- N B23B 51/0411 • • {with stepped tubular cutting bodies}
- WARNING
Group [B23B 51/0411](#) is incomplete pending reclassification of documents from groups [B23B 51/04](#) and [B23B 51/0466](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M B23B 51/0413 • • {with core-cutting-off devices}
- N B23B 51/0417 • • {including chamfer or spot bore cutter}
- WARNING
Group [B23B 51/0417](#) is incomplete pending reclassification of documents from groups [B23B 51/04](#) and [B23B 51/0466](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M B23B 51/042 • • {with lubricating or cooling equipment}

- C B23B 51/0426
- • • {with centering devices}
- WARNING
 Group [B23B 51/0426](#) is incomplete pending reclassification of documents from groups [B23B 51/04](#) and [B23B 51/0466](#).
 Group [B23B 51/0426](#) is also impacted by reclassification into groups [B23B 51/0007](#), [B23B 51/0008](#) and [B23B 51/0466](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- D B23B 51/0433
- • • {with exchangeable cutting inserts, e.g. able to be clamped}
- <administratively transferred to [B23B 51/0426](#)>
- C B23B 51/044
- • • {with core holding devices}
- WARNING
 Group [B23B 51/044](#) is incomplete pending reclassification of documents from groups [B23B 51/04](#) and [B23B 51/0466](#).
 Group [B23B 51/044](#) is also impacted by reclassification into groups [B23B 51/0007](#), [B23B 51/0008](#) and [B23B 51/0466](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- D B23B 51/0446
- • • {with exchangeable cutting inserts, e.g. able to be clamped}
- <administratively transferred to [B23B 51/044](#)>
- C B23B 51/0453
- • • {with ejecting devices}
- WARNING
 Group [B23B 51/0453](#) is impacted by reclassification into groups [B23B 51/0007](#), [B23B 51/0008](#) and [B23B 51/0466](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- D B23B 51/046
- • • {with exchangeable cutting inserts, e.g. able to be clamped}
- <administratively transferred to [B23B 51/0453](#)>
- N B23B 51/0461
- • {with exchangeable cutting heads or crowns}
- C B23B 51/0466
- • • {with exchangeable cutting inserts, e.g. able to be clamped}
- WARNING
 Group [B23B 51/0466](#) is incomplete pending reclassification of documents from groups [B23B 51/0426](#), [B23B 51/044](#) and [B23B 51/0453](#).
 Group [B23B 51/0466](#) is also impacted by reclassification into groups [B23B 51/0007](#), [B23B 51/0008](#), [B23B 51/04](#), [B23B 51/0411](#), [B23B 51/0417](#), [B23B 51/0426](#), [B23B 51/044](#), [B23B 51/0467](#), [B23B 51/0468](#) and [B23B 51/0469](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0467
- • {Details of the tubular body sidewall}
- WARNING
 Groups [B23B 51/0467](#) - [B23B 51/0469](#) are incomplete pending reclassification of documents from groups [B23B 51/04](#) and [B23B 51/0466](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0468
- • • {Internal grooves}
- N B23B 51/0469
- • • {Eccentric or non-circular}

- M B23B 51/0473
- • {~~details~~ *Details* about the connection between the driven shaft and the tubular cutting part}; *Arbors*}
- D B23B 51/048
- • {with exchangeable cutting inserts, e.g. able to be clamped (B23B 51/0493 takes precedence)}
 - <administratively transferred to [B23B 51/00](#)>
- F B23B 51/0486
(Frozen)
- • {with lubricating or cooling equipment ([B23B 51/042](#) takes precedence)}
- WARNING**
Group [B23B 51/0486](#) is no longer used for the classification of documents as of January 1, 2022.
The content of this group is being reclassified into groups [B23B 51/063](#) and [B23B 51/066](#).
Groups [B23B 51/0486](#), [B23B 51/063](#) and [B23B 51/066](#) should be considered in order to perform a complete search.
- F B23B 51/0493
(Frozen)
- • {with exchangeable cutting inserts, e.g. able to be clamped}
- WARNING**
Group [B23B 51/0493](#) is no longer used for the classification of documents as of January 1, 2022.
The content of this group is being reclassified into groups [B23B 51/0007](#), [B23B 51/0008](#), [B23B 51/06](#), [B23B 51/063](#), [B23B 51/066](#), [B23B 51/068](#), [B23B 51/0682](#), [B23B 51/0684](#) and [B23B 51/0686](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- U B23B 51/05
- • for cutting discs from sheet
- C B23B 51/06
- Drills with lubricating or cooling equipment {([B23B 51/042](#) and ~~takes~~ [B23B 51/0486](#) take precedence)}
- WARNING**
Group [B23B 51/06](#) is incomplete pending reclassification of documents from group [B23B 51/0493](#).
Group [B23B 51/06](#) is also impacted by reclassification into groups [B23B 51/063](#), [B23B 51/066](#), [B23B 51/068](#), [B23B 51/0682](#), [B23B 51/0684](#) and [B23B 51/0686](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/063
- • {Deep hole drills, e.g. ejector drills}
- WARNING**
Groups [B23B 51/063](#) and [B23B 51/066](#) are incomplete pending reclassification of documents from groups [B23B 51/0486](#), [B23B 51/0493](#) and [B23B 51/06](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/066
- • {Gun drills}
- N B23B 51/068
- • {Details of the lubricating or cooling channel}
- WARNING**
Groups [B23B 51/068](#) - [B23B 51/0686](#) are incomplete pending reclassification of documents from groups [B23B 51/0493](#) and [B23B 51/06](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 51/0682
- • {Coolant moves along outside of tool periphery toward cutting edges}
- N B23B 51/0684
- • {Deflector or nozzle on drill to point the coolant in a desired direction}

N	B23B 51/0686	• • • {Cross-sectional shape of coolant hole}
C	B23B 51/10	• Bits for countersinking
WARNING Group B23B 51/10 is impacted by reclassification into group B23B 51/109 . Groups B23B 51/10 and B23B 51/109 should be considered in order to perform a complete search.		
M	B23B 51/106	• {with a toolholder moving cutting edge adjustable along a direction oblique to the axis}
C	B23B 51/107	• {having a pilot}
WARNING Group B23B 51/107 is impacted by reclassification into group B23B 51/109 . Groups B23B 51/107 and B23B 51/109 should be considered in order to perform a complete search.		
C	B23B 51/108	• {having a centering twist drill}
WARNING Group B23B 51/108 is impacted by reclassification into group B23B 51/1085 . Groups B23B 51/108 and B23B 51/1085 should be considered in order to perform a complete search.		
N	B23B 51/1085	• • • {countersink in the form of an attachment to the drill}
WARNING Group B23B 51/1085 is incomplete pending reclassification of documents from group B23B 51/108 . Groups B23B 51/108 and B23B 51/1085 should be considered in order to perform a complete search.		
N	B23B 51/109	• {Counterboring tools (B23B 51/102 takes precedence)}
WARNING Group B23B 51/109 is incomplete pending reclassification of documents from groups B23B 51/10 , B23B 51/107 and B23B 51/108 . All groups listed in this Warning should be considered in order to perform a complete search.		
C	B23B 2250/00	Compensating adverse effects during turning, boring or drilling
WARNING Group B23B 2250/00 is impacted by reclassification into group B23B 2250/18 . Groups B23B 2250/00 and B23B 2250/18 should be considered in order to perform a complete search.		
M	B23B 2250/04	• Balancing rotating components (vibration damping B23B 2250/16)
M	B23B 2250/08	• Compensation of centrifugal force (use of centrifugal force B23B 2270/04)
C	B23B 2250/12	• Cooling and lubrication
WARNING Group B23B 2250/12 is impacted by reclassification into groups B23B 2250/121 , B23B 2250/122 , B23B 2250/123 and B23B 2250/124 . All groups listed in this Warning should be considered in order to perform a complete search.		

- N B23B 2250/121
- Insert with coolant channels
- WARNING
Group [B23B 2250/121](#) is incomplete pending reclassification of documents from group [B23B 2250/12](#).
Groups [B23B 2250/12](#) and [B23B 2250/121](#) should be considered in order to perform a complete search.
- N B23B 2250/122
- Internal coolant reservoir
- WARNING
Group [B23B 2250/122](#) is incomplete pending reclassification of documents from group [B23B 2250/12](#).
Groups [B23B 2250/12](#) and [B23B 2250/122](#) should be considered in order to perform a complete search.
- N B23B 2250/123
- Meltable lubricant
- WARNING
Group [B23B 2250/123](#) is incomplete pending reclassification of documents from group [B23B 2250/12](#).
Groups [B23B 2250/12](#) and [B23B 2250/123](#) should be considered in order to perform a complete search.
- N B23B 2250/124
- Coolant trapping reservoir, e.g. recesses, pockets on external surface of tool
- WARNING
Group [B23B 2250/124](#) is incomplete pending reclassification of documents from group [B23B 2250/12](#).
Groups [B23B 2250/12](#) and [B23B 2250/124](#) should be considered in order to perform a complete search.
- M B23B 2250/16
- Damping of vibrations (~~balancing rotating components B23B 2250/04~~)
- N B23B 2250/18
- Surface of tool modified by roughening, scratching, etc. to modify friction or other adverse effect
- WARNING
Group [B23B 2250/18](#) is incomplete pending reclassification of documents from group [B23B 2250/00](#).
Groups [B23B 2250/00](#) and [B23B 2250/18](#) should be considered in order to perform a complete search.
- C B23B 2251/00
- Details of tools for drilling machines**
- WARNING
Group [B23B 2251/00](#) is impacted by reclassification into groups [B23B 2251/16](#), [B23B 2251/51](#) and [B23B 2251/74](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- F B23B 2251/02
(Frozen)
- Connections between shanks and removable cutting heads
- WARNING
Group [B23B 2251/02](#) is no longer used for the classification of documents as of January 1, 2022.
The content of this group is being reclassified into groups [B23B 51/0003](#), [B23B 51/0004](#) and [B23B 51/0005](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- C B23B 2251/04
- Angles, e.g. cutting angles

WARNING

Group [B23B 2251/04](#) is impacted by reclassification into groups [B23B 2251/047](#) and [B23B 2251/048](#).

Groups [B23B 2251/04](#), [B23B 2251/047](#) and [B23B 2251/048](#) should be considered in order to perform a complete search.

- U B23B 2251/043
- • Helix angles

- U B23B 2251/046
- • • Variable

- N B23B 2251/047
- Axial clearance angles

WARNING

Group [B23B 2251/047](#) is incomplete pending reclassification of documents from groups [B23B 2251/04](#) and [B23B 2251/14](#).

Groups [B23B 2251/04](#), [B23B 2251/14](#) and [B23B 2251/047](#) should be considered in order to perform a complete search.

- N B23B 2251/048
- Radial clearance angles

WARNING

Group [B23B 2251/048](#) is incomplete pending reclassification of documents from groups [B23B 2251/04](#) and [B23B 2251/14](#).

Groups [B23B 2251/04](#), [B23B 2251/14](#) and [B23B 2251/048](#) should be considered in order to perform a complete search.

- U B23B 2251/08
- Side or plan views of cutting edges

- C B23B 2251/082
- • Curved cutting edges

WARNING

Group [B23B 2251/082](#) is impacted by reclassification into group [B23B 2251/0825](#).

Groups [B23B 2251/082](#) and [B23B 2251/0825](#) should be considered in order to perform a complete search.

- N B23B 2251/0825
- • • Curved in the axial direction

WARNING

Group [B23B 2251/0825](#) is incomplete pending reclassification of documents from group [B23B 2251/082](#).

Groups [B23B 2251/082](#) and [B23B 2251/0825](#) should be considered in order to perform a complete search.

- C B23B 2251/14
- Configuration of the cutting part, i.e. the main cutting edges

WARNING

Group [B23B 2251/14](#) is impacted by reclassification into groups [B23B 2251/047](#) and [B23B 2251/048](#).

Groups [B23B 2251/14](#), [B23B 2251/047](#) and [B23B 2251/048](#) should be considered in order to perform a complete search.

- N B23B 2251/16
- New cutting edge by fracture, wear, or recycling

WARNING

Group [B23B 2251/16](#) is incomplete pending reclassification of documents from group [B23B 2251/00](#).

Groups [B23B 2251/00](#) and [B23B 2251/16](#) should be considered in order to perform a complete search.

- C B23B 2251/18 • Configuration of the drill point
- WARNING**
 Group [B23B 2251/18](#) is impacted by reclassification into groups [B23B 2251/182](#), [B23B 2251/185](#) and [B23B 2251/188](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 2251/182 • • Web thinning
- WARNING**
 Group [B23B 2251/182](#) is incomplete pending reclassification of documents from group [B23B 2251/18](#).
 Groups [B23B 2251/18](#) and [B23B 2251/182](#) should be considered in order to perform a complete search.
- N B23B 2251/185 • • Point angles less than 90 degrees
- WARNING**
 Group [B23B 2251/185](#) is incomplete pending reclassification of documents from group [B23B 2251/18](#).
 Groups [B23B 2251/18](#) and [B23B 2251/185](#) should be considered in order to perform a complete search.
- N B23B 2251/188 • • Variable point angles
- WARNING**
 Group [B23B 2251/188](#) is incomplete pending reclassification of documents from group [B23B 2251/18](#).
 Groups [B23B 2251/18](#) and [B23B 2251/188](#) should be considered in order to perform a complete search.
- C B23B 2251/24 • Overall form of drilling tools
- WARNING**
 Group [B23B 2251/24](#) is impacted by reclassification into group [B23B 2251/249](#).
 Groups [B23B 2251/24](#) and [B23B 2251/249](#) should be considered in order to perform a complete search.
- U B23B 2251/248 • • Drills in which the outer surface is of special form
- N B23B 2251/249 • • Drills in which the shank is flexible
- WARNING**
 Group [B23B 2251/249](#) is incomplete pending reclassification of documents from groups [B23B 51/00](#), [B23B 51/02](#) and [B23B 2251/24](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- C B23B 2251/40 • Flutes, i.e. chip conveying grooves
- WARNING**
 Group [B23B 2251/40](#) is impacted by reclassification into groups [B23B 2251/4011](#) and [B23B 2251/4012](#).
 Groups [B23B 2251/40](#), [B23B 2251/4011](#) and [B23B 2251/4012](#) should be considered in order to perform a complete search.
- N B23B 2251/4011 • • Two flutes merge into one flute
- WARNING**
 Group [B23B 2251/4011](#) is incomplete pending reclassification of documents from group [B23B 2251/40](#).

Groups [B23B 2251/40](#) and [B23B 2251/4011](#) should be considered in order to perform a complete search.

N B23B 2251/4012

- Flutes with sleeves

WARNING

Group [B23B 2251/4012](#) is incomplete pending reclassification of documents from group [B23B 2251/40](#).

Groups [B23B 2251/40](#) and [B23B 2251/4012](#) should be considered in order to perform a complete search.

C B23B 2251/406

- of special form not otherwise provided for

WARNING

Group [B23B 2251/406](#) is impacted by reclassification into group [B23B 2251/4062](#).

Groups [B23B 2251/406](#) and [B23B 2251/4062](#) should be considered in order to perform a complete search.

N B23B 2251/4062

- Reverse flutes

WARNING

Group [B23B 2251/4062](#) is incomplete pending reclassification of documents from group [B23B 2251/406](#).

Groups [B23B 2251/406](#) and [B23B 2251/4062](#) should be considered in order to perform a complete search.

D B23B 2251/42

- Types of drill

<administratively transferred to [B23B 51/00](#)>

D B23B 2251/422

- Deep hole drills, e.g. ejector drills

<administratively transferred to [B23B 51/063](#)>

D B23B 2251/424

- Gun drills

<administratively transferred to [B23B 51/066](#)>

D B23B 2251/426

- Microdrills

<administratively transferred to [B23B 51/011](#)>

D B23B 2251/428

- Drills for cutting plugs of material

<administratively transferred to [B23B 51/044](#)>

C B23B 2251/44

- Margins, i.e. the **area of the circumference following the axial cutting edge in the direction of rotation** narrow portion of the land which is not cut away to provide clearance on the circumferential surface

WARNING

Group [B23B 2251/44](#) is impacted by reclassification into group [B23B 2251/448](#). Groups [B23B 2251/44](#) and [B23B 2251/448](#) should be considered in order to perform a complete search.

U B23B 2251/446

- Drills with variable margins

N B23B 2251/448

- Drills with axial cutting edge extending along margin

WARNING

Group [B23B 2251/448](#) is incomplete pending reclassification of documents from group [B23B 2251/44](#).

Groups [B23B 2251/44](#) and [B23B 2251/448](#) should be considered in order to perform a complete search.

- F B23B 2251/50
(Frozen)
- Drilling tools comprising cutting inserts
- WARNING**
Group [B23B 2251/50](#) is no longer used for the classification of documents as of January 1, 2022.
The content of this group is being reclassified into groups [B23B 51/0002](#), [B23B 51/0003](#), [B23B 51/00035](#), [B23B 51/0004](#), [B23B 51/0005](#), [B23B 51/0006](#), [B23B 51/0007](#), [B23B 51/0008](#) and [B23B 51/0011](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- F B23B 2251/505
(Frozen)
- • set at different heights
- WARNING**
Group [B23B 2251/505](#) is no longer used for the classification of documents as of January 1, 2022.
The content of this group is being reclassified into groups [B23B 51/0002](#), [B23B 51/0003](#), [B23B 51/00035](#), [B23B 51/0004](#), [B23B 51/0005](#), [B23B 51/0006](#), [B23B 51/0007](#), [B23B 51/0008](#) and [B23B 51/0011](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B23B 2251/51
- Drills with means for feeding cable
- WARNING**
Group [B23B 2251/51](#) is incomplete pending reclassification of documents from group [B23B 2251/00](#).
Groups [B23B 2251/00](#) and [B23B 2251/51](#) should be considered in order to perform a complete search.
- D B23B 2251/54
- Drilling tools having provision for drilling different diameters
<administratively transferred to [B23B 51/0411](#)>
- U B23B 2251/66
- Drills with provision to be used as a screwdriver
- M B23B 2251/68
- Drills with provision for suction (~~use of suction in turning, boring or drilling in general B23B-2270/62~~)
- U B23B 2251/70
- Drills with vibration suppressing means
- N B23B 2251/74
- Drills for drilling a flat bottomed hole
- WARNING**
Group [B23B 2251/74](#) is incomplete pending reclassification of documents from group [B23B 2251/00](#).
Groups [B23B 2251/00](#) and [B23B 2251/74](#) should be considered in order to perform a complete search.

Project: RP0757 (B28C)

- U B28C 5/00
- Apparatus or methods for producing mixtures of cement with other substances, e.g. slurries, mortars, porous or fibrous compositions (controlling the mixing apparatus and supplying the ingredients [B28C 7/00](#) {separating cement from waste concrete [B03B 9/063](#)})**
- U B28C 5/38
- wherein the mixing is effected both by the action of a fluid and by directly-acting driven mechanical means, e.g. stirring means {; Producing cellular concrete}
- B28C 5/381
- • {Producing cellular concrete ([B28C 5/1269](#) takes precedence; producing foam ~~B01F 3/04446~~[B01F 23/235](#), ~~B01F 3/04992~~[B01F 23/291](#))}
- B28C 5/48
- wherein the mixing is effected by vibrations (mixers with vibrating mechanisms in general ~~B01F 11/00~~[B01F 31/00](#))

- U B28C 7/00** Controlling the operation of apparatus for producing mixtures of clay or cement with other substances; Supplying or proportioning the ingredients for mixing clay or cement with other substances; Discharging the mixture {(B28C 5/42 takes precedence; feeding material in general B65G; proportioning in general G01F, G01G; controlling in general G05)}
- B28C 7/04 • Supplying or proportioning the ingredients {(B28C 7/022 takes precedence; forming a predetermined ratio of the components to be mixed, in general B01F-15/04 B01F 35/80)}

Project: RP0757 (B29B)

- U B29B 7/00** Mixing; Kneading ({for preparation of dough A21C 1/00;} in general B01F; combined with calendering B29C 43/24, with injection B29C 45/46, with extrusion B29C 48/36)
- U B29B 7/30 • continuous, with mechanical mixing or kneading devices
- U B29B 7/32 • • with non-movable mixing or kneading devices
- B29B 7/325 • • • {Static mixers (in general B01F 5/0602 B01F 25/42)}
- U B29B 7/34 • • with movable mixing or kneading devices
- U B29B 7/38 • • • rotary (B29B 7/52 takes precedence)
- U B29B 7/40 • • • • with single shaft
- U B29B 7/42 • • • • • with screw or helix
- U B29B 7/422 • • • • • {with screw sections co-operating, e.g. intermeshing, with elements on the wall of the surrounding casing}
- B29B 7/423 • • • • • • {and oscillating axially (in general B01F-11/0057 B01F 31/401)}
- U B29B 7/58 • • Component parts, details or accessories; Auxiliary operations
- B29B 7/60 • • • for feeding, e.g. end guides for the incoming material {(B29B 7/7615 takes precedence; feeding predetermined amounts for mixing in general B01F-15/0216 B01F 35/714)}
- U B29B 7/74 • using other mixers or combinations of {mixers, e.g. of dissimilar mixers (; Plant)}
- U B29B 7/76 • • {Mixers} with stream-impingement mixing head
- U B29B 7/7615 • • • {characterised by arrangements for controlling, measuring or regulating, e.g. for feeding or proportioning the components}
- B29B 7/7626 • • • • {using measuring chambers of piston or plunger type (B29B 7/7621 takes precedence; for mixing in general B01F-15/0454 B01F 35/882)}
- B29B 7/80 • Component parts, details or accessories; Auxiliary operations (B29B 7/22, B29B 7/58 take precedence (; cleaning mixers B01F-15/00019 B01F 35/145))
- B29B 7/86 • • for working at sub- or superatmospheric pressure {(B01F-13/06 B01F 33/70 takes precedence)}

Project: RP0757 (B29C)

- U B29C 31/00** Handling, e.g. feeding of the material to be shaped {, storage of plastics material before moulding; Automation, i.e. automated handling lines in plastics processing plants, e.g. using manipulators or robots (discharging moulded articles from the mould B29C 37/0003; storage of prepregs or SMC after impregnation or during ageing B29C 70/54; baling of rubber B29B 15/02)}
- U B29C 31/04 • Feeding {of the material to be moulded}, e.g. into a mould cavity {(B29C 39/08 takes precedence; using a material distribution system to two or more fixed injection moulds B29C 45/125)}

B29C 31/06

- in measured doses {, e.g. by weighting (feeding mixers with measured doses ~~B01F 15/0216~~ B01F 35/714, ~~B01F 15/0454~~ B01F 35/882, B29B 7/24, B29B 7/603)}

Project: RP0134-F (B29K)**U B29K 2105/00****Condition, form or state of moulded material {or of the material to be shaped}**

M B29K 2105/02

- heat shrinkable {(B29K 2995/0049 takes precedence)}

WARNING

~~Group B29K 2105/02 is impacted by reclassification into group B29K 2995/0049.~~

~~Groups B29K 2105/02 and B29K 2995/0049 should be considered in order to perform a complete search.~~

U B29K 2995/00**Properties of moulding materials, reinforcements, fillers, preformed parts or moulds**

U B29K 2995/0037

- Other properties

M B29K 2995/0049

- Heat shrinkable

WARNING

~~Group B29K 2995/0049 is incomplete pending reclassification of documents from group B29K 2105/02.~~

~~Groups B29K 2995/0049 and B29K 2105/02 should be considered in order to perform a complete search.~~

Project: RP0266-F (B32B)**U B32B 17/00****Layered products essentially comprising sheet glass, or glass, slag, or like fibres****NOTE**

{In this group, a layer of organic glass is not considered as a glass layer but as a synthetic resin layer.}

U B32B 17/06

- comprising glass as the main or only constituent of a layer, next to another layer of a specific {material}

D B32B 17/064
—(Frozen)

- {synthetic resin (B32B 17/10 takes precedence)}

WARNING

~~Group B32B 17/064 is no longer used for the classification of documents as of January 1, 2021.~~

~~The content of this group is being reclassified into groups B32B 17/10 – B32B 17/1099.~~

~~Groups B32B 17/064 and B32B 17/10 – B32B 17/1099 should be considered in order to perform a complete search.~~

M B32B 17/10

- of synthetic resin

WARNING

~~Group B32B 17/10 is impacted by reclassification into groups B32B 17/10005 – B32B 17/1099.~~

~~Groups B32B 17/10 and B32B 17/10005 – B32B 17/1099 should be considered in order to perform a complete search.~~

- M B32B 17/10005 · · · {laminated safety glass or glazing}

NOTE

{In this group, C-Sets are used. The detailed information about the C-Sets construction and the associated syntax rules is present in the Definitions of [B32B](#).}

WARNING

Groups B32B 17/10005 – B32B 17/1099 are incomplete pending reclassification of documents from groups B32B 17/064 and B32B 17/10. All groups listed in this warning should be considered in order to perform a complete search.

Project: MP0534 (B41F)

- U B41F 7/00 Rotary lithographic machines {(such office printing machines [B41L 7/00](#))}
- U B41F 7/20 · Details
- U B41F 7/24 · · Damping devices
- M B41F 7/36 · · · Inking-rollers serving also to apply ink repellentrepellants
- U B41F 31/00 Inking arrangements or devices (inking units for platen presses [B41F 1/40](#); inking units for cylinder presses [B41F 3/81](#))
- M B41F 31/26 · Construction of inking rollers (inking-rollers serving also to apply ink repellentrepellants in rotary lithographic machines [B41F 7/36](#))

Project: MP0534 (B41L)

- U B41L 25/00 Devices for damping printing surfaces, e.g. moistening printing surfaces in connection with lithographic printing (applying liquids or other fluent materials to surfaces in general [B05](#))
- M B41L 25/14 · Inking rollers serving also to apply ink repellentrepellants {(in rotary lithographic machines [B41F 7/36](#))}

Project: RP0064-F (B42D)

- M B42D 25/00 Information-bearing cards or sheet-like structures characterised by identification or security features; Manufacture thereof (printing processes to produce identification or security features [B41M 3/14](#))

WARNING

Groups B42D 25/00 – B42D 25/485 are incomplete pending reclassification of documents from groups B42D 2033/00 – B42D 2033/46 and B42D 2035/00, B42D 2035/02, B42D 2035/06, B42D 2035/08, B42D 2035/12 – B42D 2035/16, B42D 2035/20, B42D 2035/24, B42D 2035/26, B42D 2035/30, B42D 2035/34, B42D 2035/36, B42D 2035/44, and B42D 2035/50.

Until reclassification is complete, groups B42D 2033/00 – B42D 2033/46, B42D 2035/00, B42D 2035/02, B42D 2035/06, B42D 2035/08, B42D 2035/12 – B42D 2035/16, B42D 2035/20, B42D 2035/24, B42D 2035/26, B42D 2035/30, B42D 2035/34, B42D 2035/36, B42D 2035/44, B42D 2035/50 and B42D 25/00 – B42D 25/485 should be considered in order to perform a complete search.

D B42D 2033/00 - B42D 2035/00 Indexing scheme associated with group B42D 25/00, relating to specific characteristics of identity, credit, cheque or like information-bearing cards

D B42D 2033/00 —(Frozen) Structure or construction of identity, credit, cheque or like information-bearing cards

WARNING

Groups B42D 2033/00 - B42D 2033/46 are no longer used for the classification of documents as of October 1, 2014. The backfile of these groups is being reclassified into groups B42D 25/00 - B42D 25/485.

Until reclassification is complete, groups B42D 2033/00 - B42D 2033/46 and B42D 25/00 - B42D 25/485 should be considered in order to perform a complete search.

- D B42D 2033/02 —(Frozen) • Single-layer structure
- D B42D 2033/04 —(Frozen) • Transparent material
- D B42D 2033/06 —(Frozen) • Translucent material
- D B42D 2033/08 —(Frozen) • Opaque material
- D B42D 2033/10 —(Frozen) • Metallic material
- D B42D 2033/12 —(Frozen) • Pressure sensitive material
- D B42D 2033/14 —(Frozen) • Photosensitive material
- D B42D 2033/16 —(Frozen) • Magnetic or magnetisable material
- D B42D 2033/18 —(Frozen) • Reflecting material
- D B42D 2033/20 —(Frozen) • Coloured material; Pigments or inks
- D B42D 2033/22 —(Frozen) • Perforated or incised material
- D B42D 2033/24 —(Frozen) • Reliefs or indentations
- D B42D 2033/26 —(Frozen) • Liquid-crystal material
- D B42D 2033/28 —(Frozen) • Paper or card board
- D B42D 2033/30 —(Frozen) • Plastic material
- D B42D 2033/32 —(Frozen) • Other material
- D B42D 2033/40 —(Frozen) • with a foldable or removable part
- D B42D 2033/42 —(Frozen) • with separable mating or co-operating elements
- D B42D 2033/44 —(Frozen) • combined with other objects

- D B42D 2033/46
—(Frozen)
- • with electrical circuitry

- D B42D 2035/00
—(Frozen)
- Nature or shape of the markings provided on identity, credit, cheque or like information-bearing cards**

WARNING

Groups B42D 2035/00, B42D 2035/02, B42D 2035/06, B42D 2035/08, B42D 2035/12 - B42D 2035/16, B42D 2035/20, B42D 2035/24, B42D 2035/26, B42D 2035/30, B42D 2035/34, B42D 2035/36, B42D 2035/44, and B42D 2035/50 are no longer used for the classification of documents as of October 1, 2014. The backfile of these groups is being reclassified into groups B42D 25/00 - B42D 25/485.

Until reclassification is complete, groups B42D 2035/00, B42D 2035/02, B42D 2035/06, B42D 2035/08, B42D 2035/12 - B42D 2035/16, B42D 2035/20, B42D 2035/24, B42D 2035/26, B42D 2035/30, B42D 2035/34, B42D 2035/36, B42D 2035/44, B42D 2035/50 and B42D 25/00 - B42D 25/485 should be considered in order to perform a complete search.

- D B42D 2035/02
—(Frozen)
- Nature of the markings
- D B42D 2035/06
—(Frozen)
- • Picture of the user
- D B42D 2035/08
—(Frozen)
- • Alphanumerical data
- D B42D 2035/12
—(Frozen)
- Shape of the markings
- D B42D 2035/14
—(Frozen)
- • Dot or raster patterns
- D B42D 2035/16
—(Frozen)
- • Bars or lines
- D B42D 2035/20
—(Frozen)
- • Optical effects
- D B42D 2035/24
—(Frozen)
- • • Colours
- D B42D 2035/26
—(Frozen)
- • • Halftone or interference patterns
- D B42D 2035/30
—(Frozen)
- • Indentations
- D B42D 2035/34
—(Frozen)
- Markings visible under particular conditions or containing coded information
- D B42D 2035/36
—(Frozen)
- • visible in transmitted light, e.g. in a window region
- D B42D 2035/44
—(Frozen)
- Miniaturised markings
- D B42D 2035/50
—(Frozen)
- Corresponding markings appearing in different shapes or at different places

Project: RP0757 (B44D)

- U B44D 3/00** Accessories or implements for use in connection with painting or artistic drawing, not otherwise provided for (hand tools for applying liquids, e.g. paints, to surfaces [B05C 17/00](#), implements for finishing work on buildings, other than painting, [E04F 21/00](#)); Methods or devices for colour determination, selection, or synthesis, e.g. use of colour tables (colorimetry [G01J 3/00](#))
- M B44D 3/06** • Implements for stirring or mixing paints ~~(mixing in general B01F)~~

Project: MP0522 (B60K)

- M B60K 31/00** Vehicle fittings, acting on a single sub-unit only, for automatically controlling vehicle speed, i.e. preventing speed from exceeding an arbitrarily established velocity or maintaining speed at a particular velocity, as selected by the vehicle operator (fittings acting on two or more sub-units [B60W 30/14](#); ~~propulsion unit control in general, see the relevant classes or subclasses, e.g. F02D~~; speedometers [G01P](#); systems or devices for controlling speed in general [G05D 13/00](#) {; {in traffic anti-collision system for road vehicles [G08G 1/16](#)}}

NOTE

In this group:

- the means ordinarily includes a device, e.g. a servomechanism, for operating a velocity-affecting element of the vehicle, e.g. the throttle;
- a means for preventing a vehicle from exceeding a particular speed is often referred to as a "governor", whereas a means for maintaining the vehicle within a relatively narrow speed range is generally designated as "speed control". Since these two functions are frequently interrelated, no attempt has been made to identify such means as being particularly adapted to perform only one, or the other of the functions.

Project: RP0731 (B60R)

- C B60R 1/00** ~~Optical viewing arrangements; Optical viewing arrangements-Real-time viewing arrangements for drivers or passengers using optical image capturing systems, e.g. cameras or video systems specially adapted for use in or on vehicles~~{house mirrors and spies A47G 1/00; } ~~antiglare equipment, e.g. polarising, for windcreens or windows B60J 3/00; {visual aids for tractors B62D 49/0614; } devices per se G02B)~~

NOTE

This group covers optical viewing arrangements using mirrors as well as real-time viewing arrangements using optical image capturing systems, e.g. the special adaptation of cameras or video systems in or on vehicles, for assisting drivers or passengers. In this context, "viewing" refers to a visual assistance of drivers or passengers using mirrors, cameras or the like.

WARNING

Group B60R 1/00 is impacted by reclassification into groups B60R 1/20, B60R 1/22, B60R 1/23, B60R 1/24, B60R 1/25, B60R 1/26, B60R 1/27, B60R 1/28, B60R 1/29, B60R 1/30 and B60R 1/31.

All groups listed in this Warning should be considered in order to perform a complete search.

- U B60R 1/12** • Mirror assemblies combined with other articles, e.g. clocks
- U B60R 2001/1292** • • {with holding means for personal articles}

- N B60R 1/20
- Real-time viewing arrangements for drivers or passengers using optical image capturing systems, e.g. cameras or video systems specially adapted for use in or on vehicles
- WARNING
Groups [B60R 1/20](#) – [B60R 1/31](#) are incomplete pending reclassification of documents from group [B60R 1/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N B60R 1/22
- • for viewing an area outside the vehicle, e.g. the exterior of the vehicle
- N B60R 1/23
- • • with a predetermined field of view
- N B60R 1/24
- • • • in front of the vehicle
- N B60R 1/25
- • • • to the sides of the vehicle
- N B60R 1/26
- • • • to the rear of the vehicle
- N B60R 1/27
- • • • providing all-round vision, e.g. using omnidirectional cameras
- N B60R 1/28
- • • with an adjustable field of view
- N B60R 1/29
- • for viewing an area inside the vehicle, e.g. for viewing passengers or cargo
- N B60R 1/30
- • providing vision in the non-visible spectrum, e.g. night or infrared vision
- N B60R 1/31
- • providing stereoscopic vision

Project: MP0536 (B61C)

- M B61C 7/00
- Other locomotives or motor railcars **characterised by the type of motive power plant used; Locomotives or motor railcars with two or more different kinds or types of motive power**

Project: RP0761 (B61L)

- U B61L 3/00
- Devices along the route for controlling devices on the vehicle or vehicle train, e.g. to release brake, to operate a warning signal**
- B61L 3/006
- {On-board optimisation of vehicle or vehicle train operation (track-side optimisation of operation [B61L 27/0027](#) [B61L 27/16](#))}
- B61L 3/008
- {On-board target speed calculation or supervision (track-side control of safe travel [B61L 27/0038](#) [B61L 27/20](#); speed control circuitry [B60L 3/08](#); speed control of electric drives [B60L 15/20](#))}
- U B61L 3/02
- at selected places along the route, e.g. intermittent control {simultaneous mechanical and electrical control}
- U B61L 3/08
- • controlling electrically
- U B61L 3/12
- • • using magnetic or electrostatic induction; using radio waves
- B61L 3/125
- • • • {using short-range radio transmission (long-range radio transmission [B61L 15/0027](#), [B61L 27/0005](#) [B61L 27/70](#))}
- U B61L 15/00
- Indicators provided on the vehicle or vehicle train for signalling purposes {; On-board control or communication systems}**
- B61L 15/0063
- {Multiple on-board control systems, e.g. "2 out of 3"-systems (trackside multiple control systems [B61L 27/0061](#) [B61L 27/30](#))}
- B61L 15/0072
- {On-board train data handling (trackside train data handling [B61L 27/0077](#) [B61L 27/40](#))}
- B61L 15/0081
- {On-board diagnosis or maintenance (trackside diagnosis or maintenance [B61L 27/0083](#) [B61L 27/50](#))}

M	B61L 27/00	Central railway traffic control systems {; Track-side control or specific communication systems} Trackside control; Communication systems specially adapted therefor
D	B61L 27/0005	<ul style="list-style-type: none"> • {Details of track-side communication} <p><administratively transferred to B61L 27/70></p>
D	B61L 27/0011	<ul style="list-style-type: none"> • {Regulation, e.g. scheduling, time tables} <p><administratively transferred to B61L 27/10></p>
D	B61L 27/0016	<ul style="list-style-type: none"> • {Preparing schedules} <p><administratively transferred to B61L 27/12></p>
D	B61L 27/0022	<ul style="list-style-type: none"> • {Following schedules} <p><administratively transferred to B61L 27/14></p>
D	B61L 27/0027	<ul style="list-style-type: none"> • {Track-side optimisation of vehicle or vehicle train operation (on-board optimisation B61L 3/006)} <p><administratively transferred to B61L 27/16></p>
D	B61L 27/0033	<ul style="list-style-type: none"> • {Crew rosters and itineraries} <p><administratively transferred to B61L 27/18></p>
D	B61L 27/0038	<ul style="list-style-type: none"> • {Track-side control of safe travel of vehicle or vehicle train, e.g. braking curve calculation (on-board target speed calculation and supervision B61L 3/008)} <p><administratively transferred to B61L 27/20></p>
D	B61L 2027/0044	<ul style="list-style-type: none"> • {using European Train Control System [ETCS]} <p><administratively transferred to B61L 2027/202 ADD></p>
D	B61L 2027/005	<ul style="list-style-type: none"> • {using Communication-based Train Control [CBTC]} <p><administratively transferred to B61L 2027/204 ADD></p>
D	B61L 27/0055	<ul style="list-style-type: none"> • {Testing or simulation} <p><administratively transferred to B61L 27/60></p>
D	B61L 27/0061	<ul style="list-style-type: none"> • {Track-side multiple control systems, e.g. switch-over between different systems, "2 out of 3"-systems (on-board multiple control systems B61L 15/0063)} <p><administratively transferred to B61L 27/30></p>
D	B61L 27/0066	<ul style="list-style-type: none"> • {Backup systems, e.g. switching when failures occur} <p><administratively transferred to B61L 27/33></p>
D	B61L 27/0072	<ul style="list-style-type: none"> • {Migration, e.g. parallel installations running simultaneously} <p><administratively transferred to B61L 27/37></p>
D	B61L 27/0077	<ul style="list-style-type: none"> • {Track-side train data handling, e.g. vehicle or vehicle train data, position reports (on-board train data handling B61L 15/0072)} <p><administratively transferred to B61L 27/40></p>
D	B61L 27/0083	<ul style="list-style-type: none"> • {Track-side diagnosis or maintenance, e.g. software upgrades (on-board diagnosis or maintenance B61L 15/0081)} <p><administratively transferred to B61L 27/50></p>
D	B61L 27/0088	<ul style="list-style-type: none"> • {for track-side elements or systems, e.g. trackside supervision of trackside control system conditions} <p><administratively transferred to B61L 27/53></p>
D	B61L 27/0094	<ul style="list-style-type: none"> • {for vehicles or vehicle trains, e.g. trackside supervision of train conditions} <p><administratively transferred to B61L 27/57></p>
U	B61L 27/02	• Manual systems

U	B61L 27/04	• Automatic systems, e.g. controlled by train; Change-over to manual control
N	B61L 27/10	• Operations, e.g. scheduling or time tables
N	B61L 27/12	• • Preparing schedules
N	B61L 27/14	• • Following schedules
N	B61L 27/16	• • Trackside optimisation of vehicle or vehicle train operation
N	B61L 27/18	• • Crew rosters; Itineraries
N	B61L 27/20	• Trackside control of safe travel of vehicle or vehicle train, e.g. braking curve calculation
N	B61L 2027/202	• • {using European Train Control System [ETCS]}
N	B61L 2027/204	• • {using Communication-based Train Control [CBTC]}
N	B61L 27/30	• Trackside multiple control systems, e.g. switch-over between different systems
N	B61L 27/33	• • Backup systems, e.g. switching when failures occur
N	B61L 27/37	• • Migration, e.g. parallel installations running simultaneously
N	B61L 27/40	• Handling position reports or trackside vehicle data
N	B61L 27/50	• Trackside diagnosis or maintenance, e.g. software upgrades
N	B61L 27/53	• • for trackside elements or systems, e.g. trackside supervision of trackside control system conditions
N	B61L 27/57	• • for vehicles or vehicle trains, e.g. trackside supervision of train conditions
N	B61L 27/60	• Testing or simulation
N	B61L 27/70	• Details of trackside communication

Project: RP0616-F (B63B)

M	B63B 71/00	Designing vessels; Predicting their performance <u>WARNING</u> Group B63B 71/00 is incomplete pending reclassification of documents from group B63B 79/00. Groups B63B 79/00 and B63B 71/00 should be considered in order to perform a complete search.
M	B63B 73/00	Building or assembling vessels or marine structures, e.g. hulls or offshore platforms <u>WARNING</u> Group B63B 73/00 is impacted by reclassification into groups B63B 73/10, B63B 73/20, B63B 73/30, B63B 73/40, B63B 73/43, B63B 73/46, B63B 73/50, B63B 73/60, B63B 73/70, B63B 73/72, and B63B 73/74. All groups listed in this Warning should be considered in order to perform a complete search.
M	B63B 73/10	• Building or assembling vessels from prefabricated hull blocks, i.e. complete hull cross-sections <u>WARNING</u> Group B63B 73/10 is incomplete pending reclassification of documents from group B63B 73/00. Groups B63B 73/00 and B63B 73/10 should be considered in order to perform a complete search.

M	B63B 73/20	<ul style="list-style-type: none"> Building or assembling prefabricated vessel modules or parts other than hull blocks, e.g. engine rooms, rudders, propellers, superstructures, berths, holds or tanks <p><u>WARNING</u> Group B63B 73/20 is incomplete pending reclassification of documents from group B63B 73/00. Groups B63B 73/00 and B63B 73/20 should be considered in order to perform a complete search.</p>
M	B63B 73/30	<ul style="list-style-type: none"> Moving or transporting modules or hull blocks to assembly sites, e.g. by rolling, lifting or floating <p><u>WARNING</u> Group B63B 73/30 is incomplete pending reclassification of documents from group B63B 73/00. Groups B63B 73/00 and B63B 73/30 should be considered in order to perform a complete search.</p>
M	B63B 73/40	<ul style="list-style-type: none"> characterised by joining methods <p><u>WARNING</u> Group B63B 73/40 is incomplete pending reclassification of documents from groups B63B 73/00 and B63B 2221/00. Groups B63B 73/00, B63B 2221/00, and B63B 73/40 should be considered in order to perform a complete search.</p>
M	B63B 73/43	<ul style="list-style-type: none"> Welding, e.g. laser welding <p><u>WARNING</u> Group B63B 73/43 is incomplete pending reclassification of documents from groups B63B 73/00, B63B 2221/02, and B63B 2221/04. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63B 73/46	<ul style="list-style-type: none"> Gluing; Taping; Cold-bonding <p><u>WARNING</u> Group B63B 73/46 is incomplete pending reclassification of documents from groups B63B 73/00 and B63B 2221/10. Groups B63B 73/00, B63B 2221/10, and B63B 73/46 should be considered in order to perform a complete search.</p>
M	B63B 73/48	<ul style="list-style-type: none"> {Riveting} <p><u>WARNING</u> Group B63B 73/48 is incomplete pending reclassification of documents from group B63B 2221/06. Groups B63B 2221/06 and B63B 73/48 should be considered in order to perform a complete search.</p>
M	B63B 73/49	<ul style="list-style-type: none"> {by means of threaded members, e.g. screws, threaded bolts or nuts} <p><u>WARNING</u> Group B63B 73/49 is incomplete pending reclassification of documents from group B63B 2221/08. Groups B63B 2221/08 and B63B 73/49 should be considered in order to perform a complete search.</p>

M	B63B 73/50	<ul style="list-style-type: none"> characterised by forming methods, e.g. manufacturing of curved blocks <p><u>WARNING</u> Group B63B 73/50 is incomplete pending reclassification of documents from group B63B 73/00. Groups B63B 73/00 and B63B 73/50 should be considered in order to perform a complete search.</p>
M	B63B 73/60	<ul style="list-style-type: none"> characterised by the use of specific tools or equipment; characterised by automation, e.g. use of robots <p><u>WARNING</u> Group B63B 73/60 is incomplete pending reclassification of documents from group B63B 73/00. Groups B63B 73/00 and B63B 73/60 should be considered in order to perform a complete search.</p>
M	B63B 73/70	<ul style="list-style-type: none"> characterised by using moulds; Moulds or plugs therefor <p><u>WARNING</u> Groups B63B 73/70 – B63B 73/74 are incomplete pending reclassification of documents from group B63B 73/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63B 75/00	<p>Building or assembling floating offshore structures, e.g. semi-submersible platforms, SPAR platforms or wind turbine platforms</p> <p><u>WARNING</u> Group B63B 75/00 is impacted by reclassification into groups B63B 77/00 and B63B 77/10. Groups B63B 75/00, B63B 77/00, and B63B 77/10 should be considered in order to perform a complete search.</p>
M	B63B 77/00	<p>Transporting or installing offshore structures on site using buoyancy forces, e.g. using semi-submersible barges, ballasting the structure or transporting of oil-and-gas platforms</p> <p><u>WARNING</u> Groups B63B 77/00 and B63B 77/10 are incomplete pending reclassification of documents from group B63B 75/00. Groups B63B 75/00, B63B 77/00 and B63B 77/10 should be considered in order to perform a complete search.</p>
M	B63B 79/00	<p>Monitoring properties or operating parameters of vessels in operation</p> <p><u>WARNING</u> Group B63B 79/00 is impacted by reclassification into groups B63B 71/00, B63B 79/10, B63B 79/15, B63B 79/20, B63B 79/30, and B63B 79/40. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63B 79/10	<ul style="list-style-type: none"> using sensors, e.g. pressure sensors, strain gauges or accelerometers <p><u>WARNING</u> Groups B63B 79/10 and B63B 79/15 are incomplete pending reclassification of documents from group B63B 79/00. Groups B63B 79/00, B63B 79/10, and B63B 79/15 should be considered in order to perform a complete search.</p>

M	B63B 79/20	<ul style="list-style-type: none"> • using models or simulation, e.g. statistical models or stochastic models <p><u>WARNING</u> Group B63B 79/20 is incomplete pending reclassification of documents from group B63B 79/00. Groups B63B 79/00 and B63B 79/20 should be considered in order to perform a complete search.</p>
M	B63B 79/30	<ul style="list-style-type: none"> • for diagnosing, testing or predicting the integrity or performance of vessels <p><u>WARNING</u> Group B63B 79/30 is incomplete pending reclassification of documents from group B63B 79/00. Groups B63B 79/00 and B63B 79/30 should be considered in order to perform a complete search.</p>
M	B63B 79/40	<ul style="list-style-type: none"> • for controlling the operation of vessels, e.g. monitoring their speed, routing or maintenance schedules <p><u>WARNING</u> Group B63B 79/40 is incomplete pending reclassification of documents from group B63B 79/00. Groups B63B 79/00 and B63B 79/40 should be considered in order to perform a complete search.</p>
M	B63B 83/00	<p>Rebuilding or retrofitting vessels, e.g. retrofitting ballast water treatment systems</p> <p><u>WARNING</u> Group B63B 83/00 is impacted by reclassification into groups B63B 83/10, B63B 83/20, B63B 83/30, and B63B 83/40. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	B63B 83/10	<ul style="list-style-type: none"> • for increasing cargo capacity <p><u>WARNING</u> Group B63B 83/10 is incomplete pending reclassification of documents from group B63B 83/00. Groups B63B 83/00 and B63B 83/10 should be considered in order to perform a complete search.</p>
M	B63B 83/20	<ul style="list-style-type: none"> • for conversion to a different use, e.g. for converting tankers into a FPSO-FLNG units <p><u>WARNING</u> Group B63B 83/20 is incomplete pending reclassification of documents from group B63B 83/00. Groups B63B 83/00 and B63B 83/20 should be considered in order to perform a complete search.</p>
M	B63B 83/30	<ul style="list-style-type: none"> • for improving energy efficiency, e.g. by improving hydrodynamics or by upgrading the power plant <p><u>WARNING</u> Group B63B 83/30 is incomplete pending reclassification of documents from group B63B 83/00. Groups B63B 83/00 and B63B 83/30 should be considered in order to perform a complete search.</p>

- M B63B 83/40 • for reducing risks of pollution or contamination; for improving safety

WARNING

Group B63B 83/40 is incomplete pending reclassification of documents from group B63B 83/00.

Groups B63B 83/00 and B63B 83/40 should be considered in order to perform a complete search.

- M B63B 2221/00 **Methods and means for joining members or elements**

WARNING

Group B63B 2221/00 is impacted by reclassification into group B63B 73/40.

Groups B63B 2221/00 and B63B 73/40 should be considered in order to perform a complete search.

- M B63B 2221/02 • by welding

WARNING

Group B63B 2221/02 is impacted by reclassification into group B63B 73/43.

Groups B63B 2221/02 and B63B 73/43 should be considered in order to perform a complete search.

- M B63B 2221/04 • by soldering

WARNING

Group B63B 2221/04 is impacted by reclassification into group B63B 73/43.

Groups B63B 2221/04 and B63B 73/43 should be considered in order to perform a complete search.

- M B63B 2221/06 • by riveting

WARNING

Group B63B 2221/06 is impacted by reclassification into group B63B 73/48.

Groups B63B 2221/06 and B63B 73/48 should be considered in order to perform a complete search.

- M B63B 2221/08 • by means of threaded members, e.g. screws, threaded bolts or nuts

WARNING

Group B63B 2221/08 is impacted by reclassification into group B63B 73/49.

Groups B63B 2221/08 and B63B 73/49 should be considered in order to perform a complete search.

- M B63B 2221/10 • using adhesives

WARNING

Group B63B 2221/10 is impacted by reclassification into group B63B 73/46.

Groups B63B 2221/10 and B63B 73/46 should be considered in order to perform a complete search.

Project: N/A (B65D)

- U B65D 75/00 **Packages comprising articles or materials partially or wholly enclosed in strips, sheets, blanks, tubes, or webs of flexible sheet material, e.g. in folded wrappers (B65D 71/00 takes precedence; wrapping B65B 11/00)**

- U B65D 75/28 • Articles or materials wholly enclosed in composite wrappers, i.e. wrappers formed by associating or interconnecting two or more sheets or blanks

- U B65D 75/30 • • Articles or materials enclosed between two opposed sheets or blanks having their margins united, e.g. by pressure-sensitive adhesive, crimping, heat-sealing, or welding

- U B65D 75/32 • • • one or both sheets or blanks being recessed to accommodate contents
- U B65D 75/36 • • • • one sheet or blank being recessed and the other formed of relatively stiff flat sheet material, e.g. blister packages {, the recess or recesses being preformed ([B65D 73/0057](#), [B65D 73/0092](#) take precedence)}
- B65D 2075/363 • • • • {the recess presenting a lateral or a ~~frontal~~[frontal](#) opening}

Project: MP0534 (B65D)

- U B65D 81/00 **Containers, packaging elements, or packages, for contents presenting particular transport or storage problems, or adapted to be used for non-packaging purposes after removal of contents**
- U B65D 81/24 • Adaptations for preventing deterioration or decay of contents; Applications to the container or packaging material of food preservatives, fungicides, pesticides or animal repellants (with thermal insulation [B65D 81/38](#))
- M B65D 81/28 • • Applications of food preservatives, fungicides, pesticides, ~~or animal repellents~~
[or animal repellants](#)

Project: RP0518-F (B65D)

- U B65D 85/00 Containers, packaging elements or packages, specially adapted for particular articles or materials ([B65D 71/00](#), [B65D 83/00](#) take precedence; hand implements or travelling equipment [A45C](#); cosmetic or toilet equipment [A45D](#); packages for surgical knives, scalpels or blades therefor [A61B 17/3215](#); containers specially adapted for medical or pharmaceutical purposes [A61J 1/00](#); paint cans [B44D 3/12](#); oil cans [F16N 3/04](#); containers for carrying small arms [F41C 33/06](#); packaging of ammunition or explosive charges [F42B 39/00](#); containers for record carriers, specially adapted for cooperation with the recording or reproducing apparatus [G11B 23/00](#))

NOTE

Attention is drawn to Note (5) following the title of this subclass.

- U B65D 85/07 • for compressible or flexible articles (for wearing apparel [B65D 85/18](#))
- U B65D 85/08 • • rod-shaped or tubular
- U B65D 85/10 • • • for cigarettes
- U B65D 85/1036 • • • • {Containers formed by erecting a rigid or semi-rigid blank}
- M B65D 85/1045 • • • • • {having a cap-like lid hinged to an edge}

WARNING

Group B65D 85/1045 is impacted by reclassification into groups B65D 85/1048, B65D 85/10484, B65D 85/1056, B65D 85/10564, B65D 85/10566, and B65D 85/10568.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B65D 85/1048 • • • • • {characterized by the shape of the container}

WARNING

Groups B65D 85/1048 and B65D 85/10484 are incomplete pending reclassification of documents from groups B65D 85/1045 and B65D 85/1054.
All groups listed in this Warning should be considered in order to perform a complete search.

- M B65D 85/1054 {combined with an outer sleeve connected to the lid}

WARNING

Group B65D 85/1054 is impacted by reclassification into groups B65D 85/1048, B65D 85/10484, B65D 85/1056, B65D 85/10564, B65D 85/10566, and B65D 85/10568.

All groups listed in this Warning should be considered in order to perform a complete search.

- M B65D 85/1056 {characterized by the lid}

WARNING

Group B65D 85/1056 – B65D 85/10568 are incomplete pending reclassification of documents from groups B65D 85/1045 and B65D 85/1054.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: N/A (B65D)

- U B65D 2571/00 **Bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carrier for plural receptacles such as beer cans, pop bottles; Bales of material**
- U B65D 2571/00006 . Palletisable loads, i.e. loads intended to be transported by means of a fork-lift truck
- B65D 2571/00111 . . Arrangements of ~~lexible~~*flexible* binders

Project: RP0757 (B81C)

- U B81C 1/00 **Manufacture or treatment of devices or systems in or on a substrate (B81C 3/00 takes precedence)**
- U B81C 1/00015 . {for manufacturing microsystems}
- B81C 1/00023 . . {without movable or flexible elements (array of static structures for functionalising surfaces in [B81C 1/00206](#); manufacture of MEMS devices for specific applications, *see* relevant places, e.g. microreactors [B01J 19/0093](#), lab-on-chip [B01L 3/5027](#), micromixers ~~B01F 13/0059~~*B01F 33/30*)}

Project: RP0734 (C01F)

- U C01F 7/00 **Compounds of aluminium**
- D C01F 7/001 . {Aluminium carbonate}
- <administratively transferred to [C01F 7/77](#)>
- D C01F 7/002 . {Compounds containing, besides aluminium, two or more other elements, with the exception of oxygen and hydrogen (compounds containing aluminium, fluorine and alkali or alkaline earth metals C01F 7/54; compounds containing sulfur and other cations besides aluminium C01F 7/68)}
- <administratively transferred to [C01F 7/78](#)>
- D C01F 7/004 . . {containing carbonate ions, e.g. dawsonite}
- <administratively transferred to [C01F 7/782](#)>
- D C01F 7/005 . . . {Hydrotalcite}
- <administratively transferred to [C01F 7/785](#)>
- D C01F 7/007 . . {containing, besides aluminium, only anions, e.g. Al(OH)_xCL_y(SO₄)_z (mixed halides C01F 7/48)}
- <administratively transferred to [C01F 7/786](#)>

D	C01F 7/008	<ul style="list-style-type: none"> • • {Ammonium-aluminium-fluorides} • • <administratively transferred to C01F 7/788>
U	C01F 7/02	<ul style="list-style-type: none"> • • Aluminium oxide; Aluminium hydroxide; Aluminates
M	C01F 7/021	<ul style="list-style-type: none"> • • {After-treatment of oxides or hydroxides}
M	C01F 7/022	<ul style="list-style-type: none"> • • • {Classification} <i>Classification</i>
M	C01F 7/023	<ul style="list-style-type: none"> • • • {Grinding, deagglomeration, disintegration} <i>or disintegration</i>
M	C01F 7/025	<ul style="list-style-type: none"> • • • {Granulation, agglomeration} <i>Granulation or agglomeration</i>
M	C01F 7/026	<ul style="list-style-type: none"> • • • {Making or stabilising dispersions}
M	C01F 7/027	<ul style="list-style-type: none"> • • • {Treatment involving fusion or vaporisation}
M	C01F 7/028	<ul style="list-style-type: none"> • • {Beta-aluminas}
M	C01F 7/04	<ul style="list-style-type: none"> • • Preparation of alkali metal aluminates; Aluminium oxide or hydroxide therefrom {(C01F 7/028 takes precedence)}
M	C01F 7/043	<ul style="list-style-type: none"> • • • {Lithium-aluminate} <i>Lithium aluminates</i>
M	C01F 7/046	<ul style="list-style-type: none"> • • • {Stabilisation of aluminates}
M	C01F 7/06	<ul style="list-style-type: none"> • • • by treating aluminous minerals {or waste-like raw materials} with alkali hydroxide-{, e.g. leaching of bauxite according to the Bayer process (obtaining aluminium oxide or hydroxide from the resulting aluminate solution C01F 7/14)}
M	C01F 7/0606	<ul style="list-style-type: none"> • • • • {Make-up of <i>Making-up</i> the alkali hydroxide solution from recycled spent liquor}
M	C01F 7/0613	<ul style="list-style-type: none"> • • • • {Pretreatment of the minerals, e.g. grinding}
M	C01F 7/062	<ul style="list-style-type: none"> • • • • {Digestion} <i>Digestion</i>
M	C01F 7/0626	<ul style="list-style-type: none"> • • • • • {Processes making use of tube digestion only}
M	C01F 7/0633	<ul style="list-style-type: none"> • • • • • {characterised by the use of additives}
M	C01F 7/064	<ul style="list-style-type: none"> • • • • • {Apparatus for digestion, e.g. digester vessels, heat exchangers} <i>or heat exchangers</i>
M	C01F 7/0646	<ul style="list-style-type: none"> • • • • • {Separation of the insoluble residue, e.g. <i>of</i> red mud}
M	C01F 7/0653	<ul style="list-style-type: none"> • • • • • {characterised by the flocculant added to the slurry (final clarification of the aluminate solution C01F 7/47)}
M	C01F 7/066	<ul style="list-style-type: none"> • • • • • {Treatment of the separated residue}
M	C01F 7/0666	<ul style="list-style-type: none"> • • • • • {Process control or regulation-(control per se G05)}
M	C01F 7/0673	<ul style="list-style-type: none"> • • • • • {from phosphate-containing minerals}
M	C01F 7/068	<ul style="list-style-type: none"> • • • • • {from carbonate-containing minerals, e.g. dawsonite}
M	C01F 7/0686	<ul style="list-style-type: none"> • • • • • {from sulfate-containing minerals, e.g. alunite}
M	C01F 7/0693	<ul style="list-style-type: none"> • • • • • {from waste-like raw materials, e.g. fly ash, <i>or</i> Bayer calcination dust}
M	C01F 7/08	<ul style="list-style-type: none"> • • • by treating aluminous minerals with sodium carbonate-{, e.g. sinter processes (C01F 7/0613 and, C01F 7/066 take precedence)}
M	C01F 7/085	<ul style="list-style-type: none"> • • • • {according to the lime-sinter process}
U	C01F 7/14	<ul style="list-style-type: none"> • • • Aluminium oxide or hydroxide from alkali metal aluminates
M	C01F 7/141	<ul style="list-style-type: none"> • • • • {from aqueous aluminate solutions by neutralisation with an acidic agent}
M	C01F 7/142	<ul style="list-style-type: none"> • • • • • {with carbon dioxide}
M	C01F 7/144	<ul style="list-style-type: none"> • • • • {from aqueous aluminate solutions by precipitation due to cooling, e.g. as part of the Bayer process}
M	C01F 7/145	<ul style="list-style-type: none"> • • • • • {characterised by <i>characterised by the use of</i> a crystal growth modifying agent other than aluminium hydroxide seed}
M	C01F 7/147	<ul style="list-style-type: none"> • • • • • {Apparatus for precipitation}

- M C01F 7/148 {Separation of the obtained hydroxide, e.g. ~~filtration, dewatering~~}by *filtration or dewatering*
- M C01F 7/16 . . Preparation of alkaline-earth metal aluminates ~~{or magnesium aluminate}~~or *magnesium aluminates*; Aluminium oxide or hydroxide therefrom ~~{(C01F 7/028 takes precedence)}~~
- M C01F 7/162 . . . {Magnesium aluminates}
- M C01F 7/164 . . . {Calcium aluminates}
- M C01F 7/166 . . . {Strontium aluminates}
- M C01F 7/168 . . . {Barium aluminates}
- M C01F 7/18 . . . Aluminium oxide or hydroxide from alkaline-earth metal aluminates
- M C01F 7/20 . . Preparation of aluminium oxide or hydroxide from aluminous ores ~~with~~*using* acids or salts
- M C01F 7/22 . . . with halides ~~{or halogen acids}~~
- M C01F 7/30 . . Preparation of aluminium oxide or hydroxide by thermal decomposition ~~{or by hydrolysis or oxidation}~~ of aluminium compounds
- M C01F 7/302 . . . {Hydrolysis or oxidation of gaseous aluminium compounds in the ~~gas phase~~}*gaseous phase*
- M C01F 7/304 {of organic aluminium compounds}
- M C01F 7/306 . . . {Thermal decomposition of hydrated chlorides, e.g. ~~of~~ aluminium trichloride hexahydrate}
- M C01F 7/308 . . . {Thermal decomposition of nitrates}
- M C01F 7/32 . . . {Thermal decomposition} of sulfates ~~{including complex sulfates, e.g. alums}~~
- U C01F 7/42 . . Preparation of aluminium oxide or hydroxide from metallic aluminium, e.g. by oxidation
- M C01F 7/422 . . . {by oxidation with a gaseous oxidator at a high temperature}
- M C01F 7/424 {using a plasma}
- M C01F 7/426 . . . {by applying mechanical energy to solid aluminium at a low temperature}
- M C01F 7/428 . . . {by oxidation in an aqueous solution}
- M C01F 7/44 . . Dehydration of aluminium ~~{oxide or}hydroxide~~{ *hydroxide*, i.e. all conversions of one form into another involving a loss of water}
- M C01F 7/441 . . . {by calcination}
- M C01F 7/442 {in presence of a calcination additive}
- M C01F 7/444 {Apparatus therefor}
- M C01F 7/445 {making use of a fluidised bed}
- M C01F 7/447 . . . {by wet processes}
- M C01F 7/448 {using superatmospheric pressure, e.g. hydrothermal conversion of gibbsite into boehmite}
- M C01F 7/46 . . Purification of aluminium oxide, aluminium hydroxide or aluminates ~~{(C01F 7/028 takes precedence)}~~
- M C01F 7/47 . . . of aluminates~~,~~ e.g. removal of compounds of Si, Fe, Ga or of organic compounds from Bayer process liquors}
- M C01F 7/473 {Removal of organic compounds, e.g. sodium oxalate}
- M C01F 7/476 {by oxidation}
- M C01F 7/48 . . ~~Aluminium halides~~*Halides, with or without other cations besides aluminium*
- U C01F 7/50 . . Fluorides
- M C01F 7/52 . . . Double compounds containing both fluorine and other ~~acid {halide}~~*halide* groups

- C C01F 7/56
- Chlorides (containing fluorine [C01F 7/52](#))
- WARNING**
Group [C01F 7/56](#) is impacted by reclassification into group [C01F 7/57](#). Groups [C01F 7/56](#) and [C01F 7/57](#) should be considered in order to perform a complete search.
- N C01F 7/57
- Basic aluminium chlorides, e.g. polyaluminium chlorides
- WARNING**
Group [C01F 7/57](#) is incomplete pending reclassification of documents from group [C01F 7/56](#). Groups [C01F 7/56](#) and [C01F 7/57](#) should be considered in order to perform a complete search.
- M C01F 7/66
- ~~Aluminium nitrates~~ Nitrates, with or without other cations besides aluminium (containing fluorine {[C01F 7/002](#)})
- M C01F 7/68
- Aluminium compounds containing sulfur (containing fluorine {[C01F 7/002](#)})
- U C01F 7/74
- Sulfates
- M C01F 7/741
- {Preparation from elemental aluminium or elemental aluminium containing materials, e.g. foil, ~~dross~~} or dross
- M C01F 7/743
- {Preparation from silicoaluminous materials, e.g. clays, ~~bauxite~~} or bauxite
- M C01F 7/745
- {Preparation from alums, e.g. alunite}
- M C01F 7/746
- {After-treatment, e.g. dehydration, ~~stabilisation~~} or stabilisation
- M C01F 7/748
- {Purification} Purification
- M C01F 7/76
- Double salts {, i.e. compounds containing, besides aluminium and sulfate ions, only other cations}, e.g. alums
- M C01F 7/762
- {Ammonium or alkali metal aluminium sulfates}
- M C01F 7/765
- {Ammonium aluminium sulfates}
- M C01F 7/767
- {Alkaline earth metal aluminium sulfates}
- N C01F 7/77
- Aluminium carbonates
- Q C01F 7/78
- Compounds containing aluminium and two or more other elements, with the exception of oxygen and hydrogen (aluminates [C01F 7/02](#); compounds containing aluminium, fluorine and alkali or alkaline earth metals [C01F 7/54](#); nitrates containing other cations besides aluminium [C01F 7/66](#); sulfides, sulfites or sulfates containing other cations besides aluminium [C01F 7/70](#) - [C01F 7/74](#))
- WARNING**
Group [C01F 7/78](#) is impacted by reclassification into group [C01F 7/784](#). Groups [C01F 7/78](#) and [C01F 7/784](#) should be considered in order to perform a complete search.
- Q C01F 7/782
- containing carbonate ions, e.g. dawsonite
- WARNING**
Group [C01F 7/782](#) is impacted by reclassification into group [C01F 7/784](#). Groups [C01F 7/782](#) and [C01F 7/784](#) should be considered in order to perform a complete search.
- N C01F 7/784
- Layered double hydroxide, e.g. comprising nitrate, sulfate or carbonate ions as intercalating anions
- WARNING**
Group [C01F 7/784](#) is incomplete pending reclassification of documents from groups [C01F 7/78](#) and [C01F 7/782](#).

Groups [C01F 7/78](#), [C01F 7/782](#) and [C01F 7/784](#) should be considered in order to perform a complete search.

- N C01F 7/785 • • • Hydrotalcite
- N C01F 7/786 • • containing, besides aluminium, only anions, e.g. $Al[OH]_xCl_y[SO_4]_z$ (mixed halides [C01F 7/48](#))
- N C01F 7/788 • • Ammonium aluminium fluorides, e.g. ammonium hexafluoroaluminate

Project: RP0632-F (C01F)

M C01F 17/00 Compounds of rare earth metals

NOTES

1. In this group, the following expression is used with the meaning indicated; "rare earth metals" means elements from the group of the lanthanides as well as scandium or yttrium, taken alone or in combination.
2. When classifying a compound in groups [C01F 17/20](#) - [C01F 17/38](#), then its specific preparation or treatment must also be classified in groups [C01F 17/10](#) - [C01F 17/17](#) as long as the compound is characterised by its preparation or treatment and vice versa.

WARNING

~~Group C01F 17/00 is impacted by reclassification into group C01F 17/20.-
Groups C01F 17/00 and C01F 17/20 should be considered in order to perform a complete search.~~

- M C01F 17/10 • Preparation or treatment, e.g. separation or purification

WARNING

~~Group C01F 17/10 is impacted by reclassification into groups C01F 17/13 and C01F 17/17.-
Groups C01F 17/10, C01F 17/13, and C01F 17/17 should be considered in order to perform a complete search.~~

- M C01F 17/13 • • by using ion exchange resins, e.g. chelate resins

WARNING

~~Group C01F 17/13 is incomplete pending reclassification of documents from group C01F 17/10.-
Groups C01F 17/10 and C01F 17/13 should be considered in order to perform a complete search.~~

- M C01F 17/17 • • involving a liquid-liquid extraction

WARNING

~~Group C01F 17/17 is incomplete pending reclassification of documents from group C01F 17/10.-
Groups C01F 17/10 and C01F 17/17 should be considered in order to perform a complete search.~~

- M C01F 17/20 • Compounds containing only rare earth metals as the metal element

WARNING

~~Group C01F 17/20 is incomplete pending reclassification of documents from group C01F 17/00.-
Groups C01F 17/00 and C01F 17/20 should be considered in order to perform a complete search.~~

M	C01F 17/206	<ul style="list-style-type: none"> • • oxide or hydroxide being the only anion <p><u>WARNING</u> Group C01F 17/206 is impacted by reclassification into groups C01F 17/212, C01F 17/218, C01F 17/224, C01F 17/229, C01F 17/235, and C01F 17/241. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C01F 17/212	<ul style="list-style-type: none"> • • Scandium oxides or hydroxides <p><u>WARNING</u> Group C01F 17/212 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/212 should be considered in order to perform a complete search.</p>
M	C01F 17/218	<ul style="list-style-type: none"> • • Yttrium oxides or hydroxides <p><u>WARNING</u> Group C01F 17/218 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/218 should be considered in order to perform a complete search.</p>
M	C01F 17/224	<ul style="list-style-type: none"> • • Oxides or hydroxides of lanthanides <p><u>WARNING</u> Group C01F 17/224 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/224 should be considered in order to perform a complete search.</p>
M	C01F 17/229	<ul style="list-style-type: none"> • • Lanthanum oxides or hydroxides <p><u>WARNING</u> Group C01F 17/229 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/229 should be considered in order to perform a complete search.</p>
M	C01F 17/235	<ul style="list-style-type: none"> • • Cerium oxides or hydroxides <p><u>WARNING</u> Group C01F 17/235 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/235 should be considered in order to perform a complete search.</p>
M	C01F 17/241	<ul style="list-style-type: none"> • • containing two or more rare earth metals, e.g. NdPrO₃ or LaNdPrO₃ <p><u>WARNING</u> Group C01F 17/241 is incomplete pending reclassification of documents from group C01F 17/206. Groups C01F 17/206 and C01F 17/241 should be considered in order to perform a complete search.</p>
M	C01F 17/253	<ul style="list-style-type: none"> • Halides <p><u>WARNING</u> Group C01F 17/253 is impacted by reclassification into group C01F 17/259. Groups C01F 17/253 and C01F 17/259 should be considered in order to perform a complete search.</p>

M C01F 17/259 • • • Oxyhalides

WARNING

Group C01F 17/259 is incomplete pending reclassification of documents from group C01F 17/253.
Groups C01F 17/253 and C01F 17/259 should be considered in order to perform a complete search.

Project: MP0517 (C04B)

M C04B 38/00 Porous mortars, concrete, artificial stone or ceramic ware; Preparation thereof (treating slag with gases or gas generating material [C04B 5/06](#) {; expanded graphite [C04B 35/536](#)})

NOTE

1. Porous mortars, concrete, artificial stone or ceramic ware characterised by the ingredients or compositions are also classified in groups [C04B 2/00](#) - [C04B 35/00](#).

~~1.~~ 2. {Porous materials based on fibres, i.e. materials where the porosity is due to the spaces between the fibres, are not classified in this main group, but in one or more of the other relevant main groups of this subclass, e.g. in [C04B 30/02](#).}

Project: MP0534 (C04B)

U C04B 2103/00 **Function or property of ingredients for mortars, concrete or artificial stone**

U C04B 2103/60 • Agents for protection against chemical, physical or biological attack

M C04B 2103/65 • • ~~Waterproofers or repellents~~ *Water proofers or repellants*

U C04B 2111/00 **Mortars, concrete or artificial stone or mixtures to prepare them, characterised by specific function, property or use**

U C04B 2111/20 • Resistance against chemical, physical or biological attack

M C04B 2111/27 • • Water resistance, *e.g.i.e.* waterproof or water-~~repellant~~*repellent* materials

Project: MP0534 (C06D)

M C06D 3/00 **Generation of smoke or mist (chemical part) (compositions used as biocides, pest repellants or attractants, or plant growth regulators ~~A01N~~, e.g. [A01N 25/18](#))**

Project: MP0517 (C07K)

U C07K 14/00 **Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof**

U C07K 14/005 • from viruses

NOTE

When classifying in this group, subject-matter related to viral proteins shall be classified by the symbol [C07K 14/005](#) together with (a number of) appropriate indexing codes out of [C12N 2710/00](#)-[C12N 2795/00](#)

WARNING

1. From March 15, 2012 groups [C07K 14/01](#) - [C07K 14/19](#) and subgroups thereof are no longer used for the classification of new documents. 2. Reclassification of the back-file follows the principle outlined in the Note here above

U C07K 14/08 • • RNA viruses

- M C07K 14/145 • • • Rhabdoviridae, e.g. rabies virus, Duvenhage virus, ~~Mokda-virus~~, ~~Mokola virus~~ or vesicular stomatitis virus

Project: RP0633-F (C08J)

- U C08J 7/00** **Chemical treatment or coating of shaped articles made of macromolecular substances (coating with metallic material [C23C](#); electrolytic deposition of metals [C25](#))**
- M C08J 7/04 • Coating
- WARNING
Group C08J 7/04 is impacted by reclassification into groups C08J 7/043, C08J 7/044, C08J 7/046, C08J 7/048, C08J 7/05, C08J 7/052, C08J 7/054, and C08J 7/056.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08J 7/042 • • {with two or more layers, where at least one layer of a composition contains a polymer binder}
- WARNING
Group C08J 7/042 is impacted by reclassification into groups C08J 7/043–C08J 7/056.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08J 7/0423 • • • {with at least one layer of inorganic material and at least one layer of a composition containing a polymer binder}
- WARNING
Group C08J 7/0423 is impacted by reclassification into groups C08J 7/043–C08J 7/056.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08J 7/0427 • • {with only one layer of a composition containing a polymer binder (with more layers [C08J 7/042](#))}
- WARNING
Group C08J 7/0427 is impacted by reclassification into groups C08J 7/043–C08J 7/056.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08J 7/043 • • Improving the adhesiveness of the coatings per se, e.g. forming primers (adhesives in the form of films or foils characterised by the primer layers between the polymer carriers and the adhesives [C09J 7/50](#))
- WARNING
Group C08J 7/043 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065.
All groups listed in this Warning should be considered in order to perform a complete search.
- M C08J 7/044 • • Forming conductive coatings; Forming coatings having anti-static properties
- WARNING
Group C08J 7/044 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065.

		All groups listed in this Warning should be considered in order to perform a complete search.
M	C08J 7/046	<ul style="list-style-type: none"> Forming abrasion-resistant coatings; Forming surface-hardening coatings <p>WARNING Group C08J 7/046 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/048	<ul style="list-style-type: none"> Forming gas barrier coatings <p>WARNING Group C08J 7/048 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/05	<ul style="list-style-type: none"> Forming flame retardant coatings or fire resistant coatings <p>WARNING Group C08J 7/05 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/052	<ul style="list-style-type: none"> Forming heat-sealable coatings <p>WARNING Group C08J 7/052 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/054	<ul style="list-style-type: none"> Forming anti-misting or drip-proofing coatings <p>WARNING Group C08J 7/054 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/056	<ul style="list-style-type: none"> Forming hydrophilic coatings <p>WARNING Group C08J 7/056 is incomplete pending reclassification of documents from groups C08J 7/04, C08J 7/042, C08J 7/0423, C08J 7/0427, C08J 7/06, and C08J 7/065. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	C08J 7/06	<ul style="list-style-type: none"> with compositions not containing macromolecular substances <p>WARNING Group C08J 7/06 is impacted by reclassification into groups C08J 7/043, C08J 7/044, C08J 7/046, C08J 7/048, C08J 7/05, C08J 7/052, C08J 7/054, and C08J 7/056.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

M C08J 7/065

- {Low-molecular-weight organic substances, e.g. absorption of additives in the surface of the article}

WARNING

Group C08J 7/065 is impacted by reclassification into groups C08J 7/043, C08J 7/044, C08J 7/046, C08J 7/048, C08J 7/05, C08J 7/052, C08J 7/054, and C08J 7/056.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0757 (C09K)

Q C09K 23/00

Use of substances as emulsifying, wetting, dispersing, or foam-producing agents

WARNING

Group C09K 23/00 is impacted by reclassification into groups C09K 23/005, C09K 23/02, C09K 23/04, C09K 23/06, C09K 23/08, C09K 23/10, C09K 23/12, C09K 23/14, C09K 23/16, C09K 23/18, C09K 23/20, C09K 23/22, C09K 23/24, C09K 23/26, C09K 23/28, C09K 23/30, C09K 23/32, C09K 23/34, C09K 23/36, C09K 23/38, C09K 23/40, C09K 23/42, C09K 23/44, C09K 23/46, C09K 23/48, C09K 23/50, C09K 23/52, C09K 23/54 and C09K 23/56.

All groups listed in this Warning should be considered in order to perform a complete search.

N C09K 23/002

- {Inorganic compounds}

N C09K 23/003

- {Organic compounds containing only carbon and hydrogen}

N C09K 23/005

- {Organic compounds containing selenium or tellurium}

WARNING

Group C09K 23/005 is incomplete pending reclassification of documents from group C09K 23/00.

Groups C09K 23/00 and C09K 23/005 should be considered in order to perform a complete search.

N C09K 23/007

- {Organic compounds containing halogen}

N C09K 23/017

- {Mixtures of compounds}

N C09K 23/018

- {Mixtures of two or more different organic oxygen-containing compounds}

N C09K 23/02

- Alkyl sulfonates or sulfuric acid ester salts derived from monohydric alcohols

WARNING

Group C09K 23/02 is incomplete pending reclassification of documents from group C09K 23/00.

Groups C09K 23/00 and C09K 23/02 should be considered in order to perform a complete search.

N C09K 23/04

- Sulfonates or sulfuric acid ester salts derived from polyhydric alcohols or amino alcohols or derivatives thereof (sulfated or sulfonated fatty oils C09K 23/08)

WARNING

Group C09K 23/04 is incomplete pending reclassification of documents from group C09K 23/00.

Groups C09K 23/00 and C09K 23/04 should be considered in order to perform a complete search.

- N C09K 23/06
- Esters of higher fatty acids with hydroxyalkylated sulfonic acids or salts thereof
- WARNING
Group [C09K 23/06](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/06](#) should be considered in order to perform a complete search.
- N C09K 23/08
- Sulfation or sulfonation products of fats, oils, waxes, or higher fatty acids or esters thereof with monovalent alcohols
- WARNING
Group [C09K 23/08](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/08](#) should be considered in order to perform a complete search.
- N C09K 23/10
- Derivatives of low-molecular-weight sulfocarboxylic acids or sulfopolycarboxylic acids
- WARNING
Group [C09K 23/10](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/10](#) should be considered in order to perform a complete search.
- N C09K 23/12
- Sulfonates of aromatic or alkylated aromatic compounds
- WARNING
Group [C09K 23/12](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/12](#) should be considered in order to perform a complete search.
- Q C09K 23/14
- Derivatives of phosphoric acid
- WARNING
Group [C09K 23/14](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Group [C09K 23/14](#) is also impacted by reclassification into group [C09K 23/20](#).
Groups [C09K 23/00](#), [C09K 23/14](#) and [C09K 23/20](#) should be considered in order to perform a complete search.
- Q C09K 23/16
- Amines or polyamines
- WARNING
Group [C09K 23/16](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Group [C09K 23/16](#) is also impacted by reclassification into group [C09K 23/30](#).
Groups [C09K 23/00](#), [C09K 23/16](#) and [C09K 23/30](#) should be considered in order to perform a complete search.
- N C09K 23/18
- Quaternary ammonium compounds
- WARNING
Group [C09K 23/18](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/18](#) should be considered in order to perform a complete search.

- N C09K 23/20
- *Phosphonium and sulfonium compounds*
- WARNING
Group [C09K 23/20](#) is incomplete pending reclassification of documents from groups [C09K 23/00](#) and [C09K 23/14](#).
Groups [C09K 23/00](#), [C09K 23/14](#) and [C09K 23/20](#) should be considered in order to perform a complete search.
- N C09K 23/22
- *Amides or hydrazides*
- WARNING
Groups [C09K 23/22](#) and [C09K 23/24](#) are incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#), [C09K 23/22](#) and [C09K 23/24](#) should be considered in order to perform a complete search.
- N C09K 23/24
- *Amides of higher fatty acids with aminoalkylated sulfonic acids*
- N C09K 23/26
- *Sulfonamides*
- WARNING
Group [C09K 23/26](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/26](#) should be considered in order to perform a complete search.
- N C09K 23/28
- *Aminocarboxylic acids (proteins and protein hydrolysates [C09K 23/30](#))*
- WARNING
Group [C09K 23/28](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/28](#) should be considered in order to perform a complete search.
- N C09K 23/30
- *Proteins; Protein hydrolysates*
- WARNING
Group [C09K 23/30](#) is incomplete pending reclassification of documents from groups [C09K 23/00](#) and [C09K 23/16](#).
Groups [C09K 23/00](#), [C09K 23/16](#) and [C09K 23/30](#) should be considered in order to perform a complete search.
- N C09K 23/32
- *Heterocyclic compounds*
- WARNING
Group [C09K 23/32](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/32](#) should be considered in order to perform a complete search.
- N C09K 23/34
- *Higher-molecular-weight carboxylic acid esters (esters of higher fatty acids with hydroxyalkylated sulfonic acids or salts thereof [C09K 23/06](#))*
- WARNING
Groups [C09K 23/34](#) and [C09K 23/36](#) are incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#), [C09K 23/34](#) and [C09K 23/36](#) should be considered in order to perform a complete search.
- N C09K 23/36
- *Esters of polycarboxylic acids*

- N C09K 23/38
- Alcohols, e.g. oxidation products of paraffins
- WARNING
Group [C09K 23/38](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/38](#) should be considered in order to perform a complete search.
- N C09K 23/40
- Phenols
- WARNING
Group [C09K 23/40](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/40](#) should be considered in order to perform a complete search.
- N C09K 23/42
- Ethers, e.g. polyglycol ethers of alcohols or phenols
- WARNING
Groups [C09K 23/42](#) - [C09K 23/48](#) are incomplete pending reclassification of documents from group [C09K 23/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C09K 23/44
- • Ether carboxylic acids
- N C09K 23/46
- • Ethers of aminoalcohols
- N C09K 23/48
- • Cellulose ethers
- N C09K 23/50
- Derivatives of lignin
- WARNING
Group [C09K 23/50](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/50](#) should be considered in order to perform a complete search.
- N C09K 23/52
- Natural or synthetic resins or their salts
- WARNING
Group [C09K 23/52](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/52](#) should be considered in order to perform a complete search.
- N C09K 23/54
- Silicon compounds
- WARNING
Group [C09K 23/54](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/54](#) should be considered in order to perform a complete search.
- N C09K 23/56
- Glucosides; Mucilage; Saponins
- WARNING
Group [C09K 23/56](#) is incomplete pending reclassification of documents from group [C09K 23/00](#).
Groups [C09K 23/00](#) and [C09K 23/56](#) should be considered in order to perform a complete search.

Project: RP0757 (C12M)

- U C12M 29/00** {Means for introduction, extraction or recirculation of materials, e.g. pumps (pumps **per se** [F04B](#))}
- C12M 29/06 · {Nozzles; Sprayers; Spargers; Diffusers (**per se** [B01F 3/04106](#)[B01F 23/231](#), [B01J 19/26](#))}
- U C12M 41/00** {Means for regulation, monitoring, measurement or control, e.g. flow regulation (controlling or regulating chemical, physical or physicochemical processes [B01J 19/0006](#); heating or cooling apparatus for laboratory use [B01L 7/00](#); electro optical investigation of individual particles, flow cytometers [G01N 15/14](#); automatic analysis [G01N 35/00](#); controlling or regulating in general [G06N](#))}
- U C12M 41/02 · {of foam (foam prevention during gasification of liquids [B01D 19/02](#))}
- C12M 41/04 · · {Means for foam enhancement (making foam by mixing [B01F 3/04446](#)[B01F 23/235](#))}

Project: RP0735 (C12P)

- U C12P 7/00** **Preparation of oxygen-containing organic compounds**
- M C12P 7/40 · containing a carboxyl group {including Peroxycarboxylic acids ~~{fatty acids C12P 7/6409}~~}
- T C12P 7/62 · Carboxylic acid esters ~~{(fatty acid esters C12P 7/6436)}~~
- WARNING**
Groups [C12P 7/62](#) and [C12P 7/625](#) are incomplete pending reclassification of documents from group [C12P 7/6436](#).
Groups [C12P 7/6436](#), [C12P 7/62](#) and [C12P 7/625](#) should be considered in order to perform a complete search.
- T C12P 7/625 · · ~~{Polyesters of hydroxy- carboxylic acids}~~
- U C12P 7/64 · Fats; Fatty oils; Ester-type waxes; Higher fatty acids, i.e. having at least seven carbon atoms in an unbroken chain bound to a carboxyl group; Oxidised oils or fats
- M C12P 7/6409 · · ~~{Fatty acids}~~
- M C12P 7/6418 · · · ~~{by hydrolysis of Fatty acid esters}~~ [fatty acid esters](#)
- C C12P 7/6427 · · · ~~{Polyunsaturated fatty acids [PUFA], i.e. having 2two or more double bonds in their backbone}~~
- WARNING**
Group [C12P 7/6427](#) is impacted by reclassification into groups [C12P 7/6431](#), [C12P 7/6432](#) and [C12P 7/6434](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N C12P 7/6431 · · · · Linoleic acids [18:2[n-6]]
- WARNING**
Group [C12P 7/6431](#) is incomplete pending reclassification of documents from group [C12P 7/6427](#).
Groups [C12P 7/6431](#) and [C12P 7/6427](#) should be considered in order to perform a complete search.
- N C12P 7/6432 · · · · Eicosapentaenoic acids [EPA]
- WARNING**
Group [C12P 7/6432](#) is incomplete pending reclassification of documents from group [C12P 7/6427](#).

Groups [C12P 7/6432](#) and [C12P 7/6427](#) should be considered in order to perform a complete search.

N C12P 7/6434 . . . Docosahexenoic acids [DHA]

WARNING

Group [C12P 7/6434](#) is incomplete pending reclassification of documents from group [C12P 7/6427](#).

Groups [C12P 7/6434](#) and [C12P 7/6427](#) should be considered in order to perform a complete search.

C C12P 7/6436 . . {Fatty acid esters}

WARNING

Group [C12P 7/6436](#) is impacted by reclassification into groups [C12P 7/62](#) and [C12P 7/625](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C C12P 7/6445 . . {Glycerides} Glycerides

WARNING

Group [C12P 7/6445](#) is impacted by reclassification into group [C12P 7/6458](#). Groups [C12P 7/6445](#) and [C12P 7/6458](#) should be considered in order to perform a complete search.

C C12P 7/6454 . . . {by esterification}

WARNING

Group [C12P 7/6454](#) is impacted by reclassification into group [C12P 7/6458](#).

Groups [C12P 7/6454](#) and [C12P 7/6458](#) should be considered in order to perform a complete search.

N C12P 7/6458 . . . by transesterification, e.g. interesterification, ester interchange, alcoholysis or acidolysis

WARNING

Group [C12P 7/6458](#) is incomplete pending reclassification of documents from groups [C12P 7/6445](#), [C12P 7/6454](#), [C12P 7/6472](#), [C12P 7/6481](#) and [C12P 7/649](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M C12P 7/6463 . . . {obtained from glyceride producing microorganisms, e.g. single cell oil}

C C12P 7/6472 . . . {containing polyunsaturated fatty acid [PUFA] residues, i.e. having 2two or more double bonds in their backbone}

WARNING

Group [C12P 7/6472](#) is impacted by reclassification into group [C12P 7/6458](#).

Groups [C12P 7/6472](#) and [C12P 7/6458](#) should be considered in order to perform a complete search.

C C12P 7/6481 . . . {Phosphoglycerides (phosphoglycerides having carboxylic acids with less than 7 carbon atoms, seven carbon atoms [C12P 7/62](#))}

WARNING

Group [C12P 7/6481](#) is impacted by reclassification into group [C12P 7/6458](#).

Groups C12P 7/6481 and C12P 7/6458 should be considered in order to perform a complete search.

- C C12P 7/649
- • {Biodiesel, i.e. **Fattyfatty** acid alkyl esters}

WARNING

Group C12P 7/649 is impacted by reclassification into group C12P 7/6458. Groups C12P 7/649 and C12P 7/6458 should be considered in order to perform a complete search.

Project: RP0146-F (C21B)

- U C21B 13/00 Making spongy iron or liquid steel, by direct processes**

- M C21B 13/02
- in shaft furnaces

WARNING

Group C21B 13/02 is impacted by reclassification into group C21B 13/029. Groups C21B 13/02 and C21B 13/029 should be considered in order to perform a complete search.

- M C21B 13/029
- • {Introducing coolant gas in the shaft furnaces}

WARNING

Group C21B 13/029 is incomplete pending reclassification of documents from group C21B 13/02. Groups C21B 13/02 and C21B 13/029 should be considered in order to perform a complete search.

- M C21B 2100/00 Handling of exhaust gases produced during the manufacture of iron or steel**

WARNING

Groups C21B 2100/02 - C21B 2100/06 are no longer used for the classification of documents as of May 1, 2017. The content of these groups is being reclassified into groups C21B 2100/20 - C21B 2100/80. Groups C21B 2100/02 - C21B 2100/06 and C21B 2100/20 - C21B 2100/80 should be considered in order to perform a complete search.

- D C21B 2100/02
—(Frozen)
- Treatment of the exhaust gases
- D C21B 2100/04
—(Frozen)
- Recirculation of the exhaust gases
- D C21B 2100/06
—(Frozen)
- Energy from waste gases used in other processes
- M C21B 2100/20
- Increasing the gas reduction potential of recycled exhaust gases

WARNING

Groups C21B 2100/20 - C21B 2100/284 are incomplete pending reclassification of documents from groups C21B 2100/02 - C21B 2100/06. Groups C21B 2100/02 - C21B 2100/06 and C21B 2100/20 - C21B 2100/284 should be considered in order to perform a complete search.

- M C21B 2100/40
- Gas purification of exhaust gases to be recirculated or used in other metallurgical processes

WARNING

Groups C21B 2100/40 - C21B 2100/44 are incomplete pending reclassification of documents from groups C21B 2100/02 - C21B 2100/06.

Groups C21B 2100/02–C21B 2100/06 and C21B 2100/40–C21B 2100/44 should be considered in order to perform a complete search.

- M C21B 2100/60 • Process control or energy utilisation in the manufacture of iron or steel

WARNING

Groups C21B 2100/60–C21B 2100/66 are incomplete pending reclassification of documents from groups C21B 2100/02–C21B 2100/06.

Groups C21B 2100/02–C21B 2100/06 and C21B 2100/60–C21B 2100/66 should be considered in order to perform a complete search.

- M C21B 2100/80 • Interaction of exhaust gases produced during the manufacture of iron or steel with other processes

WARNING

Group C21B 2100/80 is incomplete pending reclassification of documents from groups C21B 2100/02–C21B 2100/06.

Groups C21B 2100/02–C21B 2100/06 and C21B 2100/80 should be considered in order to perform a complete search.

Project: RP0730 (C22C)

U C22C 33/00 Making ferrous alloys

- U C22C 33/02 • by powder metallurgy (working metallic powder [B22F](#))
C22C 33/0207 • {Using a mixture of prealloyed powders or a master alloy (mixtures of metal powder in general [B22F 1/0003](#)[B22F 1/09](#))}

Project: RP0750 (C25B)

C C25B 1/00 Electrolytic production of inorganic compounds or non-metals

WARNING

Group [C25B 1/00](#) is impacted by reclassification into groups [C25B 1/01](#), [C25B 1/135](#), [C25B 1/23](#), [C25B 1/27](#), and [C25B 1/50](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U C25B 1/01 • Products

WARNING

Group [C25B 1/01](#) is incomplete pending reclassification of documents from group [C25B 1/00](#).

Groups [C25B 1/00](#) and [C25B 1/01](#) should be considered in order to perform a complete search.

- U C25B 1/02 • • Hydrogen or oxygen

- C C25B 1/04 • • • by electrolysis of water

WARNING

Group [C25B 1/04](#) is incomplete pending reclassification of documents from groups [group C25B 9/70](#) and [C25B 9/73](#).

Group [C25B 1/04](#) is also impacted by reclassification into groups [C25B 1/042](#), [C25B 1/044](#), [C25B 9/05](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/73](#), [C25B 9/75](#), [C25B 9/77](#), [C25B 11/00](#), and [C25B 11/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- T C25B 1/042
- • • *by electrolysis* of steam
- WARNING
Group [C25B 1/042](#) is incomplete pending reclassification of documents from group [C25B 1/04](#).
Groups [C25B 1/04](#) and [C25B 1/042](#) should be considered in order to perform a complete search.
- T C25B 1/044
- • • *of producing* mixed hydrogen and oxygen gas, e.g. Brown's gas [HHO]
- WARNING
Group [C25B 1/044](#) is incomplete pending reclassification of documents from group [C25B 1/04](#).
Groups [C25B 1/04](#) and [C25B 1/044](#) should be considered in order to perform a complete search.
- U C25B 1/14
- Alkali metal compounds
- M C25B 1/16
- • Hydroxides (by simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine [C25B 1/34](#))
- WARNING
~~Group C25B 1/16 is impacted by reclassification into group C25B 1/34. Groups C25B 1/16 and C25B 1/34 should be considered in order to perform a complete search.~~
- U C25B 1/24
- Halogens or compounds thereof
- M C25B 1/26
- • Chlorine; Compounds thereof (by simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine [C25B 1/34](#))
- WARNING
~~Group C25B 1/26 is impacted by reclassification into group C25B 1/34. Groups C25B 1/26 and C25B 1/34 should be considered in order to perform a complete search.~~
- M C25B 1/34
- Simultaneous production of alkali metal hydroxides and chlorine, oxyacids or salts of chlorine, e.g. by chlor-alkali electrolysis
- WARNING
~~Group C25B 1/34 is incomplete pending reclassification of documents from groups C25B 1/16 and C25B 1/26. Groups C25B 1/16, C25B 1/26, and C25B 1/34 should be considered in order to perform a complete search.~~
- C C25B 3/00**
- Electrolytic production of organic compounds**
- WARNING
Group [C25B 3/00](#) is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#), ~~[C25B 3/13](#)~~, [C25B 3/20](#), [C25B 3/21](#), ~~[C25B 3/23](#)~~, ~~[C25B 3/25](#)~~, and [C25B 3/26](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M C25B 3/01
- Products
- WARNING
Groups [C25B 3/01](#), ~~[C25B 3/03](#)~~, ~~[C25B 3/13](#)~~, [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#) and [C25B 3/11](#) are incomplete pending reclassification of documents from groups [C25B 3/00](#), [C25B 3/23](#), [C25B 3/25](#), [C25B 3/27](#), [C25B 3/28](#), [C25B 3/29](#), and [C25B 3/295](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U C25B 3/20

- Processes

WARNING

Group [C25B 3/20](#) is incomplete pending reclassification of documents from group [C25B 3/00](#).

Groups [C25B 3/00](#) and [C25B 3/20](#) should be considered in order to perform a complete search.

C C25B 3/23

- • Oxidation (halogenation [C25B 3/27](#))

WARNING

~~Group C25B 3/23 is incomplete pending reclassification of documents from group C25B 3/00.~~

~~Group C25B 3/23 is also impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, C25B 3/21, C25B 3/27, and C25B 3/28.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Group C25B 3/23 is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#). All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 3/25

- • Reduction

WARNING

~~Group C25B 3/25 is incomplete pending reclassification of documents from group C25B 3/00.~~

~~Group C25B 3/25 is also impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, C25B 3/21, and C25B 3/26.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Group C25B 3/25 is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#), [C25B 3/21](#) and [C25B 3/26](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 3/27

- • Halogenation

WARNING

~~Group C25B 3/27 is incomplete pending reclassification of documents from group C25B 3/23.~~

~~Group C25B 3/27 is also impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, and C25B 3/21.~~

~~All groups listed in this Warning should be considered in order to perform a complete search.~~

Group C25B 3/27 is impacted by reclassification into groups [C25B 3/01](#), [C25B 3/03](#), [C25B 3/05](#), [C25B 3/07](#), [C25B 3/09](#), [C25B 3/11](#) and [C25B 3/21](#). All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 3/28

- • Fluorination

WARNING

Group C25B 3/28 is incomplete pending reclassification of documents from group C25B 3/23.

Group C25B 3/28 is also impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, and C25B 3/21.

All groups listed in this Warning should be considered in order to perform a complete search.

Group C25B 3/28 is impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11 and C25B 3/21. All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 3/29

- • Coupling reactions

WARNING

Group C25B 3/29 is impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, and C25B 3/21.

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 3/295

- • {hydrodimerisation}

WARNING

Group C25B 3/295 is impacted by reclassification into groups C25B 3/01, C25B 3/03, C25B 3/05, C25B 3/07, C25B 3/09, C25B 3/11, C25B 3/13, and C25B 3/21.

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 9/00

Cells or assemblies of cells; Constructional parts of cells; Assemblies of constructional parts, e.g. electrode-diaphragm assemblies; Process-related cell features

WARNING

Group C25B 9/00 is impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/07, C25B 9/09, C25B 9/13, C25B 9/15, C25B 9/17, C25B 9/23, C25B 9/40, C25B 9/50, C25B 9/60, and C25B 9/67.

All groups listed in this Warning should be considered in order to perform a complete search.

M C25B 9/01

- Electrolytic cells characterised by shape or form

WARNING

Groups C25B 9/01 and C25B 9/015 are incomplete pending reclassification of documents from group groups C25B 9/00, C25B 9/17, C25B 9/19, C25B 9/23, C25B 9/30, C25B 9/70, C25B 9/73, C25B 9/75 and C25B 9/77.

Groups All C25B 9/00, groups C25B 9/01, and listed in C25B 9/015 this Warning should be considered in order to perform a complete search.

M C25B 9/05

- Pressure cells

WARNING

Group C25B 9/05 is incomplete pending reclassification of documents from groups C25B 1/04, C25B 9/00 and, C25B 9/17, C25B 9/19, C25B 9/23, C25B 9/70, C25B 9/73, C25B 9/75 and C25B 9/77.

~~Groups All C25B 9/00, groups C25B 9/70, and listed in C25B 9/05~~ this Warning should be considered in order to perform a complete search.

M C25B 9/07

- Common duct cells

WARNING

Group C25B 9/07 is incomplete pending reclassification of documents from ~~group groups C25B 9/00, C25B 9/17, C25B 9/30, C25B 9/70, C25B 9/73 and C25B 9/75.~~

~~Groups All C25B 9/00 and groups listed C25B 9/07~~ in this Warning should be considered in order to perform a complete search.

M C25B 9/09

- Fused bath cells

WARNING

Group C25B 9/09 is incomplete pending reclassification of documents from ~~group groups C25B 9/00, C25B 9/17, C25B 9/19, C25B 9/23, C25B 9/70, C25B 9/73, C25B 9/75 and C25B 9/77.~~

~~Groups All C25B 9/00 and groups listed C25B 9/09~~ in this Warning should be considered in order to perform a complete search.

M C25B 9/13

- Single electrolytic cells with circulation of an electrolyte

WARNING

Groups C25B 9/13 and C25B 9/15 are incomplete pending reclassification of documents from ~~group groups C25B 9/00, C25B 9/17, C25B 9/19, C25B 9/23, C25B 9/30, C25B 9/70, C25B 9/73, C25B 9/75 and C25B 9/77.~~

~~Groups All C25B 9/00, groups C25B 9/13, and listed in C25B 9/15~~ this Warning should be considered in order to perform a complete search.

C C25B 9/17

- Cells comprising dimensionally-stable non-movable electrodes; Assemblies of constructional parts thereof

WARNING

~~Group C25B 9/17 is incomplete pending reclassification of documents from group C25B 9/00.~~

~~Groups C25B 9/00 and C25B 9/17 should be considered in order to perform a complete search.~~

Group C25B 9/17 is impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/07, C25B 9/09, C25B 9/13, C25B 9/15 and C25B 9/50.

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 9/19

- with diaphragms

WARNING

~~Group C25B 9/19 is impacted by reclassification into group C25B 9/21.~~

~~Groups C25B 9/19 and C25B 9/21 should be considered in order to perform a complete search.~~

Group C25B 9/19 is incomplete pending reclassification of documents from groups C25B 1/04 and C25B 9/73.

Group C25B 9/19 is also impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/09, C25B 9/13, C25B 9/15, C25B 9/21, C25B 9/50, C25B 9/75, C25B 9/77 and C25B 11/036.

All groups listed in this Warning should be considered in order to perform a complete search.

- C C25B 9/23
- • comprising ion-exchange membranes in or on which electrode material is embedded
- WARNING
Group [C25B 9/23](#) is incomplete pending reclassification of documents from ~~group~~groups [C25B 9/00](#)[C25B 1/04](#) and [C25B 9/73](#).
~~Groups~~Group [C25B 9/00](#) and [C25B 9/23](#) is also impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#) and [C25B 9/50](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25B 9/30
- Cells comprising movable electrodes, e.g. rotary electrodes; Assemblies of constructional parts thereof
- WARNING
Group [C25B 9/30](#) is impacted by reclassification into groups [C25B 9/01](#), [C25B 9/015](#), [C25B 9/07](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 11/00](#), [C25B 11/02](#), [C25B 11/033](#), and [C25B 11/034](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25B 9/40
- Cells or assemblies of cells comprising electrodes made of particles; Assemblies of constructional parts thereof
- WARNING
~~Group C25B 9/40 is incomplete pending reclassification of documents from group C25B 9/00.~~
~~Group C25B 9/40 is also impacted by reclassification into groups C25B 9/43, C25B 9/47, C25B 11/02, and C25B 11/037.~~
~~All groups listed in this Warning should be considered in order to perform a complete search.~~
Group [C25B 9/40](#) is impacted by reclassification into groups [C25B 9/43](#), [C25B 9/47](#), [C25B 11/02](#) and [C25B 11/037](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- M C25B 9/50
- Cells or assemblies of cells comprising photoelectrodes; Assemblies of constructional parts thereof
- WARNING
Group [C25B 9/50](#) is incomplete pending reclassification of documents from ~~group~~groups [C25B 9/00](#), [C25B 9/17](#), [C25B 9/19](#), [C25B 9/23](#), [C25B 9/70](#), [C25B 9/73](#), [C25B 9/75](#) and [C25B 9/77](#).
~~Groups~~All [C25B 9/00](#) and groups listed [C25B 9/50](#) in this Warning should be considered in order to perform a complete search.
- C C25B 9/70
- Assemblies comprising two or more cells
- WARNING
Group [C25B 9/70](#) is impacted by reclassification into groups [C25B 1/04](#), [C25B 9/005](#), [C25B 9/01](#), [C25B 9/015](#), [C25B 9/05](#), ~~[C25B 9/005](#)~~[C25B 9/07](#), [C25B 9/09](#), [C25B 9/13](#), [C25B 9/15](#), [C25B 9/50](#), [C25B 11/00](#), and [C25B 11/02](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25B 9/73
- • of the filter-press type
- WARNING
~~Group C25B 9/73 is impacted by reclassification into groups C25B 1/04, C25B 9/75, and C25B 9/77.~~

All groups listed in this Warning should be considered in order to perform a complete search.

Group C25B 9/73 is incomplete pending reclassification of documents from group C25B 1/04.

Group C25B 9/73 is also impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/07, C25B 9/09, C25B 9/13, C25B 9/15, C25B 9/19, C25B 9/23, C25B 9/50, C25B 9/75 and C25B 9/77.

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 9/75

- • having bipolar electrodes

WARNING

Group C25B 9/75 is incomplete pending reclassification of documents from ~~group~~groups C25B 1/04, C25B 9/19, C25B 9/73, C25B 9/77 and C25B 11/036.

~~Groups~~Group C25B 9/73 and C25B 9/75 is also impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/07, C25B 9/09, C25B 9/13, C25B 9/15 and C25B 9/50.

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 9/77

- • having diaphragms

WARNING

Group C25B 9/77 is incomplete pending reclassification of documents from ~~group~~groups C25B 1/04, C25B 9/19, C25B 9/73 and C25B 11/036.

~~Groups~~Group C25B 9/73 and C25B 9/77 is also impacted by reclassification into groups C25B 9/01, C25B 9/015, C25B 9/05, C25B 9/09, C25B 9/13, C25B 9/15, C25B 9/50 and C25B 9/75.

All groups listed in this Warning should be considered in order to perform a complete search.

U C25B 11/00

Electrodes; Manufacture thereof not otherwise provided for

WARNING

Group C25B 11/00 is incomplete pending reclassification of documents from groups C25B 1/04, C25B 9/30, and C25B 9/70.

All groups listed in this Warning should be considered in order to perform a complete search.

U C25B 11/02

- characterised by shape or form

WARNING

Group C25B 11/02 is incomplete pending reclassification of documents from groups C25B 1/04, C25B 9/30, C25B 9/40, and C25B 9/70.

All groups listed in this Warning should be considered in order to perform a complete search.

U C25B 11/03

- • perforated or foraminous

C C25B 11/031

- • Porous electrodes

WARNING

Group C25B 11/031 is impacted by reclassification into group C25B 11/032.

Groups C25B 11/031 and C25B 11/032 should be considered in order to perform a complete search.

- C C25B 11/036
- Bipolar electrodes
- WARNING
Group C25B 11/036 is incomplete pending reclassification of documents from group C25B 9/19.
Group C25B 11/036 is also impacted by reclassification into groups C25B 9/75 and C25B 9/77.
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25B 11/04
- characterised by the material
- WARNING
 Group [C25B 11/04](#) is impacted by reclassification into groups [C25B 11/042](#), [C25B 11/046](#), [C25B 11/047](#), [C25B 11/048](#), ~~and C25B 11/049~~ and [C25B 11/051](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- U C25B 11/042
- Electrodes formed of a single material
- WARNING
 Group [C25B 11/042](#) is incomplete pending reclassification of documents from group [C25B 11/04](#).
 Groups [C25B 11/042](#) and [C25B 11/04](#) should be considered in order to perform a complete search.
- C C25B 11/043
- Carbon, e.g. diamond or graphene
- WARNING
 Group [C25B 11/043](#) is impacted by reclassification into group [C25B 11/044](#).
 Groups [C25B 11/043](#) and [C25B 11/044](#) should be considered in order to perform a complete search.
- C C25B 11/051
- Electrodes formed of electrocatalysts on a substrate or carrier
- WARNING
 Group C25B 11/051 is impacted by reclassification into groups C25B 11/052, C25B 11/053, C25B 11/054, C25B 11/055, C25B 11/056, C25B 11/057, C25B 11/065, C25B 11/067, C25B 11/069, C25B 11/073, C25B 11/075, C25B 11/077, C25B 11/079, C25B 11/083, C25B 11/085, C25B 11/087, C25B 11/089, and C25B 11/097.
 All groups listed in this Warning should be considered in order to perform a complete search.
- Group C25B 11/051 is incomplete pending reclassification of documents from group C25B 11/04.*
Group C25B 11/051 is also impacted by reclassification into groups C25B 11/052, C25B 11/053, C25B 11/054, C25B 11/055, C25B 11/056, C25B 11/057, C25B 11/065, C25B 11/067, C25B 11/069, C25B 11/073, C25B 11/075, C25B 11/077, C25B 11/079, C25B 11/083, C25B 11/085, C25B 11/087, C25B 11/089 and C25B 11/097.
All groups listed in this Warning should be considered in order to perform a complete search.
- C C25B 11/055
- characterised by the substrate or carrier material
- WARNING
 Group [C25B 11/055](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).
Group C25B 11/055 is also impacted by reclassification into group C25B 11/056.

Groups [C25B 11/051](#) and, [C25B 11/055](#) and [C25B 11/056](#) should be considered in order to perform a complete search.

M C25B 11/056

- • • consisting of textile or non-woven fabric

WARNING

Group [C25B 11/056](#) is incomplete pending reclassification of documents from ~~group~~ [groups C25B 11/051](#) and [C25B 11/055](#).

Groups [C25B 11/051](#), [C25B 11/055](#) and [C25B 11/056](#) should be considered in order to perform a complete search.

C C25B 11/057

- • • consisting of a single element or compound

WARNING

Group [C25B 11/057](#) is incomplete pending reclassification of documents from group [C25B 11/051](#).

~~Groups~~ [Group C25B 11/051](#) and [C25B 11/057](#) is also impacted by reclassification into groups [C25B 11/063](#), [C25B 11/065](#) and [C25B 11/067](#).

[All groups listed in this Warning](#) should be considered in order to perform a complete search.

C C25B 11/061

- • • • Metal or alloy

WARNING

Group [C25B 11/061](#) is impacted by reclassification into group [C25B 11/063](#).

Groups [C25B 11/061](#) and [C25B 11/063](#) should be considered in order to perform a complete search.

M C25B 11/063

- • • • • Valve metal, e.g. titanium

WARNING

Group [C25B 11/063](#) is incomplete pending reclassification of documents from ~~group~~ [groups C25B 11/057](#) and [C25B 11/061](#).

Groups [C25B 11/057](#), [C25B 11/061](#) and [C25B 11/063](#) should be considered in order to perform a complete search.

M C25B 11/065

- • • • • Carbon

WARNING

Group [C25B 11/065](#) is incomplete pending reclassification of documents from ~~group~~ [groups C25B 11/051](#) and [C25B 11/057](#).

Groups [C25B 11/051](#), [C25B 11/057](#) and [C25B 11/065](#) should be considered in order to perform a complete search.

M C25B 11/067

- • • • • Inorganic compound e.g. ITO, silica or titania

WARNING

Group [C25B 11/067](#) is incomplete pending reclassification of documents from ~~group~~ [groups C25B 11/051](#) and [C25B 11/057](#).

Groups [C25B 11/051](#), [C25B 11/057](#) and [C25B 11/067](#) should be considered in order to perform a complete search.

U C25B 13/00

Diaphragms; Spacing elements

C C25B 13/04

- characterised by the material

WARNING

Group [C25B 13/04](#) is impacted by reclassification into groups [C25B 13/05](#) and [C25B 13/07](#).

Groups [C25B 13/04](#), [C25B 13/05](#), and [C25B 13/07](#) should be considered in order to perform a complete search.

U C25B 15/00

Operating or servicing cells

C C25B 15/02

- Process control or regulation

WARNING

Group [C25B 15/02](#) is impacted by reclassification into groups [C25B 15/021](#), [C25B 15/023](#), [C25B 15/025](#), [C25B 15/027](#), [C25B 15/029](#), [C25B 15/031](#), and [C25B 15/033](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C C25B 15/08

- Supplying or removing reactants or electrolytes; Regeneration of electrolytes

WARNING

Group [C25B 15/08](#) is impacted by reclassification into groups [C25B 15/081](#), [C25B 15/083](#), [C25B 15/085](#), and [C25B 15/087](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0517 (C30B)

M C30B

SINGLE-CRYSTAL-GROWTH (by using ultra-high pressure, e.g. for the formation of diamonds, [B01J 3/06](#)); **UNIDIRECTIONAL SOLIDIFICATION OF EUTECTIC MATERIAL OR UNIDIRECTIONAL DEMIXING OF EUTECTOID MATERIAL**; **REFINING BY ZONE-MELTING OF MATERIAL** (zone-refining of metals or alloys [C22B](#)); **PRODUCTION OF A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE** (casting of metals, casting of other substances by the same processes or devices [B22D](#); working of plastics [B29](#); modifying the physical structure of metals or alloys [C21D](#), [C22F](#)); **SINGLE CRYSTALS OR HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE**; **AFTER-TREATMENT OF SINGLE CRYSTALS OR A HOMOGENEOUS POLYCRYSTALLINE MATERIAL WITH DEFINED STRUCTURE** (for producing semiconductor devices or parts thereof [H01L](#)); **APPARATUS THEREFOR**

NOTES

1. In this subclass, the following expressions are used with the meaning indicated:

- "single-crystal" includes also twin crystals and a predominantly single crystal product;
- "homogeneous polycrystalline material" means a material with crystal particles, all of which have the same chemical composition;
- "defined structure" means the structure of a material with grains which are oriented in a preferential way or have larger dimensions than normally obtained.

2. In this subclass:

- the preparation of crystals or a homogeneous polycrystalline material with defined structure of particular materials or shapes is classified in the group for the process as well as in group [C30B 29/00](#);
- an apparatus specially adapted for a specific process is classified in the appropriate group for the process. Apparatus to be used in more than one kind of process is classified in group [C30B 35/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- U C30B 13/00** Single-crystal growth by zone-melting; Refining by zone-melting (**C30B 17/00** takes precedence; by changing the cross-section of the treated solid **C30B 15/00**; under a protective fluid **C30B 27/00**; zone-refining of specific materials, see the relevant subclasses for the materials)
- U C30B 13/16** • Heating of the molten zone
- M C30B 13/20** • • by induction, e.g. hot wire technique (**C30B 13/18** takes precedence; ~~induction-coils H05B-6/36~~)
- M C30B 13/28** • Controlling or regulating (~~controlling or regulating in general G05~~)
- M C30B 29/00** **Single crystals or homogeneous polycrystalline material with defined structure characterised by the material or by their shape** (~~alloys G22G~~)
- NOTE
In groups **C30B 29/02** - **C30B 29/58**, in the absence of an indication to the contrary, a material is classified in the last appropriate place.
- U C30B 31/00** **Diffusion or doping processes for single crystals or homogeneous polycrystalline material with defined structure; Apparatus therefor**
- U C30B 31/06** • by contacting with diffusion material in the gaseous state
- M C30B 31/18** • • Controlling or regulating (~~controlling or regulating in general G05~~)
- M C30B 33/00** **After-treatment of single crystals or homogeneous polycrystalline material with defined structure** (**C30B 31/00** takes precedence; ~~grinding, polishing B24; mechanical fine working of gems, jewels, crystals B28D 5/00~~)

Project: MP0533 (D01H)

- M D01H** **SPINNING OR TWISTING** (~~unwinding, paying-out, forwarding, winding or coiling filamentary material not intimately associated with spinning or twisting B65H; cores, formers, supports or holders for coiled or wound material, e.g. bobbins B65H; twisting oakum D01G 35/00; crimping or curling of fibres, filaments, or yarns D02G 1/00; making chenille D03D; D04D 3/00; testing yarns, rovings, slivers, fibres, or fibre webs G01~~)
- WARNING
{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
- U D01H 3/00** **Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules**
- U D01H 3/02** • Details (drafting arrangements **D01H 5/00**; twisting arrangements **D01H 7/00**)
- M D01H 3/14** • • Roller-driving arrangements (~~drafting arrangements of general application in spinning machines D01H 5/18~~)
- M D01H 5/00** **Drafting machines or arrangements** {; ~~Drafting machines or arrangements { Threading of roving into drafting machine}(arrangements in which draft is dependent on linear movement of take-up spindles, e.g. in mules; D01H 3/00; devices for combing or orienting fibres for open-end spinning machines D01H 4/30 - {; increasing the strength of a roving or sliver by false-twisting D01H 7/92, during drafting D01H 5/28, after drafting and before spinning according to groups D01H 1/02 - D01H 1/08, D01H 7/90; depositing materials in cans after drafting B65H 54/76 + T)}~~
- M D01H 5/02** • Gill boxes or other drafting machines employing fallers or like pinned bars (~~lubricating fibres in gill boxes D01G 29/00~~)
- U D01H 5/18** • Drafting machines or arrangements without fallers or like pinned bars

M	D01H 5/28	<ul style="list-style-type: none"> • in which fibres are controlled by inserting twist during drafting ({spinning by false-twisting D01H 1/11}; mules D01H 3/00 {; twisting by false-twisting D01H 7/92}; constructions of false-twist devices D02G 1/04)
M	D01H 5/56	<ul style="list-style-type: none"> • Supports for drafting elements (saddles or top roller arms forming essential components of weighting arrangements D01H 5/48)
M	D01H 5/58	<ul style="list-style-type: none"> • Arrangements for traversing drafting elements (traversing arrangements for roving guides D01H 13/06)
U	D01H 5/70	<ul style="list-style-type: none"> • Constructional features of drafting elements
M	D01H 5/72	<ul style="list-style-type: none"> • Fibre-condensing guides (guides for slivers, rovings, or yarns applicable solely for spinning, twisting, curling, or crimping purposes D01H 13/04 {; combined with false twisting before drafting or before spinning according to groups D01H 1/02 – D01H 1/08 : D01H 7/92})
U	D01H 7/00	Spinning or twisting arrangements (for open-end spinning D01H 4/00)
U	D01H 7/02	<ul style="list-style-type: none"> • for imparting permanent twist
M	D01H 7/04	<ul style="list-style-type: none"> • Spindles ({bearings for hollow spindles D01H 7/88}; spindle bearings, supports therefor, in general F16C)
M	D01H 7/18	<ul style="list-style-type: none"> • Arrangements on spindles for suppressing yarn balloons (thread guards or protectors D01H 1/42)
M	D01H 7/24	<ul style="list-style-type: none"> • Flyer or like arrangements (multiple-twist arrangements D01H 7/86)
M	D01H 7/50	<ul style="list-style-type: none"> • Interrelated flyer and bobbin drive mechanisms, e.g. winding-on motions for cotton-roving frames ({variation of machine speed according to growing bobbin diameter D01H 1/34}; package-building mechanisms D01H 1/36)
U	D01H 7/52	<ul style="list-style-type: none"> • Ring-and-traveller arrangements
M	D01H 7/60	<ul style="list-style-type: none"> • Rings or travellers; Manufacture thereof not otherwise provided for ({hand tools for applying travellers to rings D01H 17/02}); Cleaning means for rings
M	D01H 7/64	<ul style="list-style-type: none"> • Ring supports, e.g. ring rails (poker guides or other rail supports D01H 7/10)
U	D01H 7/66	<ul style="list-style-type: none"> • Cap arrangements
M	D01H 7/72	<ul style="list-style-type: none"> • Bobbin-supporting arrangements, e.g. bobbin rails (poker guides or other rail supports D01H 7/10)
U	D01H 7/74	<ul style="list-style-type: none"> • Cup or like arrangements
M	D01H 7/84	<ul style="list-style-type: none"> • Spindles or yarn carriers for co-operation with rotary cups (removing yarn from centrifugal cups on to yarn carriers D01H 9/06)
M	D01H 7/90	<ul style="list-style-type: none"> • Arrangements with two or more {spinning or} twisting devices {of different types} in combination ({D01H 1/006}; D01H 7/86; D01H 7/88 take/takes precedence)
M	D01H 9/00	Arrangements for replacing or removing bobbins, cores, receptacles, or completed packages at paying-out or take-up stations {(arrangements of general interest in the winding of filamentary material {B65H 67/00})}; Combination of spinning-winding machine}
U	D01H 9/02	<ul style="list-style-type: none"> • for removing completed take-up packages and replacing by bobbins, cores, or receptacles at take-up stations; Transferring material between adjacent full and empty take-up elements
M	D01H 9/14	<ul style="list-style-type: none"> • for preparing machines for doffing of yarns, {, e.g. raising cops prior to removal}{stop motions responsive to delivery of a measured length of material D01H 13/24}

- M D01H 11/00** Arrangements for confining or removing dust, fly, or the like (cleaning of running surfaces in open-end spinning machines [D01H 4/22](#); ~~separation in general B01D; cleaning in general B08B; air-conditioning F24F, e.g. by filtering F24F 3/16, F24F 8/10~~)
- M D01H 13/00** Other common constructional features, details or accessories ~~(for open-end spinning D01H 4/00)~~
- M D01H 13/12** • Arrangements preventing snarls or inadvertent doubling of yarns ~~(suction end-catchers D01H 5/68)~~
- M D01H 13/14** • Warning or safety devices, e.g. automatic fault detectors, stop motions {; { Monitoring the entanglement of slivers in drafting arrangements}; ~~(safety devices of general application F16P; indicating devices of general application G08B)~~
- M D01H 13/32** • Counting, measuring, recording or registering devices ~~(in general, see the appropriate subclass of Section G, e.g. {G01B 21/12, G01N 33/36})~~
- M D01H 15/00** Piecing arrangements (for open-end spinning machines [D01H 4/48](#); ~~in machines for producing textile fabrics, see the appropriate subclasses~~) {; Automatic end-finding, e.g. by suction and reverse package rotation; Devices for temporarily storing yarn during piecing (piecing of rovings in combination with replacing of completed packages or cans [D01H 9/005](#))}
- M D01H 17/00** Hand tools ~~(cop-tube applying apparatus D01H 9/12)~~

Project: MP0512 (D03D)**M D03D WOVEN FABRICS; METHODS OF WEAVING; LOOMS**NOTES

1. Class [D06](#) takes precedence over this subclass in respect of processes involving both weaving and finishing steps and in respect of the finished fabrics.
2. A method of weaving is classified in the group designating the fabric woven unless the method is characterised by the operation of a particular loom rather than by the production of a particular fabric. In this case, the method is classified in the group for the loom.
3. In this subclass, further classification in indexing scheme [D10B](#) for aspects relating to textiles is required.
4. In this subclass, if there is any doubt as to which of the essential features is the most important (this is usually the most restrictive feature), the groups designating woven fabrics should be considered in the order in which they appear at each level of indentation, except that groups designating woven pile fabrics are to be considered as taking precedence over groups designating other woven fabrics.

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

- M D03D 9/00** Open-work fabrics ~~(ladder-tape fabrics D03D 1/08)~~
- U D03D 11/00** Double or multi-ply fabrics not otherwise provided for
- M D03D 11/02** • Fabrics formed with pockets, tubes, loops, folds, tucks; or flaps (fabrics for curtain heading tapes [D03D 1/06](#); fabrics consisting of a single tube [D03D 3/02](#))

Project: MP0534 (D03D)

U D03D 15/00 Woven fabrics characterised by the material, structure or properties of the fibres, filaments, yarns, threads or other warp or weft elements used

WARNING

Group [D03D 15/00](#) is impacted by reclassification into groups [D03D 15/20](#), [D03D 15/208](#), [D03D 15/217](#), [D03D 15/225](#), [D03D 15/233](#), [D03D 15/242](#), [D03D 15/25](#), [D03D 15/275](#), [D03D 15/283](#), [D03D 15/30](#), [D03D 15/37](#), [D03D 15/40](#), [D03D 15/41](#), [D03D 15/50](#), [D03D 15/52](#), [D03D 15/527](#), [D03D 15/547](#), [D03D 15/553](#), [D03D 15/573](#), [D03D 15/587](#), [D03D 15/60](#), [D03D 15/62](#), and [D03D 15/67](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U D03D 15/50 • characterised by the properties of the yarns or threads

WARNING

Groups [D03D 15/50](#), [D03D 15/527](#), [D03D 15/547](#), [D03D 15/553](#), [D03D 15/573](#), and [D03D 15/587](#) are incomplete pending reclassification of documents from group [D03D 15/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M D03D 15/527 • • waterproof or water-repellent

Project: MP0512 (D03D)

M D03D 45/00 Looms with automatic weft replenishment (automatic replenishment in smallware looms [D03D 35/00](#), in circular looms [D03D 37/00](#); ~~bobbins rewound on loom D03J 1/12~~)

U D03D 47/00 Looms in which bulk supply of weft does not pass through shed, e.g. shuttleless looms, gripper shuttle looms, dummy shuttle looms (circular looms [D03D 37/00](#))

U D03D 47/12 • wherein single picks of weft thread are inserted, i.e. with shedding between each pick

M D03D 47/24 • • by gripper or dummy shuttle (travelling-wave-shed looms [D03D 47/26](#); inserting mechanisms for shuttles [D03D 49/24](#); ~~gripper or dummy shuttles per se D03J 5/06~~)

U D03D 47/34 • Handling the weft between bulk storage and weft-inserting means

M D03D 47/36 • • Measuring and cutting the weft ~~{; Devices for measuring and temporary storing the weft (cutting weft threads D03D 49/70)}~~

M D03D 49/00 Details or constructional features not ~~peculiar to~~ **specially adapted for looms of a particular type (temples D03J 1/22)**

U D03D 49/04 • Control of the tension in warp or cloth

M D03D 49/06 • • Warp let-off mechanisms ~~(construction of warp beam D02H)~~

M D03D 49/18 • • Devices for indicating warp tension ~~(measuring tension of threads in general G01L 5/04)~~

M D03D 49/20 • • Take-up motions; Cloth beams ~~(storage racks for beams D02H)~~

M D03D 49/24 • Mechanisms for inserting shuttle in shed ~~(shuttles per se D03J 5/00)~~

M D03D 49/70 • Devices for cutting weft threads (cutting weft in looms with automatic weft replenishment [D03D 45/50](#); ~~apparatus for slitting fabric D03J 1/08~~)

Project: RP0264-F (D04H)

- U D04H 1/00 Non-woven fabrics formed wholly or mainly of staple fibres or like relatively short fibres**
- U D04H 1/40
- from fleeces or layers composed of fibres without existing or potential cohesive properties
- WARNING
Groups [D04H 1/407](#) and [D04H 1/413](#) are not complete pending a reorganisation. See also group [D04H 1/40](#)
Group [D04H 1/407](#) is not complete pending a reorganisation. See also group [D04H 1/40](#)
- U D04H 1/42
- • characterised by the use of certain kinds of fibres insofar as this use has no preponderant influence on the consolidation of the fleece
- WARNING
Groups [D04H 1/4209](#) - [D04H 1/52](#) are not complete pending a reorganisation. See also group [D04H 1/4209](#) and other subgroups of [D04H 1/42](#)
- M D04H 1/4382
- • • Stretched reticular film fibres; Composite fibres; Mixed fibres; Ultrafine fibres; Fibres for artificial leather
- WARNING
Group D04H 1/4382 is impacted by reclassification into groups D04H 1/43825 — D04H 1/43838.
All groups listed in this Warning should be considered in order to perform a complete search.
- M D04H 1/43825
- • • {Composite fibres}
- WARNING
Groups D04H 1/43825 — D04H 1/43832 are incomplete pending reclassification of documents from group D04H 1/4382.
All groups listed in this Warning should be considered in order to perform a complete search.
- M D04H 1/43835
- • • {Mixed fibres, e.g. at least two chemically different fibres or fibre blends}
- WARNING
Group D04H 1/43835 is incomplete pending reclassification of documents from Group D04H 1/4382.
Groups D04H 1/4382 and D04H 1/43835 should be considered in order to perform a complete search.
- M D04H 1/43838
- • • {Ultrafine fibres, e.g. microfibres}
- WARNING
Group D04H 1/43838 is incomplete pending reclassification of documents from Group D04H 1/4382.
Groups D04H 1/4382 and D04H 1/43838 should be considered in order to perform a complete search.
- M D04H 1/4391
- • • characterised by the shape of the fibres
- WARNING
Group D04H 1/4391 is impacted by reclassification into groups D04H 1/43912 — D04H 1/43918.
All groups listed in this Warning should be considered in order to perform a complete search.

M	D04H 1/43912	<ul style="list-style-type: none"> • • • {fibres with noncircular cross-sections} <p><u>WARNING</u> Group D04H 1/43912 is incomplete pending reclassification of documents from group D04H 1/4391. Groups D04H 1/4391 and D04H 1/43912 should be considered in order to perform a complete search.</p>
M	D04H 1/43914	<ul style="list-style-type: none"> • • • {hollow fibres} <p><u>WARNING</u> Group D04H 1/43914 is incomplete pending reclassification of documents from group D04H 1/4391. Groups D04H 1/4391 and D04H 1/43914 should be considered in order to perform a complete search.</p>
M	D04H 1/43916	<ul style="list-style-type: none"> • • • {microcellular fibres, e.g. porous or foamed fibres} <p><u>WARNING</u> Group D04H 1/43916 is incomplete pending reclassification of documents from group D04H 1/4391. Groups D04H 1/4391 and D04H 1/43916 should be considered in order to perform a complete search.</p>
M	D04H 1/43918	<ul style="list-style-type: none"> • • • {nonlinear fibres, e.g. crimped or coiled fibres} <p><u>WARNING</u> Group D04H 1/43918 is incomplete pending reclassification of documents from group D04H 1/4391. Groups D04H 1/4391 and D04H 1/43918 should be considered in order to perform a complete search.</p>
U	D04H 1/54	<ul style="list-style-type: none"> • • by welding together the fibres, e.g. by partially melting or dissolving (in combination with needling D04H 1/485)
M	D04H 1/541	<ul style="list-style-type: none"> • • • Composite fibres, e.g. sheath-core, sea-island or side-by-side; Mixed fibres <p><u>WARNING</u> Group D04H 1/541 is impacted by reclassification into groups D04H 1/5412 – D04H 1/5418. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	D04H 1/5412	<ul style="list-style-type: none"> • • • {sheath-core} <p><u>WARNING</u> Group D04H 1/5412 is incomplete pending reclassification of documents from group D04H 1/541. Groups D04H 1/541 and D04H 1/5412 should be considered in order to perform a complete search.</p>
M	D04H 1/5414	<ul style="list-style-type: none"> • • • {side-by-side} <p><u>WARNING</u> Group D04H 1/5414 is incomplete pending reclassification of documents from group D04H 1/541. Groups D04H 1/541 and D04H 1/5414 should be considered in order to perform a complete search.</p>

M D04H 1/5416 . . . {sea-island}

WARNING

Group D04H 1/5416 is incomplete pending reclassification of documents from group D04H 1/541.

Groups D04H 1/541 and D04H 1/5416 should be considered in order to perform a complete search.

M D04H 1/5418 . . . {Mixed fibres, e.g. at least two chemically different fibres or fibre blends}

WARNING

Group D04H 1/5418 is incomplete pending reclassification of documents from group D04H 1/541.

Groups D04H 1/541 and D04H 1/5418 should be considered in order to perform a complete search.

Project: RP0757 (E02B)

U E02B 1/00 Equipment or apparatus for, or methods of, general hydraulic engineering {, e.g. protection of constructions against ice-strains (protection of offshore constructions against ice-loads [E02B 17/0021](#); ice-structures as artificial islands [E02B 17/028](#))}

E02B 1/003 . {Mechanically induced gas or liquid streams in seas, lakes or water-courses for forming weirs or breakwaters; making or keeping water surfaces free from ice, aerating or circulating water, e.g. screens of air-bubbles against sludge formation or salt water entry, pump-assisted water circulation (moving sediments [E02B 3/023](#); for ice breakers [B63B 35/08](#); aerating or circulating water in fish-tanks [A01K 63/042](#); purification of waste water with addition of air [C02F](#); distributing gases in liquids in general [B01F 3/04](#)[B01F 23/20](#))}

Project: MP0534 (E05G)

M E05G 1/00 Safes or strong-rooms for valuables (savings boxes [A45C 1/12](#); floatable safes [B63C 7/30](#); storage containers without attack or fire ~~repellent~~ ~~retardant~~ features [B65D](#); bank buildings in general, e.g. modular construction; ~~or~~ floor plan, [E04H 1/06](#); buildings resistant to earthquakes or war action [E04H 9/00](#))

M E05G 1/12 . with fluent ~~material releasing~~, generating or distributing means, e.g. ~~repellent or fire extinguishing~~~~fire-retardant or fire extinguishing means~~ ([E05G 1/14](#) takes precedence; identifying, scaring or incapacitating burglars, thieves or intruders with smoke, gas, powder or liquid [G08B 15/02](#))

Project: MP0522 (F02D)

M F02D

CONTROLLING COMBUSTION ENGINES (~~cyclically operating valves for combustion engines F01L; controlling combustion engine lubrication F01M; cooling internal combustion engines F01P; supplying combustion engines with combustible mixtures or constituents thereof, e.g. carburettors, injection pumps F02M; starting of combustion engines F02N; controlling of ignition F02P; controlling gas-turbine plants, jet-propulsion plants, or combustion-product engine plants, see the relevant subclasses for these plants~~*vehicle fittings, acting on a single sub-unit only, for automatically controlling vehicle speed B60K 31/00; conjoint control of vehicle sub-units of different type or different function, road vehicle drive control systems for purposes other than the control of a single sub-unit B60W*)

NOTE

1. ~~Attention is drawn to the notes preceding class F01.~~

2. ~~1.~~ In this subclass, the following ~~words are~~*term or expression is* used with the meanings indicated:-

- "~~Fuel~~*fuel* injection" means the introduction of a combustible substance into a space, e.g. cylinder, by means of a pressure source, e.g. a pump, continuously or cyclically acting behind the substance;
- "~~Supercharging~~*supercharging*" means supplying to the working space, e.g. cylinder, combustion-air pressurised by means of a pressure source, e.g. a pump.

2. *Attention is drawn to the Notes preceding class F01.*

3. *In this subclass, electrical aspects of control arrangements are classified in groups F02D 41/00 - F02D 45/00.*

WARNING

{In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}

M F02D 1/00 -
F02D 17/00

Controlling, e.g. regulating, fuel injection (~~peculiar to engines characterised by their use of non-liquid fuels, pluralities of fuels, or non-fuel substances added to the combustible mixtures F02D 19/00; peculiar to supercharged engines F02D 23/00; automatic controllers for prime movers, in general G05D~~)

M F02D 1/00

Controlling fuel-injection pumps, e.g. of high pressure injection type (**F02D 3/00** takes precedence; ~~controlling fuel-injection electrically F02D 41/30 {pumping elements on fuel pressure acting for varying fuel delivery in quantity or timing F02M}~~)

NOTE

- in this subclass the following indexing codes are used:

[F02D 2700/0282](#) and [F02D 2700/10](#)

M F02D 1/16

- Adjustment of injection timing ([F02D 1/02](#) takes precedence ~~{rotary distributor pumps F02M 41/00; by adjustment of pumping elements F02M 59/20}~~)

- M F02D 3/00** Controlling low-pressure fuel injection, i.e. where the ~~air-fuel~~**fuel-air** mixture containing fuel thus injected will be substantially compressed by the compression stroke of the engine, by means other than controlling only an injection pump ~~(controlling fuel-injection electrically F02D 41/30; {controlling the feeding of liquid fuel from storage containers to carburettors or fuel-injection apparatus F02D 33/003; } carburettors F02M)~~
- NOTE
When the control apparatus or system forms part of the low-pressure fuel-injection apparatus it is classified in group [F02M 69/00](#).
- U F02D 9/00** Controlling engines by throttling air or fuel-and-air induction conduits or exhaust conduits
- NOTE
- in this group the following indexing codes are used: [F02D 2700/00](#), [F02D 2700/02](#), [F02D 2700/04](#), [F02D 2700/09](#)
- M F02D 9/08** • Throttle valves specially adapted therefor; Arrangements of such valves in conduits ~~(throttle valves modified for use in or arranged in carburettors F02M; throttle valves in general F16K)~~
- M F02D 11/00** Arrangements for, or adaptations to, non-automatic engine control initiation means, e.g. operator initiated (specially for reversing [F02D 27/00](#); ~~arrangement or mounting of prime-mover control devices in vehicles B60K 26/00~~)
- M F02D 11/04** • characterised by mechanical control linkages (~~with power drive or assistance F02D 11/06~~**F02D 11/06 takes precedence**)
- M F02D 13/00** Controlling the engine output power by varying inlet or exhaust valve operating characteristics, e.g. timing ~~(modifying valve gear F01L)~~
- M F02D 15/00** Varying compression ratio ~~(modifying valve gear F01L)~~
- NOTE
- in this group the following indexing codes are used:
[F02D 2700/03](#)
- U F02D 19/00** Controlling engines characterised by their use of non-liquid fuels, pluralities of fuels, or non-fuel substances added to the combustible mixtures (the non-fuel substances being gaseous [F02D 21/00](#))
- M F02D 19/02** • peculiar to engines working with gaseous fuels ~~(apparatus, or control parts thereof, for mixing gas and air F02M)~~
- M F02D 19/12** • peculiar to engines working with non-fuel substances or with anti-knock agents, e.g. with anti-knock fuel ~~(apparatus, or control parts thereof for delivering such substances or agents F02M)~~
- U F02D 21/00** Controlling engines characterised by their being supplied with non-airborne oxygen or other non-fuel gas
- U F02D 21/06** • peculiar to engines having other non-fuel gas added to combustion air
- M F02D 21/08** • • the other gas being the exhaust gas of engine ~~(circulation of exhaust gas in oxygen-fed engines F02D 21/04)~~
- M F02D 21/10** • • having secondary air added to the fuel-air mixture ~~(apparatus, or control parts thereof, for delivering secondary air F02M)~~

- M F02D 28/00 Programme-control of engines ~~(programme-control specific to a type or purpose covered by one of the groups of this subclass except groups F02D 29/00, F02D 39/00, or by one group of another subclass, e.g. F01L, see that group; programme-control in general G05B 19/00)~~
- M F02D 31/00 - F02D 39/00 Other ~~controlling of~~ **non-electrical control of combustion** engines

Project: MP0536 (F02D)

- M F02D 37/00 **Controlling conjointly** ~~Non-electrical conjoint control of~~ two or more functions of engines, not otherwise provided for

Project: MP0522 (F02D)

- M F02D 37/02 • one of the functions being ignition ~~(ignition-control per se F02P -{, automatically advancing or retarding ignition combined with electronic control of other engine functions, e.g. fuel injection F02P 5/045})~~

Project: N/A (F02D)

- U F02D 41/00 Electrical control of supply of combustible mixture or its constituents **(F02D 43/00 takes precedence {; control of engine starters F02N 11/08, electrical control of engine ignition timing F02P 5/145})**
- U F02D 41/02 • Circuit arrangements for generating control signals
- U F02D 41/14 • • Introducing closed-loop corrections
- U F02D 41/1438 • • {using means for determining characteristics of the combustion gases; Sensors therefor}
- U F02D 41/1473 • • • {characterised by the regulation method}
- F02D 41/1475 • • • • {Regulating the air fuel ratio at a value other than ~~stoichiometry~~ **stoichiometry**}

Project: MP0522 (F02D)

- M F02D 41/18 • • by measuring intake air flow ~~(measuring flow in general G01F)~~
- M F02D 41/20 • Output circuits, e.g. for controlling currents in command coils ~~(current control in inductive loads in general H03K 17/64)~~
- U F02D 41/30 • Controlling fuel injection {(F02D 41/182, F02D 41/24 take precedence)}
- U F02D 41/32 • • of the low pressure type {(F02D 41/3082 takes precedence)}
- M F02D 41/34 • • • with means for controlling injection timing or duration ~~(ignition timing F02P 5/00)~~
- M F02D 41/36 • • • with means for controlling distribution ~~(arrangement of ignition distributors F02P 7/00)~~
- M F02D 43/00 Conjoint electrical control of two or more functions, e.g. ignition, fuel-air mixture, recirculation, supercharging, **or** exhaust-gas treatment ~~(electrical control of exhaust gas treating apparatus per se F01N 9/00)~~
- M F02D 45/00 Electrical control not provided for in groups **F02D 41/00 - F02D 43/00** ~~(electrical control of exhaust gas treating apparatus F01N 9/00; electrical control of one of the functions; ignition, lubricating, cooling, starting, intake-heating, see relevant subclasses for such functions)~~

Project: MP0523 (F02K)

M F02K

JET-PROPULSION PLANTS (arrangement or mounting of jet-propulsion plants in land vehicles or vehicles in general B60K; arrangement or mounting of jet-propulsion plants in waterborne vessels B63H; controlling aircraft attitude, flight direction or altitude by jet reaction B64C; arrangement or mounting of jet-propulsion plants in aircraft B64D; plants characterised by the power of the working fluid being divided between jet-propulsion and another form of propulsion, e.g. propeller, F02B, F02C; features of jet-propulsion plants common to gas-turbine plants, air intakes or fuel supply control of air-breathing jet-propulsion plants F02C F02C 7/00, F02C 9/00)

NOTES

1. In this subclass, the following expression is used with the meaning indicated:

- "jet-propulsion plants" means plants using combustion to produce a fluid stream from which a propulsive thrust on the plant is obtained on the reaction principle.
- {"jet-pipe" means the exhaust duct of a jet engine that carries the exhaust to the nozzle.}

2. Attention is drawn to the notes preceding class F01.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme:

U F02K 1/00

Plants characterised by the form or arrangement of the jet pipe or nozzle; Jet pipes or nozzles peculiar thereto (rocket nozzles F02K 9/97)

M F02K 1/002

- {with means to modify the direction of thrust vector (F02K 1/54 takes precedence; thrust vectoring of rockets F02K 9/80; aerodynamic vectoring surfaces B64C)}

M F02K 1/06

- Varying effective area of jet pipe or nozzle (F02K 1/30 takes precedence by using fluid jets to influence the jet flow F02K 1/30)

U F02K 1/12

- • by means of pivoted flaps

M F02K 1/1207

- • • {of one series of flaps hinged at their upstream ends on a fixed structure (F02K 1/1215 - F02K 1/1276 F02K 1/1292 take precedence)}

M F02K 1/54

- Nozzles having means for reversing jet thrust (F02K 1/32 takes precedence reversing jet thrust using fluid jets F02K 1/32)

U F02K 1/78

- Other construction of jet pipes

U F02K 1/82

- • Jet pipe walls, e.g. liners

M F02K 1/827

- • • {Sound absorbing structures or liners (noise attenuators in general G10K 11/00; noise suppression in air intakes F02C 7/045)}

U F02K 3/00

Plants including a gas turbine driving a compressor or a ducted fan

U F02K 3/02

- in which part of the working fluid by-passes the turbine and combustion chamber

U F02K 3/04

- • the plant including ducted fans, i.e. fans with high volume, low pressure outputs, for augmenting the jet thrust, e.g. of double-flow type

M F02K 3/072

- • • with counter-rotating {, e.g. fan} rotors {(turbomachines with counter-rotating rotors F01D 1/24; gas turbines having counter-rotating rotors F02C 3/067; axial flow pumps for elastic fluids with counter-rotating parts F04D 19/024)}

M F02K 3/08

- with supplementary heating of the working fluid (after-burners, combustion chambers F23R); Control thereof (control of fuel supply therefor F02C 9/26)

U	F02K 7/00	Plants in which the working fluid is used in a jet only, i.e. the plants not having a turbine or other engine driving a compressor or a ducted fan; Control thereof (rocket-engine plants F02K 9/00)
M	F02K 7/005	<ul style="list-style-type: none"> the engine comprising a rotor rotating under the actions of jets issuing from this rotor (in general F01D 1/32; the working fluid being a combustion product F02C 3/165)
M	F02K 9/00	Rocket-engine plants, i.e. plants carrying both fuel and oxidant therefor; Control thereof (chemical composition of propellants C06B, C06D ; launching apparatus for rockets F41F 3/04; explosive charges, ammunition F42B)
M	F02K 9/08	<ul style="list-style-type: none"> using solid propellants (F02K 9/72 takes precedence; using semi-solid or pulverulent propellants F02K 9/70 cartridges for producing gas under pressure F42B 3/04)
M	F02K 9/32	<ul style="list-style-type: none"> Constructional parts; Details <i>not otherwise provided for</i> (shape or structure of solid propellant charges F02K 9/10; starting or ignition means or arrangements F02K 9/95; rocket nozzles F02K 9/97)
U	F02K 9/42	<ul style="list-style-type: none"> using liquid or gaseous propellants (F02K 9/72 takes precedence)
M	F02K 9/425	<ul style="list-style-type: none"> propellants Propellants (C06B, C06D, take precedence)
U	F02K 9/44	<ul style="list-style-type: none"> Feeding propellants
M	F02K 9/46	<ul style="list-style-type: none"> using pumps (pumps per se F04; control of propellant feed pumps F02K 9/563)
M	F02K 9/52	<ul style="list-style-type: none"> Injectors (in general B05B)
M	F02K 9/54	<ul style="list-style-type: none"> Leakage detectors; Purging systems; Filtration systems (filters per se B01D)
U	F02K 9/56	<ul style="list-style-type: none"> Control
M	F02K 9/58	<ul style="list-style-type: none"> Propellant feed valves (valves in general F16K)
M	F02K 9/60	<ul style="list-style-type: none"> Constructional parts; Details <i>not otherwise provided for</i> (starting or ignition means or arrangements F02K 9/95; rocket nozzles F02K 9/97)
M	F02K 9/80	<ul style="list-style-type: none"> characterised by thrust or thrust vector control (F02K 9/26, F02K 9/56, F02K 9/94 take precedence <i>burning control of solid propellants F02K 9/26; feeding control of liquid or gaseous propellants F02K 9/56; re-ignitable, restartable or intermittently operated rocket-engine plants F02K 9/94</i>)

Project: RP0757 (F04F)

U	F04F 5/00	Jet pumps, i.e. devices in which flow is induced by pressure drop caused by velocity of another fluid flow (diffusion pumps F04F 9/00 ; combination of jet pumps with pumps of other than jet type F04B ; use of jet pumps for priming or boosting non-positive-displacement pumps F04D)
U	F04F 5/44	<ul style="list-style-type: none"> Component parts, details, or accessories not provided for in, or of interest apart from, groups F04F 5/02 - F04F 5/42
U	F04F 5/46	<ul style="list-style-type: none"> Arrangements of nozzles
	F04F 5/465	<ul style="list-style-type: none"> {with supersonic flow (mixing of supersonic fluids B01F 5/04 B01F 25/20)}

Project: N/A (F05B)

U	F05B 2240/00	Components
		NOTE
		Components are the basic elements of construction.
U	F05B 2240/20	<ul style="list-style-type: none"> Rotors
U	F05B 2240/21	<ul style="list-style-type: none"> for wind turbines

- U F05B 2240/211 · · · with vertical axis
- F05B 2240/213 · · · · of the ~~Savonius~~*Savonius* type

Project: RP0757 (F22G)

- U F22G 5/00 **Controlling superheat temperature (control systems for steam boilers [F22B](#); regulating or controlling in general [G05](#))**
- F22G 5/12 · by attemperating the superheated steam, e.g. by injected water sprays (spray mixers ~~B01F 5/18~~*B01F 25/70*)

Project: RP0765 (F24D)

- U F24D 5/00 **Hot-air central heating systems (district heating systems [F24D 10/00](#); central heating systems using heat accumulated in storage masses [F24D 11/00](#); air conditioning [F24F](#)); Exhaust gas central heating systems**
- M F24D 5/005 · {combined with solar energy ~~(solar heat collectors per se F24S)~~}
- M F24D 7/00 **Central heating systems employing heat-transfer fluids not covered by groups [F24D 1/00](#) - [F24D 5/00](#), e.g. oil, salt, *or* gas (district heating systems [F24D 10/00](#); central heating systems using heat accumulated in storage masses [F24D 11/00](#))**
- U F24D 17/00 **Domestic hot-water supply systems**
- U F24D 17/02 · using heat pumps
- N F24D 18/00 ***Small-scale combined heat and power [CHP] generation systems specially adapted for domestic heating, space heating or domestic hot-water supply***

NOTE

In this group, it is desirable to add the indexing codes of groups [F24D 2101/00](#) - [F24D 2105/00](#).

WARNING

Group [F24D 18/00](#) is incomplete pending reclassification of documents from groups [F24H 2240/00](#), [F24H 2240/01](#), [F24H 2240/02](#), [F24H 2240/04](#), [F24H 2240/06](#), [F24H 2240/08](#), [F24H 2240/09](#), [F24H 2240/10](#), [F24H 2240/12](#), [F24H 2240/122](#), [F24H 2240/125](#) and [F24H 2240/127](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0758 (F24D)

- U F24D 19/00 **Details (of water or air heaters [F24H 9/00](#); of heat-exchange or heat-transfer apparatus, of general application [F28F](#))**
- C F24D 19/10 · Arrangement or mounting of control or safety devices (only the heater being controlled [F24H 9/20](#))

WARNING

Group [F24D 19/10](#) is impacted by reclassification into groups [F24H 15/00](#) - [F24H 15/493](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1003 · · {for steam heating systems}

WARNING

Group [F24D 19/1003](#) is impacted by reclassification into groups [F24H 15/00](#) - [F24H 15/493](#).

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1006

- {for water heating systems}

WARNING

Group F24D 19/1006 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1009

- • {for central heating}

WARNING

Group F24D 19/1009 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1012

- • • {by regulating the speed of a pump}

WARNING

Group F24D 19/1012 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1015

- • • • {using a valve or valves}

WARNING

Group F24D 19/1015 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1018

- • • • • {Radiator valves}

WARNING

Group F24D 19/1018 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1021

- • • • • {a by pass valve}

WARNING

Group F24D 19/1021 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1024

- • • • • {a multiple way valve}

WARNING

Group F24D 19/1024 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C F24D 19/1027 {hand operated}

WARNING

*Group F24D 19/1027 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/103 {bimetal operated}

WARNING

*Group F24D 19/103 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1033 {motor operated}

WARNING

*Group F24D 19/1033 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1036 {Having differential pressure measurement facilities}

WARNING

*Group F24D 19/1036 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1039 {the system uses a heat pump}

WARNING

*Group F24D 19/1039 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1042 {the system uses solar energy}

WARNING

*Group F24D 19/1042 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1045 {the system uses a heat pump and solar energy}

WARNING

*Group F24D 19/1045 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.
All groups listed in this Warning should be considered in order to perform a complete search.*

C F24D 19/1048 {Counting of energy consumption}

WARNING

Group F24D 19/1048 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1051 . . . {for domestic hot water}

WARNING

Group F24D 19/1051 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1054 . . . {the system uses a heat pump}

WARNING

Group F24D 19/1054 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1057 . . . {the system uses solar energy}

WARNING

Group F24D 19/1057 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/106 . . . {the system uses a heat pump and solar energy}

WARNING

Group F24D 19/106 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1063 . . . {counting of energy consumption}

WARNING

Group F24D 19/1063 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1066 . . . {for the combination of central heating and domestic hot water}

WARNING

Group F24D 19/1066 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24D 19/1069 . . . {regulation in function of the temperature of the domestic hot water}

WARNING

Group F24D 19/1069 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

C	F24D 19/1072	<ul style="list-style-type: none"> • • • {the system uses a heat pump} <p><u>WARNING</u> Group <u>F24D 19/1072</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1075	<ul style="list-style-type: none"> • • • {the system uses solar energy} <p><u>WARNING</u> Group <u>F24D 19/1075</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1078	<ul style="list-style-type: none"> • • • {the system uses a heat pump and solar energy} <p><u>WARNING</u> Group <u>F24D 19/1078</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1081	<ul style="list-style-type: none"> • • • {counting of energy consumption} <p><u>WARNING</u> Group <u>F24D 19/1081</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1084	<ul style="list-style-type: none"> • • {for air heating systems} <p><u>WARNING</u> Group <u>F24D 19/1084</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1087	<ul style="list-style-type: none"> • • • {system using a heat pump} <p><u>WARNING</u> Group <u>F24D 19/1087</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/109	<ul style="list-style-type: none"> • • • {system using solar energy} <p><u>WARNING</u> Group <u>F24D 19/109</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>. All groups listed in this Warning should be considered in order to perform a complete search.</p>
C	F24D 19/1093	<ul style="list-style-type: none"> • • • {system using a heat pump and solar energy} <p><u>WARNING</u> Group <u>F24D 19/1093</u> is impacted by reclassification into groups <u>F24H 15/00</u> - <u>F24H 15/493</u>.</p>

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0765, RP0758 (F24D)

C F24D 19/1096 • {for electric heating systems}

WARNING

Group F24D 19/1096 is impacted by reclassification into groups F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0765 (F24D)

N F24D 2101/00 - F24D 2105/00 **Indexing scheme associated with group F24D 18/00, relating to electric generators, thermal aspects and constructional aspects of small-scale combined heat and power [CHP] systems**

N F24D 2101/00 **Electric generators of small-scale CHP systems**

WARNING

Groups F24D 2101/00 - F24D 2101/80 are incomplete pending reclassification of documents from groups F24H 2240/00, F24H 2240/01, F24H 2240/02, F24H 2240/04, F24H 2240/06, F24H 2240/08, F24H 2240/09, F24H 2240/10, F24H 2240/12, F24H 2240/122, F24H 2240/125 and F24H 2240/127.

All groups listed in this Warning should be considered in order to perform a complete search.

- N F24D 2101/10 • Gas turbines; Steam engines or steam turbines; Water turbines, e.g. located in water pipes
- N F24D 2101/20 • Wind turbines
- N F24D 2101/30 • Fuel cells
- N F24D 2101/40 • Photovoltaic [PV] modules
- N F24D 2101/50 • Thermophotovoltaic [TPV] modules
- N F24D 2101/60 • Thermoelectric generators, e.g. Peltier or Seebeck elements
- N F24D 2101/70 • Electric generators driven by internal combustion engines [ICE]
- N F24D 2101/80 • Electric generators driven by external combustion engines, e.g. Stirling engines

N F24D 2103/00 **Thermal aspects of small-scale CHP systems**

WARNING

Groups F24D 2103/00 - F24D 2103/20 are incomplete pending reclassification of documents from groups F24H 2240/00, F24H 2240/01, F24H 2240/02, F24H 2240/04, F24H 2240/06, F24H 2240/08, F24H 2240/09, F24H 2240/10, F24H 2240/12, F24H 2240/122, F24H 2240/125 and F24H 2240/127.

All groups listed in this Warning should be considered in order to perform a complete search.

- N F24D 2103/10 • Small-scale CHP systems characterised by their heat recovery units
- N F24D 2103/13 • • characterised by their heat exchangers
- N F24D 2103/17 • • Storage tanks
- N F24D 2103/20 • Additional heat sources for supporting thermal peak loads

N F24D 2105/00 Constructional aspects of small-scale CHP systems**WARNING**

Groups [F24D 2105/00](#) and [F24D 2105/10](#) are incomplete pending reclassification of documents from groups [F24H 2240/00](#), [F24H 2240/01](#), [F24H 2240/02](#), [F24H 2240/04](#), [F24H 2240/06](#), [F24H 2240/08](#), [F24H 2240/09](#), [F24H 2240/10](#), [F24H 2240/12](#), [F24H 2240/122](#), [F24H 2240/125](#) and [F24H 2240/127](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F24D 2105/10 • Sound insulation

Project: RP0758 (F24H)**M F24H**

FLUID HEATERS, e.g. WATER OR AIR HEATERS, HAVING HEAT GENERATING MEANS, ~~GENERATING MEANS, e.g. HEAT PUMPS,~~ IN GENERAL (heat-transfer, heat-exchange or heat-storage materials [G09K 5/00](#); tube furnaces for thermal non-catalytic cracking [G10G 9/20](#); devices, e.g. valves, for venting and aerating enclosures [F16K 24/00](#); steam traps or like apparatus [F16T](#); steam generation [F22](#); combustion apparatus [F23](#); domestic stoves or ranges [F24B](#), [F24C](#); domestic or space-heating systems [F24D](#); furnaces, kilns, ovens, retorts [F27](#); heat-exchangers [F28](#); electric heating elements or arrangements [H05B](#))

NOTES

1. The distinguishing feature of the air heaters covered by this subclass is that the heat is predominantly released to the air by convection, mostly by forced circulation of the air. The domestic stoves or ranges covered by subclasses [F24B](#), [F24C](#) may also be fired or electric air heaters but they release their heat to a considerable extent by radiation and only to some extent by natural convection.

2. In this subclass, the following terms are used with the meanings indicated:

- "Water" includes other liquids;
- "water" includes other liquids and means always the liquid to be heated;
- "air" includes other gases or gas mixtures and means always the gas to be heated;
- "water" and "air" always mean, respectively, the liquid and gas to be heated;
- "Furnacefurnace tubes" means tubes inside the heater wherein combustion is performed;
- "Firefire tubes" means tubes inside the heater through which flue-gases flow from a combustion chamber located outside the tubes;
- "Heaterheater" means apparatus including both heat generating means and means for transferring the generated heat to water or air.

3. All storage heaters are classified in group [F24H 7/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M F24H 1/00

Water heaters ~~having heat generating means, e.g. boiler, flow-heater, water-storage heater, e.g. boilers, continuous-flow heaters or water-storage heaters~~ ([F24H 7/00](#), [F24H 8/00](#) take precedence; details [F24H 9/00](#); steam boilers [F22B](#); domestic stoves or ranges with additional provisions for heating water [F24B 9/00](#), [F24C 13/00](#))

U F24H 1/0072 • {Special adaptations}

D F24H 1/0081 • • {for bath tubs}
 <administratively transferred to [F24H 1/54](#)>

- M F24H 1/10
 - Continuous-flow heaters, i.e. **heaters** in which heat is generated only while the water is flowing, e.g. with direct contact of the water with the heating medium (**F24H 1/50 takes precedence**)
- M F24H 1/18
 - Water-storage heaters (**combined with water-heating stoves for central heating F24H 1/22; F24H 1/50 takes precedence**)
- M F24H 1/181
 - • {Construction of the tank (**containers or tanks in general B65D, e.g. metal containers B65D 7/00**)}
- M F24H 1/182
 - • • {Insulation (**containers with thermal insulation in general B65D 81/38**)}
- M F24H 1/183
 - • • {Inner linings (**linings for containers in general B65D 25/14, B65D 90/04**)}
- M F24H 1/22
 - Water heaters other than continuous-flow or water-storage heaters, e.g. water-heaters for central heating (**F24H 1/50 takes precedence**)
- M F24H 1/24
 - • with water mantle surrounding the combustion chamber or chambers (**F24H 1/40, F24H 1/44 take precedence**)
- M F24H 1/34
 - • with water chamber arranged adjacent to the combustion chamber or chambers, e.g. above or at side (**F24H 1/24, F24H 1/44 take precedence**)
- M F24H 1/38
 - • with water contained in separate elements, e.g. radiator-type element (**F24H 1/40, F24H 1/44 take precedence**)
- M F24H 1/40
 - • with water tube or tubes (**F24H 1/44 takes precedence**)
- M F24H 1/44
 - • with combinations of two or more of the types covered by groups [F24H 1/24](#) - [F24H 1/40](#), { e.g. boilers having a combination of features covered by [F24H 1/24](#) - [F24H 1/40](#)}
- U F24H 1/48
 - Water heaters for central heating incorporating heaters for domestic water
- U F24H 1/52
 - • incorporating heat exchangers for domestic water ([F24H 1/50](#) takes precedence)
- U F24H 1/526
 - • • {Pipes in pipe heat exchangers for sanitary water}
- N F24H 1/54
 - *Water heaters for bathtubs or pools; Water heaters for reheating the water in bathtubs or pools*
- M F24H 3/00
 - **Air heaters having heat generating means (F24H 7/00, F24H 8/00 take precedence; details F24H 9/00; domestic stoves or ranges with additional provisions for convection heating of air F24B, F24C)**
- M F24H 3/006
 - {using fluid **combustibles** **fuel**}
- M F24H 3/008
 - {using solid **combustibles** **fuel**}
- M F24H 3/02
 - with forced circulation (**F24H 3/12 takes precedence**)
- M F24H 3/025
 - • {using fluid **combustibles** **fuel**}
- M F24H 3/027
 - • {using solid **combustibles** **fuel**}
- U F24H 3/04
 - • the air being in direct contact with the heating medium, e.g. electric heating element
- M F24H 3/0488
 - • • {using fluid **combustibles** **fuel**}
- M F24H 3/0494
 - • • {using solid **combustibles** **fuel**}
- U F24H 3/06
 - • the air being kept separate from the heating medium, e.g. using forced circulation of air over radiators
- M F24H 3/065
 - • • {using fluid **combustibles** **fuel**}
- M F24H 3/067
 - • • {using solid **combustibles** **fuel**}
- U F24H 3/08
 - • • by tubes
- M F24H 3/087
 - • • • {using fluid **combustibles** **fuel**}
- M F24H 3/088
 - • • • {using solid **combustibles** **fuel**}
- U F24H 3/10
 - • • by plates
- M F24H 3/105
 - • • • {using fluid **combustibles** **fuel**}

M	F24H 3/107	<ul style="list-style-type: none"> • • • {using solid combustibles fuel}
M	F24H 4/00	Fluid heaters using <i>characterised by the use of</i> heat pumps
M	F24H 4/02	<ul style="list-style-type: none"> • Liquid Water heaters
M	F24H 4/06	<ul style="list-style-type: none"> • Gas Air heaters
M	F24H 6/00	Combined water and air heaters (F24H 8/00 takes precedence)
M	F24H 7/00	Storage heaters, i.e. heaters in which <i>the</i> energy is stored as heat in masses for subsequent release (domestic stoves or ranges with additional heat storage masses F24B 1/24, F24C 15/34)
M	F24H 7/002	<ul style="list-style-type: none"> • {with using electrical energy supply}
M	F24H 7/005	<ul style="list-style-type: none"> • {with using fluid fuel}
M	F24H 7/007	<ul style="list-style-type: none"> • {with using solid fuel}
M	F24H 7/02	<ul style="list-style-type: none"> • the released heat being conveyed to a transfer fluid, e.g. air, water
M	F24H 7/0208	<ul style="list-style-type: none"> • • {with using electrical energy supply}
M	F24H 7/0233	<ul style="list-style-type: none"> • • • {the transfer fluid being a liquid water}
M	F24H 7/025	<ul style="list-style-type: none"> • • {with using fluid fuel}
M	F24H 7/0266	<ul style="list-style-type: none"> • • • {the transfer fluid being a liquid water}
M	F24H 7/0275	<ul style="list-style-type: none"> • • {with using solid fuel}
M	F24H 7/0291	<ul style="list-style-type: none"> • • • {the transfer fluid being a liquid water}
U	F24H 7/04	<ul style="list-style-type: none"> • • with forced circulation of the transfer fluid
M	F24H 7/0408	<ul style="list-style-type: none"> • • • {with using electrical energy supply}
M	F24H 7/0433	<ul style="list-style-type: none"> • • • • {the transfer medium being a liquid water}
M	F24H 7/045	<ul style="list-style-type: none"> • • • {with using fluid fuel}
M	F24H 7/0466	<ul style="list-style-type: none"> • • • • {the transfer fluid being a liquid water}
M	F24H 7/0475	<ul style="list-style-type: none"> • • • {with using solid fuel}
M	F24H 7/0491	<ul style="list-style-type: none"> • • • • {the transfer fluid being a liquid water}
M	F24H 8/00	Fluid heaters having heat-generating means specially adapted <i>characterised by means</i> for extracting latent heat from flue gases by means of condensation
U	F24H 9/00	Details
U	F24H 9/0005	<ul style="list-style-type: none"> • {for water heaters}
D	F24H 9/0047	<ul style="list-style-type: none"> • • {Protections against galvanic corrosion, e.g. cathodic protections, electrolytic protections} <p><administratively transferred to F24H 9/45></p>
M	F24H 9/12	<ul style="list-style-type: none"> • Connecting Arrangements for connecting heaters to circulation pipes (pipe joints in general F16L)
D	F24H 9/122	<ul style="list-style-type: none"> • • {for water heaters} <p><administratively transferred to F24H 9/13></p>
D	F24H 9/124	<ul style="list-style-type: none"> • • • {storage heaters} <p><administratively transferred to F24H 9/133></p>
D	F24H 9/126	<ul style="list-style-type: none"> • • • • {Arrangement of inlet valves used therewith (valves per se F16K)} <p><administratively transferred to F24H 9/136></p>
D	F24H 9/128	<ul style="list-style-type: none"> • • • {continuous flow heaters} <p><administratively transferred to F24H 9/139></p>
N	F24H 9/13	<ul style="list-style-type: none"> • • for water heaters

N	F24H 9/133	<ul style="list-style-type: none"> • • • {Storage heaters}
N	F24H 9/136	<ul style="list-style-type: none"> • • • • {Arrangement of inlet valves used therewith}
N	F24H 9/139	<ul style="list-style-type: none"> • • • {Continuous flow heaters}
M	F24H 9/14	<ul style="list-style-type: none"> • Connecting Arrangements for connecting different sections, e.g. in water- heaters (in radiators F28F 9/26 arrangements for connecting heaters to circulation pipes F24H 9/12)
M	F24H 9/16	<ul style="list-style-type: none"> • Arrangements for water drainage (valves for drainage F16K, e.g. F16K 21/00; in pipes or pipe systems in general F16L 55/00; in domestic- or space-heating systems F24D 19/08)
D	F24H 9/165	<ul style="list-style-type: none"> • • {Devices for retaining leaking fluid from heaters} <p><administratively transferred to F24H 9/17></p>
N	F24H 9/17	<ul style="list-style-type: none"> • • Means for retaining water leaked from heaters
M	F24H 9/18	<ul style="list-style-type: none"> • Arrangement or mounting of grates, burners, or heating elements or heating means (burners F23D; grates F23H; electric heating elements H05B)
C	F24H 9/1809	<ul style="list-style-type: none"> • • {for water heaters} <p>WARNING Group F24H 9/1809 is impacted by reclassification into group F24H 9/1832. Groups F24H 9/1809 and F24H 9/1832 should be considered in order to perform a complete search.</p>
M	F24H 9/1818	<ul style="list-style-type: none"> • • • {electric heating means} Arrangement or mounting of electric heating means
M	F24H 9/1827	<ul style="list-style-type: none"> • • • • {PTC-Positive temperature coefficient [PTC] resistor}
N	F24H 9/1832	<ul style="list-style-type: none"> • • • Arrangement or mounting of combustion heating means, e.g. grates or burners <p>WARNING Group F24H 9/1832 is incomplete pending reclassification of documents from group F24H 9/1809. Groups F24H 9/1809 and F24H 9/1832 should be considered in order to perform a complete search.</p>
M	F24H 9/1836	<ul style="list-style-type: none"> • • • • {fluid combustible heating means} using fluid fuel
M	F24H 9/1845	<ul style="list-style-type: none"> • • • • {solid combustible heating means} using solid fuel
C	F24H 9/1854	<ul style="list-style-type: none"> • • {for air heaters} <p>WARNING Group F24H 9/1854 is impacted by reclassification into group F24H 9/1877. Groups F24H 9/1854 and F24H 9/1877 should be considered in order to perform a complete search.</p>
M	F24H 9/1863	<ul style="list-style-type: none"> • • • {electric heating means} Arrangement or mounting of electric heating means
M	F24H 9/1872	<ul style="list-style-type: none"> • • • • {PTC-Positive temperature coefficient resistor}
N	F24H 9/1877	<ul style="list-style-type: none"> • • • Arrangement or mounting of combustion heating means, e.g. grates or burners <p>WARNING Group F24H 9/1877 is incomplete pending reclassification of documents from group F24H 9/1854. Groups F24H 9/1854 and F24H 9/1877 should be considered in order to perform a complete search.</p>
M	F24H 9/1881	<ul style="list-style-type: none"> • • • • {fluid combustible heating means} using fluid fuel
M	F24H 9/189	<ul style="list-style-type: none"> • • • • {solid combustible heating means} using solid fuel

- C F24H 9/20
- Arrangement or mounting of control or safety devices ~~{or methods}~~ (control valves F16K; safety devices for burners F23D; combustion control devices F23N; of systems comprising a heater, see the relevant subclasses, e.g. of control heating systems F24D 19/10; automatic switching for electric heating apparatus H05B 1/02)

WARNING

Group F24H 9/20 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2007
- {for water heaters}

WARNING

Group F24H 9/2007 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2014
- • {~~for heaters~~ using electrical energy supply}

WARNING

Group F24H 9/2014 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2021
- • • {Storage heaters}

WARNING

Group F24H 9/2021 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2028
- • • {Continuous-flow heaters}

WARNING

Group F24H 9/2028 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2035
- • • {~~for heaters using fluid combustibles~~ using fluid fuel}

WARNING

Group F24H 9/2035 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/2042
- • • {Preventing or detecting the return of combustion gases}

WARNING

Group F24H 9/2042 is impacted by reclassification into groups F24H 9/25, F24H 9/28, and F24H 15/00 - F24H 15/493.

All groups listed in this Warning should be considered in order to perform a complete search.

- C F24H 9/205 • • • • {Closing the energy supply}
- WARNING
Group *F24H 9/205* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2057 • • • {~~for heaters using solid combustibles~~using solid fuel}
- WARNING
Group *F24H 9/2057* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2064 • • {for air heaters}
- WARNING
Group *F24H 9/2064* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2071 • • • {~~for heaters~~using electrical energy supply}
- WARNING
Group *F24H 9/2071* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2078 • • • • {~~storage~~Storage heaters}
- WARNING
Group *F24H 9/2078* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2085 • • • {~~for heaters using fluid combustibles~~using fluid fuel}
- WARNING
Group *F24H 9/2085* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- C F24H 9/2092 • • • {~~for heaters using solid combustibles~~using solid fuel}
- WARNING
Group *F24H 9/2092* is impacted by reclassification into groups *F24H 9/25*, *F24H 9/28*, and *F24H 15/00 - F24H 15/493*.
All groups listed in this Warning should be considered in order to perform a complete search.
- N F24H 9/25 • • of remote control devices or control-panels
- WARNING
Groups *F24H 9/25* and *F24H 9/28* are incomplete pending reclassification of documents from groups *F24H 9/20*, *F24H 9/2007*, *F24H 9/2014*, *F24H 9/2021*, *F24H 9/2028*, *F24H 9/2035*, *F24H 9/2042*, *F24H 9/205*,

[F24H 9/2057](#), [F24H 9/2064](#), [F24H 9/2071](#), [F24H 9/2078](#), [F24H 9/2085](#), and [F24H 9/2092](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F24H 9/28 • • • characterised by the graphical user interface [GUI]

N F24H 9/40 • Arrangements for preventing corrosion

WARNING

Groups [F24H 9/40](#), [F24H 9/455](#), and [F24H 9/457](#) are incomplete pending reclassification of documents from group [F24H 9/45](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q F24H 9/45 • • for preventing galvanic corrosion, e.g. cathodic or electrolytic means

WARNING

Group [F24H 9/45](#) is impacted by reclassification into groups [F24H 9/40](#), [F24H 9/455](#), and [F24H 9/457](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F24H 9/455 • • • {for water heaters}

N F24H 9/457 • • • {for air heaters}

N F24H 15/00

Control of fluid heaters

WARNING

Groups [F24H 15/00](#) - [F24H 15/493](#) are incomplete pending reclassification of documents from groups [F24D 19/10](#) - [F24D 19/1096](#) and [F24H 9/20](#) - [F24H 9/2092](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N F24H 15/10 • characterised by the purpose of the control

N F24H 15/104 • • Inspection; Diagnosis; Trial operation

N F24H 15/108 • • Resuming operation, e.g. after power outages

N F24H 15/112 • • Preventing or detecting blocked flues

N F24H 15/116 • • • Disabling the heating means in response thereto

N F24H 15/12 • • Preventing or detecting fluid leakage

N F24H 15/124 • • Preventing or detecting electric faults, e.g. electric leakage

N F24H 15/128 • • Preventing overheating

N F24H 15/132 • • • Preventing the operation of water heaters with low water levels, e.g. dry-firing

N F24H 15/136 • • Defrosting or de-icing; Preventing freezing

N F24H 15/14 • • Cleaning; Sterilising; Preventing contamination by bacteria or microorganisms, e.g. by replacing fluid in tanks or conduits

N F24H 15/144 • • Measuring or calculating energy consumption

N F24H 15/148 • • • Assessing the current energy consumption

N F24H 15/152 • • • Forecasting future energy consumption

N F24H 15/156 • • Reducing the quantity of energy consumed; Increasing efficiency

N F24H 15/16 • • Reducing cost using the price of energy, e.g. choosing or switching between different energy sources

N F24H 15/164 • • • where the price of the electric supply changes with time

N	F24H 15/168	<ul style="list-style-type: none"> • Reducing the electric power demand peak
N	F24H 15/172	<ul style="list-style-type: none"> • Scheduling based on user demand, e.g. determining starting point of heating
N	F24H 15/174	<ul style="list-style-type: none"> • Supplying heated water with desired temperature or desired range of temperature
N	F24H 15/175	<ul style="list-style-type: none"> • where the difference between the measured temperature and a set temperature is kept under a predetermined value
N	F24H 15/176	<ul style="list-style-type: none"> • Improving or maintaining comfort of users
N	F24H 15/18	<ul style="list-style-type: none"> • Preventing sudden or unintentional change of fluid temperature
N	F24H 15/184	<ul style="list-style-type: none"> • Preventing harm to users from exposure to heated water, e.g. scalding
N	F24H 15/196	<ul style="list-style-type: none"> • Automatically filling bathtubs or pools; Reheating the water in bathtubs or pools
N	F24H 15/20	<ul style="list-style-type: none"> • characterised by control inputs
N	F24H 15/204	<ul style="list-style-type: none"> • Temperature of the air before heating
N	F24H 15/208	<ul style="list-style-type: none"> • Temperature of the air after heating
N	F24H 15/212	<ul style="list-style-type: none"> • Temperature of the water
N	F24H 15/215	<ul style="list-style-type: none"> • before heating
N	F24H 15/219	<ul style="list-style-type: none"> • after heating
N	F24H 15/223	<ul style="list-style-type: none"> • in the water storage tank
N	F24H 15/225	<ul style="list-style-type: none"> • at different heights of the tank
N	F24H 15/227	<ul style="list-style-type: none"> • Temperature of the refrigerant in heat pump cycles
N	F24H 15/231	<ul style="list-style-type: none"> • at the evaporator
N	F24H 15/232	<ul style="list-style-type: none"> • at the condenser
N	F24H 15/235	<ul style="list-style-type: none"> • Temperature of exhaust gases
N	F24H 15/238	<ul style="list-style-type: none"> • Flow rate
N	F24H 15/242	<ul style="list-style-type: none"> • Pressure
N	F24H 15/246	<ul style="list-style-type: none"> • Water level
N	F24H 15/248	<ul style="list-style-type: none"> • of water storage tanks
N	F24H 15/25	<ul style="list-style-type: none"> • Temperature of the heat-generating means in the heater
N	F24H 15/254	<ul style="list-style-type: none"> • Room temperature
N	F24H 15/258	<ul style="list-style-type: none"> • Outdoor temperature
N	F24H 15/262	<ul style="list-style-type: none"> • Weather information or forecast
N	F24H 15/265	<ul style="list-style-type: none"> • Occupancy
N	F24H 15/269	<ul style="list-style-type: none"> • Time, e.g. hour or date
N	F24H 15/273	<ul style="list-style-type: none"> • Address or location
N	F24H 15/277	<ul style="list-style-type: none"> • Price
N	F24H 15/281	<ul style="list-style-type: none"> • Input from user
N	F24H 15/288	<ul style="list-style-type: none"> • Accumulation of deposits, e.g. lime or scale
N	F24H 15/292	<ul style="list-style-type: none"> • Metering of electricity sold to the grid
N	F24H 15/296	<ul style="list-style-type: none"> • Information from neighbouring devices
N	F24H 15/30	<ul style="list-style-type: none"> • characterised by control outputs; characterised by the components to be controlled
N	F24H 15/305	<ul style="list-style-type: none"> • Control of valves (of heat pumps F24H 15/385, F24H 15/39)
N	F24H 15/31	<ul style="list-style-type: none"> • of valves having only one inlet port and one outlet port, e.g. flow rate regulating valves
N	F24H 15/315	<ul style="list-style-type: none"> • of mixing valves

- N F24H 15/32 • • • of switching valves (for by-passing [F24H 15/325](#))
- N F24H 15/325 • • • of by-pass valves
- N F24H 15/33 • • Control of dampers
- N F24H 15/335 • • Control of pumps, e.g. on-off control (control of compressors of heat pumps [F24H 15/38](#))
- N F24H 15/34 • • • Control of the speed of pumps
- N F24H 15/345 • • Control of fans, e.g. on-off control (control of fans of heat pump units [F24H 15/375](#))
- N F24H 15/35 • • • Control of the speed of fans
- N F24H 15/355 • • Control of heat-generating means in heaters
- N F24H 15/36 • • • of burners
- N F24H 15/365 • • • • of two or more burners, e.g. an array of burners
- N F24H 15/37 • • • of electric heaters
- N F24H 15/375 • • Control of heat pumps
- N F24H 15/38 • • • Control of compressors of heat pumps
- N F24H 15/385 • • • Control of expansion valves of heat pumps
- N F24H 15/39 • • • Control of valves for distributing refrigerant to different evaporators or condensers in heat pumps
- N F24H 15/395 • • Information to users, e.g. alarms
- N F24H 15/40 • characterised by the type of controllers
- N F24H 15/407 • • using electrical switching, e.g. TRIAC
- N F24H 15/414 • • using electronic processing, e.g. computer-based
- N F24H 15/421 • • • using pre-stored data
- N F24H 15/429 • • • • for selecting operation modes
- N F24H 15/436 • • • • for selecting sleeping modes
- N F24H 15/443 • • • using a central controller connected to several sub-controllers
- N F24H 15/45 • • • remotely accessible
- N F24H 15/457 • • • • using telephone networks or Internet communication
- N F24H 15/464 • • • • using local wireless communication
- N F24H 15/479 • • • • for programming the system
- N F24H 15/486 • • using timers
- N F24H 15/493 • • specially adapted for enabling recognition of parts newly installed in the fluid heating system, e.g. for retrofitting or for repairing by replacing parts

Project: RP0765 (F24H)

C F24H 2240/00 Fluid heaters having electrical generators

WARNING

Group [F24H 2240/00](#) is impacted by reclassification into groups [F24D 18/00](#) and [F24D 2101/00](#) - [F24D 2105/10](#).

Groups [F24H 2240/00](#), [F24D 18/00](#) and [F24D 2101/00](#) - [F24D 2105/10](#) should be considered in order to perform a complete search.

C F24H 2240/01 • Batteries, electrical energy storage device

WARNING

Group [F24H 2240/01](#) is impacted by reclassification into groups [F24D 18/00](#) and [F24D 2101/00](#) - [F24D 2105/10](#).

Groups F24H 2240/01, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/02 • with combustion engines

WARNING

Group F24H 2240/02 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/02, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/04 • • External combustion engines

WARNING

Group F24H 2240/04 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/04, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/06 • • Internal combustion engines

WARNING

Group F24H 2240/06 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/06, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/08 • with peltier elements

WARNING

Group F24H 2240/08 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/08, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/09 • with photovoltaic cells

WARNING

Group F24H 2240/09 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/09, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/10 • with fuel cells

WARNING

Group F24H 2240/10 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/10, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/12 • with thermodynamic cycle for converting thermal energy to mechanical power to produce electrical energy

WARNING

Group F24H 2240/12 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/12, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/122 • • Stirling cycles

WARNING

Group F24H 2240/122 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/122, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/125 • • Carnot cycles

WARNING

Group F24H 2240/125 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/125, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

- C F24H 2240/127 • • Rankine cycles, e.g. steam heat engines

WARNING

Group F24H 2240/127 is impacted by reclassification into groups F24D 18/00 and F24D 2101/00 - F24D 2105/10.

Groups F24H 2240/127, F24D 18/00 and F24D 2101/00 - F24D 2105/10 should be considered in order to perform a complete search.

Project: MP0513 (F25B)

- M F25B

REFRIGERATION MACHINES, PLANTS OR SYSTEMS; COMBINED HEATING AND REFRIGERATION SYSTEMS; HEAT- PUMP SYSTEMS (~~evaporation or evaporation apparatus for physical or chemical purposes, e.g. evaporation of liquids for gas phase reactions B01B 1/005~~); ~~heat-transfer, heat-exchange or heat-storage materials, e.g. refrigerants, or materials for the production of heat or cold by chemical reactions other than by combustion C09K 5/00~~; ~~pumps, compressors F04~~; ~~use of heat-pumps for domestic- or space-heating or for domestic hot-water supply F24D~~; ~~air-conditioning, air-humidification F24F~~; ~~fluid heaters using heat pumps F24H~~)

NOTES

1. Attention is drawn to Note (2) following the title of subclass F24F.

2. When classifying heat pump circuits or systems, groups F25B 1/00 - F25B 25/00 and F25B 29/00 take precedence over group F25B 30/00.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- M F25B 1/00 -
F25B 13/00

Compression machines, ~~plant~~, ~~plants~~ or systems

- M F25B 1/00

Compression machines, ~~plant~~, ~~plants~~ or systems with non-reversible cycle (F25B 3/00, F25B 5/00, F25B 6/00, F25B 7/00, F25B 9/00 take precedence)

- M F25B 3/00

Self-contained rotary compression machines, i.e. with compressor, condenser, and evaporator rotating as a single unit

- M F25B 5/00

Compression machines, ~~plant~~, ~~plants~~ or systems, with several evaporator circuits, e.g. for varying refrigerating capacity (with cascade operation F25B 7/00)

- M F25B 6/00

Compression machines, ~~plant~~, ~~plants~~ or systems, with several condenser circuits

M	F25B 7/00	Compression machines, plant, plants or systems, with cascade operation, i.e. with two or more circuits, the heat from the condenser of one circuit being absorbed by the evaporator of the next circuit (F25B 9/00 takes precedence)
M	F25B 9/00	Compression machines, plant, plants or systems, in which the refrigerant is air or other gas of low boiling point
U	F25B 9/002	• {characterised by the refrigerant}
M	F25B 9/004	• • {the refrigerant being air (air conditioning F24F) }
M	F25B 9/006	• • {the refrigerant containing more than one component (F25B 9/004 takes precedence; refrigerant materials per se C09K 5/00)}
M	F25B 9/14	• characterised by the cycle used, e.g. Stirling cycle {{engine plants with Vuilleumier-type cycles F02G 1/0445}}
M	F25B 11/00	Compression machines, plant, plants or systems, using turbines, e.g. gas turbines
M	F25B 13/00	Compression machines, plant or systems plants or systems , with reversible cycle (defrosting cycles F25B 47/02)
M	F25B 15/00 - F25B 17/00	<u>Sorption machines, plant, plants or systems</u>
M	F25B 15/00	Sorption machines, plant, plants or systems, operating continuously, e.g. absorption type
M	F25B 17/00	Sorption machines, plant, plants or systems, operating intermittently, e.g. absorption or adsorption type
M	F25B 19/00 - F25B 30/00 F25B 23/00	<u>Machines, plant, plants or systems, with a single mode of operation, not covered by groups F25B 1/00 - F25B 17/00</u>
M	F25B 19/00	Machines, plant, plants or systems, using evaporation of a refrigerant but without recovery of the vapour
M	F25B 21/00	Machines, plant, plants or systems, using electric or magnetic effects {{magnetic refrigerating material H01F 1/012 and H01F 1/017}}
M	F25B 21/02	• using Peltier effect; using Nernst-Ettinghausen effect (thermoelectric elements H01L 35/00, H01L 37/00)
M	F25B 23/00	Machines, plant, plants or systems, with a single mode of operation not covered by groups F25B 1/00 - F25B 21/00 , e.g. using selective radiation effect
M	F25B 25/00	Machines, plant, plants or systems, using a combination of modes of operation covered by two or more of the groups F25B 1/00 - F25B 23/00 (combinations of two or more modes of operation covered by a single main group, see the relevant group)
M	F25B 27/00	Machines, plant, plants or systems, using particular sources of energy (F25B 30/06 takes precedence)
M	F25B 27/002	• {using solar energy (solar heat collectors F24S) }
M	F25B 30/00	Heat pumps (F25B 1/00 - F25B 25/00 , F25B 29/00 take precedence)
M	F25B 31/00	Compressor arrangements (compressors per se F04)
M	F25B 31/002	• { lubrication Lubrication } (of compressors per se F04B, of machines or engines in general F01M)
M	F25B 31/006	• cooling Cooling of compressor or motor (of compressors per se F04B 39/06)

M	F25B 31/008	• • {by injecting a liquid {for compressors in general F04B 39/062} }
M	F25B 37/00	Absorbers; Adsorbers (boiler-absorbers F25B 35/00; separating processes involving the treatment of liquids with adsorbents B01D 15/00; separation of gases or vapours by adsorption B01D 53/02; separation of gases or vapours by absorption B01D 53/14; investigating using adsorption or absorption G01N 30/00); {(absorption or adsorption in general B01J 20/00)}
U	F25B 39/00	Evaporators; Condensers
U	F25B 39/02	• Evaporators
U	F25B 39/022	• • {with plate-like or laminated elements}
M	F25B 39/024	• • • {with elements constructed in the shape of a hollow panel {for heat exchange in general F28F 3/12} }
U	F25B 43/00	Arrangements for separating or purifying gases or liquids (in analysers or rectifiers F25B 33/00); Arrangements for vaporising the residuum of liquid refrigerant, e.g. by heat (F25B 40/00 takes precedence)
M	F25B 43/003	• { filters <i>Filters</i> } {in general B01D} }
M	F25B 43/006	• { accumulators <i>Accumulators</i> }
M	F25B 49/00	Arrangement or mounting of control or safety devices {testing refrigerators G01M; control in general G05}
M	F25B 49/02	• for compression type machines, plant <i>plants</i> or systems
M	F25B 49/022	• • {Compressor control arrangements {in general F04B} }
M	F25B 49/025	• • {Motor control arrangements {motors per se H02K} }
M	F25B 49/04	• for sorption type machines, plant <i>plants</i> or systems
N	F25B 2300/00 - F25B 2700/00	<u>Indexing scheme associated with groups F25B 1/00 - F25B 49/00, relating to arrangements, features or devices for refrigeration machines, plants or systems, combined heating and refrigeration systems or heat-pump systems as well as solved problems, control issues and sensing of parameters therefore</u>
U	F25B 2309/00	Gas cycle refrigeration machines
M	F25B 2309/06	• Compression machines, plant <i>plants</i> or systems characterised by the refrigerant being carbon dioxide
M	F25B 2309/14	• Compression machines, plant <i>plants</i> or systems characterised by the cycle used
M	F25B 2313/00	Compression machines, plant <i>plants</i> or systems with reversible cycle not otherwise provided for
M	F25B 2321/00	Details of machines, plants, or systems, using electric or magnetic effects

Project: MP0536 (F25D)

M	F25D 9/00	Devices not <i>associated with refrigerating machinery and not</i> covered by groups F25D 1/00 - F25D 7/00; Combinations of devices covered by two or more of the groups F25D 1/00 - F25D 7/00
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Project: MP0536 (G01)

M	G01	MEASURING; TESTING
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NOTES

1. This class covers, in addition to "true" measuring instruments, other indicating or recording devices of analogous construction, and also signalling or control devices insofar as they are concerned with measurement (as defined in Note 2

below) and are not specially adapted to the particular purpose of signalling or control.

2. In this class, the following term is used with the meaning indicated:

- "measuring" is used to cover considerably more than its primary or basic meaning. In this primary sense, it means finding a numerical expression of the value of a variable in relation to a unit or datum or to another variable of the same nature, e.g. expressing a length in terms of another length as in measuring a length with a scale; the value may be obtained directly (as just suggested) or by measuring some other variable of which the value can be related to the value of the required variable, as in measuring a change in temperature by measuring a resultant change in the length of a column of mercury. However, since the same device or instrument may, instead of giving an immediate indication, be used to produce a record or to initiate a signal to produce an indication or control effect, or may be used in combination with other devices or instruments to give a conjoint result from measurement of two or more variables of the same or different kinds, it is necessary to interpret "measuring" as including also any operation that would make it possible to obtain such a numerical expression by the additional use of some way of converting a value into figures. Thus the expression in figures may be actually made by a digital presentation or by reading a scale, or an indication of it may be given without the use of figures, e.g. by some perceptible feature (variable) of the entity (e.g. object, substance, beam of light) of which the variable being measured is a property or condition or by an analogue of such a feature (e.g. the corresponding position of a member without any scale, a corresponding voltage generated in some way). In many cases there is no such value indication but only an indication of difference or equality in relation to a standard or datum (of which the value may or may not be known in figures); the standard or datum may be the value of another variable of the same nature but of a different entity (e.g. a standard measure) or of the same entity at a different time.

~~In its simplest form, measurement may give merely an indication of presence or absence of a certain condition or quality, e.g. movement (in any direction or in a particular direction), or whether a variable exceeds a predetermined value.~~

In its simplest form, measurement may give merely an indication of presence or absence of a certain condition or quality, e.g. movement (in any direction or in a particular direction), or whether a variable exceeds a predetermined value.

3. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "microstructural devices" and "microstructural systems" and the Notes following the title of subclass B82B relating to "nanostructures".

~~3. 4.~~ Attention is drawn to the Notes following the title of ~~Section~~section G, especially as regards the definition of the term "variable".

~~4. 5.~~ In many measuring arrangements, a first variable to be measured is transformed into a second, or further, variables. The second, or further, variables may be (a) a condition related to the first variable and produced in a member, or (b) a displacement of a member. Further transformation may be needed.

When classifying such an arrangement, (i) the transformation step, or each transformation step, that is of interest is classified, or (ii) if interest lies only in the system as a whole, the first variable is classified in the appropriate place.

~~When classifying such an arrangement, (i) the transformation step, or each transformation step, that is of interest is classified, or (ii) if interest lies only in the system as a whole, the first variable is classified in the appropriate place.~~

-This is particularly important where two or more conversions take place, for instance where a first variable, for example pressure, is transformed

into a second variable, for example an optical property of a sensing body, and that second variable is expressed by means of a third variable, for example an electric effect. In such a case, the following classification places should be considered: the place for the transformation of the first variable, that for sensing the condition caused by that variable, subclass [G01D](#) for expression of the measurement, and finally the place for the overall system, if any.

~~5.~~ 6. The measurement of change in the value of a physical property is classified in the same subclass as *the* measurement of that physical property, e.g. measurement of expansion of length is classified in *subclass* [G01B](#).

Project: MP0535 (G01B)

U	G01B 5/00	Measuring arrangements characterised by the use of mechanical means (instruments of the types covered by group G01B 3/00 per se G01B 3/00)
U	G01B 5/0002	• {Arrangements for supporting, fixing or guiding the measuring instrument or the object to be measured}
M	G01B 5/0004	• • {Supports (in general F16M ; G01B 5/025 takes precedence)}
U	G01B 9/00	Instruments as specified in the subgroups and characterised by the use of optical measuring means (arrangements for measuring particular parameters G01B 11/00)
M	G01B 9/02	• Interferometers {for determining dimensional properties of, or relations between, measurement objects}
M	G01B 9/02001	• • {characterised by manipulating or generating specific radiation properties} <i>characterised by controlling or generating intrinsic radiation properties</i>
M	G01B 9/02002	• • • {Frequency variation} <i>using two or more frequencies</i>
M	G01B 9/02003	• • • • {by using beat frequencies generated by mixing of two or more frequencies} <i>using beat frequencies</i>
M	G01B 9/02004	• • • • {by using a continuous frequency sweep or scan} <i>using frequency scans</i>
M	G01B 9/02005	• • • • {by using discrete frequency stepping or switching}
M	G01B 9/02015	• • {characterised by a particular beam path configuration} <i>characterised by the beam path configuration</i>
M	G01B 9/02017	• • • {contacting one object several times} <i>with multiple interactions between the target object and light beams, e.g. beam reflections occurring from different locations</i>
M	G01B 9/02018	• • • • {Multiple-pass interferometer, e.g. double pass} <i>Multipass interferometers, e.g. double-pass</i>
M	G01B 9/02055	• • {characterised by error reduction techniques} <i>Reduction or prevention of errors; Testing; Calibration</i>
M	G01B 9/02056	• • • {Passive error reduction, i.e. not varying during measurement, e.g. by constructional details of optics} <i>Passive reduction of errors</i>
M	G01B 9/02061	• • • • {Reducing or preventing effect of tilt or misalignment, e.g. of object or reference mirror} <i>Reduction or prevention of effects of tilts or misalignment</i>
M	G01B 9/0209	• • {Non-tomographic low coherence interferometers, e.g. low coherence interferometry, scanning white light interferometry, optical frequency domain interferometry or reflectometry} <i>Low-coherence interferometers</i>
M	G01B 9/02091	• • • {Tomographic low coherence interferometers, e.g. optical coherence tomography} <i>Tomographic interferometers, e.g. based on optical coherence</i>
M	G01B 9/02097	• • {Self-interferometers, i.e. the object beam interfering with a shifted version of itself} <i>Self-interferometers</i>

M G01B 9/02098 . . . ~~{shearing interferometers}~~ *Shearing interferometers*

Project: RP0713 (G01C)

U G01C 19/00 Gyroscopes; Turn-sensitive devices using vibrating masses; Turn-sensitive devices without moving masses; Measuring angular rate using gyroscopic effects

N G01C 19/005 . {Measuring angular rate using gyroscopic effects}

WARNING

Group [G01C 19/005](#) is incomplete pending reclassification of documents from groups [G01P 9/00](#), [G01P 9/02](#) and [G01P 9/04](#).

All groups listed in this Warning should be considered in order to perform a complete search.

M G01C 19/02 . Rotary gyroscopes

WARNING

Groups [G01C 19/02](#), [G01C 19/025](#), [G01C 19/04](#), [G01C 19/06](#), [G01C 19/08](#), [G01C 19/10](#), [G01C 19/12](#), [G01C 19/14](#), [G01C 19/16](#), [G01C 19/18](#), [G01C 19/20](#), [G01C 19/22](#), [G01C 19/24](#), [G01C 19/26](#), [G01C 19/28](#), [G01C 19/30](#), [G01C 19/32](#), [G01C 19/34](#), [G01C 19/36](#), [G01C 19/38](#), [G01C 19/40](#), [G01C 19/42](#), [G01C 19/44](#), [G01C 19/46](#), [G01C 19/48](#), [G01C 19/50](#), [G01C 19/52](#) and [G01C 19/54](#) are incomplete pending reclassification of documents from group [G01P 9/02](#).

All groups listed in this Warning should be considered in order to perform a complete search.

T G01C 19/025 . . {~~Special arrangements for gyros functioning during a short period~~ *Gyroscopes functioning for short periods*}

U G01C 19/04 . Details

U G01C 19/06 . . Rotors

T G01C 19/065 . . . {~~Measurement or control of angular velocity, specifically adapted to gyrorotors~~ *Means for measuring or controlling of rotors' angular velocity*}

WARNING

Group [G01C 19/065](#) is incomplete pending reclassification of documents from groups [G01P 9/00](#) and [G01P 9/02](#).

Groups [G01P 9/00](#), [G01P 9/02](#) and [G01C 19/065](#) should be considered in order to perform a complete search.

M G01C 19/56 . Turn-sensitive devices using vibrating masses, e.g. vibratory angular rate sensors based on Coriolis forces

WARNING

Groups [G01C 19/56](#) - [G01C 19/5783](#) are incomplete pending reclassification of documents from group [G01P 9/04](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U G01C 21/00 Navigation; Navigational instruments not provided for in groups [G01C 1/00](#) - [G01C 19/00](#) (measuring distance traversed on the ground by a vehicle [G01C 22/00](#); control of position, course, altitude or attitude of vehicles [G05D 1/00](#); traffic control systems for road vehicles involving transmission of navigation instructions to the vehicle [G08G 1/0968](#))

WARNING

Group [G01C 21/00](#) is impacted by reclassification into groups [G01C 21/38](#) - [G01C 21/3896](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U G01C 21/10 • by using measurements of speed or acceleration ([G01C 21/24](#), [G01C 21/26](#) take precedence)
- U G01C 21/12 • • executed aboard the object being navigated; Dead reckoning
- M G01C 21/16 • • • by integrating acceleration or speed, i.e. inertial navigation

WARNING

Group G01C 21/16 is impacted by reclassification into groups G01C 21/166, G01C 21/183, G01C 21/185, and G01C 21/188.-
Groups G01C 21/16, G01C 21/166, G01C 21/183, G01C 21/185, and G01C 21/188 should be considered in order to perform a complete search.

Groups [G01C 21/16](#) - [G01C 21/188](#) are incomplete pending reclassification of documents from groups [G01P 9/00](#), [G01P 9/02](#) and [G01P 9/04](#).
All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0536 (G01C)

- M G01C 23/00 Combined instruments indicating more than one navigational value, e.g. for aircraft; Combined measuring devices for measuring two or more variables of movement, e.g. distance, speed, ~~or~~ acceleration

Project: MP0536 (G01D)

- U G01D 1/00 Measuring arrangements giving results other than momentary value of variable, of general application ([G01D 3/00](#) takes precedence; in tariff metering apparatus [G01D 4/00](#); transducers not specially adapted for a specific variable [G01D 5/00](#))
- M G01D 1/16 • giving a value which is a function of two or more values, e.g. product, ~~or~~ ratio

Project: RP0755 (G01F)

- M G01F 1/00 Measuring the volume flow or mass flow of fluid or fluent solid material wherein the fluid passes through ~~the~~[a](#) meter in a continuous flow (measuring a proportion of the volume flow [G01F 5/00](#))

NOTE

~~G01F 1/72, {Groups G01F 1/74 and G01F 1/704 - G01F 1/76 take precedence over groups G01F 1/05 - G01F 1/68.}~~

- M G01F 1/002 • ~~{specially adapted to be used in open channels}~~ *wherein the flow is in an open channel*
- U G01F 1/05 • by using mechanical effects
- M G01F 1/20 • • by detection of dynamic effects of the ~~fluid~~-flow
- M G01F 1/32 • • • ~~by swirl flowmeter, e.g. using Karman vortices~~ *using swirl flowmeters*
- U G01F 1/3236 • • • • {using guide vanes as swirling means}
- D G01F 1/3245 • • • • {~~detection means for swirl flowmeters (detection means in general G01H)~~}
 <administratively transferred to [G01F 1/325](#)>
- N G01F 1/325 • • • • *Means for detecting quantities used as proxy variables for swirl*
- D G01F 1/3254 • • • • • {~~for detecting fluid pressure oscillations~~}
 <administratively transferred to [G01F 1/3259](#)>
- N G01F 1/3259 • • • • • {*for detecting fluid pressure oscillations*}

- D G01F 1/3263 {by sensing mechanical vibrations}
 <administratively transferred to [G01F 1/3266](#)>
- N G01F 1/3266 {by sensing mechanical vibrations}
- D G01F 1/3272 {for detecting fluid speed oscillations by thermal sensors}
 <administratively transferred to [G01F 1/3273](#)>
- N G01F 1/3273 {for detecting fluid speed oscillations by thermal sensors}
- D G01F 1/3281 {for detecting variations in infrasonic, sonic or ultrasonic waves, due to modulation by passing through the swirling fluid}
 <administratively transferred to [G01F 1/3282](#)>
- N G01F 1/3282 {for detecting variations in infrasonic, sonic or ultrasonic waves, due to modulation by passing through the swirling fluid}
- N G01F 1/3287 {circuits therefor}
- D G01F 1/329 {circuits therefore}
 <administratively transferred to [G01F 1/3287](#)>
- U G01F 1/34 . . by measuring pressure or differential pressure
- U G01F 1/36 . . . the pressure or differential pressure being created by the use of flow constriction
- M G01F 1/40 Details ~~or~~ construction of the flow constriction devices
- M G01F 1/48 . . . the pressure ~~or~~ differential pressure being created by a capillary element
- M G01F 1/52 . . by measuring the height of the fluid level due to the lifting ~~power~~ of the fluid flow
- M G01F 1/54 . . by means of chains, flexible bands or wires introduced into and moved by, the flow
- M G01F 1/66 . . by measuring frequency, ~~phaseshift~~, ~~phase shift~~ or propagation time of electromagnetic or other waves, e.g. ~~using~~ ultrasonic flowmeters
- M G01F 1/661 . . {using light}
- M G01F 1/663 . . {by measuring Doppler frequency shift}
- M G01F 1/667 . . {~~Schematic arrangements of transducers of~~ ~~Arrangements of transducers for~~ ultrasonic flowmeters; ~~Circuits therefor for operating ultrasonic flowmeters~~ (G01F 1/663, G01F 1/665, G01F 1/666 take precedence)}
- U G01F 1/704 . . using marked regions or existing inhomogeneities within the fluid stream, e.g. statistically occurring variations in a fluid parameter ([G01F 1/76](#), [G01F 25/00](#) take precedence)
- U G01F 1/708 . . Measuring the time taken to traverse a fixed distance
- C G01F 1/7082 . . . {using acoustic detecting arrangements}
- WARNING**
 Group [G01F 1/7082](#) is impacted by reclassification into group [G01F 1/712](#). Groups [G01F 1/7082](#) and [G01F 1/712](#) should be considered in order to perform a complete search.
- C G01F 1/7084 . . . {using thermal detecting arrangements}
- WARNING**
 Group [G01F 1/7084](#) is impacted by reclassification into group [G01F 1/712](#). Groups [G01F 1/7084](#) and [G01F 1/712](#) should be considered in order to perform a complete search.
- C G01F 1/7086 . . . {using optical detecting arrangements}
- WARNING**
 Group [G01F 1/7086](#) is impacted by reclassification into group [G01F 1/712](#).

Groups G01F 1/7086 and G01F 1/712 should be considered in order to perform a complete search.

C G01F 1/7088

- • ~~{using electrical loaded particles as tracers}~~ using electrically charged particles as tracers

WARNING

Group G01F 1/7088 is impacted by reclassification into group G01F 1/712. Groups G01F 1/7088 and G01F 1/712 should be considered in order to perform a complete search.

T G01F 1/712

- • using auto-correlation or cross-correlation detection means ~~{{G01F 1/7082-G01F 1/7088 take precedence}}~~

WARNING

Group G01F 1/712 is incomplete pending reclassification of documents from groups G01F 1/7082, G01F 1/7084, G01F 1/7086 and G01F 1/7088. All groups listed in this Warning should be considered in order to perform a complete search.

U G01F 1/76

- Devices for measuring mass flow of a fluid or a fluent solid material

U G01F 1/78

- • Direct mass flowmeters

U G01F 1/80

- • operating by measuring pressure, force, momentum, or frequency of a fluid flow to which a rotational movement has been imparted

M G01F 1/84

- • • Gyroscopic Coriolis or gyroscopic mass flowmeters

U G01F 1/86

- • Indirect mass flowmeters, e.g. measuring volume flow and density, temperature or pressure

M G01F 1/88

- • • with differential-pressure measurement to determine the volume flow

M G01F 1/90

- • • with positive-displacement meter or turbine meter to determine the volume flow

U G01F 3/00

Measuring the volume flow of fluids or fluent solid material wherein the fluid passes through the meter in successive and more or less isolated quantities, the meter being driven by the flow (measuring a proportion of the volume flow G01F 5/00)

U G01F 3/02

- with measuring chambers which expand or contract during measurement

U G01F 3/04

- • having rigid movable walls

U G01F 3/06

- • comprising members rotating in a fluid-tight or substantially fluid-tight manner in a housing

M G01F 3/08

- • • Rotary-piston or ring-piston meters

M G01F 3/14

- • comprising reciprocating pistons, e.g. reciprocating in a rotary rotating body

M G01F 3/24

- with measuring chambers moved during operation (wet gasmeters gas-meters G01F 3/30)

M G01F 11/00

Apparatus requiring external operation and adapted at each repeated and identical operation to measure and separate a predetermined volume of fluid or fluent solid material from a supply or container, without regard to weight, and to deliver it

U G01F 11/10

- with measuring chambers moved during operation

M G01F 11/26

- • wherein the measuring chamber is filled and emptied by tilting or inverting the supply vessel, e.g. bottle-emptying apparatus

U G01F 11/28

- with stationary measuring chambers having constant volume during measurement

M G01F 11/36

- • with supply and/or discharge valves of the rectilinearly-moved slide type

M G01F 11/42

- • with supply and/or discharge valves of the rotary or oscillatory type

M	G01F 15/00	Details of, or accessories for, apparatus of the preceding groups groups G01F 1/00 - G01F 13/00 insofar as such details or appliances are not adapted to particular types of such apparatus
M	G01F 15/06	• Indicating or recording devices, e.g. for remote indication
M	G01F 15/061	• • {for remote indication}
M	G01F 15/063	• • • {using electrical means}
M	G01F 15/07	• Integration to give total flow, e.g. using mechanically-operated integration mechanisms integrating mechanism
M	G01F 15/075	• • using electrically - operated integrating means
M	G01F 15/08	• Air or gas separators in combination with liquid meters; Liquid separators in combination with gas - meters
M	G01F 23/00	Indicating or measuring liquid level, or level of fluent solid material, e.g. indicating in terms of volume, or indicating by means of an alarm
D	G01F 23/0061	• {characterised by the level signal processing means} <administratively transferred to G01F 23/80 >
D	G01F 23/0069	• • {particular electronic circuits for digital processing equipment} <administratively transferred to G01F 23/802 >
D	G01F 23/0076	• • • {containing circuits handling parameters other than liquid level} <administratively transferred to G01F 23/804 >
D	G01F 23/0084	• • {particular electronic circuits for handling non-digital processing equipment} <administratively transferred to G01F 23/806 >
D	G01F 23/0092	• • • {containing circuits handling parameters other than liquid level} <administratively transferred to G01F 23/808 >
M	G01F 23/22	• by measurement of measuring physical variables, other than linear dimensions, pressure or weight, dependent on the level to be measured, e.g. by difference of heat transfer of steam or water (involving the use of floats G01F 23/30)
U	G01F 23/26	• • by measuring variations of capacity or inductance of capacitors or inductors arising from the presence of liquid or fluent solid material in the electric or electromagnetic fields
M	G01F 23/263	• • • {using capacitors} by measuring variations in capacitance of capacitors
M	G01F 23/28	• • by measuring the variations of parameters of electric electromagnetic or acoustic waves applied directly to the liquid or fluent solid material
U	G01F 23/296	• • • Acoustic waves
M	G01F 23/2962	• • • • { Transit time measurement } Measuring transit time of reflected waves
M	G01F 23/2965	• • • • { measuring wave attenuation } Measuring attenuation of transmitted waves
U	G01F 23/30	• by floats
M	G01F 23/48	• • using twisted spindles as transmission means elements
M	G01F 23/56	• • using elements rigidly fixed to, and rectilinearly moving with, the floats as transmission elements
U	G01F 23/76	• • characterised by the construction of the float
N	G01F 23/80	• <i>Arrangements for signal processing</i>
N	G01F 23/802	• • {Particular electronic circuits for digital processing equipment}
N	G01F 23/804	• • • {containing circuits handling parameters other than liquid level}
N	G01F 23/806	• • {Particular electronic circuits for handling non-digital processing equipment}
N	G01F 23/808	• • • {containing circuits handling parameters other than liquid level}

M	G01F 25/00	Testing or calibrating<i>calibration of</i> apparatus for measuring volume, volume flow or liquid level, or for metering by volume
D	G01F 25/0007	<ul style="list-style-type: none"> • {for measuring volume flow} <administratively transferred to G01F 25/10>
D	G01F 25/0015	<ul style="list-style-type: none"> • • {using a seal ball or piston in a test loop} <administratively transferred to G01F 25/11>
D	G01F 25/0023	<ul style="list-style-type: none"> • • {using tracer} <administratively transferred to G01F 25/12>
D	G01F 25/003	<ul style="list-style-type: none"> • • {using a reference counter} <administratively transferred to G01F 25/13>
D	G01F 25/0038	<ul style="list-style-type: none"> • • {using a calibrated reservoir} <administratively transferred to G01F 25/17>
D	G01F 25/0046	<ul style="list-style-type: none"> • • {using a weighing apparatus} <administratively transferred to G01F 25/14>
D	G01F 25/0053	<ul style="list-style-type: none"> • • {specially adapted for gas meters (G01F 25/0015 – G01F 25/0046 take precedence)} <administratively transferred to G01F 25/15>
D	G01F 25/0061	<ul style="list-style-type: none"> • {for measuring liquid level} <administratively transferred to G01F 25/20>
D	G01F 25/0069	<ul style="list-style-type: none"> • • {checking proper indicating of discrete level by floats} <administratively transferred to G01F 25/22>
D	G01F 25/0076	<ul style="list-style-type: none"> • • {testing proper functioning of electronic circuits} <administratively transferred to G01F 25/24>
U	G01F 25/0084	• {for measuring volume}
U	G01F 25/0092	• {for metering by volume}
N	G01F 25/10	• of flowmeters
N	G01F 25/11	• • {using a seal ball or piston in a test loop}
N	G01F 25/12	• • {using tracer}
N	G01F 25/13	• • {using a reference counter}
N	G01F 25/14	• • {using a weighing apparatus}
N	G01F 25/15	• • {specially adapted for gas meters (G01F 25/11 - G01F 25/14 , G01F 25/17 take precedence)}
N	G01F 25/17	• • using calibrated reservoirs
N	G01F 25/20	• of apparatus for measuring liquid level
N	G01F 25/22	• • {Checking proper indicating of discrete level by floats}
N	G01F 25/24	• • {Testing proper functioning of electronic circuits}

Project: RP0752 (G01J)

C **G01J 5/00** **Radiation pyrometry, e.g. *infrared or optical thermometry***

WARNING

Group G01J 5/00 is impacted by reclassification into group G01J 5/90. Groups G01J 5/00 and G01J 5/90 should be considered in order to perform a complete search.

D	G01J 2005/0048	<ul style="list-style-type: none"> • {Calibrating; Correcting} <p><administratively transferred to G01J 5/80 INV></p>
D	G01J 2005/0051	<ul style="list-style-type: none"> • {Methods for correcting for emissivity} <p><administratively transferred to G01J 5/802 INV></p>
D	G01J 2005/0055	<ul style="list-style-type: none"> • {Atmospheric correction} <p><administratively transferred to G01J 5/804 INV></p>
D	G01J 2005/0059	<ul style="list-style-type: none"> • {Correcting for reflection of the emitter radiation} <p><administratively transferred to G01J 5/806 INV></p>
D	G01J 2005/0062	<ul style="list-style-type: none"> • {Linearising circuits} <p><administratively transferred to G01J 5/808 INV></p>
D	G01J 2005/0081	<ul style="list-style-type: none"> • {Thermography} <p><administratively transferred to G01J 5/48 INV></p>
D	G01J 2005/0085	<ul style="list-style-type: none"> • {Temperature profile} <p><administratively transferred to G01J 5/485 INV></p>
M	G01J 2005/0092	<ul style="list-style-type: none"> • {Temperature by averaging, e.g. by scan (scan intended for space-resolved determination G01J-2005/0081 <i>thermography G01J 5/48</i>)}
C	G01J 5/02	<ul style="list-style-type: none"> • Details <i>Constructional details</i> <p>WARNING <i>Group G01J 5/02 is impacted by reclassification into group G01J 5/05. Groups G01J 5/02 and G01J 5/05 should be considered in order to perform a complete search.</i></p>
U	G01J 5/025	<ul style="list-style-type: none"> • {Interfacing a pyrometer to an external device or network; User interface}
M	G01J 5/0255	<ul style="list-style-type: none"> • {Sample holders for pyrometry; Cleaning of sample (using a gas purge G01J 5/029 <i>G01J 5/051</i>)}
C	G01J 5/026	<ul style="list-style-type: none"> • {Control of working procedures of a pyrometer, other than calibration (calibration G01J-2005/0048 and G01J 5/522); Detecting failures in the functioning of a pyrometer; Bandwidth calculation; Gain control}; Security control <p>WARNING <i>Group G01J 5/026 is impacted by reclassification into group G01J 5/90. Groups G01J 5/026 and G01J 5/90 should be considered in order to perform a complete search.</i></p>
U	G01J 5/028	<ul style="list-style-type: none"> • {using a charging unit or battery}
D	G01J 5/0285	<ul style="list-style-type: none"> • {Constructional arrangements for compensating for fluctuations caused by humidity, pressure or electromagnetic waves; Controlling the atmosphere inside a pyrometer (G01J 5/029 takes precedence)} <p><administratively transferred to G01J 5/068></p>
D	G01J 5/029	<ul style="list-style-type: none"> • {using a gas purge} <p><administratively transferred to G01J 5/051></p>
U	G01J 5/0295	<ul style="list-style-type: none"> • {Nulling devices or absolute detection}
N	G01J 5/03	<ul style="list-style-type: none"> • <i>Arrangements for indicating or recording specially adapted for radiation pyrometers</i>
M	G01J 5/04	<ul style="list-style-type: none"> • Casings {Mountings}
U	G01J 5/041	<ul style="list-style-type: none"> • {Mountings in enclosures or in a particular environment}

- D G01J 5/043 . . . {Prevention or determination of dust, smog or clogging (G01J 5/029 takes precedence)}
<administratively transferred to [G01J 5/05](#)>
- U G01J 5/049 . . . {Casings for tympanic thermometers}
- N G01J 5/05 . . . Means for preventing contamination of the components of the optical system;
Means for preventing obstruction of the radiation path
WARNING
Group [G01J 5/05](#) is incomplete pending reclassification of documents from group [G01J 5/02](#).
Groups [G01J 5/02](#) and [G01J 5/05](#) should be considered in order to perform a complete search.
- N G01J 5/051 . . . {using a gas purge}
- M G01J 5/06 . . . Arrangements for eliminating effects of disturbing radiation; *Arrangements for compensating changes in sensitivity (for adjusting of solid angle of collected radiation G01J 5/07; means for wavelength selection G01J 5/0801)*
- M G01J 5/061 . . . ~~{using cooling or thermostating of parts of the apparatus by controlling the temperature of the apparatus or parts thereof, e.g. using cooling means or thermostats (cooling techniques in general F17C, F25J)}~~
- Q G01J 5/064 . . . {Ambient temperature sensor; Housing temperature sensor; Constructional details thereof}
WARNING
Group [G01J 5/064](#) is impacted by reclassification into group [G01J 5/70](#).
Groups [G01J 5/064](#) and [G01J 5/70](#) should be considered in order to perform a complete search.
- U G01J 2005/066 . . . {Differential arrangement, i.e. sensitive/not sensitive}
- D G01J 2005/067 . . . {Compensating for environment parameters}
<administratively transferred to [G01J 5/068](#) INV>
- N G01J 5/068 . . . by controlling parameters other than temperature
- D G01J 2005/068 . . . {Ambient temperature sensor; Housing temperature sensor}
<administratively transferred to [G01J 5/064](#) INV>
- N G01J 5/07 . . . Arrangements for adjusting the solid angle of collected radiation, e.g. adjusting or orienting field of view, tracking position or encoding angular position (optical collimating elements [G01J 5/0806](#))
- C G01J 5/08 . . . Optical features ~~{arrangements (optical-mechanical scanning H04N 5/33; G02B 26/10)}~~
WARNING
Group [G01J 5/08](#) is impacted by reclassification into groups [G01J 5/0801](#) and [G01J 5/0803](#).
Groups [G01J 5/08](#), [G01J 5/0801](#), and [G01J 5/0803](#) should be considered in order to perform a complete search.
- N G01J 5/0801 . . . Means for wavelength selection or discrimination
WARNING
Group [G01J 5/0801](#) is incomplete pending reclassification of documents from groups [G01J 5/08](#) and [G01J 5/0803](#).
Groups [G01J 5/08](#), [G01J 5/0803](#), and [G01J 5/0801](#) should be considered in order to perform a complete search.
- N G01J 5/0802 Optical filters
- N G01J 5/08021 {Notch filters}

- C G01J 5/0803 . . . {~~Optical elements not provided otherwise, e.g. optical manifolds, gratings, holograms, cubic beamsplitters, prisms, particular coatings~~} *Arrangements for time-dependent attenuation of radiation signals*
- WARNING
Group [G01J 5/0803](#) is incomplete pending reclassification of documents from groups [G01J 5/08](#) and [G01J 5/0816](#).
Group [G01J 5/0803](#) is also impacted by reclassification into groups [G01J 5/0801](#) and [G01J 5/0879](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q G01J 5/0804 . . . Shutters
- WARNING
Group [G01J 5/0804](#) is impacted by reclassification into group [G01J 5/0805](#).
Groups [G01J 5/0804](#) and [G01J 5/0805](#) should be considered in order to perform a complete search.
- N G01J 5/0805 . . . Means for chopping radiation
- WARNING
Group [G01J 5/0805](#) is incomplete pending reclassification of documents from group [G01J 5/0804](#).
Groups [G01J 5/0804](#) and [G01J 5/0805](#) should be considered in order to perform a complete search.
- M G01J 5/0806 . . . {~~using focussing~~ *Focusing* or collimating elements, e.g. lenses or mirrors} *concave mirrors*
- Q G01J 5/0808 . . . Convex mirrors
- WARNING
Group [G01J 5/0808](#) is impacted by reclassification into groups [G01J 5/0813](#) and [G01J 5/0814](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- D G01J 5/0809 . . . {~~using plane or convex mirrors, parallel phase plates or particular reflectors~~}
- <administratively transferred to [G01J 5/0808](#)>
- D G01J 5/0812 . . . {~~using attenuators~~}
- <administratively transferred to [G01J 5/0816](#)>
- N G01J 5/0813 . . . Planar mirrors; Parallel phase plates
- WARNING
Group [G01J 5/0813](#) is incomplete pending reclassification of documents from group [G01J 5/0808](#).
Groups [G01J 5/0808](#) and [G01J 5/0813](#) should be considered in order to perform a complete search.
- N G01J 5/0814 . . . {Particular reflectors, e.g. faceted or dichroic mirrors}
- WARNING
Group [G01J 5/0814](#) is incomplete pending reclassification of documents from group [G01J 5/0808](#).
Groups [G01J 5/0808](#) and [G01J 5/0814](#) should be considered in order to perform a complete search.
- M G01J 5/0815 . . . {~~using light~~ *Light* concentrators, collectors or condensers}

- Q G01J 5/0816 . . . {using attenuators}
- WARNING
Group [G01J 5/0816](#) is impacted by reclassification into group [G01J 5/0803](#). Groups [G01J 5/0816](#) and [G01J 5/0803](#) should be considered in order to perform a complete search.
- M G01J 5/0818 . . . ~~{using waveguides, rods or tubes}~~ *Waveguides*
- M G01J 5/0821 . . . ~~{using optical fibers}~~ *Optical fibres*
- D G01J 5/0825 . . . ~~{using polarizing elements}~~
<administratively transferred to [G01J 5/59](#)>
- D G01J 5/0828 . . . ~~{using notch filters}~~
<administratively transferred to [G01J 5/08021](#)>
- M G01J 5/0831 . . . ~~*Masks; Aperture plates; {using masks, e.g. structured apertures, using aperture plates or using spatial light modulators or spatial filters, e.g. reflective filters}*~~ *Spatial light modulators*
- D G01J 5/0834 . . . ~~{using shutters or modulators}~~
<administratively transferred to [G01J 5/0804](#)>
- M G01J 5/0837 . . . ~~{using microantennas}~~ *Microantennas*, e.g. bow-tie}
- M G01J 5/084 . . . ~~{Adjustable, or slidable}~~
- M G01J 5/0843 . . . ~~{Manually adjustable}~~
- M G01J 5/0846 . . . ~~{using having}~~ multiple detectors for performing different types of detection, e.g. *using* radiometry and reflectometry channels}
- M G01J 5/085 . . . ~~{having a through-hole enabling the optical element}~~ *through-hole enabling the optical elements* to fulfil an additional optical function, e.g. ~~a mirror or grating having a through-hole~~ *mirrors or gratings having a through-hole* for a light collecting or light injecting optical fiber}
- M G01J 5/0853 . . . ~~{using having}~~ infrared absorbers other than the usual absorber layers deposited on infrared detectors like bolometers, wherein the heat propagation between the absorber and the detecting element occurs within a solid}
- M G01J 5/0856 . . . ~~{Slit arrangements}~~
- M G01J 5/0859 . . . ~~{using a sighting arrangement, or a camera for the same purpose}~~ *Sighting arrangements, e.g. cameras}*
- D G01J 5/0862 . . . ~~{using optical filters (G01J 5/602, G01J 5/0828 take precedence)}~~
<administratively transferred to [G01J 5/0802](#)>
- M G01J 5/0865 . . . ~~{using having}~~ means for replacing an element ~~by another, e.g. for replacing a of the arrangement by another of the same type, e.g. an optical filter}~~
- M G01J 5/0868 . . . ~~{using means}~~ *Means* for illuminating a slit or a surface efficiently, e.g. entrance slit of a pyrometer or entrance face of a fiber}
- M G01J 5/0871 . . . ~~{Beam switching arrangements; Photodetection involving different fields of view for a single detector}~~
- M G01J 5/0875 . . . ~~{Windows or their fastening arrangements}~~ *Windows; Arrangements for fastening thereof*
- M G01J 5/0878 . . . ~~{Diffusers}~~

- N G01J 5/0879
- • {Optical elements not provided otherwise, e.g. optical manifolds, holograms, cubic beamsplitters, non-dispersive prisms or particular coatings}
- WARNING
Group [G01J 5/0879](#) is incomplete pending reclassification of documents from group [G01J 5/0803](#).
Groups [G01J 5/0803](#) and [G01J 5/0879](#) should be considered in order to perform a complete search.
- D G01J 5/089
- • {Field-of-view determination; Aiming or pointing of a pyrometer; Adjusting alignment; Encoding angular position; Size of the measuring area; Position tracking}
- <administratively transferred to [G01J 5/07](#)>
- U G01J 5/10
- using electric radiation detectors
- M G01J 5/12
- using thermoelectric elements, e.g. thermocouples ~~(thermoelectric elements per se H01L 35/00, H01L 37/00)~~
- M G01J 5/14
- • Electrical features *thereof*
- D G01J 5/18
- • • Special adaptation for indicating or recording (indicating or recording measured values in general G01D)
- <administratively transferred to [G01J 5/03](#)>
- M G01J 5/20
- using resistors, thermistors or semiconductors sensitive to radiation, e.g. *photoconductive devices*
- M G01J 5/22
- • Electrical features *thereof*
- M G01J 5/24
- • • Use of ~~a specially-adapted circuit, e.g. bridge circuit~~ *specially adapted circuits, e.g. bridge circuits*
- D G01J 5/26
- • • Special adaptation for indicating or recording (indicating or recording measured values in general G01D)
- <administratively transferred to [G01J 5/03](#)>
- M G01J 5/28
- using ~~photo-emissive, photo-conductive, or photo-voltaic~~ *photoemissive or photovoltaic* cells
- M G01J 5/30
- • Electrical features *thereof*
- D G01J 5/32
- • • Special adaptation for indicating or recording (indicating or recording measured values in general G01D)
- <administratively transferred to [G01J 5/03](#)>
- C G01J 5/34
- using capacitors ~~-, e.g. pyroelectric elements~~ *capacitors*
- WARNING
Group [G01J 5/34](#) is impacted by reclassification into group [G01J 5/35](#).
Groups [G01J 5/34](#) and [G01J 5/35](#) should be considered in order to perform a complete search.
- U G01J 2005/345
- • {Arrays}
- N G01J 5/35
- • Electrical features *thereof*
- WARNING
Group [G01J 5/35](#) is incomplete pending reclassification of documents from group [G01J 5/34](#).
Groups [G01J 5/34](#) and [G01J 5/35](#) should be considered in order to perform a complete search.
- U G01J 5/38
- using extension or expansion of solids or fluids
- M G01J 5/40
- using ~~bimetallic~~ *bimaterial* elements
- M G01J 5/44
- using change of resonant frequency, e.g. of piezo-electric ~~crystal~~ *crystals*

- T G01J 5/48 • *Thermography; Techniques* using wholly visual means
- N G01J 5/485 • • {*Temperature profile*}
- D G01J 5/50 • using techniques specified in the subgroups below
<administratively transferred to [G01J 5/00](#)>
- D G01J 5/505 • • {using photographic recording}
<administratively transferred to [G01J 5/03](#)>
- M G01J 5/52 • ~~•~~ using comparison with reference sources, e.g. disappearing-filament pyrometer
- D G01J 5/522 • • • {Reference sources, e.g. standard lamps; Black bodies}
<administratively transferred to [G01J 5/53](#)>
- D G01J 5/524 • • • {using a reference heater of the emissive surface type, e.g. for selectively absorbing materials}
<administratively transferred to [G01J 5/532](#)>
- M G01J 2005/526 • • ~~•~~ {Periodic insertion of emissive surface}
- M G01J 2005/528 • • ~~•~~ {Periodic comparison}
- N G01J 5/53 • • *Reference sources, e.g. standard lamps; Black bodies*
- N G01J 5/532 • • • {using a reference heater of the emissive surface type, e.g. for selectively absorbing materials}
- M G01J 5/54 • • ~~•~~ Optical *features arrangements*
- M G01J 5/56 • • ~~•~~ Electrical features *thereof*
- M G01J 5/58 • ~~•~~ using absorption; *using polarisation*; using extinction effect
- M G01J 2005/583 • • ~~•~~ {Interferences, i.e. fringe variation with temperature}
- D G01J 2005/586 • • • {Polarisation}
<administratively transferred to [G01J 5/59](#) INV>
- N G01J 5/59 • *using polarisation; Details thereof*
- M G01J 5/60 • ~~•~~ using determination of colour temperature ~~{Pyrometry using two wavelengths filtering; using selective, monochromatic or bandpass filtering; using spectral scanning}~~
- M G01J 5/601 • • ~~•~~ {using spectral scanning}
- M G01J 5/602 • • ~~•~~ {using selective, monochromatic or bandpass filtering}
- M G01J 2005/604 • • • ~~•~~ {bandpass filtered}
- M G01J 5/605 • • ~~•~~ {using visual determination}
- M G01J 2005/607 • • ~~•~~ {on two separate detectors}
- M G01J 2005/608 • • ~~•~~ {Colour temperature of *lamps, sources or the like light sources*}
- D G01J 5/62 • • using means for chopping the light {Compensation for background radiation of chopper element}
<administratively transferred to [G01J 5/0805](#)>
- D G01J 2005/623 • • • {Compensating radiation of chopper}
<administratively transferred to [G01J 5/0805](#) INV>
- D G01J 2005/626 • • • {Electrooptic chopper}
<administratively transferred to [G01J 5/0805](#) INV>
- N G01J 5/70 • *Passive compensation of pyrometer measurements, e.g. using ambient temperature sensing or sensing of temperature within housing*
WARNING
Group [G01J 5/70](#) is incomplete pending reclassification of documents from group [G01J 5/064](#).

Groups [G01J 5/064](#) and [G01J 5/70](#) should be considered in order to perform a complete search.

- N G01J 5/80 • Calibration (using comparison with reference sources [G01J 5/52](#))
- N G01J 5/802 • • {by correcting for emissivity}
- N G01J 5/804 • • {using atmospheric correction}
- N G01J 5/806 • • {by correcting for reflection of the emitter radiation}
- N G01J 5/808 • • {using linearising circuits}
- N G01J 5/90 • Testing, inspecting or checking operation of radiation pyrometers

WARNING

Group [G01J 5/90](#) is incomplete pending reclassification of documents from group [G01J 5/00](#).

Groups [G01J 5/00](#) and [G01J 5/90](#) should be considered in order to perform a complete search.

Project: RP0654-F (G01L)

U G01L 5/00 Apparatus for, or methods of, measuring force, work, mechanical power, or torque, specially adapted for specific purposes

- M G01L 5/16 • for measuring several components of force

WARNING

Group G01L 5/16 is impacted by reclassification into groups G01L 5/169, G01L 5/171 and G01L 5/173.

All groups listed in this Warning should be considered in order to perform a complete search.

- M G01L 5/161 • • using variations in ohmic resistance

WARNING

Group G01L 5/161 is impacted by reclassification into groups G01L 5/1623 and G01L 5/1627.

Groups G01L 5/161, G01L 5/1623 and G01L 5/1627 should be considered in order to perform a complete search.

- M G01L 5/1623 • • of pressure sensitive conductors (using piezoresistors [G01L 5/162](#))

WARNING

Group G01L 5/1623 is incomplete pending reclassification of documents from group G01L 5/161.

Groups G01L 5/161 and G01L 5/1623 should be considered in order to perform a complete search.

- M G01L 5/1627 • • of strain gauges (using piezoresistors [G01L 5/162](#))

WARNING

Group G01L 5/1627 is incomplete pending reclassification of documents from group G01L 5/161.

Groups G01L 5/161 and G01L 5/1627 should be considered in order to perform a complete search.

- M G01L 5/169 • • using magnetic means

WARNING

Group G01L 5/169 is incomplete pending reclassification of documents from group G01L 5/16.

Groups G01L 5/16 and G01L 5/169 should be considered in order to perform a complete search.

- M G01L 5/171 • • using fluid means

WARNING

Group G01L 5/171 is incomplete pending reclassification of documents from group G01L 5/16.
Groups G01L 5/16 and G01L 5/171 should be considered in order to perform a complete search.

- M G01L 5/173 • • using acoustic means

WARNING

Group G01L 5/173 is incomplete pending reclassification of documents from group G01L 5/16.
Groups G01L 5/16 and G01L 5/173 should be considered in order to perform a complete search.

Project: N/A (G01N)**U G01N 1/00****Sampling; Preparing specimens for investigation**

- U G01N 2001/002 • {Devices for supplying or distributing samples to an analysing apparatus}
G01N 2001/005 • • {Packages for mailing or similar ~~transprot~~transport of samples}

Project: RP0760 (G01N)**U G01N 15/00****Investigating characteristics of particles; Investigating permeability, pore-volume, or surface-area of porous materials (identification of microorganisms [C12Q](#))**

- U G01N 15/10 • Investigating individual particles
U G01N 15/14 • • Electro-optical investigation, e.g. flow cytometers
U G01N 15/1456 • • • {without spatial resolution of the texture or inner structure of the particle, e.g. processing of pulse signals}
G01N 15/1463 • • • • {using image analysis for extracting features of the particle}

NOTE

{ References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#) [G06V 10/40](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#) [G06V 20/69](#)
- image enhancement in general [G06T 5/00](#)
- image analysis in general [G06T 7/00](#)

}

- G01N 15/1468 • • • {with spatial resolution of the texture or inner structure of the particle}

NOTE

{ References listed below indicate CPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

- counting objects disposed at random with size distinction [G06M 11/04](#)
- extraction of features from image for pattern recognition [G06K 9/46](#) [G06V 10/40](#)
- specific image analysis method for the recognition of microscopic objects [G06K 9/00127](#) [G06V 20/69](#)
- image enhancement [G06T 5/00](#)

- image analysis [G06T 7/00](#)

}

Project: MP0517 (G01N)

U G01N 2333/00 Assays involving biological materials from specific organisms or of a specific nature

NOTE

In groups [G01N 2333/47](#) - [G01N 2333/994](#) indexing codes are assigned according to the chemical nature of the materials irrespective of the source organism.

- U G01N 2333/005 • from viruses
- U G01N 2333/08 • • RNA viruses
- M G01N 2333/145 • • Rhabdoviridae, e.g. rabies virus, Duvenhage virus, ~~Mokda-virus~~, ~~Mokola virus~~ or vesicular stomatitis virus

Project: RP0713 (G01P)

F G01P 9/00 (Frozen) {Measuring speed by using gyroscopic effect, e.g. using gas, using electron beam (gyroscopes or turn-sensitive devices per se [G01C 19/00](#))}

NOTE

Absolute angular speed sensors are classified under [G01C 19/00](#) and s.gr.

WARNING

Group [G01P 9/00](#) is no longer used for the classification of documents as of January 1, 2022. The content of this group is being reclassified into groups [G01C 19/005](#), [G01C 19/065](#), [G01C 21/16](#), [G01C 21/165](#), [G01C 21/1652](#), [G01C 21/1654](#), [G01C 21/1656](#), [G01C 21/166](#), [G01C 21/18](#), [G01C 21/183](#), [G01C 21/185](#) and [G01C 21/188](#).

All groups listed in this Warning should be considered in order to perform a complete search.

F G01P 9/02 (Frozen) • {using rotary gyroscopes}

WARNING

Group [G01P 9/02](#) is no longer used for the classification of documents as of January 1, 2022. The content of this group is being reclassified into groups [G01C 19/005](#), [G01C 19/02](#), [G01C 19/025](#), [G01C 19/04](#), [G01C 19/06](#), [G01C 19/065](#), [G01C 19/08](#), [G01C 19/10](#), [G01C 19/12](#), [G01C 19/14](#), [G01C 19/16](#), [G01C 19/18](#), [G01C 19/20](#), [G01C 19/22](#), [G01C 19/24](#), [G01C 19/26](#), [G01C 19/28](#), [G01C 19/30](#), [G01C 19/32](#), [G01C 19/34](#), [G01C 19/36](#), [G01C 19/38](#), [G01C 19/40](#), [G01C 19/42](#), [G01C 19/44](#), [G01C 19/46](#), [G01C 19/48](#), [G01C 19/50](#), [G01C 19/52](#), [G01C 19/54](#), [G01C 21/16](#), [G01C 21/165](#), [G01C 21/1652](#), [G01C 21/1654](#), [G01C 21/1656](#), [G01C 21/166](#), [G01C 21/18](#), [G01C 21/183](#), [G01C 21/185](#) and [G01C 21/188](#). All groups listed in this Warning should be considered in order to perform a complete search.

F G01P 9/04 (Frozen) • {using turn-sensitive devices with vibrating masses, e.g. tuning-fork}

WARNING

Group [G01P 9/04](#) is no longer used for the classification of documents as of January 1, 2022. The content of this group is being reclassified into groups [G01C 19/005](#), [G01C 19/56](#), [G01C 19/5607](#), [G01C 19/5614](#), [G01C 19/5621](#), [G01C 19/5628](#), [G01C 19/5635](#), [G01C 19/5642](#), [G01C 19/5649](#), [G01C 19/5656](#), [G01C 19/5663](#), [G01C 19/567](#), [G01C 19/5677](#), [G01C 19/5684](#), [G01C 19/5691](#), [G01C 19/5698](#), [G01C 19/5705](#), [G01C 19/5712](#), [G01C 19/5719](#), [G01C 19/5726](#),

[G01C 19/5733](#), [G01C 19/574](#), [G01C 19/5747](#), [G01C 19/5755](#), [G01C 19/5762](#), [G01C 19/5769](#), [G01C 19/5776](#), [G01C 19/5783](#), [G01C 21/16](#), [G01C 21/165](#), [G01C 21/1652](#), [G01C 21/1654](#), [G01C 21/1656](#), [G01C 21/166](#), [G01C 21/18](#), [G01C 21/183](#), [G01C 21/185](#) and [G01C 21/188](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0755 (G01P)

- U G01P 21/00 Testing or calibrating of apparatus or devices covered by the preceding groups
- U G01P 21/02
 - of speedometers
- G01P 21/025
 - • {for measuring speed of fluids; for measuring speed of bodies relative to fluids (for measuring volume flow [G01F 25/0007](#) [G01F 25/10](#))}

Project: RP0645-F (G01R)

- U G01R 31/00 Arrangements for testing electric properties; Arrangements for locating electric faults; Arrangements for electrical testing characterised by what is being tested not provided for elsewhere ({measuring superconductive properties [G01R 33/1238](#)}; testing or measuring semiconductors or solid state devices during manufacture {[H01L 22/00](#)}; testing line transmission systems [H04B 3/46](#))
- NOTE
- Groups [G01R 31/08](#), [G01R 31/12](#), [G01R 31/327](#), [G01R 31/24](#), [G01R 31/26](#), [G01R 31/34](#), [G01R 31/36](#), [G01R 31/40](#), [G01R 31/44](#) take precedence over group [G01R 31/50](#).

- M G01R 31/01
 - Subjecting similar articles in turn to test, e.g. "go/no-go" tests in mass production; Testing objects at points as they pass through a testing station (testing of cables continuously passing the testing apparatus [G01R 31/59](#); testing dielectric strength or breakdown voltage [G01R 31/12](#))

WARNING

Group G01R 31/01 is impacted by reclassification into groups G01R 31/12 and G01R 31/59.

Groups G01R 31/01, G01R 31/12 and G01R 31/59 should be considered in order to perform a complete search.

- M G01R 31/12
 - Testing dielectric strength or breakdown voltage {; Testing or monitoring effectiveness or level of insulation, e.g. of a cable or of an apparatus, for example using partial discharge measurements; Electrostatic testing ([G01R 31/08](#), [G01R 31/327](#) and [G01R 31/72](#) take precedence; measuring in plasmas [G01R 19/0061](#); measuring dielectric constants [G01R 27/2617](#); ESD, EMC or EMP testing of circuits [G01R 31/002](#))}

WARNING

Group G01R 31/12 is incomplete pending reclassification of documents from group G01R 31/01.

Groups G01R 31/01 and G01R 31/12 should be considered in order to perform a complete search.

- M G01R 31/50
 - Testing of electric apparatus, lines, cables or components for short-circuits, continuity, leakage current or incorrect line connections (testing of sparking plugs [H01T 13/58](#))

WARNING

Group G01R 31/50 is impacted by reclassification into groups G01R 31/52, G01R 31/54, G01R 31/55 and G01R 31/56.

Groups G01R 31/50, G01R 31/52, G01R 31/54, G01R 31/55 and G01R 31/56 should be considered in order to perform a complete search.

M G01R 31/52

- Testing for short-circuits, leakage current or ground faults

WARNING

Group G01R 31/52 is incomplete pending reclassification of documents from group G01R 31/50.
Groups G01R 31/50 and G01R 31/52 should be considered in order to perform a complete search.

M G01R 31/54

- Testing for continuity

WARNING

Group G01R 31/54 is incomplete pending reclassification of documents from group G01R 31/50.
Groups G01R 31/50 and G01R 31/54 should be considered in order to perform a complete search.

M G01R 31/55

- Testing for incorrect line connections

WARNING

Group G01R 31/55 is incomplete pending reclassification of documents from group G01R 31/50.
Groups G01R 31/50 and G01R 31/55 should be considered in order to perform a complete search.

M G01R 31/56

- Testing of electric apparatus (testing of transformers [G01R 31/62](#); testing of connections [G01R 31/66](#))

WARNING

Group G01R 31/56 is incomplete pending reclassification of documents from group G01R 31/50.
Groups G01R 31/50 and G01R 31/56 should be considered in order to perform a complete search.

U G01R 31/58

- Testing of lines, cables or conductors (testing of electric windings [G01R 31/72](#))

M G01R 31/59

- while the cable continuously passes the testing apparatus, e.g. during manufacture

WARNING

Group G01R 31/59 is incomplete pending reclassification of documents from group G01R 31/01.
Groups G01R 31/01 and G01R 31/59 should be considered in order to perform a complete search.

M G01R 31/62

- Testing of transformers

WARNING

Group G01R 31/62 is incomplete pending reclassification of documents from group G01R 31/72.
Groups G01R 31/72 and G01R 31/62 should be considered in order to perform a complete search.

M G01R 31/72

- Testing of electric windings (testing of transformers [G01R 31/62](#))

WARNING

Group G01R 31/72 is impacted by reclassification into group G01R 31/62.
Groups G01R 31/72 and G01R 31/62 should be considered in order to perform a complete search.

Project: RP0248-F (G01S)**U G01S 13/00**

Systems using the reflection or reradiation of radio waves, e.g. radar systems; Analogous systems using reflection or reradiation of waves whose nature or wavelength is irrelevant or unspecified

NOTES

1. This group covers :

- systems for detecting the presence of an object, e.g. by reflection or reradiation from the object itself, or from a transponder associated with the object, for determining the distance or relative velocity of an object, for providing a co-ordinated display of the distance and direction of an object or for obtaining an image thereof;
- systems arranged for mounting on a moving craft or vehicle and using the reflection of waves from an extended surface external to the craft, e.g. the surface of the earth, to determine the velocity and direction of motion of the craft relative to the surface.

2. This group does not cover :

- systems for determining the direction of an object by means not employing reflection or reradiation, which are covered by groups [G01S 1/00](#) or [G01S 3/00](#);
- systems for determining distance or velocity of an object by means not employing reflection or reradiation, which are covered by group [G01S 11/00](#).

U G01S 13/88

- Radar or analogous systems specially adapted for specific applications (electromagnetic prospecting or detecting of objects, e.g. near-field detection, [G01V 3/00](#))

M G01S 13/89

- for mapping or imaging

WARNING

Group G01S 13/89 is impacted by reclassification into group G01S 13/895. Groups G01S 13/89 and G01S 13/895 should be considered in order to perform a complete search.

M G01S 13/895

- • {Side looking radar [SLR]}

WARNING

Group G01S 13/895 is incomplete pending reclassification of documents from group G01S 13/89. Groups G01S 13/89 and G01S 13/895 should be considered in order to perform a complete search.

M G01S 13/90

- • using synthetic aperture techniques {, e.g. synthetic aperture radar [SAR] techniques}

WARNING

Group G01S 13/90 is impacted by reclassification into groups G01S 13/9004, G01S 13/9019, G01S 13/9021, G01S 13/9027, G01S 13/904, G01S 13/9054, G01S 13/9056 and G01S 13/9089. All groups listed in this Warning should be considered in order to perform a complete search.

M G01S 13/9004

- • • {SAR image acquisition techniques}

WARNING

Group G01S 13/9004 is incomplete pending reclassification of documents from group G01S 13/90. Groups G01S 13/90 and G01S 13/9004 should be considered in order to perform a complete search.

M	G01S 13/9019	<ul style="list-style-type: none"> • • • • {Auto-focussing of the SAR signals} <p><u>WARNING</u> Group G01S 13/9019 is incomplete pending reclassification of documents from group G01S 13/90. Groups G01S 13/90 and G01S 13/9019 should be considered in order to perform a complete search.</p>
M	G01S 13/9021	<ul style="list-style-type: none"> • • • • {SAR image post-processing techniques} <p><u>WARNING</u> Group G01S 13/9021 is incomplete pending reclassification of documents from group G01S 13/90. Groups G01S 13/90 and G01S 13/9021 should be considered in order to perform a complete search.</p>
M	G01S 13/9023	<ul style="list-style-type: none"> • • • • {combined with interferometric techniques} <p><u>WARNING</u> Group G01S 13/9023 is impacted by reclassification into group G01S 13/9092. Groups G01S 13/9023 and G01S 13/9092 should be considered in order to perform a complete search.</p>
M	G01S 13/9027	<ul style="list-style-type: none"> • • • • {Pattern recognition for feature extraction} <p><u>WARNING</u> Group G01S 13/9027 is incomplete pending reclassification of documents from group G01S 13/90. Groups G01S 13/90 and G01S 13/9027 should be considered in order to perform a complete search.</p>
M	G01S 13/904	<ul style="list-style-type: none"> • • • • {SAR modes} <p><u>WARNING</u> Group G01S 13/904 is incomplete pending reclassification of documents from group G01S 13/90. Group G01S 13/904 is also impacted by reclassification into groups G01S 13/9054 and G01S 13/9056. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	G01S 13/9054	<ul style="list-style-type: none"> • • • • {Stripmap mode} <p><u>WARNING</u> Group G01S 13/9054 is incomplete pending reclassification of documents from groups G01S 13/90 and G01S 13/904. Groups G01S 13/90, G01S 13/904 and G01S 13/9056 should be considered in order to perform a complete search.</p>
M	G01S 13/9056	<ul style="list-style-type: none"> • • • • {Scan SAR mode} <p><u>WARNING</u> Group G01S 13/9056 is incomplete pending reclassification of documents from groups G01S 13/90 and G01S 13/904. Groups G01S 13/90 and G01S 13/904 and G01S 13/9056 should be considered in order to perform a complete search.</p>
M	G01S 13/9089	<ul style="list-style-type: none"> • • • • {SAR having an irregular aperture} <p><u>WARNING</u> Group G01S 13/9089 is incomplete pending reclassification of documents from group G01S 13/90.</p>

~~Groups G01S 13/90 and G01S 13/9089 should be considered in order to perform a complete search.~~

- M G01S 13/9092 • • • • {combined with monopulse techniques}

WARNING

~~Group G01S 13/9092 is incomplete pending reclassification of documents from group G01S 13/9023.
Groups G01S 13/9023 and G01S 13/9092 should be considered in order to perform a complete search.~~

- M G01S 13/91 • • for traffic control ([G01S 13/93](#) takes precedence)

WARNING

~~Group G01S 13/91 is impacted by reclassification into group G01S 13/917.
Groups G01S 13/91 and G01S 13/917 should be considered in order to perform a complete search.~~

- M G01S 13/917 • • • {for marine craft or other waterborne vessels}

WARNING

~~Group G01S 13/917 is incomplete pending reclassification of documents from group G01S 13/91.
Groups G01S 13/91 and G01S 13/917 should be considered in order to perform a complete search.~~

Project: RP0652-F (G01S)

- U G01S 17/00 Systems using the reflection or reradiation of electromagnetic waves other than radio waves, e.g. lidar systems**

NOTES

1. This group covers:

- systems for detecting the presence of an object, e.g. by reflection or reradiation from the object itself, or from a transponder associated with the object, for determining the distance or relative velocity of an object, for providing a coordinated display of the distance and direction of an object or for obtaining an image thereof;
- systems arranged for mounting on a moving craft or vehicle and using the reflection of waves from an extended surface external to the craft, e.g. the surface of the earth, to determine the velocity and direction of motion of the craft relative to the surface.

2. This subclass does not cover:

- systems for determining the direction of an object by means not employing reflection or reradiation which are covered by groups [G01S 1/00](#) or [G01S 3/00](#);
- systems for determining distance or velocity of an object by means not employing reflection or reradiation, which are covered by group [G01S 11/00](#).

- U G01S 17/88 • Lidar systems specially adapted for specific applications

- M G01S 17/89 • • for mapping or imaging

WARNING

~~Group G01S 17/89 is impacted by reclassification into group G01S 17/894.
Groups G01S 17/89 and G01S 17/894 should be considered in order to perform a complete search.~~

M G01S 17/894

- • 3D imaging with simultaneous measurement of time-of-flight at a 2D array of receiver pixels, e.g. time-of-flight cameras or flash lidar

WARNING

Group G01S 17/894 is incomplete pending reclassification of documents from group G01S 17/89.

Groups G01S 17/89 and G01S 17/894 should be considered in order to perform a complete search.

Project: MP0536 (G01W)

U G01W 1/00

Meteorology

M G01W 1/02

- Instruments for indicating weather conditions by measuring two or more variables, e.g. humidity, pressure, temperature, cloud cover, **or** wind speed ([G01W 1/10](#) takes precedence)

Project: MP0520 (G02)

M G02

OPTICSNOTE

In this class, the following **expression is** **terms are** used with the meaning indicated:

- "optical" **applies or** **"optics" apply** not only to visible light but also to **ultra-violet or infra-red radiations** **ultraviolet or infrared radiation**.

Project: MP0519 (G02B)

M G02B

OPTICAL ELEMENTS, SYSTEMS, OR APPARATUS ([G02F](#) takes precedence; measuring instruments, see the relevant subclass of [G01](#), e.g. optical rangefinders [G01C](#); testing of optical elements, systems, or apparatus [G01M 11/00](#); spectacles [G02C](#); sound lenses [G10K 11/30](#); electron and ion "optics" [H01J](#); X-ray "optics" [H01J](#), [H05G 1/00](#); optical elements structurally combined with electric discharge tubes [H01J 5/16](#), [H01J 29/89](#), [H01J 37/22](#); microwave "optics" [H01Q](#); combination of optical elements with television receivers [H04N 5/72](#); heating arrangements specially adapted for transparent or reflecting areas [H05B 3/84](#))

NOTE

1. Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems".

2. *This subclass does not cover:*

- *devices or arrangements, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light, frequency-changing, non-linear optics, optical logic elements;*
- *optical analogue/digital converters;*

which are covered by subclass [G02F](#).

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[G02B 11/00](#) – [G02B 11/34](#) covered by [G02B 9/00](#) and [G02B 13/00](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M	G02B 1/00	Optical elements characterised by the material of which they are made (compositions of optical glasses G03C 3/00; cements for glass G03C 27/00); <i>Optical coatings for optical elements</i>
M	G02B 3/00	Simple or compound lenses (artificial eyes A61F 2/14; spectacle lenses or contact lenses for the eyes G02C; watch or clock glasses G04B 39/00)
U	G02B 5/00	Optical elements other than lenses (light guides G02B 6/00 ; optical logic elements G02F 3/00)
M	G02B 5/20	• Filters (polarising elements G02B 5/30 ; {manufacturing optical filters by photographic processes G03C 7/12; by lithographic processes G03F 7/0007})
M	G02B 5/30	• Polarising elements (light-modulating devices <i>with active elements</i> G02F 1/00)
U	G02B 5/32	• Holograms used as optical elements
U	G02B 6/00	Light guides
M	G02B 6/02	• Optical fibre with cladding {with or without a coating} <i>fibres with cladding</i> (mechanical structures for providing tensile strength and external protection G02B 6/44)
M	G02B 6/10	• of the optical waveguide type (G02B 6/02 , G02B 6/24 take precedence; devices or arrangements for the control of light by electric, magnetic, electro-magnetic or acoustic means G02F 1/00 ; transferring the modulation of modulated light G02F 2/00 ; optical logic elements G02F 3/00 ; optical analogue/digital converters G02F 7/00 ; stores using opto-electronic devices G11C 11/42; electric waveguides H01P; transmission of information by optical means H04B 10/00; multiplex systems H04J 14/00)
M	G02B 6/12	• • of the integrated circuit kind (production or processing of single crystals G30B ; electric integrated circuits H01L 27/00)
M	G02B 6/24	• Coupling light guides (for electric waveguides H01P 1/00)
U	G02B 6/26	• • Optical coupling means (G02B 6/36 , G02B 6/42 take precedence)
M	G02B 6/27	• • • with polarisation selective and adjusting means ({for wavelength selection G02B 6/29302; of the integrated waveguide kind G02B 6/126} ; polarisation; polarisation systems in general G02B 27/28; optical polarisation multiplex systems H04J 14/06)
U	G02B 6/28	• • • having data bus means, i.e. plural waveguides interconnected and providing an inherently bidirectional system by mixing and splitting signals
M	G02B 6/293	• • • • with wavelength selective means ({G02B 6/02052, G02B 6/02057 take precedence} ; for optical elements in use, see the relevant subgroups of this subclass; optical wavelength-division multiplexing systems H04J 14/02 ; in or associated with an integrated waveguide arrangement G02B 6/12007; mode multiplexing G02B 6/14)
M	G02B 6/35	• • • having switching means (optical switching in general G02B 26/08 ; by changing the optical properties of the medium G02F 1/00)
U	G02B 6/42	• • Coupling light guides with opto-electronic elements
NOTE		
In this group, the following expression is used with the meaning indicated:		
• "opto-electronic elements" includes light emitting elements, e.g. lasers or LED's, as well as light receiving elements, e.g. photodiodes or phototransistors		
M	G02B 6/43	• • • Arrangements comprising a plurality of opto-electronic elements and associated optical interconnections (light-emissive or light-sensitive semiconductor devices H01L 27/00, H01L 31/00, H01L 33/00); {Transmitting or receiving optical signals between chips, wafers or boards; Optical backplane assemblies}

U	G02B 7/00	Mountings, adjusting means, or light-tight connections, for optical elements
U	G02B 7/02	• for lenses {(supports for magnifying lenses G02B 25/002)}
U	G02B 7/04	• • with mechanism for focusing or varying magnification
M	G02B 7/09	• • • adapted for automatic focusing or varying magnification (automatic generation of focusing signals G02B 7/28)
U	G02B 7/18	• for prisms; for mirrors
M	G02B 7/182	• • for mirrors {(G02B 7/181 takes precedence; mounting of MEMS mirrors, e.g. DMDs, G02B 26/0833); optical devices or arrangements using movable or deformable optical elements for controlling the intensity, colour, phase, polarisation or direction of light G02B 26/00-; mirror arrangements in vehicles B60R 1/02)}
M	G02B 7/185	• • • with means for adjusting the shape of the mirror surface (mirrors with curved faces G02B 5/10-; for controlling the phase of light G02B 26/06, the direction of light G02B 26/0825)}
M	G02B 7/28	• Systems for automatic generation of focusing signals (measuring distance per se G01C, G01S; using such signals to control focus of particular apparatus, see the subclasses for the apparatus, e.g. G03B, G03F-; H04N)}
U	G02B 13/00	Optical objectives specially designed for the purposes specified below (with variable magnification {in general} G02B 15/00)
		NOTE Unless specified in the title of the subgroups, this group and its subgroups do not cover objectives comprising reflecting surfaces, which are covered by G02B 17/06 , G02B 17/08 and their subgroups
M	G02B 13/20	• Soft-focus objectives (diffusing elements in general G02B 5/02)
M	G02B 17/00	Systems with reflecting surfaces, with or without refracting elements (microscopes G02B 21/00; telescopes, periscopes G02B 23/00; for beam splitting or combining G02B 27/10; for optical projection G02B 27/18)
M	G02B 21/00	Microscopes (eyepieces G02B 25/00; polarising systems G02B 27/28; measuring microscopes G01B 9/04; microtomes G01N 1/06; scanning-probe techniques or apparatus G01Q)
M	G02B 21/34	• Microscope slides, e.g. mounting specimens on microscope slides (preparing specimens for investigation G01N 1/28; means for supporting the objects or the materials to be analysed in electron microscopes H01J 37/20)
M	G02B 23/00	Telescopes, e.g. binoculars; Periscopes; Instruments for viewing the inside of hollow bodies (diagnostic instruments A61B); Viewfinders (objectives G02B 9/00, G02B 13/00, G02B 15/00, G02B 17/00; eyepieces G02B 25/00); Optical aiming or sighting devices (non-optical aspects of weapon aiming or sighting devices F41G)
U	G02B 23/02	• involving prisms or mirrors (G02B 23/14 takes precedence)
M	G02B 23/10	• • reflecting into the field of view additional indications, e.g. from collimator (collimators in general G02B 27/30; graticules G02B 27/34)
M	G02B 23/12	• with means for image conversion or intensification (objectives for image conversion or intensification G02B 13/16; electrical image converters with optical input and optical output H01J 31/50)
M	G02B 23/16	• Housings; Caps; Mountings; Supports, e.g. with counterweight (cases or receptacles A45C-; for submarine periscopes G02B 23/08)}
M	G02B 25/00	Eyepieces; Magnifying glasses (simple lenses G02B 3/00)

Project: MP0520 (G02B)

- M G02B 26/00** Optical devices or arrangements ~~using movable or deformable optical elements for controlling the intensity, colour, phase, polarisation or direction of light, e.g. switching, gating, modulating~~ *for the control of light using movable or deformable optical elements* (mechanically operable parts of lighting devices for the control of light order F21V; specially adapted for measuring characteristics of light G01J; devices or arrangements, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements G02F 1/00; control of light in general G05D 25/00; control of light sources H01S 3/10; H05B 39/00 — H05B 47/00 *control of light by modification of the optical properties of the media of the elements involved therein G02F 1/00*)

Project: MP0519 (G02B)

- U G02B 26/08** • for controlling the direction of light (in light guides [G02B 6/35](#))
- M G02B 26/10** • • Scanning systems ~~(for special applications, see the relevant places, e.g. G03B 27/32, {G03F 7/20}, G03G 15/04, G09G 3/00, H04N)~~
- U G02B 27/00** **Optical systems or apparatus not provided for by any of the groups [G02B 1/00](#) - [G02B 26/00](#), [G02B 30/00](#)**
- M G02B 27/02** • Viewing or reading apparatus (stereoscopic systems [G02B 30/00](#); ~~of the projection type G03B~~; slide-changing apparatus G03B)
- M G02B 27/40** • Optical focusing aids ~~(beam splitting or combining systems G02B 27/10)~~
- U G02B 27/42** • Diffraction optics {, i.e. systems including a diffractive element being designed for providing a diffractive effect}([G02B 27/60](#) takes precedence)
- M G02B 27/44** • • Grating systems; Zone plate systems ([G02B 27/46](#) takes precedence ~~}; beam splitting or combining systems operating by diffraction only G02B 27/1086~~}; spectrometry G01J)
- M G02B 27/46** • • Systems using spatial filters ~~(character recognition G06K 9/00)~~
- NOTE**
In this group, the filter may be in any plane, e.g. the image or the Fourier transfer plane.
- M G02B 27/48** • Laser speckle optics; ~~{Speckle reduction arrangements} (speckle suppression in holography G03H 1/32)~~
- M G02B 27/60** • Systems using moiré fringes ~~(means for converting the output of a sensing member using diffraction gratings G01D 5/38)~~
- M G02B 27/62** • Optical apparatus specially adapted for adjusting optical elements during the assembly of optical systems ~~(adjusting means being part of the system to be assembled G02B 7/00)~~
- M G02B 27/64** • Imaging systems using optical elements for stabilisation of the lateral and angular position of the image ~~(focusing systems G02B 7/04)~~

Project: MP0520 (G02F)**M G02F**

DEVICES OR ARRANGEMENTS, THE OPTICAL OPERATION OF WHICH IS MODIFIED BY CHANGING THE OPTICAL PROPERTIES OF THE MEDIUM OF THE OPTICAL DEVICES OR ARRANGEMENTS FOR THE CONTROL OF THE INTENSITY, COLOUR, PHASE, POLARISATION OR DIRECTION OF LIGHT, e.g. SWITCHING, GATING, MODULATING OR DEMODULATING LIGHT BY MODIFICATION OF THE OPTICAL PROPERTIES OF THE MEDIA OF THE ELEMENTS INVOLVED THEREIN; TECHNIQUES OR PROCEDURES FOR THE OPERATION THEREOF; FREQUENCY-CHANGING; NON-LINEAR OPTICS; FREQUENCY-CHANGING OF LIGHT; OPTICAL LOGIC ELEMENTS; OPTICAL ANALOGUE/DIGITAL CONVERTERS

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

Subject matter covered by these groups is classified in the following CPC groups:

[G02F 1/13357](#) covered by [G02F 1/1336](#) and subgroups

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

U G02F 1/00

Devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light arriving from an independent light source, e.g. switching, gating or modulating; Non-linear optics

NOTE

This group covers only :

- devices or arrangements, e.g. cells, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements by the influence or control of physical parameters, e.g. electric fields, electric current, magnetic fields, sound or mechanical vibrations, stress or thermal effects;
- devices or arrangements in which the electric or magnetic field component of the light beams influences the optical properties of the medium, i.e. non-linear optics;
- control of light by electromagnetic waves, e.g. radio waves, or by electrons or other elementary particles.

Project: RP0556-F (G02F)**M G02F 1/01**

- for the control of the intensity, phase, polarisation or colour ([G02F 1/29](#), [G02F 1/35](#) take precedence)

WARNING

Group G02F 1/01 is impacted by reclassification into groups G02F 1/165, G02F 1/166, G02F 1/1673, and G02F 1/169.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: MP0520 (G02F)**U G02F 1/13**

- based on liquid crystals, e.g. single liquid crystal display cells

U G02F 1/133

- • Constructional arrangements; Operation of liquid crystal cells; Circuit arrangements (arrangements or circuits for control of liquid crystal elements in a matrix, not structurally associated with these elements [G09G 3/36](#))

- U G02F 1/1333 Constructional arrangements; {Manufacturing methods}(G02F 1/135, G02F 1/136 take precedence)
- U G02F 1/1335 Structural association of cells with optical devices, e.g. polarisers or reflectors
- U G02F 1/1336 {Illuminating devices}
- M G02F 1/133615 {Edge-illuminating devices, i.e. illuminating from the side (G02B 6/0001 takes precedence)}
- U G02F 1/1337 Surface-induced orientation of the liquid crystal molecules, e.g. by alignment layers
- M G02F 1/133703 {by introducing organic surfactant additives into the liquid crystal material (G09K 19/56 takes precedence)}
- U G02F 1/1345 Conductors connecting electrodes to cell terminals
- M G02F 1/13452 {Conductors connecting driver circuitry and terminals of panels (H01L 21/00 takes precedence; electrical details inside the cell G02F 1/133;)}
- U G02F 1/137 . . . characterised by the electro-optical or magneto-optical effect, e.g. field-induced phase transition, orientation effect, guest-host interaction or dynamic scattering
- U G02F 1/13731 {based on a field-induced phase transition (G02F 1/13781 takes precedence)}
- M G02F 1/13737 {in liquid crystals doped with a ~~plechroic~~pleochroic dye}

Project: RP0556-F (G02F)

- M G02F 1/15 . . . based on an electrochromic effect

WARNING
Group G02F 1/15 is impacted by reclassification into groups G02F 1/1514 and G02F 1/1516.
All groups listed in this Warning should be considered in order to perform a complete search.
- M G02F 1/1514 . . . characterised by the electrochromic material, e.g. by the electrodeposited material

WARNING
Group G02F 1/1514 is incomplete pending reclassification of documents from group G02F 1/15.
Groups G02F 1/15 and G02F 1/1514 should be considered in order to perform a complete search.
- M G02F 1/1516 comprising organic material

WARNING
Group G02F 1/1516 is incomplete pending reclassification of documents from group G02F 1/15.
Groups G02F 1/15 and G02F 1/1516 should be considered in order to perform a complete search.
- M G02F 1/1523 comprising inorganic material

WARNING
Group G02F 1/1523 is impacted by reclassification into group G02F 1/1524.
Groups G02F 1/1523 and G02F 1/1524 should be considered in order to perform a complete search.

M	G02F 1/1524	<ul style="list-style-type: none"> • • • • Transition metal compounds <p><u>WARNING</u> Group G02F 1/1524 is incomplete pending reclassification of documents from group G02F 1/1523. Groups G02F 1/1523 and G02F 1/1524 should be considered in order to perform a complete search.</p>
M	G02F 1/165	<ul style="list-style-type: none"> • • based on translational movement of particles in a fluid under the influence of an applied field <p><u>WARNING</u> Group G02F 1/165 is incomplete pending reclassification of documents from groups G02F 1/01, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.</p>
M	G02F 1/166	<ul style="list-style-type: none"> • • • characterised by the electro-optical or magneto-optical effect <p><u>WARNING</u> Group G02F 1/166 is incomplete pending reclassification of documents from group G02F 1/01, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.</p>
M	G02F 1/167	<ul style="list-style-type: none"> • • • • by electrophoresis <p><u>WARNING</u> Group G02F 1/167 is impacted by reclassification into groups G02F 1/1675, G02F 1/16753, G02F 1/16755, G02F 1/16756, G02F 1/16757, G02F 1/1677, G02F 1/1679, and G02F 1/1685. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	G02F 1/1673	<ul style="list-style-type: none"> • • • • by magnetophoresis <p><u>WARNING</u> Group G02F 1/1673 is incomplete pending reclassification of documents from group G02F 1/01, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.</p>
M	G02F 1/1675	<ul style="list-style-type: none"> • • • Constructional details <p><u>WARNING</u> Group G02F 1/1675 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.</p>
M	G02F 1/16753	<ul style="list-style-type: none"> • • • • Structures for supporting or mounting cells, e.g. frames or bezels <p><u>WARNING</u> Group G02F 1/16753 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.</p>
M	G02F 1/16755	<ul style="list-style-type: none"> • • • • Substrates <p><u>WARNING</u> Group G02F 1/16755 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19.</p>

			All groups listed above should be considered in order to perform a complete search.
M	G02F 1/16756	• • • •	Insulating layers <u>WARNING</u> Group G02F 1/16756 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.
M	G02F 1/16757	• • • •	Microcapsules <u>WARNING</u> Group G02F 1/16757 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.
M	G02F 1/1676	• • • •	Electrodes <u>WARNING</u> Group G02F 1/1676 is impacted by reclassification into groups G02F 1/16761, G02F 1/16762, and G02F 1/16766. All groups listed in this Warning should be considered in order to perform a complete search.
M	G02F 1/16761	• • • •	Side-by-side arrangement of working electrodes and counter-electrodes <u>WARNING</u> Group G02F 1/16761 is incomplete pending reclassification of documents from group G02F 1/1676. All groups listed above should be considered in order to perform a complete search.
M	G02F 1/16762	• • • •	having three or more electrodes per pixel <u>WARNING</u> Group G02F 1/16762 is incomplete pending reclassification of documents from group G02F 1/1676. All groups listed above should be considered in order to perform a complete search.
M	G02F 1/16766	• • • •	for active matrices <u>WARNING</u> Group G02F 1/16766 is incomplete pending reclassification of documents from group G02F 1/1676. All groups listed above should be considered in order to perform a complete search.
M	G02F 1/1677	• • • •	Structural association of cells with optical devices, e.g. reflectors or illuminating devices <u>WARNING</u> Group G02F 1/1677 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19. All groups listed above should be considered in order to perform a complete search.

- M G02F 1/1679
- • • Gaskets; Spacers; Sealing of cells; Filling or closing of cells
- WARNING
Group G02F 1/1679 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19.
All groups listed above should be considered in order to perform a complete search.
- M G02F 1/1685
- • • Operation of cells; Circuit arrangements affecting the entire cell
- WARNING
Group G02F 1/1685 is incomplete pending reclassification of documents from group G02F 1/167, G02F 1/17, and G02F 1/19.
All groups listed above should be considered in order to perform a complete search.
- M G02F 1/169
- • based on orientable non-spherical particles having a common optical characteristic, e.g. suspended particles of reflective metal flakes
- WARNING
Group G02F 1/169 is incomplete pending reclassification of documents from groups G02F 1/17 and G02F 1/19.
All groups listed above should be considered in order to perform a complete search.
- M G02F 1/17
- • based on variable-absorption elements not provided for in groups [G02F 1/015](#) - [G02F 1/169](#)
- WARNING
Group G02F 1/17 is impacted by reclassification into group G02F 1/165, G02F 1/166, G02F 1/1673, G02F 1/1675, G02F 1/16753, G02F 1/16755, G02F 1/16756, G02F 1/16757, G02F 1/1677, G02F 1/1679, G02F 1/1685, G02F 1/169.
All groups listed above should be considered in order to perform a complete search.
- M G02F 1/19
- • based on variable-reflection or variable-refraction elements not provided for in groups [G02F 1/015](#) - [G02F 1/169](#)
- WARNING
Group G02F 1/19 is impacted by reclassification into group G02F 1/165, G02F 1/166, G02F 1/1673, G02F 1/1675, G02F 1/16753, G02F 1/16755, G02F 1/16756, G02F 1/16757, G02F 1/1677, G02F 1/1679, G02F 1/1685, G02F 1/169.
All groups listed above should be considered in order to perform a complete search.

Project: MP0520 (G02F)

- U G02F 1/35
- Non-linear optics
- U G02F 1/353
- • {Frequency conversion, i.e. wherein a light beam is generated with frequency components different from those of the incident light beams}
- U G02F 1/3536
- • • {Four-wave interaction}
- M G02F 1/3538
- • • {for optical phase conjugation (**H01S 3/10076** takes precedence controlling the intensity, frequency, phase, polarisation or direction of the emitted radiation using optical phase conjugation **H01S 3/10076**)}
- U G02F 2203/00** **Function characteristic**
- U G02F 2203/02
- reflective

- M G02F 2203/026 • • attenuated or ~~frustated~~*frustrated* internal reflection

Project: MP0536 (G03B)

- U G03B 9/00 Exposure-making shutters; Diaphragms**
- U G03B 9/02 • Diaphragms
- M G03B 9/04 • • Single movable plate with two or more apertures of graded size, e.g. sliding plate; *or* pivoting plate

Project: RP0323-F (G03G)

- U G03G 13/00 Electrographic processes using a charge pattern ([G03G 15/00](#), [G03G 16/00](#), [G03G 17/00](#) take precedence)**

NOTE

Group [G03G 15/00](#) also deals with processes in so far as they are characterised by the use or manipulation of apparatus classifiable *per se* in group [G03G 15/00](#) and therefor takes precedence

- U G03G 13/01 • for multicoloured copies {(colour correction on photography [G03B 27/725](#); picture communication systems [H04N 1/46](#))}
- M G03G 13/013 • • {characterised by the developing step, e.g. the properties of the colour developers}

WARNING

Group G03G 13/013 is impacted by reclassification into groups G03G 13/0131, G03G 13/0133, G03G 13/0135, G03G 13/0137 and G03G 13/0139.

All groups listed in this warning should be considered in order to perform a complete search.

- M G03G 13/0131 • • {developing using a step for liquid development, e.g. plural liquid color developers}

WARNING

Group G03G 13/0131 is incomplete pending reclassification of documents from group G03G 13/013.

Groups G03G 13/013 and G03G 13/0131 should be considered in order to perform a complete search.

- M G03G 13/0133 • • {developing using a step for deposition of subtractive colorant developing compositions, e.g. cyan, magenta and yellow}

WARNING

Group G03G 13/0133 is incomplete pending reclassification of documents from group G03G 13/013.

Groups G03G 13/013 and G03G 13/0133 should be considered in order to perform a complete search.

- M G03G 13/0135 • • {developing using a step for deposition of five or more developing compositions of different colors, excluding black, e.g. pentachrome printing or hexachrome printing}

WARNING

Group G03G 13/0135 is incomplete pending reclassification of documents from group G03G 13/013.

Groups G03G 13/013 and G03G 13/0135 should be considered in order to perform a complete search.

- M G03G 13/0137
- • • {developing using a step for deposition of security developing composition, e.g. fluorescent colorants, decolorizable colorants or magnetic ink character recognition toners [MICR]}
- WARNING**
Group G03G 13/0137 is incomplete pending reclassification of documents from group G03G 13/013.
Groups G03G 13/013 and G03G 13/0137 should be considered in order to perform a complete search.
- M G03G 13/0139
- • • {developing using a step for clear toner deposition, e.g. for regulating gloss or supplying protective coatings}
- WARNING**
Group G03G 13/0139 is incomplete pending reclassification of documents from group G03G 13/013.
Groups G03G 13/013 and G03G 13/0139 should be considered in order to perform a complete search.
- U G03G 15/00
- Apparatus for electrographic processes using a charge pattern (G03G 16/00, G03G 17/00 take precedence {; xerographic printers for data processors per se G06K 15/14})**
- M G03G 15/20
- for fixing, e.g. by using heat
- WARNING**
Group G03G 15/20 is impacted by reclassification into group G03G 15/2098.
Groups G03G 15/20 and G03G 15/2098 should be considered in order to perform a complete search.
- M G03G 15/2098
- • {using light, e.g. UV photohardening}
- WARNING**
Group G03G 15/2098 is incomplete pending reclassification of documents from group G03G 15/20.
Groups G03G 15/20 and G03G 15/2098 should be considered in order to perform a complete search.

Project: RP0760 (G03H)

- U G03H 1/00
- Holographic processes or apparatus using light, infra-red or ultra-violet waves for obtaining holograms or for obtaining an image from them; Details peculiar thereto**
- G03H 1/0005
- {Adaptation of holography to specific applications (holographic optical element G02B 5/32; holographic scanner G02B 26/106; ~~recognition using holographic mask G06K 9/76~~; *recognition using holographic mask G06V 10/88*; holographic memories G11B 7/0065, G11C 13/042)}
- G03H 2001/0066
- • {for wavefront matching wherein the hologram is arranged to convert a predetermined wavefront into a comprehensive wave, e.g. associative memory (~~recognition using holographic masks G06K 9/76~~ *recognition using holographic masks G06V 10/88*)}

Project: MP0536 (G05D)

- U G05D 13/00
- Control of linear speed; Control of angular speed; Control of acceleration or deceleration, e.g. of a prime mover (synchronising telegraph receiver and transmitter H04L 7/00)**
- U G05D 13/08
- without auxiliary power
- U G05D 13/10
- • Centrifugal governors with fly-weights

- M G05D 13/24
- • counterbalanced by two or more different appliances acting simultaneously upon the riser, e.g. with both spring force and fluid pressure; **or** with both spring force and electromagnetic force

Project: RP0254-F (G05D)**M G05D 16/00 Control of fluid pressure****WARNING**

Group G05D 16/00 is impacted by reclassification into groups G05D 16/024 and G05D 16/028.

Groups G05D 16/00, G05D 16/024, and G05D 16/028 should be considered in order to perform a complete search.

- M G05D 16/024
- {Controlling the inlet pressure, e.g. back-pressure regulator}

WARNING

Group G05D 16/024 is incomplete pending reclassification of documents from group G05D 16/00.

Groups G05D 16/00 and G05D 16/024 should be considered in order to perform a complete search.

- M G05D 16/028
- {Controlling a pressure difference (control of flow [G05D 7/00](#))}

WARNING

Group G05D 16/028 is incomplete pending reclassification of documents from group G05D 16/00.

Groups G05D 16/00 and G05D 16/028 should be considered in order to perform a complete search.

- M G05D 16/04
- without auxiliary power

WARNING

Group G05D 16/04 is impacted by reclassification into groups G05D 16/0402 and G05D 16/0404.

Groups G05D 16/04, G05D 16/0402, and G05D 16/0404 should be considered in order to perform a complete search.

- M G05D 16/0402
- {with two or more controllers mounted in series}

WARNING

Group G05D 16/0402 is incomplete pending reclassification of documents from groups G05D 16/04 and G05D 16/10.

Groups G05D 16/04, G05D 16/10, and G05D 16/0402 should be considered in order to perform a complete search.

- M G05D 16/0404
- {with two or more controllers mounted in parallel}

WARNING

Group G05D 16/0404 is incomplete pending reclassification of documents from groups G05D 16/04 and G05D 16/10.

Groups G05D 16/04, G05D 16/10 and G05D 16/0404 should be considered in order to perform a complete search.

- M G05D 16/10
- the sensing element being a piston or plunger

WARNING

Group G05D 16/10 is impacted by reclassification into groups G05D 16/101, G05D 16/107, G05D 16/109, G05D 16/0402, and G05D 16/0404.

All groups listed in this Warning should be considered in order to perform a complete search.

M	G05D 16/101	<ul style="list-style-type: none"> • • {the controller being arranged as a multiple-way valve} <p><u>WARNING</u> Group G05D 16/101 is incomplete pending reclassification of documents from groups G05D 16/10 and G05D 16/103. Groups G05D 16/10, G05D 16/103 and G05D 16/101 should be considered in order to perform a complete search.</p>
M	G05D 16/103	<ul style="list-style-type: none"> • • {the sensing element placed between the inlet and outlet (multiple-way valve G05D 16/101)} <p><u>WARNING</u> Group G05D 16/103 is impacted by reclassification into group G05D 16/101. Groups G05D 16/103 and G05D 16/101 should be considered in order to perform a complete search.</p>
M	G05D 16/107	<ul style="list-style-type: none"> • • {with a spring-loaded piston in combination with a spring-loaded slideable obturator that move together over range of motion during normal operation} <p><u>WARNING</u> Group G05D 16/107 is incomplete pending reclassification of documents from group G05D 16/10. Groups G05D 16/10 and G05D 16/107 should be considered in order to perform a complete search.</p>
M	G05D 16/109	<ul style="list-style-type: none"> • • {with two or more pistons acting as a single pressure controller that move together over range of motion during normal operations (controllers mounted in series G05D 16/0402, controller mounted in parallel G05D 16/0404)} <p><u>WARNING</u> Group G05D 16/109 is incomplete pending reclassification of documents from group G05D 16/10. Groups G05D 16/10 and G05D 16/109 should be considered in order to perform a complete search.</p>
U	G05D 16/14	<ul style="list-style-type: none"> • with auxiliary non-electric power
M	G05D 16/18	<ul style="list-style-type: none"> • • derived from an external source <p><u>WARNING</u> Group G05D 16/18 is impacted by reclassification into group G05D 16/187. Groups G05D 16/18 and G05D 16/187 should be considered in order to perform a complete search.</p>
M	G05D 16/187	<ul style="list-style-type: none"> • • {using pistons within the main valve} <p><u>WARNING</u> Group G05D 16/187 is incomplete pending reclassification of documents from group G05D 16/18. Groups G05D 16/18 and G05D 16/187 should be considered in order to perform a complete search.</p>
U	G05D 16/20	<ul style="list-style-type: none"> • characterised by the use of electric means
U	G05D 16/2006	<ul style="list-style-type: none"> • • {with direct action of electric energy on controlling means (combination of electric and non-electric auxiliary G05D 16/2093)}
M	G05D 16/2013	<ul style="list-style-type: none"> • • {using throttling means as controlling means} <p><u>WARNING</u> Group G05D 16/2013 is impacted by reclassification into groups G05D 16/2022 and G05D 16/2024.</p>

Groups G05D 16/2013, G05D 16/2022, and G05D 16/2024 should be considered in order to perform a complete search.

- M G05D 16/2022 • • • {actuated by a proportional solenoid (throttling means [G05D 16/2024](#))}

WARNING

Group G05D 16/2022 is incomplete pending reclassification of documents from group G05D 16/2013.
Groups G05D 16/2013 and G05D 16/2022 should be considered in order to perform a complete search.

- M G05D 16/2024 • • • {the throttling means being a multiple-way valve}

WARNING

Group G05D 16/2024 is incomplete pending reclassification of documents from group G05D 16/2013.
Groups G05D 16/2013 and G05D 16/2024 should be considered in order to perform a complete search.

- M G05D 16/2093 • • {with combination of electric and non-electric auxiliary power}

WARNING

Group G05D 16/2093 is impacted by reclassification into groups G05D 16/2095 and G05D 16/2097.
Groups G05D 16/2093, G05D 16/2095, and G05D 16/2097 should be considered in order to perform a complete search.

- M G05D 16/2095 • • • {using membranes within the main valve}

WARNING

Group G05D 16/2095 is incomplete pending reclassification of documents from group G05D 16/2093.
Groups G05D 16/2093 and G05D 16/2095 should be considered in order to perform a complete search.

- M G05D 16/2097 • • • {using pistons within the main valve}

WARNING

Group G05D 16/2097 is incomplete pending reclassification of documents from group G05D 16/2093.
Groups G05D 16/2093 and G05D 16/2097 should be considered in order to perform a complete search.

Project: RP0753 (G05D)

G05D 25/00

Control of light, e.g. intensity, colour, phase (mechanically operable parts of lighting devices for the control of light [F21V](#); optical devices or arrangements using movable or deformable elements for controlling light independent of the light source [G02B 26/00](#); devices or arrangements, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements for the control of light, circuit arrangements specially adapted therefor, control of light by electro-magnetic waves, electrons or other elementary particles [G02F 1/00](#); circuit arrangements for controlling light sources [H01S 3/10](#), [H05B 33/08](#) [H05B 44/00](#), [H05B 35/00](#) – [H05B 47/00](#).)

Project: MP0536 (G05D)

M G05D 27/00

Simultaneous control of variables covered by two or more of the preceding main groups [G05D 1/00](#) - [G05D 25/00](#)

Project: MP0518 (G06C)

- M G06C 1/00 Computing aids in which the computing members form at least part of the displayed result and **are** manipulated directly by hand, e.g. **abacusabacuses**, pocket adding **device****devices**

Project: MP0505 (G06F)

- M G06F 1/00 Details not covered by groups [G06F 3/00](#) -- [G06F 13/00](#) and [G06F 21/00](#) (architectures of general purpose stored program computers [G06F 15/76](#))
- M G06F 1/02
 - Digital function generators ~~{{evaluating functions by calculating only G06F 7/544, G06F 7/60; generating sawtooth or staircase waveforms H03K 4/00}}~~
- M G06F 1/025
 - • for functions having two-valued amplitude, e.g. Walsh functions ~~{{generation of pulse trains in general H03K 3/00}}~~
- U G06F 1/16
 - Constructional details or arrangements
- U G06F 1/1613
 - • {for portable computers (cooling arrangements therefor [G06F 1/203](#); constructional details or arrangements for pocket calculators, electronic agendas or books [G06F 15/0216](#); constructional details of portable telephone sets: with several bodies [H04M 1/0202](#))}
- U G06F 1/1633
 - • • {Constructional details or arrangements of portable computers not specific to the type of enclosures covered by groups [G06F 1/1615](#) - [G06F 1/1626](#)}
- M G06F 1/1635
 - • • • {Details related to the integration of battery packs and other power supplies such as fuel cells or integrated AC adapter ~~{{details of mounting batteries in general H01M 50/247}}~~}
- M G06F 1/1637
 - • • • {Details related to the display arrangement, including those related to the mounting of the display in the housing ~~{{constructional details related to the housing of computer displays in general G06F 1/1601}}~~}
- M G06F 1/1643
 - • • • • {the display being associated to a digitizer, e.g. laptops that can be used as penpads ~~{{touchpads integrated in a laptop or similar computer G06F 1/169; secondary touch screen G06F 1/1692}}~~; details related to the relative motion of the display enclosure with respect to the body enclosure, e.g. to move between laptop and tablet PC configuration [G06F 1/1615](#))}
- M G06F 1/1675
 - • • • {Miscellaneous details related to the relative movement between the different enclosures or enclosure parts ~~{{which could be adopted independently from the movement typologies specified in G06F 1/1615 and subgroups}}~~}
- U G06F 1/1684
 - • • • {Constructional details or arrangements related to integrated I/O peripherals not covered by groups [G06F 1/1635](#) - [G06F 1/1675](#)}
- M G06F 1/169
 - • • • • {the I/O peripheral being an integrated pointing device, e.g. trackball in the palm rest area, mini-joystick integrated between keyboard keys, touch pads or touch stripes ([G06F 1/1643](#) takes precedence; constructional details of pointing devices [G06F 3/033](#); ~~{{joysticks in general G05G 9/047}}~~)}
- M G06F 1/18
 - • Packaging or power distribution ~~{{for electrical apparatus in general H05K; H02J}}~~
- M G06F 1/181
 - • • {Enclosures ~~{{for electric apparatus in general H05K 5/00}}~~; for portable computers [G06F 1/1613](#)}
- M G06F 1/182
 - • • • {with special features, e.g. for use in industrial environments; grounding or shielding against radio frequency interference [RFI] or electromagnetic interference [EMI] ~~{{in general H05K 9/00}}~~}

- M G06F 1/183
 - • • {Internal mounting support structures, e.g. for printed circuit boards, *internal connecting means* (in general H05K 7/1422), internal connecting means (for buses G06F 13/409)}
- M G06F 1/184
 - • • • {Mounting of motherboards (in general H05K 7/1429)}
- M G06F 1/185
 - • • • {Mounting of expansion boards (in general H05K 7/1417)}
- M G06F 1/186
 - • • • {Securing of expansion boards in correspondence to slots provided at the computer enclosure (in general H05K 7/1402)}
- M G06F 1/187
 - • • • {Mounting of fixed and removable disk drives (constructional details of disk drives housings in general G11B 33/00)}
- M G06F 1/188
 - • • • {Mounting of power supply units (power supply for computers, per se G06F 1/26)}
- U G06F 1/26
 - Power supply means, e.g. regulation thereof (for memories G11C)
- U G06F 1/32
 - • Means for saving power
- M G06F 1/3203
 - • • Power management, i.e. event-based initiation of a power-saving mode

Project: RP0763 (G06F)

- U G06F 3/00

Input arrangements for transferring data to be processed into a form capable of being handled by the computer; Output arrangements for transferring data from processing unit to output unit, e.g. interface arrangements
- U G06F 3/01
 - Input arrangements or combined input and output arrangements for interaction between user and computer (G06F 3/16 takes precedence)
- U G06F 3/048
 - • Interaction techniques based on graphical user interfaces [GUI]

NOTE

This group covers subject matter where the focus is placed on the way the user can interact with the displayed data. The mere presence of a standard GUI in the context of the disclosure of a specific software application or a specific device capable of processing data related to its specific function, should be in general classified in the appropriate subclasses related to those software applications or specific devices.
- U G06F 3/0481
 - • • based on specific properties of the displayed interaction object or a metaphor-based environment, e.g. interaction with desktop elements like windows or icons, or assisted by a cursor's changing behaviour or appearance
- M G06F 3/04812
 - • • • {interaction *Interaction* techniques based on cursor appearance or behaviour, e.g. being affected by the presence of displayed objects, e.g. visual feedback during interaction with elements of a graphical user interface through change in cursor appearance, constraint movement or attraction/repulsion with respect to a displayed object (interaction techniques based on cursor behaviour involving tactile or force feedback G06F 3/016)}
- M G06F 3/04815
 - • • • {Interaction with three-dimensional environments, e.g. control of viewpoint to navigate in the environment} *Interaction with a metaphor-based environment or interaction object displayed as three-dimensional, e.g. changing the user viewpoint with respect to the environment or object*
- M G06F 3/04817
 - • • • {using icons (graphical programming languages using iconic symbols G06F 8/34 graphical or visual programming using iconic symbols G06F 8/34)}
- M G06F 3/0482
 - • • • *interaction Interaction* with lists of selectable items, e.g. menus
- M G06F 3/0483
 - • • • *interaction Interaction* with page-structured environments, e.g. book metaphor

- M G06F 3/0484 . . . for the control of specific functions or operations, e.g. selecting or manipulating an object ~~or an image~~, *an image or a displayed text element*, setting a parameter value or selecting a range
- M G06F 3/04842 ~~{Selection of a displayed object}~~ *Selection of displayed objects or displayed text elements* (G06F 3/0482 takes precedence)}
- M G06F 3/04845 ~~{for image manipulation, e.g. dragging, rotation}~~, *expansion or change of colour*
- M G06F 3/04847 ~~{Interaction techniques to control parameter settings, e.g. interaction with sliders, dials}~~ *or dials*
- U G06F 3/0485 Scrolling or panning
- M G06F 3/04855 ~~{Interaction with scrollbars}~~
- U G06F 3/0487 . . . using specific features provided by the input device, e.g. functions controlled by the rotation of a mouse with dual sensing arrangements, or of the nature of the input device, e.g. tap gestures based on pressure sensed by a digitiser
- U G06F 3/0488 using a touch-screen or digitiser, e.g. input of commands through traced gestures
- M G06F 3/04883 ~~{for entering handwritten data, e.g. gestures, text}~~ *for inputting data by handwriting, e.g. gesture or text*
- M G06F 3/04886 ~~{by partitioning the screen or by partitioning the display area of the touch-screen or the surface of the digitising tablet into independently controllable areas, e.g. virtual keyboards, menus or menus}~~ *(G06F 3/04883 takes precedence)}*
- U G06F 3/0489 using dedicated keyboard keys or combinations thereof
- M G06F 3/04892 ~~{Arrangements for controlling cursor position based on codes indicative of cursor displacements from one discrete location to another, e.g. using cursor control keys associated to different directions or using the tab key (arrangements for controlling cursor position based on coordinate signals G06F 3/038)}~~
- M G06F 3/04895 ~~{Guidance during keyboard input operation, e.g. prompting (help systems G06F 9/453)}~~

Project: MP0518 (G06F)

- U G06F 7/00 Methods or arrangements for processing data by operating upon the order or content of the data handled (logic circuits H03K 19/00)**
- U G06F 7/38 . Methods or arrangements for performing computations using exclusively denominational number representation, e.g. using binary, ternary, decimal representation
- U G06F 7/48 . . using non-contact-making devices, e.g. tube, solid state device; using unspecified devices
- M G06F 7/499 . . Denomination or exception handling, e.g. rounding, *or* overflow
- U G06F 7/76 . Arrangements for rearranging, permuting or selecting data according to predetermined rules, independently of the content of the data
- M G06F 7/78 . . for changing the order of data flow, e.g. matrix transposition, *or* LIFO buffers; Overflow or underflow handling therefor

Project: RP0650-F (G06F)

- U G06F 40/00 Handling natural language data (speech analysis or synthesis, speech recognition G10L)**
- U G06F 40/10 . Text processing (natural language analysis G06F 40/20; semantic analysis G06F 40/30; processing or translation of natural language G06F 40/40)

U	G06F 40/12	• • Use of codes for handling textual entities
M	G06F 40/14	• • • Tree-structured documents (parsing G06F 40/205 ; validation G06F 40/226)
		WARNING Group G06F 40/14 is impacted by reclassification into group G06F 40/143. Groups G06F 40/14 and G06F 40/143 should be considered in order to perform a complete search.
M	G06F 40/143	• • • Markup, e.g. Standard Generalized Markup Language [SGML] or Document Type Definition [DTD]
		WARNING Group G06F 40/143 is incomplete pending reclassification of documents from group G06F 40/14. Groups G06F 40/14 and G06F 40/143 should be considered in order to perform a complete search.
M	G06F 40/20	• Natural language analysis (semantic analysis of natural language G06F 40/30)
		WARNING Group G06F 40/20 is impacted by reclassification into group G06F 40/237. Groups G06F 40/20 and G06F 40/237 should be considered in order to perform a complete search.
M	G06F 40/237	• • Lexical tools
		WARNING Group G06F 40/237 is incomplete pending reclassification of documents from group G06F 40/20. Groups G06F 40/20 and G06F 40/237 should be considered in order to perform a complete search.

Project: RP0760 (G06K)

M	G06K	RECOGNITION OF DATA GRAPHICAL DATA READING (image or video recognition or understanding G06V); PRESENTATION OF DATA; RECORD CARRIERS; HANDLING RECORD CARRIERS
		NOTE
		1. This subclass covers: <ul style="list-style-type: none"> • marking, sensing, and conveying of record carriers; • recognising characters or other data; • <i>reading graphical representations from record carriers, e.g. barcodes;</i> • presenting visually or otherwise the data recognised or the result of a computation.
		2. This subclass does not cover printing per se.
		WARNING In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

C G06K 9/00

Methods or arrangements for ~~reading or recognising printed or written characters or for recognising patterns, e.g. fingerprints~~*recognising patterns* (processing or analysis of tracks of nuclear particles G01T 5/02 ~~}; information retrieval G06F 16/00; radio frequency identification G06K 7/00; recognition of barcodes and similar code images G06K 7/10; computer systems based on specific computational models G06N; image analysis, inspection, positioning or tracking G06T 7/00; recognition of acoustic speech signals G10L 15/00; acoustic speaker identification G10L 17/00~~); *methods or arrangements for graph-reading or for converting the pattern of mechanical parameters, e.g. force or presence, into electrical signals G06K 11/00; image or video recognition or understanding G06V; speech recognition G10L 15/00*)

NOTES

1. Group G06K 9/58 takes precedence over groups G06K 9/38 – G06K 9/54. {This Note corresponds to IPC Note (1) relating to G06K 9/38 – G06K 9/54.}
2. {In this group, the following term is used with the meaning indicated: – "recognising" includes several functions such as extracting features, clustering, classifying or matching.}
3. {IPC subgroups G06K 9/20, G06K 9/36, G06K 9/62 and G06K 9/74 refer to methods or arrangements that can be applied to a pattern independently of its nature or to that are applied to specific patterns not included in the subgroups in the range G06K 9/00006 – G06K 9/00852. The CPC subgroups in the range G06K 9/00006 – G06K 9/00852 refer to the same methods or arrangements when applied or specially adapted to the specific patterns to which these subgroups relate.}
4. {The present group does not cover the use of recognised patterns in specific applications, e.g. the use of traced gestures recognised as commands to be input to a computer is covered by the groups under G06F 3/00.}

WARNING

Group G06K 9/00 is impacted by reclassification into groups G06V 10/00-G06V 10/98, G06V 20/00-G06V 20/90, G06V 30/00-G06V 30/424 and G06V 40/00-G06V 40/70.

All groups listed in this Warning should be considered in order to perform a complete search.

- | | |
|----------------|--|
| D G06K 9/00006 | <ul style="list-style-type: none"> • {Acquiring or recognising fingerprints or palmprints (non-computerised biometric identification A61B 5/00; means for preventing unauthorised use of vehicles B60R 25/00; security in computer systems G06F 21/00; secure access to buildings G07C 9/00; secret or secure communication H04L 9/00; means for preventing unauthorised telephone calls H04M 1/667)} <administratively transferred to G06V 40/12> |
| D G06K 9/00013 | <ul style="list-style-type: none"> • • {Image acquisition (materials for developing fingerprints, means for visual identification A61B 5/1172)} <administratively transferred to G06V 40/13> |
| D G06K 9/0002 | <ul style="list-style-type: none"> • • • {by non-optical methods, e.g. by ultrasonic or capacitive sensing} <administratively transferred to G06V 40/1306> |
| D G06K 9/00026 | <ul style="list-style-type: none"> • • • {by combining adjacent partial images (e.g. slices) to create a composite input or reference pattern; tracking a sweeping finger movement (for specific swipe sensing hardware the groups G06K 9/0002, G06K 9/00033, G06K 9/0004 and G06K 9/00046 take precedence)} <administratively transferred to G06V 40/1335> |
| D G06K 9/00033 | <ul style="list-style-type: none"> • • • {by direct reading, i.e. contactless acquisition} <administratively transferred to G06V 40/1312> |

- D G06K 9/0004
 - • • {by using electro-optical elements or layers, e.g. electroluminescent sensing}
 - <administratively transferred to [G06V 40/1318](#)>
- D G06K 9/00046
 - • • {by using geometrical optics, e.g. using prisms (G06K 9/00033 takes precedence)}
 - <administratively transferred to [G06V 40/1324](#)>
- D G06K 9/00053
 - • • {Protecting the fingerprint sensor against damage caused by the finger (protecting semiconductor devices against mechanical damage in general H01L 23/562; encapsulations of semiconductor devices H01L 23/28; protecting semiconductor devices against electrostatic discharges in general H01L 23/60, H01L 27/0248)}
 - <administratively transferred to [G06V 40/1329](#)>
- D G06K 2009/0006
 - • • {with light passing through the finger}
 - <administratively transferred to [G06V 40/1341](#)>
- D G06K 9/00067
 - • {Preprocessing; Feature extraction (minutiae)}
 - <administratively transferred to [G06V 40/1347](#)>
- D G06K 9/00073
 - • • {Extracting features related to minutiae and pores}
 - <administratively transferred to [G06V 40/1353](#)>
- D G06K 9/0008
 - • • {Extracting features related to ridge properties; determining the fingerprint type, e.g. whorl, loop}
 - <administratively transferred to [G06V 40/1359](#)>
- D G06K 9/00087
 - • {Matching; Classification}
 - <administratively transferred to [G06V 40/1365](#)>
- D G06K 9/00093
 - • • {Matching features related to minutiae and pores}
 - <administratively transferred to [G06V 40/1371](#)>
- D G06K 9/001
 - • • {Matching features related to ridge properties or fingerprint texture}
 - <administratively transferred to [G06V 40/1376](#)>
- D G06K 9/00107
 - • {Detecting the live character of the finger, i.e. distinguishing from a fake or cadaver finger (fingerprint spoof detection by analysing recognition results G06K 9/00087)}
 - <administratively transferred to [G06V 40/1382](#)>
- D G06K 9/00114
 - • • {using image processing}
 - <administratively transferred to [G06V 40/1388](#)>
- D G06K 9/0012
 - • • {using acquisition arrangements}
 - <administratively transferred to [G06V 40/1394](#)>
- D G06K 9/00127
 - {Acquiring and recognising microscopic objects, e.g. biological cells and cellular parts (apparatus for measuring microbiological properties C12M 1/34; optical analysis of chemical or physical properties of particles, e.g. investigation of dimensions G01N 15/14; biomedical image inspection G06T 7/0012)}
 - <administratively transferred to [G06V 20/69](#)>
- D G06K 9/00134
 - • {Acquisition, e.g. centering the image field (fluorescence analysis G01N 21/64; scanning microscopes G02B 21/002; processing of multiple slides G02B 21/365)}
 - <administratively transferred to [G06V 20/693](#)>
- D G06K 9/0014
 - • {Pre-processing, e.g. image segmentation (segmentation for general image processing G06T 7/10); Feature extraction}
 - <administratively transferred to [G06V 20/695](#)>

- D G06K 9/00147
 - • {Matching; Classification}
 - <administratively transferred to [G06V 20/698](#)>
- D G06K 9/00154
 - {Reading or verifying signatures; Writer recognition}
 - <administratively transferred to [G06V 40/30](#)>
- D G06K 9/00161
 - • {based only on signature image, e.g. static signature recognition}
 - <administratively transferred to [G06V 40/33](#)>
- D G06K 9/00167
 - • {based only on signature signals such as velocity or pressure, e.g. dynamic signature recognition}
 - <administratively transferred to [G06V 40/37](#)>
- D G06K 9/00174
 - • • {Acquisition}
 - <administratively transferred to [G06V 40/376](#)>
- D G06K 9/00181
 - • • {Matching; classification}
 - <administratively transferred to [G06V 40/394](#)>
- D G06K 9/00187
 - • • {Preprocessing; feature extraction}
 - <administratively transferred to [G06V 40/382](#)>
- D G06K 9/00194
 - • • • {Sampling; contour coding; stroke extraction}
 - <administratively transferred to [G06V 40/388](#)>
- D G06K 9/00201
 - {Recognising three-dimensional objects, e.g. using range or tactile information (arrangements for measuring depth G01B 11/22; for measuring curvatures G01B 11/24; processing image data for depth or shape recovery G06T 7/50; registration of range data G06T 7/30)}
 - <administratively transferred to [G06V 20/64](#)>
- D G06K 9/00208
 - • {by matching two-dimensional images to three-dimensional objects}
 - <administratively transferred to [G06V 20/647](#)>
- D G06K 9/00214
 - • {by matching three-dimensional models, e.g. conformal mapping of Riemann surfaces}
 - <administratively transferred to [G06V 20/653](#)>
- D G06K 9/00221
 - {Acquiring or recognising human faces, facial parts, facial sketches, facial expressions}
 - <administratively transferred to [G06V 40/16](#)>
- D G06K 9/00228
 - • {Detection; Localisation; Normalisation}
 - <administratively transferred to [G06V 40/161](#)>
- D G06K 9/00234
 - • • {using pixel segmentation or colour matching (segmentation for general image processing G06T 7/10; colour analysis G06T 7/90)}
 - <administratively transferred to [G06V 40/162](#)>
- D G06K 9/00241
 - • • {using holistic features (extraction or representation of holistic features per se G06K 9/00275)}
 - <administratively transferred to [G06V 40/164](#)>
- D G06K 9/00248
 - • • {using facial parts and geometric relationships (extraction or representation of facial parts per se G06K 9/00281)}
 - <administratively transferred to [G06V 40/165](#)>
- D G06K 9/00255
 - • • {using acquisition arrangements}
 - <administratively transferred to [G06V 40/166](#)>
- D G06K 9/00261
 - • • {using comparisons between temporally consecutive images (face tracking G06T 7/20)}
 - <administratively transferred to [G06V 40/167](#)>

- D G06K 9/00268
 - • {Feature extraction; Face representation}
 - <administratively transferred to [G06V 40/168](#)>
- D G06K 9/00275
 - • • {Holistic features and representations, i.e. based on the facial image taken as a whole (statistical feature extraction in general G06K 9/6232; matching eigenfaces G06K 9/00288)}
 - <administratively transferred to [G06V 40/169](#)>
- D G06K 9/00281
 - • • {Local features and components; Facial parts (iris recognition G06K 9/00597); Occluding parts, e.g. glasses; Geometrical relationships}
 - <administratively transferred to [G06V 40/171](#)>
- D G06K 9/00288
 - • {Classification, e.g. identification}
 - <administratively transferred to [G06V 40/172](#)>
- D G06K 9/00295
 - • • {of unknown faces, i.e. recognising the same non-enrolled faces, e.g. recognising the unknown faces across different face tracks (tracking in general G06T 7/20; detecting affinities between people using analysis of image collections G06K 9/00677)}
 - <administratively transferred to [G06V 40/173](#)>
- D G06K 9/00302
 - • {Facial expression recognition}
 - <administratively transferred to [G06V 40/174](#)>
- D G06K 9/00308
 - • • {Static expression}
 - <administratively transferred to [G06V 40/175](#)>
- D G06K 9/00315
 - • • {Dynamic expression}
 - <administratively transferred to [G06V 40/176](#)>
- D G06K 2009/00322
 - • {estimating age from face image; using age information for improving recognition}
 - <administratively transferred to [G06V 40/178](#)>
- D G06K 2009/00328
 - • {metadata assisted face recognition}
 - <administratively transferred to [G06V 40/179](#)>
- D G06K 9/00335
 - {Recognising movements or behaviour, e.g. recognition of gestures, dynamic facial expressions; Lip-reading (using movements or postures of body parts for inputting data to a computer G06F 3/00; static facial expressions G06K 9/00221; recognition of scene events G06K 9/00624; analysis of movement G06T 7/20; lip-reading assisted speech recognition G10L 15/24)}
 - <administratively transferred to [G06V 40/20](#)>
- D G06K 9/00342
 - • {Recognition of whole body movements, e.g. for sport training}
 - <administratively transferred to [G06V 40/23](#)>
- D G06K 9/00348
 - • • {Recognition of walking or running movements, e.g. gait recognition}
 - <administratively transferred to [G06V 40/25](#)>
- D G06K 9/00355
 - • {Recognition of hand or arm movements, e.g. recognition of deaf sign language (static hand posture recognition G06K 9/00375)}
 - <administratively transferred to [G06V 40/28](#)>
- D G06K 9/00362
 - {Recognising human body or animal bodies, e.g. vehicle occupant, pedestrian; Recognising body parts, e.g. hand (passenger detection systems B60N 2/002; handprints G06K 9/00006; face and facial components G06K 9/00221; eyes G06K 9/00597; determining position of passenger G06T 7/70)}
 - <administratively transferred to [G06V 40/10](#)>

- D G06K 9/00369
 - • {Recognition of whole body, e.g. static pedestrian or occupant recognition (G06K 9/00342 takes precedence)}
 - <administratively transferred to [G06V 40/103](#)>
- D G06K 9/00375
 - • {Recognition of hand or arm, e.g. static hand biometric or posture recognition (G06K 9/00355 takes precedence; palmprint and fingerprint recognition G06K 9/00006)}
 - <administratively transferred to [G06V 40/107](#)>
- D G06K 9/00382
 - • • {Static hand biometric or posture recognition}
 - <administratively transferred to [G06V 40/11](#)>
- D G06K 9/00389
 - • • {Static hand gesture recognition}
 - <administratively transferred to [G06V 40/113](#)>
- D G06K 2009/00395
 - • {Biometrics derived from hands; static hand pose gestures}
 - <administratively transferred to [G06V 40/117](#)>
- D G06K 9/00402
 - {Recognising digital ink, i.e. recognising temporal sequences of handwritten position coordinates (G06K 9/00154 takes precedence; interaction arrangements using gestures traced on a digitiser G06F 3/04883; acquisition of digital ink as far as essentially related to recognition G06K 9/222)}
 - <administratively transferred to [G06V 30/32](#)>
- D G06K 9/00409
 - • {Preprocessing; Feature extraction}
 - <administratively transferred to [G06V 30/333](#)>
- D G06K 9/00416
 - • • {Sampling; contour coding; stroke extraction}
 - <administratively transferred to [G06V 30/347](#)>
- D G06K 9/00422
 - • {Matching; classification}
 - <administratively transferred to [G06V 30/36](#)>
- D G06K 9/00429
 - • • {using a special pattern or subpattern alphabet}
 - <administratively transferred to [G06V 30/373](#)>
- D G06K 9/00436
 - • • {using human interaction, e.g. selection of the best displayed recognition candidate}
 - <administratively transferred to [G06V 30/387](#)>
- D G06K 9/00442
 - {Document analysis and understanding; Document recognition}
 - <administratively transferred to [G06V 30/40](#)>
- D G06K 9/00449
 - • {Layout structured with printed lines or input boxes, e.g. business forms; tables (tables without printed lines or boxes G06K 9/00463; identification of document type using identifier or marker G06K 9/2054)}
 - <administratively transferred to [G06V 30/412](#)>
- D G06K 9/00456
 - • {Classification of image contents, e.g. text, photographs, tables (discrimination based on image tones H04N 1/40062)}
 - <administratively transferred to [G06V 30/413](#)>
- D G06K 9/00463
 - • {Document analysis by extracting the geometrical structure, e.g. layout tree; Block segmentation, e.g. bounding boxes for graphics, paragraphs, words or letters}
 - <administratively transferred to [G06V 30/414](#)>
- D G06K 9/00469
 - • {Document understanding by extracting the logical structure, e.g. chapters, sections, columns, titles, paragraphs, captions, page number, and identifying its elements, e.g. author, keywords, ZIP code, money amount}
 - <administratively transferred to [G06V 30/416](#)>

- D G06K 9/00476
 - {Reading or recognising technical drawings or geographical maps}
 - <administratively transferred to [G06V 30/422](#)>
- D G06K 9/00483
 - {Document matching}
 - <administratively transferred to [G06V 30/418](#)>
- D G06K 2009/00489
 - {Editing text-bitmaps, e.g. alignment, spacing; Semantic analysis of bitmaps of text without OCR}
 - <administratively transferred to [G06V 30/43](#)>
- M G06K 9/00496
 - {Recognising patterns in signals and combinations thereof (~~signature verification G06K 9/00154~~; analysing specific medical signals, e.g. bioelectric signals, blood pressure [A61B 5/00](#); *analysis of chromatographic signals G01N 30/86*; processing radar and similar signals [G01S](#); ~~analysis of chromatographic signals G01N 30/86~~; processing seismic signals [G01V 1/28](#), [G01V 1/46](#); *writer recognition, reading and verifying signatures G06V 40/30*; acoustic speech processing [G10L](#); transmission systems [H04B 1/00](#))}
- D G06K 9/00577
 - {Recognising objects characterised by unique random properties, i.e. objects having a physically unclonable function [PUF], e.g. authenticating objects based on their unclonable texture (verifying genuineness of valuable papers G07D 7/00)}
 - <administratively transferred to [G06V 20/80](#)>
- D G06K 2009/00583
 - {Recognition of the sensor which acquired the data, e.g. based on sensor idiosyncrasies}
 - <administratively transferred to [G06V 20/90](#)>
- D G06K 2009/0059
 - {markers for authenticating, copy prevention}
 - <administratively transferred to [G06V 20/95](#)>
- D G06K 9/00597
 - {Acquiring or recognising eyes, e.g. iris verification}
 - <administratively transferred to [G06V 40/18](#)>
- D G06K 9/00604
 - {Acquisition}
 - <administratively transferred to [G06V 40/19](#)>
- D G06K 9/0061
 - {Preprocessing; Feature extraction}
 - <administratively transferred to [G06V 40/193](#)>
- D G06K 9/00617
 - {Matching; Classification}
 - <administratively transferred to [G06V 40/197](#)>
- D G06K 9/00624
 - {Recognising scenes, i.e. recognition of a whole field of perception; recognising scene-specific objects (image retrieval G06F 16/50; video retrieval G06F 16/70; image analysis and image segmentation, e.g. pixel labelling G06T 7/00; alarm systems G08B; traffic control G08G; pictorial communication H04N)}
 - <administratively transferred to [G06V 20/00](#)>
- D G06K 9/0063
 - {Recognising patterns in remote scenes, e.g. aerial images, vegetation versus urban areas (radar and similar technologies G01S; segmentation for general image processing G06T 7/10)}
 - <administratively transferred to [G06V 20/13](#)>
- D G06K 9/00637
 - {of urban or other man made structures}
 - <administratively transferred to [G06V 20/176](#)>
- D G06K 2009/00644
 - {using hyperspectral data, i.e. more or other wavelengths than RGB}
 - <administratively transferred to [G06V 20/194](#)>
- D G06K 9/00651
 - {of network patterns, such as roads, rivers}
 - <administratively transferred to [G06V 20/182](#)>

- D G06K 9/00657
 - • • {of vegetation}
 - <administratively transferred to [G06V 20/188](#)>
- D G06K 9/00664
 - • {Recognising scenes such as could be captured by a camera operated by a pedestrian or robot, including objects at substantially different ranges from the camera}
 - <administratively transferred to [G06V 20/10](#)>
- D G06K 9/00671
 - • • {for providing information about objects in the scene to a user, e.g. as in augmented reality applications}
 - <administratively transferred to [G06V 20/20](#)>
- D G06K 9/00677
 - • • {Analysis of image collections based on shared content, e.g. to detect affinity between persons}
 - <administratively transferred to [G06V 20/30](#)>
- D G06K 9/00684
 - • • {Categorising the entire scene, e.g. birthday party or wedding scene}
 - <administratively transferred to [G06V 20/35](#)>
- D G06K 9/00691
 - • • • {Indoor scenes}
 - <administratively transferred to [G06V 20/36](#)>
- D G06K 9/00697
 - • • • {Outdoor scenes}
 - <administratively transferred to [G06V 20/38](#)>
- D G06K 9/00704
 - • • • • {Urban scenes}
 - <administratively transferred to [G06V 20/39](#)>
- D G06K 9/00711
 - • {Recognising video content, e.g. extracting audiovisual features from movies, extracting representative key-frames, discriminating news vs. sport content (information retrieval in video databases G06F 16/70; recognition of movements or behaviour G06K 9/00335; extracting overlay text G06K 9/3266; fusion techniques G06K 9/6288; speech recognition G10L 15/00; indexing of audio and video or audiovisual data on record media using extracted features or characteristics G11B 27/28)}
 - <administratively transferred to [G06V 20/40](#)>
- D G06K 9/00718
 - • • {Higher-level, semantic clustering, classification or understanding of video scenes, e.g. detection, labelling or Markovian modelling of sport events or news items (segmenting video sequences G06K 9/00765; clustering techniques per se G06K 9/6218; classification techniques per se G06K 9/6267)}
 - <administratively transferred to [G06V 20/41](#)>
- D G06K 9/00724
 - • • • {of sport video content (determination of trajectories G06T 7/20)}
 - <administratively transferred to [G06V 20/42](#)>
- D G06K 9/00731
 - • • • {of news video content}
 - <administratively transferred to [G06V 20/43](#)>
- D G06K 2009/00738
 - • • {Event detection}
 - <administratively transferred to [G06V 20/44](#)>
- D G06K 9/00744
 - • • {Extracting features from the video content, e.g. video "fingerprints", or characteristics, e.g. by automatic extraction of representative shots or key frames (segmentation for general image processing G06T 7/10; use of extracted content features in video information retrieval G06F 16/783; automated annotation of image based on image contents G06K 9/00671; determination of region of interest for recognition G06K 9/3233; extraction of image features or characteristics G06K 9/46; determining representative patterns G06K 9/6255)}
 - <administratively transferred to [G06V 20/46](#)>

- D G06K 9/00751 . . . {Detecting suitable features for summarising video content (presentation in the form of a video summary G06F 16/739; editing video summary G11B 27/034; programmed access to video content G11B 27/105)}
<administratively transferred to [G06V 20/47](#)>
- D G06K 9/00758 . . . {Matching video sequences (aligning the image field G06K 9/32; image matching techniques G06K 9/00201, G06K 9/62; registration of image sequences G06T 7/38)}
<administratively transferred to [G06V 20/48](#)>
- D G06K 9/00765 . . . {Segmenting video sequences, i.e. computational techniques such as parsing or cutting the sequence, low-level clustering or determining units such as shots and scenes (segmentation of touching or overlapping patterns in the image field G06K 9/34; segmentation for general image processing G06T 7/10; segmentation of an image based on motion information G06T 7/215; picture signal circuitry for scene change detection H04N 5/147)}
<administratively transferred to [G06V 20/49](#)>
- D G06K 9/00771 . . . {Recognising scenes under surveillance, e.g. with Markovian modelling of scene activity (G06K 9/00785 takes precedence; recognition of movements or behaviour G06K 9/00335; motion analysis using general image processing G06T 7/20; intruder alarms using image scanning and comparing systems G08B 13/194; circuitry for movement detection and estimation for pictorial communication H04N 5/144; closed circuit television systems H04N 7/18)}
<administratively transferred to [G06V 20/52](#)>
- D G06K 9/00778 . . . {Recognition or static or dynamic crowd images, e.g. recognition of crowd congestion (recognition of individual pedestrians G06K 9/00369; recognition of whole body movements G06K 9/00342; counting mechanisms G06M; analysis of motion G06T 7/20; individual entry or exit registers G07C 9/00)}
<administratively transferred to [G06V 20/53](#)>
- D G06K 9/00785 . . . {Recognising traffic patterns acquired by static cameras (measuring or analysing of parameters relative to traffic conditions G08G 1/0104; analysing traffic situation by means of optical sensors G08G 1/04)}
<administratively transferred to [G06V 20/54](#)>
- D G06K 9/00791 . . . {Recognising scenes perceived from the perspective of a land vehicle, e.g. recognising lanes, obstacles or traffic signs on road scenes (vehicle signalling devices B60Q 9/005, B60Q 1/525; viewing systems for vehicles being directed to the improvement of the driver's vision B60R 1/00; means for informing the driver B60W 50/14; steering aid displays B62D 15/02; control of position of land vehicles using camera and image processing G05D 1/0246; traffic control for road vehicles, e.g. involving several vehicles or traffic rules G08G 1/00)}
<administratively transferred to [G06V 20/56](#)>
- D G06K 9/00798 . . . {Recognition of lanes or road borders, e.g. of lane markings, or recognition of driver's driving pattern in relation to lanes perceived from the vehicle; Analysis of car trajectory relative to detected road (determination of trajectories G06T 7/20)}
<administratively transferred to [G06V 20/588](#)>
- D G06K 9/00805 . . . {Detecting potential obstacles (recognising people G06K 9/00362)}
<administratively transferred to [G06V 20/58](#)>
- D G06K 9/00812 . . . {Recognition of available parking space}
<administratively transferred to [G06V 20/586](#)>

- D G06K 9/00818
 - • • {Recognising traffic signs}
 - <administratively transferred to [G06V 20/582](#)>
- D G06K 9/00825
 - • • {Recognition of vehicle or traffic lights}
 - <administratively transferred to [G06V 20/584](#)>
- D G06K 9/00832
 - • {Recognising scenes inside a vehicle, e.g. related to occupancy, driver state, inner lighting conditions}
 - <administratively transferred to [G06V 20/59](#)>
- D G06K 9/00838
 - • • {Recognising seat occupancy, e.g. forward or rearward facing child seat}
 - <administratively transferred to [G06V 20/593](#)>
- D G06K 9/00845
 - • • {Recognising the driver's state or behaviour, e.g. attention, drowsiness (anti-dozing alarms G08B 21/06; safety device responsive to condition of driver B60K 28/02; psychotechnic devices for vehicle drivers A61B 5/18)}
 - <administratively transferred to [G06V 20/597](#)>
- D G06K 9/00852
 - {Recognising whole cursive words}
 - <administratively transferred to [G06V 30/226](#)>
- D G06K 9/00859
 - • {using word shape}
 - <administratively transferred to [G06V 30/2264](#)>
- D G06K 9/00865
 - • {using stroke segmentation}
 - <administratively transferred to [G06V 30/2268](#)>
- D G06K 9/00872
 - • • {with lexical matching}
 - <administratively transferred to [G06V 30/2272](#)>
- D G06K 9/00879
 - • • {with probabilistic networks, e.g. hidden Markov models}
 - <administratively transferred to [G06V 30/2276](#)>
- D G06K 9/00885
 - {Biometric patterns not provided for under G06K 9/00006, G06K 9/00154, G06K 9/00335, G06K 9/00362, G06K 9/00597; Biometric specific functions not specific to the kind of biometric}
 - <administratively transferred to [G06V 40/10](#)>
- D G06K 9/00892
 - • {Use of multiple biometrics (sensor fusion G06K 9/6289)}
 - <administratively transferred to [G06V 40/70](#)>
- D G06K 9/00899
 - • {Spoof detection (G06K 9/00107 takes precedence)}
 - <administratively transferred to [G06V 40/40](#)>
- D G06K 9/00906
 - • • {Detection of body part being alive}
 - <administratively transferred to [G06V 40/45](#)>
- D G06K 9/00912
 - • {Interactive means for assisting the user in correctly positioning the object of interest}
 - <administratively transferred to [G06V 40/67](#)>
- D G06K 9/00919
 - • {Static means for assisting the user in correctly positioning the object of interest}
 - <administratively transferred to [G06V 40/63](#)>
- D G06K 9/00926
 - • {Maintenance of references; Enrolment}
 - <administratively transferred to [G06V 40/50](#)>
- D G06K 2009/00932
 - • {Subcutaneous biometric features; Blood vessel patterns}
 - <administratively transferred to [G06V 40/14](#)>
- D G06K 2009/00939
 - • {Biometric patterns based on physiological signals, e.g. heartbeat, blood flow}
 - <administratively transferred to [G06V 40/15](#)>

- D G06K 2009/00946
 - • {for forensic purposes}
 - <administratively transferred to [G06V 40/155](#)>
- D G06K 2009/00953
 - • {Measures to keep reference information secret, e.g. cancellable biometrics}
 - <administratively transferred to [G06V 40/53](#)>
- D G06K 2009/00959
 - • • {Performing matching on a personal external card, e.g. to avoid submitting reference information}
 - <administratively transferred to [G06V 40/55](#)>
- D G06K 2009/00966
 - • {Solutions for unknown imposter distribution}
 - <administratively transferred to [G06V 40/58](#)>
- D G06K 9/00973
 - {Hardware and software architectures for pattern recognition, e.g. modular organisation}
 - <administratively transferred to [G06V 10/94](#)>
- D G06K 9/00979
 - • {structured as a network}
 - <administratively transferred to [G06V 10/95](#)>
- D G06K 9/00986
 - • {using specific electronic processors}
 - <administratively transferred to [G06V 10/955](#)>
- D G06K 9/00993
 - {Management of recognition tasks}
 - <administratively transferred to [G06V 10/96](#)>
- D G06K 9/03
 - Detection or correction of errors, e.g. by rescanning the pattern {(validation or performance evaluation G06K 9/6261)}
 - <administratively transferred to [G06V 10/98](#)>
- D G06K 9/033
 - • {with the intervention of an operator}
 - <administratively transferred to [G06V 10/987](#)>
- D G06K 9/036
 - • {Evaluation of quality of acquired pattern}
 - <administratively transferred to [G06V 10/993](#)>
- D G06K 9/18
 - using printed characters having additional code marks or containing code marks, e.g. the character being composed of individual strokes of different shape, each representing a different code value
 - <administratively transferred to [G06V 30/224](#)>
- D G06K 9/183
 - • {Characters composed of bars, e.g. CMC-7 (bar code forming unreadable characters, e.g. UPC, G06K 7/00)}
 - <administratively transferred to [G06V 30/2247](#)>
- D G06K 9/186
 - • {Recognition of characters printed with magnetic ink (G06K 9/183 takes precedence)}
 - <administratively transferred to [G06V 30/2253](#)>
- D G06K 9/20
 - Image acquisition
 - <administratively transferred to [G06V 10/10](#)>
- D G06K 9/2009
 - • {Construction of image pick-up using regular bi-dimensional dissection}
 - <administratively transferred to [G06V 10/12](#)>
- D G06K 9/2018
 - • {Identifying/ignoring parts by sensing at different wavelengths}
 - <administratively transferred to [G06V 10/143](#)>
- D G06K 9/2027
 - • {Illumination control}
 - <administratively transferred to [G06V 10/141](#)>

- D G06K 9/2036
 - {Special illumination such as grating, reflections, deflections, e.g. for characters with relief}
 - <administratively transferred to [G06V 10/145](#)>
- D G06K 2009/2045
 - {using multiple overlapping images}
 - <administratively transferred to [G06V 10/16](#)>
- D G06K 9/2054
 - {Selective acquisition/locating/processing of specific regions, e.g. highlighted text, fiducial marks, predetermined fields, document type identification (G06K 9/2018, G06K 9/209 take precedence; recognising the document type with the paragraph layout G06K 9/00442; recognising the document type with the layout of printed lines or input boxes G06K 9/00449)}
 - <administratively transferred to [G06V 10/22](#)>
- D G06K 9/2063
 - • {based on a marking or identifier characterising the document or the area (markings for centering the field of view on the document G06K 9/3216)}
 - <administratively transferred to [G06V 10/225](#)>
- D G06K 9/2072
 - • {based on positionally close symbols, e.g. amount sign or URL-specific characters (recognition with lexical or semantic context G06K 9/72)}
 - <administratively transferred to [G06V 10/23](#)>
- D G06K 9/2081
 - • {based on user interaction}
 - <administratively transferred to [G06V 10/235](#)>
- D G06K 9/209
 - {Sensor details, e.g. position, configuration, special lenses (G06K 9/2018 takes precedence)}
 - <administratively transferred to [G06V 10/147](#)>
- D G06K 9/22
 - using hand-held instruments
 - <administratively transferred to [G06V 10/17](#)>
- D G06K 9/222
 - • {the instrument generating sequences of position coordinates corresponding to handwriting; preprocessing or recognising digital ink (pen or stylus type devices inputting position G06F 3/03545, light pens G06F 3/03542; interaction arrangements using gestures traced on a digitiser G06F 3/04883)}
 - <administratively transferred to [G06V 30/1423](#)>
- D G06K 9/224
 - • • {in three dimensions}
 - <administratively transferred to [G06V 30/228](#)>
- D G06K 2009/226
 - • {by sensing position-defining codes on a support}
 - <administratively transferred to [G06V 10/19](#)>
- D G06K 9/228
 - • {Hand-held scanners; Optical wands}
 - <administratively transferred to [G06V 30/142](#)>
- D G06K 9/24
 - • Construction of the instrument
 - <administratively transferred to [G06V 10/12](#)>
- D G06K 9/26
 - using a slot moved over the image
 - <administratively transferred to [G06V 30/144](#)>
- D G06K 9/28
 - using discrete sensing elements at predetermined points
 - <administratively transferred to [G06V 30/144](#)>
- D G06K 9/30
 - using automatic curve-following means
 - <administratively transferred to [G06V 30/144](#)>
- D G06K 9/32
 - Aligning or centering of the image pick-up or image field
 - <administratively transferred to [G06V 10/24](#)>

- | | | |
|---|----------------|--|
| D | G06K 9/3208 | <ul style="list-style-type: none"> • • • {Orientation detection or correction, e.g. rotation of multiples of 90 degrees} <p><administratively transferred to G06V 10/242></p> |
| D | G06K 9/3216 | <ul style="list-style-type: none"> • • • {by locating a pattern (G06K 9/3208, G06K 9/3275 take precedence; centering within a document with a marking G06K 9/2063)} <p><administratively transferred to G06V 10/245></p> |
| D | G06K 2009/3225 | <ul style="list-style-type: none"> • • • • {Special marks for positioning} <p><administratively transferred to G06V 10/245></p> |
| D | G06K 9/3233 | <ul style="list-style-type: none"> • • • {Determination of region of interest (segmentation for general image processing G06T 7/10)} <p><administratively transferred to G06V 10/25></p> |
| D | G06K 9/3241 | <ul style="list-style-type: none"> • • • • {Recognising objects as potential recognition candidates based on visual cues, e.g. shape} <p><administratively transferred to G06V 10/255></p> |
| D | G06K 9/325 | <ul style="list-style-type: none"> • • • • {Detection of text region in scene imagery, real life image or Web pages, e.g. licenses plates, captions on TV images} <p><administratively transferred to G06V 20/62></p> |
| D | G06K 9/3258 | <ul style="list-style-type: none"> • • • • • {Scene text, e.g. street name} <p><administratively transferred to G06V 20/63></p> |
| D | G06K 9/3266 | <ul style="list-style-type: none"> • • • • • {Overlay text, e.g. embedded caption in TV program} <p><administratively transferred to G06V 20/635></p> |
| D | G06K 9/3275 | <ul style="list-style-type: none"> • • • {Inclination (skew) detection or correction of characters or of image to be recognised (determining orientation of objects in general G06T 7/70)} <p><administratively transferred to G06V 10/243></p> |
| D | G06K 9/3283 | <ul style="list-style-type: none"> • • • • {of characters or characters lines} <p><administratively transferred to G06V 30/1478></p> |
| D | G06K 2009/3291 | <ul style="list-style-type: none"> • • • {Pattern tracking} <p><administratively transferred to G06V 10/62></p> |
| D | G06K 9/34 | <ul style="list-style-type: none"> • • Segmentation of touching or overlapping patterns in the image field {(segmentation by quantisation, e.g. thresholding, G06K 9/38; edge detection for image feature extraction G06K 9/4604; extraction of connected components or edge linking G06K 9/4638; segmentation or edge detection for general image processing G06T 7/10)} <p><administratively transferred to G06V 10/26></p> |
| D | G06K 9/342 | <ul style="list-style-type: none"> • • • {Cutting or merging image elements, e.g. region growing, watershed, clustering-based techniques (smoothing or thinning of patterns G06K 9/44; clustering techniques G06K 9/6218; region-based segmentation for general image processing G06T 7/11)} <p><administratively transferred to G06V 10/267></p> |
| D | G06K 9/344 | <ul style="list-style-type: none"> • • • {using recognition of characters or words (lexical postprocessing of segmented characters G06K 9/72)} <p><administratively transferred to G06V 30/153></p> |
| D | G06K 9/346 | <ul style="list-style-type: none"> • • • {Removing patterns interfering with the pattern to be recognised, such as ruled lines, underlines (extracting table structures G06K 9/00442; document recognition G06K 9/2054)} <p><administratively transferred to G06V 10/273></p> |
| D | G06K 9/348 | <ul style="list-style-type: none"> • • • {using character size, text spacings, pitch estimation} <p><administratively transferred to G06V 30/158></p> |

- D G06K 9/36
- Image preprocessing, i.e. processing the image information without deciding about the identity of the image (image data processing or generation, in general G06T)
- <administratively transferred to [G06V 10/20](#)>
- D G06K 2009/363
- {Correcting image deformation, e.g. trapezoidal deformation caused by perspective}
- <administratively transferred to [G06V 10/247](#)>
- D G06K 2009/366
- {Interactive preprocessing or shape modelling, e.g. assignment of feature points by a user}
- <administratively transferred to [G06V 10/248](#)>
- D G06K 9/38
- Quantising the analogue image signal {, e.g. histogram thresholding for discrimination between background and foreground patterns (region-based segmentation of touching or overlapping patterns G06K 9/342; image segmentation for general image processing G06T 7/11)}
- <administratively transferred to [G06V 10/28](#)>
- D G06K 9/40
- Noise filtering {(restoration for general image processing G06T 5/001; morphologic operations for general image enhancement G06T 5/30)}
- <administratively transferred to [G06V 10/30](#)>
- D G06K 9/42
- Normalisation of the pattern dimensions
- <administratively transferred to [G06V 10/32](#)>
- D G06K 9/44
- Smoothing or thinning of the pattern {(restoration for general image processing G06T 5/001; morphologic operations for general image enhancement G06T 5/30)}
- <administratively transferred to [G06V 10/34](#)>
- D G06K 9/46
- Extraction of features or characteristics of the image {(segmentation of touching or overlapping patterns G06K 9/34; edge detection for feature extraction G06K 9/4604; segmentation or edge detection for general image processing G06T 7/10)}
- <administratively transferred to [G06V 10/40](#)>
- D G06K 9/4604
- {Detecting partial patterns, e.g. edges or contours, or configurations, e.g. loops, corners, strokes, intersections (extracting features by contour coding G06K 9/48; edge-based segmentation for general image processing G06T 7/12; edge detection for general image processing G06T 7/13)}
- <administratively transferred to [G06V 10/44](#)>
- D G06K 9/4609
- {by matching or filtering}
- <administratively transferred to [G06V 10/443](#)>
- D G06K 9/4614
- {filtering with Haar-like subimages, e.g. computation thereof with the integral image technique (biologically-inspired filters such as Gabor wavelets or local ICA kernels G06K 9/4619; local approaches in face detection or representation G06K 9/00248, G06K 9/00281)}
- <administratively transferred to [G06V 10/446](#)>
- D G06K 9/4619
- {Biologically-inspired filters, e.g. receptive fields}
- <administratively transferred to [G06V 10/449](#)>
- D G06K 9/4623
- {with interaction between the responses of different filters}
- <administratively transferred to [G06V 10/451](#)>
- D G06K 9/4628
- {Integrating the filters into a hierarchical structure}
- <administratively transferred to [G06V 10/454](#)>

- D G06K 9/4633 . . . {by mapping characteristic values of the pattern into a parameter space; e.g. Hough transformation}
<administratively transferred to [G06V 10/48](#)>
- D G06K 9/4638 . . . {by analysing connectivity relationships of elements of the pattern; e.g. by edge linking; by connected component or neighbouring slice analysis; by Markov Random Field [MRF] analysis (segmentation of touching or overlapping patterns involving probabilistic approaches G06K 9/34; MRF and other Markovian models in general G06K 9/6296; computing shortest geodesic path G06K 9/6215; segmentation involving probabilistic approaches for general image processing G06T 7/143)}
<administratively transferred to [G06V 10/457](#)>
- D G06K 9/4642 . . . {by performing operations within image blocks or by using histograms (G06K 9/4652 and G06K 9/4671 take precedence; matching image histograms G06K 9/6212)}
<administratively transferred to [G06V 10/50](#)>
- D G06K 9/4647 . . . {summing image-intensity values; Projection and histogram analysis (intersections with "scanning" patterns G06K 9/50; G06K 9/4652 takes precedence)}
<administratively transferred to [G06V 10/507](#)>
- D G06K 9/4652 . . . {related to colour (G06K 9/4671 takes precedence; colour-based face detection G06K 9/00234; colour analysis in general G06T 7/90; region-based segmentation for general image processing G06T 7/11; colour conversion and processing H04N 1/46; coding colour pictures signals using a reduced set of representative colours H04N 1/644)}
<administratively transferred to [G06V 10/56](#)>
- D G06K 2009/4657 . . . {involving specific hyperspectral computations of features}
<administratively transferred to [G06V 10/58](#)>
- D G06K 9/4661 . . . {related to illumination properties, e.g. according to a reflectance or lighting model (depth from shading G06T 7/507; image rendering with lighting effects G06T 15/50)}
<administratively transferred to [G06V 10/60](#)>
- D G06K 2009/4666 . . . {regional/local feature not essentially salient, e.g. local binary pattern}
<administratively transferred to [G06V 10/467](#)>
- D G06K 9/4671 . . . {Extracting features based on salient regional features, e.g. Scale Invariant Feature Transform [SIFT] keypoints (determination of region of interest for recognition [ROI] G06K 9/3233; extraction of specific shape primitives, e.g. corner or loop, or of configurations thereof, G06K 9/4604; biologically-inspired systems integrating saliency maps, e.g. for modelling visual attention G06K 9/4628; global invariant features G06K 9/52)}
<administratively transferred to [G06V 10/462](#)>
- D G06K 9/4676 . . . {Extracting features based on a plurality of salient regional features, e.g. "bag of words" (saliency map with interactions such as reinforcement or inhibition G06K 9/4623)}
<administratively transferred to [G06V 10/464](#)>
- D G06K 9/468 . . . {related to a structural representation of the pattern}
<administratively transferred to [G06V 10/422](#)>
- D G06K 9/4685 . . . {Syntactic representation, e.g. using a grammatical approach (syntactic pattern recognition G06K 9/6878)}
<administratively transferred to [G06V 10/424](#)>

- D G06K 9/469
 - . . . {Graphical representation, e.g. directed attributed graph (graph matching G06K 9/6892)}
 - <administratively transferred to [G06V 10/426](#)>
- D G06K 2009/4695
 - . . . {sparse representation}
 - <administratively transferred to [G06V 10/513](#)>
- D G06K 9/48
 - . . . by coding the contour of the pattern {contour related features or features from contour like patterns, e.g. hand-drawn point-sequence}
 - <administratively transferred to [G06V 10/46](#)>
- D G06K 9/481
 - . . . {using vector-coding}
 - <administratively transferred to [G06V 10/469](#)>
- D G06K 9/482
 - . . . {analysing the spectrum of the contour, e.g. Fourier expansion}
 - <administratively transferred to [G06V 10/478](#)>
- D G06K 2009/484
 - . . . {using an approximation function}
 - <administratively transferred to [G06V 10/471](#)>
- D G06K 2009/485
 - . . . {using a gradient analysis}
 - <administratively transferred to [G06V 10/473](#)>
- D G06K 2009/487
 - . . . {using statistical shape modelling, e.g. point distribution model}
 - <administratively transferred to [G06V 10/476](#)>
- D G06K 2009/488
 - . . . {using wavelet analysis}
 - <administratively transferred to [G06V 10/478](#)>
- D G06K 9/50
 - . . . by analysing segments intersecting the pattern {segments obtained by the intersection of the pattern with a scanning pattern, e.g. random scanning, circular scanning (G06K 9/4638 takes precedence)}
 - <administratively transferred to [G06V 10/421](#)>
- D G06K 9/52
 - . . . by deriving mathematical or geometrical properties from the whole image
 - <administratively transferred to [G06V 10/42](#)>
- D G06K 9/522
 - . . . {Frequency domain transformation; Autocorrelation}
 - <administratively transferred to [G06V 10/431](#)>
- D G06K 9/525
 - . . . {Computation of moments (moments not relevant for pattern recognition G06T 7/66)}
 - <administratively transferred to [G06V 10/435](#)>
- D G06K 9/527
 - . . . {Scale-space domain transformation, e.g. with wavelet analysis (wavelet transform as such G06F 17/148; compression of images with wavelet transform H04N 19/00)}
 - <administratively transferred to [G06V 10/52](#)>
- D G06K 9/54
 - . . Combinations of preprocessing functions
 - <administratively transferred to [G06V 10/20](#)>
- D G06K 9/56
 - . . . using a local operator, i.e. means to operate on an elementary image point in terms of the immediate surroundings of this point {(local operators for general image enhancement G06T 5/20)}
 - <administratively transferred to [G06V 10/36](#)>
- D G06K 9/58
 - . . using optical means
 - <administratively transferred to [G06V 10/88](#)>
- D G06K 2009/585
 - . . . {using a wedge-ring detector, e.g. in Fourier space}
 - <administratively transferred to [G06V 10/88](#)>

- D G06K 9/60
- Combination of image acquisition and preprocessing functions
<administratively transferred to [G06V 10/20](#)>
- D G06K 9/605
- • {the combination being locally implemented within the sensing arrangement, e.g. artificial retina (receptive fields G06K 9/4619; enhancement in image sensors H04N 3/15, H04N 5/217, H04N 5/232, H04N 5/235)}
<administratively transferred to [G06V 10/20](#)>
- C G06K 9/62
- Methods or arrangements for *pattern* recognition using electronic means (machine learning G06N 20/00; digital correlation G06F 17/15; analogue correlation G06G 7/19)
- WARNING**
*Group G06K 9/62 is impacted by reclassification into groups [G06V 10/70](#), [G06V 10/766](#) and [G06V 30/19](#).
 All groups listed in this Warning should be considered in order to perform a complete search.*
- C G06K 9/6201
- • {Matching; Proximity measures}
- WARNING**
*Group G06K 9/6201 is impacted by reclassification into groups [G06V 10/75](#) and [G06V 30/19007](#).
 Groups [G06K 9/6201](#), [G06V 10/75](#) and [G06V 30/19007](#) should be considered in order to perform a complete search.*
- D G06K 9/6202
- • • {Comparing pixel values or logical combinations thereof, or feature values having positional relevance, e.g. template matching (specially adapted for image alignment G06T 7/30; specially adapted for position determination G06T 7/70; specially adapted for the calculation of depth from stereo images G06T 7/50; specially adapted for image segmentation G06T 7/10; specially adapted for the analysis of motion G06T 7/20)}
<administratively transferred to [G06V 10/751](#)>
- D G06K 9/6203
- • • • {Shifting or otherwise transforming the patterns to accommodate for positional errors}
<administratively transferred to [G06V 10/7515](#)>
- D G06K 9/6204
- • • • • {Matching of contours (G06K 9/6206, G06K 9/6211 take precedence)}
<administratively transferred to [G06V 10/752](#)>
- D G06K 9/6205
- • • • • {by mapping curve parameters onto an accumulator array, e.g. generalised Hough Transform (detecting primitive shapes such as lines and circles by accumulating parameters of a known equation G06K 9/4633)}
<administratively transferred to [G06V 10/753](#)>
- D G06K 9/6206
- • • • • {involving a deformation of the sample or reference pattern; Elastic matching (segmentation of touching or overlapping patterns involving deformable models G06K 9/34; segmentation involving deformable models for general image processing G06T 7/149)}
<administratively transferred to [G06V 10/754](#)>
- D G06K 9/6207
- • • • • {based on a local optimisation criterion, e.g. "snakes", i.e. active contour models of the pattern to be recognised}
<administratively transferred to [G06V 10/755](#)>
- D G06K 9/6209
- • • • • {based on shape statistics, e.g. active shape models of the pattern to be recognised}
<administratively transferred to [G06V 10/7553](#)>

- D G06K 9/621 {based also on statistics of image patches, e.g. active appearance models of the pattern to be recognised}
<administratively transferred to [G06V 10/7557](#)>
- D G06K 9/6211 {Matching configurations of points or features, e.g. constellation matching (G06K 9/00087 takes precedence)}
<administratively transferred to [G06V 10/757](#)>
- D G06K 9/6212 . . . {Comparing statistics of pixel or of feature values, e.g. histogram matching}
<administratively transferred to [G06V 10/758](#)>
- D G06K 2009/6213 . . . {region-based matching}
<administratively transferred to [G06V 10/759](#)>
- D G06K 9/6214 . . . {based on a parametric eigenspace representation, e.g. eigenspace representation using pose or illumination parameters; Shape manifold}
<administratively transferred to [G06V 10/76](#)>
- C G06K 9/6215 . . . {Proximity measures, i.e. similarity or distance measures}
- WARNING**
Group G06K 9/6215 is impacted by reclassification into groups G06V 10/761 and G06V 30/19093. Groups G06K 9/6215, G06V 10/761 and G06V 30/19093 should be considered in order to perform a complete search.
- C G06K 9/6217 . . {Design or setup of recognition systems and techniques; Extraction of features in feature space; Clustering techniques; Blind source separation (regression analysis [G06F 17/18](#))}
- WARNING**
Group G06K 9/6217 is impacted by reclassification into groups G06V 10/70, G06V 10/766 and G06V 30/191. All groups listed in this Warning should be considered in order to perform a complete search.
- C G06K 9/6218 . . . {Clustering techniques}
- WARNING**
Group G06K 9/6218 is impacted by reclassification into groups G06V 10/762 and G06V 30/19107. Groups G06K 9/6218, G06V 10/762 and G06V 30/19107 should be considered in order to perform a complete search.
- C G06K 9/6219 {Hierarchical techniques, i.e. dividing or merging pattern sets so as to obtain a dendrogram}
- WARNING**
Group G06K 9/6219 is impacted by reclassification into groups G06V 10/7625 and G06V 30/19107. Groups G06K 9/6219, G06V 10/7625 and G06V 30/19107 should be considered in order to perform a complete search.
- C G06K 9/622 {Non-hierarchical partitioning techniques}
- WARNING**
Group G06K 9/622 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107. Groups G06K 9/622, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.

- C G06K 9/6221 • • • • {based on statistics}
- WARNING
*Group G06K 9/6221 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
 Groups G06K 9/6221, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.*
- C G06K 9/6222 • • • • • {with an adaptive number of clusters, e.g. ISODATA technique}
- WARNING
*Group G06K 9/6222 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
 Groups G06K 9/6222, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.*
- C G06K 9/6223 • • • • • {with a fixed number of clusters, e.g. K-means clustering}
- WARNING
*Group G06K 9/6223 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
 Groups G06K 9/6223, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.*
- C G06K 9/6224 • • • • • {based on graph theory, e.g. Minimum Spanning Trees [MST], graph cuts, spectral clustering techniques (~~segmentation of touching or overlapping patterns involving graph-based approaches G06K 9/342~~; graph embedding G06K 9/6252; segmentation involving graph-based approaches for general image processing G06T 7/162; *segmentation of touching or overlapping patterns involving graph-based approaches G06V 10/267*)}
- WARNING
*Group G06K 9/6224 is impacted by reclassification into groups G06V 10/7635 and G06V 30/19107.
 Groups G06K 9/6224, G06V 10/7635 and G06V 30/19107 should be considered in order to perform a complete search.*
- C G06K 9/6226 • • • • • {based on the modelling of probability density functions}
- WARNING
*Group G06K 9/6226 is impacted by reclassification into groups G06V 10/763 and G06V 30/19107.
 Groups G06K 9/6226, G06V 10/763 and G06V 30/19107 should be considered in order to perform a complete search.*
- C G06K 9/6227 • • • {Selection of pattern recognition techniques, e.g. of classifiers in a multi-classifier system}
- WARNING
*Group G06K 9/6227 is impacted by reclassification into groups G06V 10/87 and G06V 30/19113.
 Groups G06K 9/6227, G06V 10/87 and G06V 30/19113 should be considered in order to perform a complete search.*
- C G06K 9/6228 • • • {Selecting the most significant subset of features (G06K 9/6232 takes precedence)}
- WARNING
Group G06K 9/6228 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.

Groups G06K 9/6228, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.

- C G06K 9/6229 . . . {by using evolutionary computational techniques, e.g. genetic algorithms (genetic algorithms per se [G06N 3/126](#))}

WARNING

Group G06K 9/6229 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.

Groups G06K 9/6229, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.

- C G06K 9/623 . . . {by ranking or filtering the set of features, e.g. using a measure of variance or of feature cross-correlation}

WARNING

Group G06K 9/623 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.

Groups G06K 9/623, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.

- C G06K 9/6231 . . . {by evaluating different subsets according to an optimisation criteria such as class separability, e.g. forward selection, backward elimination (linear discriminant analysis [G06K 9/6234](#))}

WARNING

Group G06K 9/6231 is impacted by reclassification into groups G06V 10/771 and G06V 30/1912.

Groups G06K 9/6231, G06V 10/771 and G06V 30/1912 should be considered in order to perform a complete search.

- C G06K 9/6232 . . . {Extracting features by transforming the feature space, e.g. multidimensional scaling; Mappings, e.g. subspace methods}

WARNING

Group G06K 9/6232 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6232, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6234 . . . {based on a discrimination criterion, e.g. discriminant analysis (discriminant functions [G06K 9/6227](#))}

WARNING

Group G06K 9/6234 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6234, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6235 . . . {Rendering the within-class scatter matrix ~~nonsingular~~non-singular}

WARNING

Group G06K 9/6235 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6235, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 2009/6236 . . . {involving a first projection stage, e.g. Fisherface techniques}

WARNING

Group G06K 2009/6236 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 2009/6236, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 2009/6237 {involving an optimisation, e.g. using regularisation techniques}

WARNING

Group G06K 2009/6237 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 2009/6237, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 2009/6238 {involving a subspace restriction, e.g. nullspace techniques}

WARNING

Group G06K 2009/6238 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 2009/6238, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6239 {based on a naturality criterion, e.g. with non-negative factorisation or negative correlation (matrix computation [G06F 17/16](#))}

WARNING

Group G06K 9/6239 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6239, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/624 {based on a separation criterion, e.g. independent component analysis}

WARNING

Group G06K 9/624 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/624, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6242 {of statistical independence, i.e. minimising mutual information or maximising ~~nongaussianity~~non-gaussianity}

WARNING

Group G06K 9/6242 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6242, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6243 {of decorrelation or non-stationarity, e.g. minimising lagged cross-correlations}

WARNING

Group G06K 9/6243 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6243, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6244 {enforcing sparsity or involving a domain transformation}

WARNING

Group G06K 9/6244 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127.

Groups G06K 9/6244, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6245 {characterised by a domain transformation}
- WARNING
Group G06K 9/6245 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6245, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6246 {overcoming non-stationarity or permutations (using non-stationarity for separation [G06K 9/6244](#))}
- WARNING
Group G06K 9/6246 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6246, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6247 {based on an approximation criterion, e.g. principal component analysis}
- WARNING
Group G06K 9/6247 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6247, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6248 {nonlinearly, e.g. embedding a manifold in a Euclidean space (principal curves [G06K 9/6251](#))}
- WARNING
Group G06K 9/6248 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6248, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6249 {based on a sparsity criterion, e.g. with an overcomplete basis (specific for source separation [G06K 9/6244](#); pictorial communication involving matching pursuit [H04N 19/97](#))}
- WARNING
Group G06K 9/6249 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6249, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6251 {based on a criterion of topology preservation, e.g. multidimensional scaling, self-organising maps}
- WARNING
Group G06K 9/6251 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6251, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.
- C G06K 9/6252 {involving differential geometry, e.g. embedding of pattern manifold}
- WARNING
Group G06K 9/6252 is impacted by reclassification into groups G06V 10/7715 and G06V 30/19127. Groups G06K 9/6252, G06V 10/7715 and G06V 30/19127 should be considered in order to perform a complete search.

- C G06K 9/6253
- • • {User interactive design ([G06K 9/6263](#) takes precedence); Environments; Tool boxes}
- WARNING
 Group [G06K 9/6253](#) is impacted by reclassification into group [G06V 10/945](#).
 Groups [G06K 9/6253](#) and [G06V 10/945](#) should be considered in order to perform a complete search.
- C G06K 9/6254
- • • {Interactive pattern learning with a human teacher}
- WARNING
 Group [G06K 9/6254](#) is impacted by reclassification into groups [G06V 10/7788](#) and [G06V 30/19133](#).
 Groups [G06K 9/6254](#), [G06V 10/7788](#) and [G06V 30/19133](#) should be considered in order to perform a complete search.
- C G06K 9/6255
- • • {Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries, e.g. user dictionaries}
- WARNING
 Group [G06K 9/6255](#) is impacted by reclassification into groups [G06V 10/772](#) and [G06V 30/1914](#).
 Groups [G06K 9/6255](#), [G06V 10/772](#) and [G06V 30/1914](#) should be considered in order to perform a complete search.
- C G06K 9/6256
- • • {Obtaining sets of training patterns; Bootstrap methods, e.g. bagging, boosting}
- WARNING
 Group [G06K 9/6256](#) is impacted by reclassification into groups [G06V 10/774](#) and [G06V 30/19147](#).
 Groups [G06K 9/6256](#), [G06V 10/774](#) and [G06V 30/19147](#) should be considered in order to perform a complete search.
- C G06K 9/6257
- • • {characterised by the organisation or the structure of the process, e.g. boosting cascade (feature selection by floating search [G06K 9/6231](#))}
- WARNING
 Group [G06K 9/6257](#) is impacted by reclassification into groups [G06V 10/7747](#) and [G06V 30/19147](#).
 Groups [G06K 9/6257](#), [G06V 10/7747](#) and [G06V 30/19147](#) should be considered in order to perform a complete search.
- C G06K 9/6259
- • • {characterised by the incorporation of unlabelled data, e.g. multiple instance learning [MIL], semi-supervised techniques using expectation-maximisation [EM] or naïve labelling (EM techniques [G06K 9/6226](#); validation with "oracles" [G06K 9/6263](#))}
- WARNING
 Group [G06K 9/6259](#) is impacted by reclassification into groups [G06V 10/7753](#) and [G06V 30/19147](#).
 Groups [G06K 9/6259](#), [G06V 10/7753](#) and [G06V 30/19147](#) should be considered in order to perform a complete search.
- C G06K 9/626
- • • {Selecting classification rules}
- WARNING
 Group [G06K 9/626](#) is impacted by reclassification into groups [G06V 10/765](#) and [G06V 30/19153](#).
 Groups [G06K 9/626](#), [G06V 10/765](#) and [G06V 30/19153](#) should be considered in order to perform a complete search.

- C G06K 9/6261 • • • {partitioning the feature space}
- WARNING
Group G06K 9/6261 is impacted by reclassification into groups G06V 10/765 and G06V 30/19153.
Groups G06K 9/6261, G06V 10/765 and G06V 30/19153 should be considered in order to perform a complete search.
- C G06K 9/6262 • • • {Validation, performance evaluation or active pattern learning techniques}
- WARNING
Group G06K 9/6262 is impacted by reclassification into groups G06V 10/776, G06V 10/778, G06V 30/1916, G06V 30/19167 and G06V 30/302.
All groups listed in this Warning should be considered in order to perform a complete search.
- C G06K 9/6263 • • • • {based on the feedback of a supervisor (relevance feedback in information retrieval [G06F 16/00](#))}
- WARNING
Group G06K 9/6263 is impacted by reclassification into groups G06V 10/7784 and G06V 30/19167.
Groups G06K 9/6263, G06V 10/7784 and G06V 30/19167 should be considered in order to perform a complete search.
- C G06K 9/6264 • • • • {the supervisor being an automated "intelligent" module, e.g. "intelligent oracle"}
- WARNING
Group G06K 9/6264 is impacted by reclassification into groups G06V 10/7788 and G06V 30/19167.
Groups G06K 9/6264, G06V 10/7788 and G06V 30/19167 should be considered in order to perform a complete search.
- C G06K 9/6265 • • • • {based on a specific statistical test}
- WARNING
Group G06K 9/6265 is impacted by reclassification into groups G06V 10/7796 and G06V 30/19167.
Groups G06K 9/6265, G06V 10/7796 and G06V 30/19167 should be considered in order to perform a complete search.
- C G06K 9/6267 • • {Classification techniques}
- WARNING
Group G06K 9/6267 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6267, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- C G06K 9/6268 • • • {relating to the classification paradigm, e.g. parametric or non-parametric approaches}
- WARNING
Group G06K 9/6268 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
Groups G06K 9/6268, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.

- C G06K 9/6269 {based on the distance between the decision surface and training patterns lying on the boundary of the class cluster, e.g. support vector machines}
- WARNING
*Group G06K 9/6269 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6269, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/627 {based on distances between the pattern to be recognised and training or reference patterns}
- WARNING
*Group G06K 9/627 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/627, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6271 {based on distances to prototypes}
- WARNING
*Group G06K 9/6271 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6271, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6272 {based on distances to cluster centroids}
- WARNING
*Group G06K 9/6272 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6272, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6273 {Smoothing the distance, e.g. Radial Basis Function Networks}
- WARNING
*Group G06K 9/6273 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6273, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6274 {based on distances to neighbourhood prototypes, e.g. Restricted Coulomb Energy Networks}
- WARNING
*Group G06K 9/6274 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6274, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6276 {based on distances to closest patterns, e.g. nearest neighbour classification}
- WARNING
*Group G06K 9/6276 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6276, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*

- C G06K 9/6277
- • • {based on a parametric (probabilistic) model, e.g. based on Neyman-Pearson lemma, likelihood ratio, **Receiver Operating Characteristic** *receiver operating characteristic* [ROC] curve plotting a **False Acceptance Rate [FAR] versus a False Reject Rate** *false acceptance rate [FAR] versus a false reject rate* [FRR] (*segmentation of touching or overlapping patterns involving probabilistic approaches G06K 9/34; image connectivity analysis involving probabilistic approaches, e.g. Markov Random Fields techniques, G06K 9/4638; segmentation involving probabilistic approaches for general image processing G06T 7/143; segmentation of touching or overlapping patterns involving probabilistic approaches G06V 10/26; image connectivity analysis involving probabilistic approaches, e.g. Markov Random Fields techniques, G06V 10/457*)}
- WARNING**
*Group G06K 9/6277 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6277, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6278
- • • • {Bayesian classification}
- WARNING**
*Group G06K 9/6278 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6278, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6279
- • • {relating to the number of classes}
- WARNING**
*Group G06K 9/6279 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6279, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/628
- • • • {Multiple classes}
- WARNING**
*Group G06K 9/628 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/628, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6281
- • • • {Piecewise classification, i.e. whereby each classification requires several discriminant rules}
- WARNING**
*Group G06K 9/6281 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6281, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*
- C G06K 9/6282
- • • • • {Tree-organised sequential classifiers}
- WARNING**
*Group G06K 9/6282 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6282, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.*

- C G06K 9/6284
- • • {Single class perspective, e.g. one-against-all classification; Novelty detection; Outlier detection}
- WARNING**
 Group G06K 9/6284 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6284, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- C G06K 9/6285
- • • {relating to the decision surface}
- WARNING**
 Group G06K 9/6285 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6285, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- C G06K 9/6286
- • • {Linear, e.g. hyperplane}
- WARNING**
 Group G06K 9/6286 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6286, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- C G06K 9/6287
- • • {Non-linear, e.g. polynomial classifier (G06K 9/6284 takes precedence; classifier with multiple radial basis functions G06K 9/6273)}
- WARNING**
 Group G06K 9/6287 is impacted by reclassification into groups G06V 10/764 and G06V 30/19173.
 Groups G06K 9/6287, G06V 10/764 and G06V 30/19173 should be considered in order to perform a complete search.
- C G06K 9/6288
- • {Fusion techniques, i.e. combining data from various sources, e.g. sensor fusion (~~bootstrap techniques, e.g. boosting G06K 9/6256~~; data unmixing G06K 9/624; ~~image matching G06K 9/64~~; ~~bootstrap techniques, e.g. boosting G06K 9/6256~~; ~~image matching G06V 30/192~~; fusion of acoustic speaker inputs G10L 17/10)}
- WARNING**
 Group G06K 9/6288 is impacted by reclassification into groups G06V 10/80 and G06V 30/1918.
 Groups G06K 9/6288, G06V 10/80 and G06V 30/1918 should be considered in order to perform a complete search.
- C G06K 9/6289
- • • {of input or preprocessed data (imaging spectrometers G01J 3/2823; image fusion in general and biomedical image fusion G06T 5/50; processing and conversion of colour signals H04N 1/46)}
- WARNING**
 Group G06K 9/6289 is impacted by reclassification into groups G06V 10/803 and G06V 30/1918.
 Groups G06K 9/6289, G06V 10/803 and G06V 30/1918 should be considered in order to perform a complete search.
- C G06K 9/629
- • • {of extracted features}
- WARNING**
 Group G06K 9/629 is impacted by reclassification into groups G06V 10/806 and G06V 30/1918.

Groups G06K 9/629, G06V 10/806 and G06V 30/1918 should be considered in order to perform a complete search.

- C G06K 9/6292 • • • {of classification results, e.g. of classification results related to same input data (G06K 9/6256 takes precedence)}

WARNING

*Group G06K 9/6292 is impacted by reclassification into groups G06V 10/809 and G06V 30/1918.
Groups G06K 9/6292, G06V 10/809 and G06V 30/1918 should be considered in order to perform a complete search.*

- C G06K 9/6293 • • • {of classification results relating to different input data, e.g. multimodal recognition}

WARNING

*Group G06K 9/6293 is impacted by reclassification into groups G06V 10/811 and G06V 30/1918.
Groups G06K 9/6293, G06V 10/811 and G06V 30/1918 should be considered in order to perform a complete search.*

- C G06K 2009/6294 • • • {belief theory, e.g. Dempster-Shafer}

WARNING

*Group G06K 2009/6294 is impacted by reclassification into groups G06V 10/814 and G06V 30/1918.
Groups G06K 2009/6294, G06V 10/814 and G06V 30/1918 should be considered in order to perform a complete search.*

- C G06K 2009/6295 • • • {fusion by voting}

WARNING

*Group G06K 2009/6295 is impacted by reclassification into groups G06V 10/817 and G06V 30/1918.
Groups G06K 2009/6295, G06V 10/817 and G06V 30/1918 should be considered in order to perform a complete search.*

- C G06K 9/6296 • • {Graphical models, e.g. Bayesian networks (probabilistic networks per se G06N 7/005)}

WARNING

*Group G06K 9/6296 is impacted by reclassification into groups G06V 10/84 and G06V 30/1918.
Groups G06K 9/6296, G06V 10/84 and G06V 30/1918 should be considered in order to perform a complete search.*

- C G06K 9/6297 • • • {Markov models ~~and/or~~ related models, e.g. semi-Markov models; Markov random fields; networks embedding Markov models (~~segmentation of touching or overlapping patterns involving probabilistic approaches~~ G06K 9/34; ~~segmentation involving probabilistic approaches for general image processing~~ G06T 7/143; ~~segmentation of touching or overlapping patterns involving probabilistic approaches~~ G06V 10/26; image connectivity analysis involving probabilistic approaches, e.g. Markov Random Fields; ~~G06K 9/4638~~ G06V 10/457; application of Markov models to acoustic speech recognition G10L 15/00; ~~segmentation involving probabilistic approaches for general image processing~~ G06T 7/143)}

WARNING

Group G06K 9/6297 is impacted by reclassification into groups G06V 10/85 and G06V 30/1918.

Groups G06K 9/6297, G06V 10/85 and G06V 30/19187 should be considered in order to perform a complete search.

- C G06K 9/6298
- {Statistical pre-processing, e.g. techniques for normalisation or restoring missing data}
- WARNING**
Group G06K 9/6298 is impacted by reclassification into groups G06V 10/72 and G06V 30/19193.
Groups G06K 9/6298, G06V 10/72 and G06V 30/19193 should be considered in order to perform a complete search.
- D G06K 9/64
- using simultaneous comparisons or correlations of the image signals with a plurality of references, e.g. resistor matrix
<administratively transferred to [G06V 10/75](#)>
- D G06K 9/645
- {using a resistor matrix}
<administratively transferred to [G06V 30/195](#)>
- D G06K 9/66
- references adjustable by an adaptive method, e.g. learning
<administratively transferred to [G06V 30/194](#)>
- D G06K 9/68
- using sequential comparisons of the image signals with a plurality of references {in which the sequence of the image signals or the references is relevant}, e.g. addressable memory
<administratively transferred to [G06V 10/75](#)>
- D G06K 9/6807
- {Dividing the references in groups prior to recognition, the recognition taking place in steps; Selecting relevant dictionaries}
<administratively transferred to [G06V 30/242](#)>
- D G06K 9/6814
- {according to the graphical properties}
<administratively transferred to [G06V 30/244](#)>
- D G06K 9/6821
- {Alphabet recognition, e.g. Latin, Kanji, Katakana}
<administratively transferred to [G06V 30/2445](#)>
- D G06K 9/6828
- {Font recognition}
<administratively transferred to [G06V 30/245](#)>
- D G06K 9/6835
- {Discrimination between machine-print, hand-print and cursive writing}
<administratively transferred to [G06V 30/2455](#)>
- D G06K 9/6842
- {according to the linguistic properties, e.g. English, German}
<administratively transferred to [G06V 30/246](#)>
- D G06K 9/685
- {Involving plural approaches, e.g. verification by template match; resolving confusion among similar patterns, e.g. O & Q (G06K 9/6807 takes precedence)}
<administratively transferred to [G06V 30/248](#)>
- D G06K 9/6857
- {Coarse/fine approaches, e.g. resolution of ambiguities, multiscale approaches}
<administratively transferred to [G06V 30/2504](#)>
- D G06K 2009/6864
- {Combination of methods, e.g. classifiers, working on the same input data}
<administratively transferred to [G06V 30/2528](#)>
- D G06K 2009/6871
- {Combination of methods, e.g. classifiers, working on different input data, e.g. sensor fusion}
<administratively transferred to [G06V 30/2552](#)>

- D G06K 9/6878 . . . {Syntactic or structural pattern recognition, e.g. symbolic string recognition}
<administratively transferred to [G06V 30/1983](#)>
- D G06K 9/6885 . . . {Syntactic analysis, e.g. using a grammatical approach (syntactic image representation G06K 9/4685)}
<administratively transferred to [G06V 30/1985](#)>
- D G06K 9/6892 . . . {Graph matching (graphical image representation G06K 9/469)}
<administratively transferred to [G06V 30/1988](#)>
- D G06K 9/70 . . . the selection of the next reference depending on the result of the preceding comparison
<administratively transferred to [G06V 10/75](#)>
- D G06K 9/72 . . using context analysis based on the provisionally recognised identity of a number of successive patterns, e.g. a word
<administratively transferred to [G06V 10/768](#)>
- D G06K 9/723 . . . {Lexical context (G06K 9/00872 takes precedence)}
<administratively transferred to [G06V 30/268](#)>
- D G06K 9/726 . . . {Syntactic or semantic context, e.g. balancing}
<administratively transferred to [G06V 30/274](#)>
- D G06K 9/74 . Arrangements for recognition using optical reference masks (optical analogue correlation G06E 3/00; {arrangements for optically extracting non-holistic features, e.g. optical wedge-ring detectors, G06K 9/58})
<administratively transferred to [G06V 10/88](#)>
- D G06K 9/741 . . {using frequency domain filters, e.g. Fourier masks implemented on spatial light modulators (spatial light modulators *per se* G02B 26/00, G02F)}
<administratively transferred to [G06V 10/89](#)>
- D G06K 9/743 . . . {characterised by the kind of filter}
<administratively transferred to [G06V 10/893](#)>
- D G06K 9/745 {the filter being related to phase processing, e.g. phase-only filters}
<administratively transferred to [G06V 10/895](#)>
- D G06K 9/746 {the filter being related to the combination of filters, e.g. synthetic discriminant filters}
<administratively transferred to [G06V 10/898](#)>
- D G06K 9/748 . . {using spatial domain filters, e.g. joint transform correlators}
<administratively transferred to [G06V 10/92](#)>
- D G06K 9/76 . . using holographic masks
<administratively transferred to [G06V 10/88](#)>
- D G06K 9/78 . Combination of image acquisition and recognition functions
<administratively transferred to [G06V 10/10](#)>
- D G06K 9/80 . Combination of image preprocessing and recognition functions
<administratively transferred to [G06V 10/20](#)>
- D G06K 9/82 . . using optical means in one or both functions
<administratively transferred to [G06V 10/88](#)>
- U G06K 19/00 Record carriers for use with machines and with at least a part designed to carry digital markings**
- U G06K 19/06 . characterised by the kind of the digital marking, e.g. shape, nature, code

- U G06K 19/067
 - • Record carriers with conductive marks, printed circuits or semiconductor circuit elements, e.g. credit or identity cards {also with resonating or responding marks without active components}
- U G06K 19/07
 - • • with integrated circuit chips
- U G06K 19/073
 - • • • Special arrangements for circuits, e.g. for protecting identification code in memory (protection against unauthorised use of computer memory [G06F 12/14](#))
- U G06K 19/07309
 - • • • {Means for preventing undesired reading or writing from or onto record carriers}
- U G06K 19/07345
 - • • • • {by activating or deactivating at least a part of the circuit on the record carrier, e.g. ON/OFF switches}
- G06K 19/07354
 - • • • • {by biometrically sensitive means, e.g. fingerprint sensitive (~~fingerprint sensors in general G06K 9/00006~~; *fingerprint sensors in general G06V 40/12*; biometrically activated access control [G07C 9/25](#))}
- G06K 21/00**

Information retrieval from punched cards designed for manual use or handling by machine ([G06K 19/00](#) takes precedence; ~~detection or correction of errors by rescanning patterns G06K 9/03~~; *detection or correction of errors by rescanning patterns G06V 10/98*; checking correct operation of card-conveying mechanisms [G06K 13/06](#)); Apparatus for handling such cards, e.g. marking or correcting
- D G06K 2209/00**

~~Indexing scheme relating to methods or arrangements for reading or recognising printed or written characters or for recognising patterns, e.g. fingerprints~~
<administratively transferred to [G06V 2201/00](#) ADD>
- D G06K 2209/01
 - Character recognition
 <administratively transferred to [G06V 30/10](#)>
- D G06K 2209/011
 - • of Kanji, Hiragana or Katakana characters
 <administratively transferred to [G06V 30/287](#)>
- D G06K 2209/013
 - • of non-latin characters other than Kanji, Hiragana or Katakana characters
 <administratively transferred to [G06V 30/293](#)>
- D G06K 2209/015
 - • Solutions for problems related to non-uniform document background
 <administratively transferred to [G06V 2201/01](#) ADD>
- D G06K 2209/03
 - Recognising information on displays, dials, clocks
 <administratively transferred to [G06V 2201/02](#) ADD>
- D G06K 2209/05
 - Recognition of patterns in medical or anatomical images
 <administratively transferred to [G06V 2201/03](#) ADD>
- D G06K 2209/051
 - • of internal organs
 <administratively transferred to [G06V 2201/031](#) ADD>
- D G06K 2209/053
 - • of protuberances, polyps nodules, etc.
 <administratively transferred to [G06V 2201/032](#) ADD>
- D G06K 2209/055
 - • of skeletal patterns
 <administratively transferred to [G06V 2201/033](#) ADD>
- D G06K 2209/057
 - • of medical instruments
 <administratively transferred to [G06V 2201/034](#) ADD>
- D G06K 2209/07
 - Recognition of patterns in DNA microarray
 <administratively transferred to [G06V 2201/04](#) ADD>

- D G06K 2209/09
 - Recognition of patterns representing particular kinds of hidden objects, e.g. weapons, explosives, drugs
 - <administratively transferred to [G06V 2201/05](#) ADD>
- D G06K 2209/15
 - Detection and recognition of car license plates
 - <administratively transferred to [G06V 20/625](#)>
- D G06K 2209/17
 - Recognition of food, fruit, vegetables
 - <administratively transferred to [G06V 20/68](#)>
- D G06K 2209/19
 - Recognition of objects for industrial automation
 - <administratively transferred to [G06V 2201/06](#) ADD>
- D G06K 2209/21
 - Target detection
 - <administratively transferred to [G06V 2201/07](#) ADD>
- D G06K 2209/23
 - Detecting or categorising vehicles
 - <administratively transferred to [G06V 2201/08](#) ADD>
- D G06K 2209/25
 - Recognition of logos
 - <administratively transferred to [G06V 2201/09](#) ADD>
- D G06K 2209/27
 - Recognition assisted with metadata
 - <administratively transferred to [G06V 2201/10](#) ADD>
- D G06K 2209/29
 - Technique has transformation invariance effect
 - <administratively transferred to [G06V 2201/11](#) ADD>
- D G06K 2209/40
 - Acquisition of 3D measurements of objects
 - <administratively transferred to [G06V 2201/12](#) ADD>
- D G06K 2209/401
 - • using special illumination
 - <administratively transferred to [G06V 2201/121](#) ADD>
- D G06K 2209/403
 - • Computational image acquisition in electron microscopy
 - <administratively transferred to [G06V 2201/122](#) ADD>
- D G06K 2209/50
 - Indexing scheme for indicating the type of disclosure document
 - <administratively transferred to [G06V 2201/13](#) ADD>
- D G06K 2209/501
 - • Book
 - <administratively transferred to [G06V 2201/131](#) ADD>
- D G06K 2209/502
 - • Book chapter
 - <administratively transferred to [G06V 2201/132](#) ADD>
- D G06K 2209/503
 - • Survey article
 - <administratively transferred to [G06V 2201/133](#) ADD>
- D G06K 2209/504
 - • Technical report or standard
 - <administratively transferred to [G06V 2201/134](#) ADD>
- D G06K 2209/505
 - • Master, PhD or other thesis
 - <administratively transferred to [G06V 2201/135](#) ADD>
- D G06K 2209/506
 - • Tutorial
 - <administratively transferred to [G06V 2201/136](#) ADD>

Project: RP0762 (G06N)

- M G06N** **COMPUTER SYSTEMS****COMPUTING ARRANGEMENTS** BASED ON SPECIFIC COMPUTATIONAL MODELS
- WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
- M G06N 3/00** **Computer systems****Computing arrangements** based on biological models
- M G06N 5/00** **Computer systems****Computing arrangements** using knowledge-based models
- M G06N 7/00** **Computer systems****Computing arrangements** based on specific mathematical models
- M G06N 7/02**
 - using fuzzy logic (~~computer systems based on biological models G06N 3/00~~; ~~computer systems using knowledge-based models G06N 5/00~~**computing arrangements based on biological models G06N 3/00**; **computing arrangements using knowledge-based models G06N 5/00**)
- C G06N 10/00** **Quantum computers, i.e. computer systems****computing, i.e. information processing** based on quantum-mechanical phenomena
- WARNING
Group G06N 10/00 is impacted by reclassification into groups G06N 10/20, G06N 10/40, G06N 10/60, G06N 10/70 and G06N 10/80. All groups listed in this Warning should be considered in order to perform a complete search.
- N G06N 10/20**
 - Models of quantum computing, e.g. quantum circuits or universal quantum computers

WARNING
Group [G06N 10/20](#) is incomplete pending reclassification of documents from group [G06N 10/00](#).
Groups [G06N 10/00](#) and [G06N 10/20](#) should be considered in order to perform a complete search.
- N G06N 10/40**
 - Physical realisations or architectures of quantum processors or components for manipulating qubits, e.g. qubit coupling or qubit control

WARNING
Group [G06N 10/40](#) is incomplete pending reclassification of documents from group [G06N 10/00](#).
Groups [G06N 10/00](#) and [G06N 10/40](#) should be considered in order to perform a complete search.
- N G06N 10/60**
 - Quantum algorithms, e.g. based on quantum optimisation, quantum Fourier or Hadamard transforms

WARNING
Group [G06N 10/60](#) is incomplete pending reclassification of documents from group [G06N 10/00](#).
Groups [G06N 10/00](#) and [G06N 10/60](#) should be considered in order to perform a complete search.

- N G06N 10/70
- Quantum error correction, detection or prevention, e.g. surface codes or magic state distillation
- WARNING
 Group [G06N 10/70](#) is incomplete pending reclassification of documents from group [G06N 10/00](#).
 Groups [G06N 10/00](#) and [G06N 10/70](#) should be considered in order to perform a complete search.
- N G06N 10/80
- Quantum programming, e.g. interfaces, languages or software-development kits for creating or handling programs capable of running on quantum computers; Platforms for simulating or accessing quantum computers, e.g. cloud-based quantum computing
- WARNING
 Group [G06N 10/80](#) is incomplete pending reclassification of documents from group [G06N 10/00](#).
 Groups [G06N 10/00](#) and [G06N 10/80](#) should be considered in order to perform a complete search.

Project: RP0760 (G06V)

N G06V

IMAGE OR VIDEO RECOGNITION OR UNDERSTANDINGNOTES

- This subclass covers:
 - methods or arrangements for pattern recognition or machine learning specially adapted for images or video.
- In this subclass, the following terms or expressions are used with the meaning indicated:
 - "pattern recognition" means detection, categorisation, authentication and identification of patterns for explanatory purposes or to derive a certain meaning in images or video, by acquiring, preprocessing or extracting distinctive features and matching, clustering or classifying these features or representations thereof;
 - "feature extraction" means deriving descriptive or quantitative measures from images or video;
 - "clustering" means grouping or separating patterns according to their (dis)similarity or closeness;
 - "classification" means the identification of an object/feature as belonging to a class of objects/features by assigning of a label.
- In this subclass, subject matter classified in groups [G06V 20/00](#) - [G06V 40/00](#) is also classified in groups [G06V 10/10](#) or [G06V 10/20](#) respectively, if recognition relies on specific processing at the stages of acquisition or preprocessing.

N G06V 10/00

Arrangements for image or video recognition or understanding (character recognition in images or video [G06V 30/10](#))WARNING

Groups [G06V 10/00](#), [G06V 10/74](#), [G06V 10/77](#), [G06V 10/7792](#), [G06V 10/82](#) and [G06V 10/86](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06V 10/10
- Image acquisition (document image scanning and transmission [H04N 1/00](#); control of digital cameras [H04N 5/232](#))
- WARNING
- Group [G06V 10/10](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/10](#) is also impacted by reclassification into groups [G06V 10/00](#), [G06V 10/70](#) - [G06V 10/87](#), [G06V 10/88](#) - [G06V 10/92](#), [G06V 30/14](#) - [G06V 30/158](#), [G06V 30/199](#) and [G06V 30/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/12
- • Details of acquisition arrangements; Constructional details thereof
- WARNING
- Group [G06V 10/12](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/12](#) is also impacted by reclassification into groups [G06V 10/14](#) and [G06V 30/142](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/14
- • • Optical characteristics of the device performing the acquisition or on the illumination arrangements
- WARNING
- Group [G06V 10/14](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 10/12](#).
- Groups [G06K 9/00](#), [G06V 10/12](#) and [G06V 10/14](#) should be considered in order to perform a complete search.
- Q G06V 10/141
- • • • Control of illumination
- WARNING
- Group [G06V 10/141](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/141](#) is also impacted by reclassification into group [G06V 30/1431](#).
- Groups [G06K 9/00](#), [G06V 10/141](#) and [G06V 30/1431](#) should be considered in order to perform a complete search.
- Q G06V 10/143
- • • • Sensing or illuminating at different wavelengths
- WARNING
- Group [G06V 10/143](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/143](#) is also impacted by reclassification into group [G06V 30/1429](#).
- Groups [G06K 9/00](#), [G06V 10/143](#) and [G06V 30/1429](#) should be considered in order to perform a complete search.
- Q G06V 10/145
- • • • Illumination specially adapted for pattern recognition, e.g. using gratings
- WARNING
- Group [G06V 10/145](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/145](#) is also impacted by reclassification into group [G06V 30/1434](#).
- Groups [G06K 9/00](#), [G06V 10/145](#) and [G06V 30/1434](#) should be considered in order to perform a complete search.

- Q G06V 10/147
- • • Details of sensors, e.g. sensor lenses (fingerprint or palmprint sensors [G06V 40/13](#); vascular sensors [G06V 40/145](#); eye sensors [G06V 40/19](#))
- WARNING
- Group [G06V 10/147](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/147](#) is also impacted by reclassification into groups [G06V 30/1429](#) and [G06V 30/1437](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/16
- {using multiple overlapping images; Image stitching}
- WARNING
- Group [G06V 10/16](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/16](#) is also impacted by reclassification into group [G06V 30/141](#).
- Groups [G06K 9/00](#), [G06V 10/16](#) and [G06V 30/141](#) should be considered in order to perform a complete search.
- Q G06V 10/17
- {using hand-held instruments}
- WARNING
- Group [G06V 10/17](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/17](#) is also impacted by reclassification into group [G06V 30/142](#).
- Groups [G06K 9/00](#), [G06V 10/17](#) and [G06V 30/142](#) should be considered in order to perform a complete search.
- Q G06V 10/19
- {by sensing codes defining pattern positions}
- WARNING
- Group [G06V 10/19](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/19](#) is also impacted by reclassification into group [G06V 30/1426](#).
- Groups [G06K 9/00](#), [G06V 10/19](#) and [G06V 30/1426](#) should be considered in order to perform a complete search.
- Q G06V 10/20
- Image preprocessing
- WARNING
- Group [G06V 10/20](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/20](#) is also impacted by reclassification into groups [G06V 10/00](#), [G06V 10/70](#) - [G06V 10/87](#), [G06V 10/88](#) - [G06V 10/92](#), [G06V 30/16](#) - [G06V 30/168](#), [G06V 30/199](#) and [G06V 30/20](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/22
- • by selection of a specific region containing or referencing a pattern; Locating or processing of specific regions to guide the detection or recognition
- WARNING
- Group [G06V 10/22](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
- Group [G06V 10/22](#) is also impacted by reclassification into group [G06V 30/1444](#).

Groups [G06K 9/00](#), [G06V 10/22](#) and [G06V 30/1444](#) should be considered in order to perform a complete search.

- Q G06V 10/225
- • • {based on a marking or identifier characterising the area}
- WARNING
Group [G06V 10/225](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/225](#) is also impacted by reclassification into group [G06V 30/1448](#).
Groups [G06K 9/00](#), [G06V 10/225](#) and [G06V 30/1448](#) should be considered in order to perform a complete search.
- Q G06V 10/23
- • • {based on positionally close patterns or neighbourhood relationships}
- WARNING
Group [G06V 10/23](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/23](#) is also impacted by reclassification into group [G06V 30/1452](#).
Groups [G06K 9/00](#), [G06V 10/23](#) and [G06V 30/1452](#) should be considered in order to perform a complete search.
- Q G06V 10/235
- • • {based on user input or interaction}
- WARNING
Group [G06V 10/235](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/235](#) is also impacted by reclassification into group [G06V 30/1456](#).
Groups [G06K 9/00](#), [G06V 10/235](#) and [G06V 30/1456](#) should be considered in order to perform a complete search.
- Q G06V 10/24
- • • Aligning, centring, orientation detection or correction of the image
- WARNING
Group [G06V 10/24](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/24](#) is also impacted by reclassification into group [G06V 30/146](#).
Groups [G06K 9/00](#), [G06V 10/24](#) and [G06V 30/146](#) should be considered in order to perform a complete search.
- Q G06V 10/242
- • • {by image rotation, e.g. by 90 degrees}
- WARNING
Group [G06V 10/242](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/242](#) is also impacted by reclassification into group [G06V 30/1463](#).
Groups [G06K 9/00](#), [G06V 10/242](#) and [G06V 30/1463](#) should be considered in order to perform a complete search.
- Q G06V 10/243
- • • {by compensating for image skew or non-uniform image deformations}
- WARNING
Group [G06V 10/243](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 10/243](#) is also impacted by reclassification into group [G06V 30/1475](#).

Groups [G06K 9/00](#), [G06V 10/243](#) and [G06V 30/1475](#) should be considered in order to perform a complete search.

Q G06V 10/245

- • {by locating a pattern; Special marks for positioning}

WARNING

Group [G06V 10/245](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/245](#) is also impacted by reclassification into groups [G06V 30/1448](#), [G06V 30/1465](#), [G06V 30/1468](#), [G06V 30/1475](#) and [G06V 30/1478](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/247

- • {by affine transforms, e.g. correction due to perspective effects; Quadrilaterals, e.g. trapezoids}

WARNING

Group [G06V 10/247](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/247](#) is also impacted by reclassification into group [G06V 30/1607](#).

Groups [G06K 9/00](#), [G06V 10/247](#) and [G06V 30/1607](#) should be considered in order to perform a complete search.

Q G06V 10/248

- • {by interactive preprocessing or interactive shape modelling, e.g. feature points assigned by a user}

WARNING

Group [G06V 10/248](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/248](#) is also impacted by reclassification into group [G06V 30/1613](#).

Groups [G06K 9/00](#), [G06V 10/248](#) and [G06V 30/1613](#) should be considered in order to perform a complete search.

Q G06V 10/25

- • Determination of region of interest [ROI] or a volume of interest [VOI]

WARNING

Group [G06V 10/25](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/25](#) is also impacted by reclassification into group [G06V 30/147](#).

Groups [G06K 9/00](#), [G06V 10/25](#) and [G06V 30/147](#) should be considered in order to perform a complete search.

Q G06V 10/255

- • {Detecting or recognising potential candidate objects based on visual cues, e.g. shapes}

WARNING

Group [G06V 10/255](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/255](#) is also impacted by reclassification into group [G06V 30/1473](#).

Groups [G06K 9/00](#), [G06V 10/255](#) and [G06V 30/1473](#) should be considered in order to perform a complete search.

- Q G06V 10/26
- • Segmentation of patterns in the image field; Cutting or merging of image elements to establish the pattern region, e.g. clustering-based techniques; Detection of occlusion
- WARNING
 Group [G06V 10/26](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/26](#) is also impacted by reclassification into group [G06V 30/148](#).
 Groups [G06K 9/00](#), [G06V 10/26](#) and [G06V 30/148](#) should be considered in order to perform a complete search.
- Q G06V 10/267
- • {by performing operations on regions, e.g. growing, shrinking or watersheds}
- WARNING
 Group [G06V 10/267](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/267](#) is also impacted by reclassification into group [G06V 30/15](#).
 Groups [G06K 9/00](#), [G06V 10/267](#) and [G06V 30/15](#) should be considered in order to perform a complete search.
- Q G06V 10/273
- • {removing elements interfering with the pattern to be recognised}
- WARNING
 Group [G06V 10/273](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/273](#) is also impacted by reclassification into group [G06V 30/155](#).
 Groups [G06K 9/00](#), [G06V 10/273](#) and [G06V 30/155](#) should be considered in order to perform a complete search.
- Q G06V 10/28
- • Quantising the image, e.g. histogram thresholding for discrimination between background and foreground patterns
- WARNING
 Group [G06V 10/28](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/28](#) is also impacted by reclassification into group [G06V 30/162](#).
 Groups [G06K 9/00](#), [G06V 10/28](#) and [G06V 30/162](#) should be considered in order to perform a complete search.
- Q G06V 10/30
- • Noise filtering
- WARNING
 Group [G06V 10/30](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/30](#) is also impacted by reclassification into group [G06V 30/164](#).
 Groups [G06K 9/00](#), [G06V 10/30](#) and [G06V 30/164](#) should be considered in order to perform a complete search.
- Q G06V 10/32
- • Normalisation of the pattern dimensions
- WARNING
 Group [G06V 10/32](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/32](#) is also impacted by reclassification into group [G06V 30/166](#).

Groups [G06K 9/00](#), [G06V 10/32](#) and [G06V 30/166](#) should be considered in order to perform a complete search.

Q G06V 10/34

- Smoothing or thinning of the pattern; Morphological operations; Skeletonisation

WARNING

Group [G06V 10/34](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/34](#) is also impacted by reclassification into group [G06V 30/168](#).

Groups [G06K 9/00](#), [G06V 10/34](#) and [G06V 30/168](#) should be considered in order to perform a complete search.

Q G06V 10/36

- Applying a local operator, i.e. means to operate on image points situated in the vicinity of a given point; Non-linear local filtering operations, e.g. median filtering

WARNING

Group [G06V 10/36](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/36](#) is also impacted by reclassification into group [G06V 30/20](#).

Groups [G06K 9/00](#), [G06V 10/36](#) and [G06V 30/20](#) should be considered in order to perform a complete search.

Q G06V 10/40

- Extraction of image or video features

WARNING

Group [G06V 10/40](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/40](#) is also impacted by reclassification into groups [G06V 10/54](#) and [G06V 30/18](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/42

- Global feature extraction by analysis of the whole pattern, e.g. using frequency domain transformations or autocorrelation

WARNING

Group [G06V 10/42](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/42](#) is also impacted by reclassification into group [G06V 30/186](#).

Groups [G06K 9/00](#), [G06V 10/42](#) and [G06V 30/186](#) should be considered in order to perform a complete search.

Q G06V 10/421

- {by analysing segments intersecting the pattern}

WARNING

Group [G06V 10/421](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/421](#) is also impacted by reclassification into group [G06V 30/184](#).

Groups [G06K 9/00](#), [G06V 10/421](#) and [G06V 30/184](#) should be considered in order to perform a complete search.

Q G06V 10/422

- for representing the structure of the pattern or shape of an object therefor

WARNING

Group [G06V 10/422](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/422](#) is also impacted by reclassification into group [G06V 30/18162](#).

Groups [G06K 9/00](#), [G06V 10/422](#) and [G06V 30/18162](#) should be considered in order to perform a complete search.

Q G06V 10/424

- • • Syntactic representation, e.g. by using alphabets or grammars

WARNING

Group [G06V 10/424](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/424](#) is also impacted by reclassification into group [G06V 30/18171](#).

Groups [G06K 9/00](#), [G06V 10/424](#) and [G06V 30/18171](#) should be considered in order to perform a complete search.

Q G06V 10/426

- • • Graphical representations

WARNING

Group [G06V 10/426](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/426](#) is also impacted by reclassification into group [G06V 30/18181](#).

Groups [G06K 9/00](#), [G06V 10/426](#) and [G06V 30/18181](#) should be considered in order to perform a complete search.

Q G06V 10/431

- • • {Frequency domain transformation; Autocorrelation}

WARNING

Group [G06V 10/431](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/431](#) is also impacted by reclassification into group [G06V 30/187](#).

Groups [G06K 9/00](#), [G06V 10/431](#) and [G06V 30/187](#) should be considered in order to perform a complete search.

Q G06V 10/435

- • • {Computation of moments}

WARNING

Group [G06V 10/435](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/435](#) is also impacted by reclassification into group [G06V 30/188](#).

Groups [G06K 9/00](#), [G06V 10/435](#) and [G06V 30/188](#) should be considered in order to perform a complete search.

Q G06V 10/44

- • Local feature extraction by analysis of parts of the pattern, e.g. by detecting edges, contours, loops, corners, strokes or intersections; Connectivity analysis, e.g. of connected components

WARNING

Group [G06V 10/44](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/44](#) is also impacted by reclassification into groups [G06V 30/1801](#), [G06V 30/182](#), [G06V 30/1823](#), [G06V 30/1826](#), [G06V 30/1829](#), [G06V 30/1831](#), [G06V 30/1834](#) and [G06V 30/1837](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06V 10/443 . . . {by matching or filtering}
- WARNING
 Group [G06V 10/443](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/443](#) is also impacted by reclassification into group [G06V 30/18019](#).
 Groups [G06K 9/00](#), [G06V 10/443](#) and [G06V 30/18019](#) should be considered in order to perform a complete search.
- Q G06V 10/446 . . . {using Haar-like filters, e.g. using integral image techniques}
- WARNING
 Group [G06V 10/446](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/446](#) is also impacted by reclassification into group [G06V 30/18029](#).
 Groups [G06K 9/00](#), [G06V 10/446](#) and [G06V 30/18029](#) should be considered in order to perform a complete search.
- Q G06V 10/449 . . . {Biologically inspired filters, e.g. difference of Gaussians [DoG] or Gabor filters}
- WARNING
 Group [G06V 10/449](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/449](#) is also impacted by reclassification into group [G06V 30/18038](#).
 Groups [G06K 9/00](#), [G06V 10/449](#) and [G06V 30/18038](#) should be considered in order to perform a complete search.
- Q G06V 10/451 . . . {with interaction between the filter responses, e.g. cortical complex cells}
- WARNING
 Group [G06V 10/451](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/451](#) is also impacted by reclassification into group [G06V 30/18048](#).
 Groups [G06K 9/00](#), [G06V 10/451](#) and [G06V 30/18048](#) should be considered in order to perform a complete search.
- Q G06V 10/454 . . . {Integrating the filters into a hierarchical structure, e.g. convolutional neural networks [CNN]}
- WARNING
 Group [G06V 10/454](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/454](#) is also impacted by reclassification into group [G06V 30/18057](#).
 Groups [G06K 9/00](#), [G06V 10/454](#) and [G06V 30/18057](#) should be considered in order to perform a complete search.
- Q G06V 10/457 . . . {by analysing connectivity, e.g. edge linking, connected component analysis or slices}
- WARNING
 Group [G06V 10/457](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/457](#) is also impacted by reclassification into group [G06V 30/18076](#).

Groups [G06K 9/00](#), [G06V 10/457](#) and [G06V 30/18076](#) should be considered in order to perform a complete search.

Q G06V 10/46

- Descriptors for shape, contour or point-related descriptors, e.g. scale invariant feature transform [SIFT] or bags of words [BoW]; Salient regional features (colour feature extraction [G06V 10/56](#))

WARNING

Group [G06V 10/46](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/46](#) is also impacted by reclassification into group [G06V 30/182](#).

Groups [G06K 9/00](#), [G06V 10/46](#) and [G06V 30/182](#) should be considered in order to perform a complete search.

Q G06V 10/462

- {Salient features, e.g. scale invariant feature transforms [SIFT]}

WARNING

Group [G06V 10/462](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/462](#) is also impacted by reclassification into group [G06V 30/18143](#).

Groups [G06K 9/00](#), [G06V 10/462](#) and [G06V 30/18143](#) should be considered in order to perform a complete search.

Q G06V 10/464

- {using a plurality of salient features, e.g. bag-of-words [BoW] representations}

WARNING

Group [G06V 10/464](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/464](#) is also impacted by reclassification into group [G06V 30/18152](#).

Groups [G06K 9/00](#), [G06V 10/464](#) and [G06V 30/18152](#) should be considered in order to perform a complete search.

Q G06V 10/467

- {Encoded features or binary features, e.g. local binary patterns [LBP]}

WARNING

Group [G06V 10/467](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/467](#) is also impacted by reclassification into group [G06V 30/18133](#).

Groups [G06K 9/00](#), [G06V 10/467](#) and [G06V 30/18133](#) should be considered in order to perform a complete search.

Q G06V 10/469

- {Contour-based spatial representations, e.g. vector-coding}

WARNING

Group [G06V 10/469](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/469](#) is also impacted by reclassification into group [G06V 30/1823](#).

Groups [G06K 9/00](#), [G06V 10/469](#) and [G06V 30/1823](#) should be considered in order to perform a complete search.

Q G06V 10/471

- {using approximation functions}

WARNING

Group [G06V 10/471](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/471](#) is also impacted by reclassification into group [G06V 30/1829](#).

Groups [G06K 9/00](#), [G06V 10/471](#) and [G06V 30/1829](#) should be considered in order to perform a complete search.

- Q G06V 10/473 • • • {using gradient analysis}

WARNING

Group [G06V 10/473](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/473](#) is also impacted by reclassification into group [G06V 30/1831](#).

Groups [G06K 9/00](#), [G06V 10/473](#) and [G06V 30/1831](#) should be considered in order to perform a complete search.

- Q G06V 10/476 • • • {using statistical shape modelling, e.g. point distribution models}

WARNING

Group [G06V 10/476](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/476](#) is also impacted by reclassification into group [G06V 30/1834](#).

Groups [G06K 9/00](#), [G06V 10/476](#) and [G06V 30/1834](#) should be considered in order to perform a complete search.

- Q G06V 10/478 • • • {Contour-based spectral representations or scale-space representations, e.g. by Fourier analysis, wavelet analysis or curvature scale-space [CSS]}

WARNING

Group [G06V 10/478](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/478](#) is also impacted by reclassification into groups [G06V 30/1826](#) and [G06V 30/1837](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06V 10/48 • • by mapping characteristic values of the pattern into a parameter space, e.g. Hough transformation

WARNING

Group [G06V 10/48](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/48](#) is also impacted by reclassification into group [G06V 30/18067](#).

Groups [G06K 9/00](#), [G06V 10/48](#) and [G06V 30/18067](#) should be considered in order to perform a complete search.

- Q G06V 10/50 • • by performing operations within image blocks; by using histograms, e.g. histogram of oriented gradients [HoG]; by summing image-intensity values; Projection analysis

WARNING

Group [G06V 10/50](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/50](#) is also impacted by reclassification into group [G06V 30/18086](#).

Groups [G06K 9/00](#), [G06V 10/50](#) and [G06V 30/18086](#) should be considered in order to perform a complete search.

- Q G06V 10/507
- • {Summing image-intensity values; Histogram projection analysis}
- WARNING
 Group [G06V 10/507](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/507](#) is also impacted by reclassification into group [G06V 30/18095](#).
 Groups [G06K 9/00](#), [G06V 10/507](#) and [G06V 30/18095](#) should be considered in order to perform a complete search.
- Q G06V 10/513
- • {Sparse representations}
- WARNING
 Group [G06V 10/513](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/513](#) is also impacted by reclassification into group [G06V 30/1819](#).
 Groups [G06K 9/00](#), [G06V 10/513](#) and [G06V 30/1819](#) should be considered in order to perform a complete search.
- Q G06V 10/52
- • Scale-space analysis, e.g. wavelet analysis (multi-scale boundary representations [G06V 10/42](#))
- WARNING
 Group [G06V 10/52](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/52](#) is also impacted by reclassification into group [G06V 30/189](#).
 Groups [G06K 9/00](#), [G06V 10/52](#) and [G06V 30/189](#) should be considered in order to perform a complete search.
- N G06V 10/54
- • relating to texture
- WARNING
 Group [G06V 10/54](#) is incomplete pending reclassification of documents from group [G06V 10/40](#).
 Groups [G06V 10/40](#) and [G06V 10/54](#) should be considered in order to perform a complete search.
- Q G06V 10/56
- • relating to colour
- WARNING
 Group [G06V 10/56](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/56](#) is also impacted by reclassification into group [G06V 30/18105](#).
 Groups [G06K 9/00](#), [G06V 10/56](#) and [G06V 30/18105](#) should be considered in order to perform a complete search.
- Q G06V 10/58
- • relating to hyperspectral data
- WARNING
 Group [G06V 10/58](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/58](#) is also impacted by reclassification into group [G06V 30/18114](#).
 Groups [G06K 9/00](#), [G06V 10/58](#) and [G06V 30/18114](#) should be considered in order to perform a complete search.

- Q G06V 10/60
- relating to illumination properties, e.g. using a reflectance or lighting model
- WARNING
 Group [G06V 10/60](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Group [G06V 10/60](#) is also impacted by reclassification into group [G06V 30/18124](#).
 Groups [G06K 9/00](#), [G06V 10/60](#) and [G06V 30/18124](#) should be considered in order to perform a complete search.
- N G06V 10/62
- relating to a temporal dimension, e.g. time-based feature extraction; Pattern tracking
- WARNING
 Group [G06V 10/62](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
 Groups [G06K 9/00](#) and [G06V 10/62](#) should be considered in order to perform a complete search.
- N G06V 10/70
- using pattern recognition or machine learning (optical pattern recognition or electronic computations therefor [G06V 10/88](#))
- WARNING
 Groups [G06V 10/70](#) and [G06V 10/766](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/62](#), [G06K 9/6217](#), [G06V 10/10](#), [G06V 10/20](#) and [G06V 30/194](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/72
- Data preparation, e.g. statistical preprocessing of image or video features
- WARNING
 Group [G06V 10/72](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6298](#), [G06V 10/10](#) and [G06V 10/20](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/74
- Image or video pattern matching; Proximity measures in feature spaces
- Q G06V 10/75
- Organisation of the matching processes, e.g. simultaneous or sequential comparisons of image or video features; Coarse-fine approaches, e.g. multi-scale approaches; using context analysis; Selection of dictionaries
- WARNING
 Group [G06V 10/75](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6201](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/75](#) is also impacted by reclassification into groups [G06V 30/19007](#), [G06V 30/192](#), [G06V 30/196](#) and [G06V 30/198](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/751
- {Comparing pixel values or logical combinations thereof, or feature values having positional relevance, e.g. template matching}
- WARNING
 Group [G06V 10/751](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/751](#) is also impacted by reclassification into group [G06V 30/19013](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06V 10/7515 {Shifting the patterns to accommodate for positional errors}
WARNING
 Group [G06V 10/7515](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/7515](#) is also impacted by reclassification into group [G06V 30/1902](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/752 {Contour matching}
WARNING
 Group [G06V 10/752](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/752](#) is also impacted by reclassification into group [G06V 30/19027](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/753 {Transform-based matching, e.g. Hough transform}
WARNING
 Group [G06V 10/753](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/753](#) is also impacted by reclassification into group [G06V 30/19033](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/754 {involving a deformation of the sample pattern or of the reference pattern; Elastic matching}
WARNING
 Group [G06V 10/754](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/754](#) is also impacted by reclassification into group [G06V 30/1904](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/755 {Deformable models or variational models, e.g. snakes or active contours}
WARNING
 Group [G06V 10/755](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/755](#) is also impacted by reclassification into group [G06V 30/19047](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/7553 {based on shape, e.g. active shape models [ASM]}
WARNING
 Group [G06V 10/7553](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/7553](#) is also impacted by reclassification into group [G06V 30/19053](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- Q G06V 10/7557 {based on appearance, e.g. active appearance models [AAM]}
- WARNING
 Group [G06V 10/7557](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/7557](#) is also impacted by reclassification into group [G06V 30/1906](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/757 {Matching configurations of points or features}
- WARNING
 Group [G06V 10/757](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/757](#) is also impacted by reclassification into group [G06V 30/19067](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/758 {Involving statistics of pixels or of feature values, e.g. histogram matching}
- WARNING
 Group [G06V 10/758](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/758](#) is also impacted by reclassification into group [G06V 30/19073](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/759 {Region-based matching}
- WARNING
 Group [G06V 10/759](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/759](#) is also impacted by reclassification into group [G06V 30/1908](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 10/76 {based on eigen-space representations, e.g. from pose or different illumination conditions; Shape manifolds}
- WARNING
 Group [G06V 10/76](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
 Group [G06V 10/76](#) is also impacted by reclassification into group [G06V 30/19087](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/761 {Proximity, similarity or dissimilarity measures}
- WARNING
 Group [G06V 10/761](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6215](#), [G06V 10/10](#) and [G06V 10/20](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 10/762
- • using clustering, e.g. of similar faces in social networks
- WARNING
Group [G06V 10/762](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6218](#) [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7625
- • {Hierarchical techniques, i.e. dividing or merging patterns to obtain a tree-like representation; Dendograms}
- WARNING
Group [G06V 10/7625](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6219](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/763
- • {Non-hierarchical techniques, e.g. based on statistics of modelling distributions}
- WARNING
Group [G06V 10/763](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/622](#), [G06K 9/6221](#), [G06K 9/6222](#), [G06K 9/6223](#), [G06K 9/6226](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7635
- • {based on graphs, e.g. graph cuts or spectral clustering}
- WARNING
Group [G06V 10/7635](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6224](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/764
- • using classification, e.g. of video objects
- WARNING
Group [G06V 10/764](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6267](#), [G06K 9/6268](#), [G06K 9/6269](#), [G06K 9/627](#), [G06K 9/6271](#), [G06K 9/6272](#), [G06K 9/6273](#), [G06K 9/6274](#), [G06K 9/6276](#), [G06K 9/6277](#), [G06K 9/6278](#), [G06K 9/6279](#), [G06K 9/628](#), [G06K 9/6281](#), [G06K 9/6282](#), [G06K 9/6284](#), [G06K 9/6285](#), [G06K 9/6286](#), [G06K 9/6287](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/765
- • {using rules for classification or partitioning the feature space}
- WARNING
Group [G06V 10/765](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/626](#), [G06K 9/6261](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/766
- • using regression, e.g. by projecting features on hyperplanes

- Q G06V 10/768
- {using context analysis, e.g. recognition aided by known co-occurring patterns}
- WARNING
- Group [G06V 10/768](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).
Group [G06V 10/768](#) is also impacted by reclassification into group [G06V 30/262](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/77
- Processing image or video features in feature spaces; using data integration or data reduction, e.g. principal component analysis [PCA] or independent component analysis [ICA] or self-organising maps [SOM]; Blind source separation
- N G06V 10/771
- Feature selection, e.g. selecting representative features from a multi-dimensional feature space
- WARNING
- Group [G06V 10/771](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6228](#), [G06K 9/6229](#), [G06K 9/623](#), [G06K 9/6231](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7715
- {Feature extraction, e.g. by transforming the feature space, e.g. multi-dimensional scaling [MDS]; Mappings, e.g. subspace methods}
- WARNING
- Group [G06V 10/7715](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6232](#), [G06K 9/6234](#), [G06K 9/6235](#), [G06K 2009/6236](#), [G06K 2009/6237](#), [G06K 2009/6238](#), [G06K 9/6239](#), [G06K 9/624](#), [G06K 9/6242](#), [G06K 9/6243](#), [G06K 9/6244](#), [G06K 9/6245](#), [G06K 9/6246](#), [G06K 9/6247](#), [G06K 9/6248](#), [G06K 9/6249](#), [G06K 9/6251](#), [G06K 9/6252](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/772
- Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries
- WARNING
- Group [G06V 10/772](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6255](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/774
- Generating sets of training patterns; Bootstrap methods, e.g. bagging or boosting
- WARNING
- Group [G06V 10/774](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6256](#), [G06V 10/10](#) and [G06V 10/20](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7747
- {Organisation of the process, e.g. bagging or boosting}
- WARNING
- Group [G06V 10/7747](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6257](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 10/7753 • • • {Incorporation of unlabelled data, e.g. multiple instance learning [MIL]}
- WARNING
Group [G06V 10/7753](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6259](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/776 • • • Validation; Performance evaluation
- WARNING
Group [G06V 10/776](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6262](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/778 • • • Active pattern-learning, e.g. online learning of image or video features
- WARNING
Group [G06V 10/778](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6262](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7784 • • • {based on feedback from supervisors}
- WARNING
Group [G06V 10/7784](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6263](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7788 • • • • {the supervisor being a human, e.g. interactive learning with a human teacher}
- WARNING
Group [G06V 10/7788](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6254](#), [G06K 9/6264](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/7792 • • • • {the supervisor being an automated module, e.g. "intelligent oracle"}
- N G06V 10/7796 • • • • {based on specific statistical tests}
- WARNING
Group [G06V 10/7796](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6265](#), [G06V 10/10](#) and [G06V 10/20](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 10/80 • • • Fusion, i.e. combining data from various sources at the sensor level, preprocessing level, feature extraction level or classification level (multimodal speaker identification or verification [G10L 17/10](#))
- WARNING
Group [G06V 10/80](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6288](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- | | | |
|---|-------------|--|
| N | G06V 10/803 | <ul style="list-style-type: none"> • • • {of input or preprocessed data} <p><u>WARNING</u></p> <p>Group G06V 10/803 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 9/6289, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/806 | <ul style="list-style-type: none"> • • • {of extracted features} <p><u>WARNING</u></p> <p>Group G06V 10/806 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 9/629, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/809 | <ul style="list-style-type: none"> • • • {of classification results, e.g. where the classifiers operate on the same input data} <p><u>WARNING</u></p> <p>Group G06V 10/809 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 9/6292, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/811 | <ul style="list-style-type: none"> • • • • {the classifiers operating on different input data, e.g. multi-modal recognition} <p><u>WARNING</u></p> <p>Group G06V 10/811 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 9/6293, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/814 | <ul style="list-style-type: none"> • • • {using belief theory, e.g. Dempster-Shafer} <p><u>WARNING</u></p> <p>Group G06V 10/814 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 2009/6294, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/817 | <ul style="list-style-type: none"> • • • {by voting} <p><u>WARNING</u></p> <p>Group G06V 10/817 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 2009/6295, G06V 10/10 and G06V 10/20. All groups listed in this Warning should be considered in order to perform a complete search.</p> |
| N | G06V 10/82 | <ul style="list-style-type: none"> • • using neural networks |
| N | G06V 10/84 | <ul style="list-style-type: none"> • • using probabilistic graphical models from image or video features, e.g. Markov models or Bayesian networks <p><u>WARNING</u></p> <p>Group G06V 10/84 is incomplete pending reclassification of documents from groups G06K 9/00, G06K 9/6296, G06V 10/10 and G06V 10/20.</p> |

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 10/85

- • • {Markov-related models; Markov random fields}

WARNING

Group [G06V 10/85](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6297](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 10/86

- • using syntactic or structural representations of the image or video pattern, e.g. symbolic string recognition; using graph matching

N G06V 10/87

- • {using selection of the recognition techniques, e.g. of a classifier in a multiple classifier system}

WARNING

Group [G06V 10/87](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6227](#), [G06V 10/10](#) and [G06V 10/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/88

- Image or video recognition using optical means, e.g. reference filters, holographic masks, frequency domain filters or spatial domain filters

WARNING

Group [G06V 10/88](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/88](#) is also impacted by reclassification into groups [G06V 30/199](#) and [G06V 30/20](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/89

- • {using frequency domain filters, e.g. Fourier masks implemented on spatial light modulators}

WARNING

Group [G06V 10/89](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/89](#) is also impacted by reclassification into group [G06V 30/199](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/893

- • • {characterised by the kind of filter}

WARNING

Group [G06V 10/893](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/893](#) is also impacted by reclassification into group [G06V 30/199](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/895

- • • {the filter being related to phase processing, e.g. phase-only filters}

WARNING

Group [G06V 10/895](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/895](#) is also impacted by reclassification into group [G06V 30/199](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/898

- • • {combination of filters, e.g. phase-only filters}

WARNING

Group [G06V 10/898](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/898](#) is also impacted by reclassification into group [G06V 30/199](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 10/92

- {using spatial domain filters, e.g. joint transform correlators}

WARNING

Group [G06V 10/92](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 10/20](#).

Group [G06V 10/92](#) is also impacted by reclassification into group [G06V 30/199](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 10/94

- Hardware or software architectures specially adapted for image or video understanding

WARNING

Groups [G06V 10/94](#), [G06V 10/95](#) and [G06V 10/955](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 10/945

- {User interactive design; Environments; Toolboxes}

WARNING

Group [G06V 10/945](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06K 9/6253](#).

Groups [G06K 9/00](#), [G06K 9/6253](#) and [G06V 10/945](#) should be considered in order to perform a complete search.

N G06V 10/95

- {structured as a network, e.g. client-server architectures}

N G06V 10/955

- {using specific electronic processors}

N G06V 10/96

- Management of image or video recognition tasks

WARNING

Group [G06V 10/96](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Groups [G06K 9/00](#) and [G06V 10/96](#) should be considered in order to perform a complete search.

Q G06V 10/98

- Detection or correction of errors, e.g. by rescanning the pattern or by human intervention; Evaluation of the quality of the acquired patterns

WARNING

Group [G06V 10/98](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 10/98](#) is also impacted by reclassification into group [G06V 30/12](#).

Groups [G06K 9/00](#), [G06V 10/98](#) and [G06V 30/12](#) should be considered in order to perform a complete search.

- Q G06V 10/987
- {with the intervention of an operator}
- WARNING
Group [G06V 10/987](#) is impacted by reclassification into group [G06V 30/127](#). Groups [G06V 10/987](#) and [G06V 30/127](#) should be considered in order to perform a complete search.
- Q G06V 10/993
- {Evaluation of the quality of the acquired pattern}
- WARNING
Group [G06V 10/993](#) is impacted by reclassification into group [G06V 30/133](#). Groups [G06V 10/993](#) and [G06V 30/133](#) should be considered in order to perform a complete search.
- Q G06V 20/00
- Scenes; Scene-specific elements (control of digital cameras [H04N 5/232](#))**
- NOTE
In this group, the following term is used with the meaning indicated:
- "scene" is a visual representation of the world or of some elements of it, as captured by a sensor or generated by a computer.
- WARNING
Group [G06V 20/00](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 20/00](#) is also impacted by reclassification into groups [G06V 20/05](#), [G06V 20/50](#), [G06V 20/60](#), [G06V 20/66](#), [G06V 20/69](#), [G06V 20/693](#), [G06V 20/695](#), [G06V 20/698](#) and [G06V 20/70](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/05
- Underwater scenes
- WARNING
Group [G06V 20/05](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 20/00](#).
Groups [G06K 9/00](#), [G06V 20/00](#) and [G06V 20/05](#) should be considered in order to perform a complete search.
- N G06V 20/10
- Terrestrial scenes (scenes under surveillance with static cameras [G06V 20/52](#); scenes perceived from the exterior of a vehicle [G06V 20/56](#); scenes perceived from the interior of a vehicle [G06V 20/59](#))
- WARNING
Groups [G06V 20/10](#), [G06V 20/176](#), [G06V 20/182](#), [G06V 20/188](#) and [G06V 20/194](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 20/13
- Satellite images
- WARNING
Group [G06V 20/13](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 20/13](#) is also impacted by reclassification into group [G06V 20/17](#).
Groups [G06K 9/00](#), [G06V 20/13](#) and [G06V 20/17](#) should be considered in order to perform a complete search.

- N G06V 20/17
- taken from planes or by drones
- WARNING
Group [G06V 20/17](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 20/13](#).
Groups [G06K 9/00](#), [G06V 20/13](#) and [G06V 20/17](#) should be considered in order to perform a complete search.
- N G06V 20/176
- {Urban or other man-made structures}
- N G06V 20/182
- {Network patterns, e.g. roads or rivers}
- N G06V 20/188
- {Vegetation}
- N G06V 20/194
- {using hyperspectral data, i.e. more or other wavelengths than RGB}
- N G06V 20/20
- in augmented reality scenes
- WARNING
Group [G06V 20/20](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Groups [G06K 9/00](#) and [G06V 20/20](#) should be considered in order to perform a complete search.
- N G06V 20/30
- in albums, collections or shared content, e.g. social network photos or video
- WARNING
Group [G06V 20/30](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Groups [G06K 9/00](#) and [G06V 20/30](#) should be considered in order to perform a complete search.
- N G06V 20/35
- {Categorising the entire scene, e.g. birthday party or wedding scene}
- WARNING
Groups [G06V 20/35](#), [G06V 20/36](#), [G06V 20/38](#) and [G06V 20/39](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/36
- {Indoor scenes}
- N G06V 20/38
- {Outdoor scenes}
- N G06V 20/39
- {Urban scenes}
- N G06V 20/40
- in video content (extracting overlay text [G06V 20/62](#); video retrieval [G06F 16/70](#); processing of video elementary streams in video servers [H04N 21/234](#); processing of video elementary streams in video clients [H04N 21/44](#))
- WARNING
Groups [G06V 20/40](#), [G06V 20/41](#), [G06V 20/42](#), [G06V 20/43](#), [G06V 20/44](#), [G06V 20/46](#), [G06V 20/47](#), [G06V 20/48](#) and [G06V 20/49](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/41
- {Higher-level, semantic clustering, classification or understanding of video scenes, e.g. detection, labelling or Markovian modelling of sport events or news items (segmenting video sequences [G06V 20/49](#))}
- N G06V 20/42
- {of sport video content}
- N G06V 20/43
- {of news video content}
- N G06V 20/44
- {Event detection}

N	G06V 20/46	<ul style="list-style-type: none"> • {Extracting features or characteristics from the video content, e.g. video fingerprints, representative shots or key frames}
N	G06V 20/47	<ul style="list-style-type: none"> • • {Detecting features for summarising video content}
N	G06V 20/48	<ul style="list-style-type: none"> • • {Matching video sequences}
N	G06V 20/49	<ul style="list-style-type: none"> • • {Segmenting video sequences, i.e. computational techniques such as parsing or cutting the sequence, low-level clustering or determining units such as shots or scenes}
N	G06V 20/50	<ul style="list-style-type: none"> • Context or environment of the image <p><u>WARNING</u></p> <p>Group G06V 20/50 is incomplete pending reclassification of documents from groups G06K 9/00 and G06V 20/00. Groups G06K 9/00, G06V 20/00 and G06V 20/50 should be considered in order to perform a complete search.</p>
N	G06V 20/52	<ul style="list-style-type: none"> • • Surveillance or monitoring of activities, e.g. for recognising suspicious objects (recognising microscopic objects G06V 20/69) <p><u>WARNING</u></p> <p>Groups G06V 20/52, G06V 20/53 and G06V 20/54 are incomplete pending reclassification of documents from group G06K 9/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	G06V 20/53	<ul style="list-style-type: none"> • • • {Recognition of crowd images, e.g. recognition of crowd congestion}
N	G06V 20/54	<ul style="list-style-type: none"> • • • of traffic, e.g. cars on the road, trains or boats
N	G06V 20/56	<ul style="list-style-type: none"> • • exterior to a vehicle by using sensors mounted on the vehicle <p><u>WARNING</u></p> <p>Groups G06V 20/56, G06V 20/58, G06V 20/582, G06V 20/584, G06V 20/586 and G06V 20/588 are incomplete pending reclassification of documents from group G06K 9/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	G06V 20/58	<ul style="list-style-type: none"> • • • Recognition of moving objects or obstacles, e.g. vehicles or pedestrians; Recognition of traffic objects, e.g. traffic signs, traffic lights or roads
N	G06V 20/582	<ul style="list-style-type: none"> • • • • {of traffic signs}
N	G06V 20/584	<ul style="list-style-type: none"> • • • • {of vehicle lights or traffic lights}
N	G06V 20/586	<ul style="list-style-type: none"> • • • • {of parking space}
N	G06V 20/588	<ul style="list-style-type: none"> • • • {Recognition of the road, e.g. of lane markings; Recognition of the vehicle driving pattern in relation to the road}
N	G06V 20/59	<ul style="list-style-type: none"> • • inside of a vehicle, e.g. relating to seat occupancy, driver state or inner lighting conditions <p><u>WARNING</u></p> <p>Groups G06V 20/59, G06V 20/593 and G06V 20/597 are incomplete pending reclassification of documents from group G06K 9/00. All groups listed in this Warning should be considered in order to perform a complete search.</p>
N	G06V 20/593	<ul style="list-style-type: none"> • • • {Recognising seat occupancy}
N	G06V 20/597	<ul style="list-style-type: none"> • • • {Recognising the driver's state or behaviour, e.g. attention or drowsiness}

- N G06V 20/60
- Type of objects
- WARNING
Groups [G06V 20/60](#), [G06V 20/66](#), [G06V 20/69](#), [G06V 20/693](#), [G06V 20/695](#) and [G06V 20/698](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 20/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/62
- • Text, e.g. of license plates, overlay texts or captions on TV images
- WARNING
Groups [G06V 20/62](#), [G06V 20/625](#), [G06V 20/63](#) and [G06V 20/635](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/625
- • • {License plates}
- N G06V 20/63
- • • {Scene text, e.g. street names}
- N G06V 20/635
- • • {Overlay text, e.g. embedded captions in a TV program}
- N G06V 20/64
- • Three-dimensional objects
- WARNING
Groups [G06V 20/64](#), [G06V 20/647](#) and [G06V 20/653](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 20/647
- • • {by matching two-dimensional images to three-dimensional objects}
- N G06V 20/653
- • • {by matching three-dimensional models, e.g. conformal mapping of Riemann surfaces}
- N G06V 20/66
- • Trinkets, e.g. shirt buttons or jewellery items (recognising microscopic objects [G06V 20/69](#))
- N G06V 20/68
- • Food, e.g. fruit or vegetables
- WARNING
Group [G06V 20/68](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Groups [G06K 9/00](#) and [G06V 20/68](#) should be considered in order to perform a complete search.
- N G06V 20/69
- • Microscopic objects, e.g. biological cells or cellular parts
- N G06V 20/693
- • • {Acquisition}
- N G06V 20/695
- • • {Preprocessing, e.g. image segmentation}
- N G06V 20/698
- • • {Matching; Classification}
- N G06V 20/70
- Labelling scene content, e.g. deriving syntactic or semantic representations
- WARNING
Group [G06V 20/70](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 20/00](#).
Groups [G06K 9/00](#), [G06V 20/00](#) and [G06V 20/70](#) should be considered in order to perform a complete search.
- N G06V 20/80
- Recognising image objects characterised by unique random patterns
- WARNING
Group [G06V 20/80](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Groups [G06K 9/00](#) and [G06V 20/80](#) should be considered in order to perform a complete search.

N G06V 20/90

- Identifying an image sensor based on its output data

WARNING

Group [G06V 20/90](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Groups [G06K 9/00](#) and [G06V 20/90](#) should be considered in order to perform a complete search.

N G06V 20/95

- {Pattern authentication; Markers therefor; Forgery detection}

N G06V 30/00

Character recognition; Recognising digital ink; Document-oriented image-based pattern recognition (scanning, transmission or reproduction of documents or the like [H04N 1/00](#))

NOTE

This group covers recognition of characters or digital ink, where the characters or the digital ink can include representations in three dimensions, e.g. as written by performing gestures in the air.

WARNING

Groups [G06V 30/00](#), [G06V 30/412](#), [G06V 30/413](#), [G06V 30/414](#), [G06V 30/416](#), [G06V 30/418](#), [G06V 30/42](#), [G06V 30/422](#) and [G06V 30/424](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

Q G06V 30/10

- Character recognition

WARNING

Group [G06V 30/10](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 30/10](#) is also impacted by reclassification into groups [G06V 30/12](#), [G06V 30/127](#), [G06V 30/133](#), [G06V 30/14](#), [G06V 30/141](#), [G06V 30/142](#), [G06V 30/1423](#), [G06V 30/1426](#), [G06V 30/1429](#), [G06V 30/1431](#), [G06V 30/1434](#), [G06V 30/1437](#), [G06V 30/144](#), [G06V 30/1444](#), [G06V 30/1448](#), [G06V 30/1452](#), [G06V 30/1456](#), [G06V 30/146](#), [G06V 30/1463](#), [G06V 30/1465](#), [G06V 30/1468](#), [G06V 30/147](#), [G06V 30/1473](#), [G06V 30/1475](#), [G06V 30/1478](#), [G06V 30/148](#), [G06V 30/15](#), [G06V 30/153](#), [G06V 30/155](#), [G06V 30/158](#), [G06V 30/16](#), [G06V 30/1607](#), [G06V 30/1613](#), [G06V 30/162](#), [G06V 30/164](#), [G06V 30/166](#), [G06V 30/168](#), [G06V 30/18](#), [G06V 30/1801](#), [G06V 30/18019](#), [G06V 30/18029](#), [G06V 30/18038](#), [G06V 30/18048](#), [G06V 30/18057](#), [G06V 30/18067](#), [G06V 30/18076](#), [G06V 30/18086](#), [G06V 30/18095](#), [G06V 30/18105](#), [G06V 30/18114](#), [G06V 30/18124](#), [G06V 30/18133](#), [G06V 30/18143](#), [G06V 30/18152](#), [G06V 30/18162](#), [G06V 30/18171](#), [G06V 30/18181](#), [G06V 30/1819](#), [G06V 30/182](#), [G06V 30/1823](#), [G06V 30/1826](#), [G06V 30/1829](#), [G06V 30/1831](#), [G06V 30/1834](#), [G06V 30/1837](#), [G06V 30/184](#), [G06V 30/186](#), [G06V 30/187](#), [G06V 30/188](#), [G06V 30/189](#), [G06V 30/19](#), [G06V 30/19007](#), [G06V 30/19013](#), [G06V 30/1902](#), [G06V 30/19027](#), [G06V 30/19033](#), [G06V 30/1904](#), [G06V 30/19047](#), [G06V 30/19053](#), [G06V 30/1906](#), [G06V 30/19067](#), [G06V 30/19073](#), [G06V 30/1908](#), [G06V 30/19087](#), [G06V 30/19093](#), [G06V 30/191](#), [G06V 30/19107](#), [G06V 30/19113](#), [G06V 30/1912](#), [G06V 30/19127](#), [G06V 30/19133](#), [G06V 30/1914](#), [G06V 30/19147](#), [G06V 30/19153](#), [G06V 30/1916](#), [G06V 30/19167](#), [G06V 30/19173](#), [G06V 30/1918](#), [G06V 30/19187](#), [G06V 30/19193](#), [G06V 30/192](#), [G06V 30/194](#), [G06V 30/195](#), [G06V 30/196](#), [G06V 30/198](#), [G06V 30/1983](#), [G06V 30/1985](#), [G06V 30/1988](#), [G06V 30/199](#), [G06V 30/20](#), [G06V 30/22](#), [G06V 30/222](#), [G06V 30/224](#), [G06V 30/2247](#), [G06V 30/2253](#), [G06V 30/226](#), [G06V 30/2264](#), [G06V 30/2268](#), [G06V 30/2272](#), [G06V 30/2276](#),

[G06V 30/228](#), [G06V 30/24](#), [G06V 30/242](#), [G06V 30/244](#), [G06V 30/2445](#), [G06V 30/245](#), [G06V 30/2455](#), [G06V 30/246](#), [G06V 30/248](#), [G06V 30/2504](#), [G06V 30/2528](#), [G06V 30/2552](#), [G06V 30/26](#), [G06V 30/262](#), [G06V 30/268](#), [G06V 30/274](#), [G06V 30/28](#), [G06V 30/287](#), [G06V 30/293](#), [G06V 30/30](#), [G06V 30/302](#), [G06V 30/304](#), [G06V 30/32](#), [G06V 30/333](#), [G06V 30/347](#), [G06V 30/36](#), [G06V 30/373](#) and [G06V 30/387](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/12

- • Detection or correction of errors, e.g. by rescanning the pattern

WARNING

Group [G06V 30/12](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/98](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/127

- • {with the intervention of an operator}

WARNING

Group [G06V 30/127](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/987](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/133

- • {Evaluation of quality of the acquired characters}

WARNING

Group [G06V 30/133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/993](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/14

- • Image acquisition

WARNING

Groups [G06V 30/14](#), [G06V 30/1423](#), [G06V 30/144](#), [G06V 30/153](#) and [G06V 30/158](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/141

- • {using multiple overlapping images; Image stitching}

WARNING

Group [G06V 30/141](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/16](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/142

- • using hand-held instruments; Constructional details of the instruments

WARNING

Group [G06V 30/142](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/12](#), [G06V 10/17](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/1423

- • • {the instrument generating sequences of position coordinates corresponding to handwriting (preprocessing or recognising digital ink [G06V 30/32](#))}

- N G06V 30/1426 . . . {by sensing position defining codes on a support}
- WARNING
Group [G06V 30/1426](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/19](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1429 . . . {Identifying or ignoring parts by sensing at different wavelengths}
- WARNING
Group [G06V 30/1429](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/143](#), [G06V 10/147](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1431 . . . {Illumination control}
- WARNING
Group [G06V 30/1431](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/141](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1434 . . . {Special illumination such as grating, reflections or deflections, e.g. for characters with relief}
- WARNING
Group [G06V 30/1434](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/145](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1437 . . . {Sensor details, e.g. position, configuration or special lenses ([G06V 30/1429](#) takes precedence)}
- WARNING
Group [G06V 30/1437](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/147](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/144 . . . using a slot moved over the image; using discrete sensing elements at predetermined points; using automatic curve following means
- N G06V 30/1444 . . . {Selective acquisition, locating or processing of specific regions, e.g. highlighted text, fiducial marks or predetermined fields}
- WARNING
Group [G06V 30/1444](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/22](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1448 . . . {based on markings or identifiers characterising the document or the area}
- WARNING
Group [G06V 30/1448](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/225](#), [G06V 10/245](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1452 . . . {based on positionally close symbols, e.g. amount sign or URL-specific characters}
- WARNING
Group [G06V 30/1452](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/23](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1456 . . . {based on user interactions}
- WARNING
Group [G06V 30/1456](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/235](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/146 . . . Aligning or centring of the image pick-up or image-field
- WARNING
Group [G06V 30/146](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/24](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1463 . . . {Orientation detection or correction, e.g. rotation of multiples of 90 degrees}
- WARNING
Group [G06V 30/1463](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/242](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1465 . . . {by locating a pattern ([G06V 30/1475](#) takes precedence; centring within a document with a marking [G06V 30/1448](#))}
- WARNING
Groups [G06V 30/1465](#) and [G06V 30/1468](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/245](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1468 {Special marks for positioning}
- N G06V 30/147 . . . {Determination of region of interest}
- WARNING
Group [G06V 30/147](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/25](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1473 . . . {Recognising objects as potential recognition candidates based on visual cues, e.g. shapes}
- WARNING
Group [G06V 30/1473](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/255](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1475 . . . {Inclination or skew detection or correction of characters or of image to be recognised}

WARNING

Group [G06V 30/1475](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/243](#), [G06V 10/245](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1478 . . . {of characters or characters lines}

WARNING

Group [G06V 30/1478](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/245](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/148 . . Segmentation of character regions

WARNING

Group [G06V 30/148](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/26](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/15 . . . {Cutting or merging image elements, e.g. region growing, watershed or clustering-based techniques}

WARNING

Group [G06V 30/15](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/267](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/153 . . . {using recognition of characters or words}

- N G06V 30/155 . . . {Removing patterns interfering with the pattern to be recognised, such as ruled lines or underlines}

WARNING

Group [G06V 30/155](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/273](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/158 . . . {using character size, text spacings or pitch estimation}

- N G06V 30/16 . Image preprocessing

WARNING

Group [G06V 30/16](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1607
- • • {Correcting image deformation, e.g. trapezoidal deformation caused by perspective}
- WARNING
Group [G06V 30/1607](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/247](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1613
- • • {Interactive preprocessing or shape modelling, e.g. assignment of feature points by a user}
- WARNING
Group [G06V 30/1613](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/248](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/162
- • • Quantising the image signal
- WARNING
Group [G06V 30/162](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/28](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/164
- • • Noise filtering
- WARNING
Group [G06V 30/164](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/30](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/166
- • • Normalisation of pattern dimensions
- WARNING
Group [G06V 30/166](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/32](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/168
- • • Smoothing or thinning of the pattern; Skeletonisation
- WARNING
Group [G06V 30/168](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/20](#), [G06V 10/34](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18
- • • Extraction of features or characteristics of the image
- WARNING
Group [G06V 30/18](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/40](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1801 • • • {Detecting partial patterns, e.g. edges or contours, or configurations, e.g. loops, corners, strokes or intersections (extracting features by contour coding [G06V 30/182](#))}
- WARNING
Group [G06V 30/1801](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18019 • • • • {by matching or filtering}
- WARNING
Group [G06V 30/18019](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/443](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18029 • • • • • {filtering with Haar-like subimages, e.g. computation thereof with the integral image technique}
- WARNING
Group [G06V 30/18029](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/446](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18038 • • • • • {Biologically-inspired filters, e.g. difference of Gaussians [DoG], Gabor filters}
- WARNING
Group [G06V 30/18038](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/449](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18048 • • • • • • {with interaction between the responses of different filters, e.g. cortical complex cells}
- WARNING
Group [G06V 30/18048](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/451](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18057 • • • • • • • {Integrating the filters into a hierarchical structure, e.g. convolutional neural networks [CNN]}
- WARNING
Group [G06V 30/18057](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/454](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18067 • • • • {by mapping characteristic values of the pattern into a parameter space, e.g. Hough transformation}
- WARNING
Group [G06V 30/18067](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/48](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/18076 . . . {by analysing connectivity, e.g. edge linking, connected component analysis or slices}
WARNING
 Group [G06V 30/18076](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/457](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18086 . . . {by performing operations within image blocks or by using histograms}
WARNING
 Group [G06V 30/18086](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/50](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18095 . . . {Summing image-intensity values; Projection and histogram analysis}
WARNING
 Group [G06V 30/18095](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/507](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18105 . . . {related to colour}
WARNING
 Group [G06V 30/18105](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/56](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18114 . . . {involving specific hyperspectral computations of features}
WARNING
 Group [G06V 30/18114](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/58](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18124 . . . {related to illumination properties, e.g. according to a reflectance or lighting model}
WARNING
 Group [G06V 30/18124](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/60](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18133 . . . {regional/local feature not essentially salient, e.g. local binary pattern}
WARNING
 Group [G06V 30/18133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/467](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/18143 • • • {Extracting features based on salient regional features, e.g. scale invariant feature transform [SIFT] keypoints}
- WARNING
Group [G06V 30/18143](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/462](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18152 • • • {Extracting features based on a plurality of salient regional features, e.g. "bag of words"}
- WARNING
Group [G06V 30/18152](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/464](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18162 • • • {related to a structural representation of the pattern}
- WARNING
Group [G06V 30/18162](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/422](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18171 • • • {Syntactic representation, e.g. using a grammatical approach}
- WARNING
Group [G06V 30/18171](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/424](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/18181 • • • {Graphical representation, e.g. directed attributed graph}
- WARNING
Group [G06V 30/18181](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/426](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1819 • • • {sparse representations}
- WARNING
Group [G06V 30/1819](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/513](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/182 • • • by coding the contour of the pattern
- WARNING
Group [G06V 30/182](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/46](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1823 • • • {using vector-coding}
- WARNING
Group [G06V 30/1823](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/469](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1826 . . . {analysing the spectrum of the contour, e.g. Fourier expansion}
WARNING
Group [G06V 30/1826](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/478](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1829 . . . {using an approximation function}
WARNING
Group [G06V 30/1829](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/471](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1831 . . . {using gradient analysis}
WARNING
Group [G06V 30/1831](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/473](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1834 . . . {using statistical shape modelling, e.g. point distribution model}
WARNING
Group [G06V 30/1834](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/476](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1837 . . . {using wavelet analysis}
WARNING
Group [G06V 30/1837](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/44](#), [G06V 10/478](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/184 . . . by analysing segments intersecting the pattern
WARNING
Group [G06V 30/184](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/421](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/186 . . . by deriving mathematical or geometrical properties from the whole image
WARNING
Group [G06V 30/186](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/42](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/187 • • • {Frequency domain transformation; Autocorrelation}
- WARNING
Group [G06V 30/187](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/431](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/188 • • • {Computation of moments}
- WARNING
Group [G06V 30/188](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/435](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/189 • • • {Scale-space domain transformation, e.g. with wavelet analysis}
- WARNING
Group [G06V 30/189](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/52](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19 • • Recognition using electronic means
- WARNING
Group [G06V 30/19](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/62](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19007 • • • {Matching; Proximity measures}
- WARNING
Group [G06V 30/19007](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6201](#), [G06V 10/75](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19013 • • • {Comparing pixel values or logical combinations thereof, or feature values having positional relevance, e.g. template matching (specially adapted for image segmentation [G06T 7/10](#); specially adapted for the analysis of motion [G06T 7/20](#); specially adapted for image alignment [G06T 7/30](#); specially adapted for the calculation of depth from stereo images [G06T 7/50](#); specially adapted for position determination [G06T 7/70](#))}
- WARNING
Group [G06V 30/19013](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/751](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1902 • • • • {Shifting or otherwise transforming the patterns to accommodate for positional errors}
- WARNING
Group [G06V 30/1902](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/7515](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/19027 {Matching of contours}
WARNING
 Group [G06V 30/19027](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/752](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19033 {by mapping curve parameters onto an accumulator array, e.g. generalised Hough Transform}
WARNING
 Group [G06V 30/19033](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/753](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1904 {involving a deformation of the sample or reference pattern; Elastic matching}
WARNING
 Group [G06V 30/1904](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/754](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19047 {based on a local optimisation criterion, e.g. "snakes", i.e. active contour models of the pattern to be recognised}
WARNING
 Group [G06V 30/19047](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/755](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19053 {based on shape statistics, e.g. active shape models of the pattern to be recognised}
WARNING
 Group [G06V 30/19053](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/7553](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1906 {based also on statistics of image patches, e.g. active appearance models of the pattern to be recognised}
WARNING
 Group [G06V 30/1906](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/7557](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19067 {Matching configurations of points or features, e.g. constellation matching}
WARNING
 Group [G06V 30/19067](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/757](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/19073 . . . {Comparing statistics of pixel or of feature values, e.g. histogram matching}
WARNING
Group [G06V 30/19073](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/758](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1908 . . . {Region based matching}
WARNING
Group [G06V 30/1908](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/759](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19087 . . . {based on parametric eigenspace representations, e.g. eigenspace representations using pose or illumination parameters; Shape manifold}
WARNING
Group [G06V 30/19087](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/76](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19093 . . . {Proximity measures, i.e. similarity or distance measures}
WARNING
Group [G06V 30/19093](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6215](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/191 . . . {Design or setup of recognition systems or techniques; Extraction of features in feature space; Clustering techniques; Blind source separation}
WARNING
Group [G06V 30/191](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6217](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19107 . . . {Clustering techniques}
WARNING
Group [G06V 30/19107](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6218](#), [G06K 9/6219](#), [G06K 9/622](#), [G06K 9/6221](#), [G06K 9/6222](#), [G06K 9/6223](#), [G06K 9/6224](#), [G06K 9/6226](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19113 . . . {Selection of pattern recognition techniques, e.g. of classifiers in a multi-classifier system}
WARNING
Group [G06V 30/19113](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6227](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1912 . . . {Selecting the most significant subset of features ([G06V 30/19127](#) takes precedence)}
- WARNING
Group [G06V 30/1912](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6228](#), [G06K 9/6229](#), [G06K 9/623](#), [G06K 9/6231](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19127 . . . {Extracting features by transforming the feature space, e.g. multidimensional scaling; Mappings, e.g. subspace methods}
- WARNING
Group [G06V 30/19127](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6232](#), [G06K 9/6234](#), [G06K 9/6235](#), [G06K 2009/6236](#), [G06K 2009/6237](#), [G06K 2009/6238](#), [G06K 9/6239](#), [G06K 9/624](#), [G06K 9/6242](#), [G06K 9/6243](#), [G06K 9/6244](#), [G06K 9/6245](#), [G06K 9/6246](#), [G06K 9/6247](#), [G06K 9/6248](#), [G06K 9/6249](#), [G06K 9/6251](#), [G06K 9/6252](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19133 . . . {Interactive pattern learning with a human teacher}
- WARNING
Group [G06V 30/19133](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6254](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1914 . . . {Determining representative reference patterns, e.g. averaging or distorting patterns; Generating dictionaries, e.g. user dictionaries}
- WARNING
Group [G06V 30/1914](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6255](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19147 . . . {Obtaining sets of training patterns; Bootstrap methods, e.g. bagging or boosting}
- WARNING
Group [G06V 30/19147](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6256](#), [G06K 9/6257](#), [G06K 9/6259](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19153 . . . {using rules for classification or partitioning the feature space}
- WARNING
Group [G06V 30/19153](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/626](#), [G06K 9/6261](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/1916 . . . {Validation; Performance evaluation}
- WARNING
 Group [G06V 30/1916](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6262](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19167 . . . {Active pattern learning}
- WARNING
 Group [G06V 30/19167](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6262](#), [G06K 9/6263](#), [G06K 9/6264](#), [G06K 9/6265](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19173 . . . {Classification techniques}
- WARNING
 Group [G06V 30/19173](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6267](#), [G06K 9/6268](#), [G06K 9/6269](#), [G06K 9/627](#), [G06K 9/6271](#), [G06K 9/6272](#), [G06K 9/6273](#), [G06K 9/6274](#), [G06K 9/6276](#), [G06K 9/6277](#), [G06K 9/6278](#), [G06K 9/6279](#), [G06K 9/628](#), [G06K 9/6281](#), [G06K 9/6282](#), [G06K 9/6284](#), [G06K 9/6285](#), [G06K 9/6286](#), [G06K 9/6287](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1918 . . . {Fusion techniques, i.e. combining data from various sources, e.g. sensor fusion}
- WARNING
 Group [G06V 30/1918](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6288](#), [G06K 9/6289](#), [G06K 9/629](#), [G06K 9/6292](#), [G06K 9/6293](#), [G06K 2009/6294](#), [G06K 2009/6295](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19187 . . . {Graphical models, e.g. Bayesian networks or Markov models}
- WARNING
 Group [G06V 30/19187](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6296](#), [G06K 9/6297](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/19193 . . . {Statistical pre-processing, e.g. techniques for normalisation or restoring missing data}
- WARNING
 Group [G06V 30/19193](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6298](#) and [G06V 30/10](#).
 All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 30/192
- • • using simultaneous comparisons or correlations of the image signals with a plurality of references
- WARNING
Group [G06V 30/192](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/75](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- Q G06V 30/194
- • • • References adjustable by an adaptive method, e.g. learning
- WARNING
Group [G06V 30/194](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).
Group [G06V 30/194](#) is also impacted by reclassification into groups [G06V 10/70](#) and [G06V 10/766](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/195
- • • • {using a resistor matrix}
- WARNING
Group [G06V 30/195](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).
Groups [G06K 9/00](#), [G06V 30/10](#) and [G06V 30/195](#) should be considered in order to perform a complete search.
- N G06V 30/196
- • • using sequential comparisons of the image signals with a plurality of references
- WARNING
Groups [G06V 30/196](#) and [G06V 30/198](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/75](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/198
- • • • the selection of the next reference depending on the result of the preceding comparison
- N G06V 30/1983
- • • • {Syntactic or structural pattern recognition, e.g. symbolic string recognition}
- WARNING
Groups [G06V 30/1983](#), [G06V 30/1985](#) and [G06V 30/1988](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/1985
- • • • • {Syntactic analysis, e.g. using a grammatical approach (syntactic image representation [G06V 30/18171](#))}
- N G06V 30/1988
- • • • • {Graph matching (graphical image representation [G06V 30/18181](#))}
- N G06V 30/199
- • Arrangements for recognition using optical reference masks, e.g. holographic masks
- WARNING
Group [G06V 30/199](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/20](#), [G06V 10/88](#), [G06V 10/89](#), [G06V 10/893](#), [G06V 10/895](#), [G06V 10/898](#), [G06V 10/92](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/20

- • Combination of acquisition, preprocessing or recognition functions

WARNING

Group [G06V 30/20](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/10](#), [G06V 10/20](#), [G06V 10/36](#), [G06V 10/88](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/22

- • characterised by the type of writing

WARNING

Groups [G06V 30/22](#), [G06V 30/222](#), [G06V 30/226](#), [G06V 30/2264](#), [G06V 30/2268](#), [G06V 30/2272](#), [G06V 30/2276](#) and [G06V 30/228](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/222

- • • of characters separated by spaces

N G06V 30/224

- • • of printed characters having additional code marks or containing code marks

WARNING

Groups [G06V 30/224](#), [G06V 30/2247](#) and [G06V 30/2253](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 30/10](#) and [G06V 30/40](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/2247

- • • • {Characters composed of bars, e.g. CMC-7}

N G06V 30/2253

- • • • {Recognition of characters printed with magnetic ink ([G06V 30/2247](#) takes precedence)}

N G06V 30/226

- • • of cursive writing

N G06V 30/2264

- • • • {using word shape}

N G06V 30/2268

- • • • {using stroke segmentation}

N G06V 30/2272

- • • • • {with lexical matching}

N G06V 30/2276

- • • • • {with probabilistic networks, e.g. hidden Markov models}

N G06V 30/228

- • • of three-dimensional handwriting, e.g. writing in the air

N G06V 30/24

- • characterised by the processing or recognition method (segmentation of character regions [G06V 30/148](#))

WARNING

Groups [G06V 30/24](#), [G06V 30/242](#), [G06V 30/244](#), [G06V 30/2445](#), [G06V 30/245](#), [G06V 30/2455](#), [G06V 30/246](#), [G06V 30/248](#), [G06V 30/2504](#), [G06V 30/2528](#) and [G06V 30/2552](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N G06V 30/242

- • • Division of the character sequences into groups prior to recognition; Selection of dictionaries

N G06V 30/244

- • • • using graphical properties, e.g. alphabet type or font

N G06V 30/2445

- • • • • {Alphabet recognition, e.g. Latin, Kanji or Katakana}

- N G06V 30/245 {Font recognition}
- N G06V 30/2455 {Discrimination between machine-print, hand-print and cursive writing}
- N G06V 30/246 using linguistic properties, e.g. specific for English or German language
- N G06V 30/248 . . . {involving plural approaches, e.g. verification by template match; Resolving confusion among similar patterns, e.g. "O" versus "Q" ([G06V 30/242](#) takes precedence)}
- N G06V 30/2504 {Coarse or fine approaches, e.g. resolution of ambiguities or multiscale approaches}
- N G06V 30/2528 {Combination of methods, e.g. classifiers, working on the same input data}
- N G06V 30/2552 {Combination of methods, e.g. classifiers, working on different input data, e.g. sensor fusion}
- N G06V 30/26 . . . Techniques for post-processing, e.g. correcting the recognition result
- WARNING
Groups [G06V 30/26](#), [G06V 30/268](#) and [G06V 30/274](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/262 . . . using context analysis, e.g. lexical, syntactic or semantic context
- WARNING
Group [G06V 30/262](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06V 10/768](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/268 {Lexical context}
- N G06V 30/274 {Syntactic or semantic context, e.g. balancing}
- N G06V 30/28 . . . specially adapted to the type of the alphabet, e.g. Latin alphabet
- WARNING
Groups [G06V 30/28](#), [G06V 30/287](#) and [G06V 30/293](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/287 . . . {of Kanji, Hiragana or Katakana characters}
- N G06V 30/293 . . . {of characters other than Kanji, Hiragana or Katakana}
- N G06V 30/30 . . . based on the type of data
- WARNING
Groups [G06V 30/30](#) and [G06V 30/304](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/302 . . . Images containing characters for discriminating human versus automated computer access
- WARNING
Group [G06V 30/302](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#), [G06K 9/6262](#) and [G06V 30/10](#). All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/304 . . . Music notations

- N G06V 30/32
- • Digital ink
- WARNING
Groups [G06V 30/32](#), [G06V 30/333](#), [G06V 30/347](#), [G06V 30/36](#), [G06V 30/373](#) and [G06V 30/387](#) are incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/10](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/333
- • • {Preprocessing; Feature extraction}
- N G06V 30/347
- • • • {Sampling; Contour coding; Stroke extraction}
- N G06V 30/36
- • • {Matching; Classification}
- N G06V 30/373
- • • • {using a special pattern or subpattern alphabet}
- N G06V 30/387
- • • • {using human interaction, e.g. selection of the best displayed recognition candidate}
- Q G06V 30/40
- Document-oriented image-based pattern recognition
- WARNING
Group [G06V 30/40](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).
Group [G06V 30/40](#) is also impacted by reclassification into groups [G06V 30/224](#), [G06V 30/2247](#), [G06V 30/2253](#) and [G06V 30/41](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N G06V 30/41
- • Analysis of document content (recognition of printed characters based on code marks [G06V 30/224](#))
- WARNING
Group [G06V 30/41](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 30/40](#).
Groups [G06K 9/00](#), [G06V 30/40](#) and [G06V 30/41](#) should be considered in order to perform a complete search.
- N G06V 30/412
- • • Layout analysis of documents structured with printed lines or input boxes, e.g. business forms or tables
- N G06V 30/413
- • • Classification of content, e.g. text, photographs or tables
- N G06V 30/414
- • • Extracting the geometrical structure, e.g. layout tree; Block segmentation, e.g. bounding boxes for graphics or text
- N G06V 30/416
- • • Extracting the logical structure, e.g. chapters, sections or page numbers; Identifying elements of the document, e.g. authors
- N G06V 30/418
- • • Document matching, e.g. of document images
- N G06V 30/42
- • based on the type of document
- N G06V 30/422
- • • Technical drawings; Geographical maps
- N G06V 30/424
- • • Postal images, e.g. labels or addresses on parcels or postal envelopes
- N G06V 30/43
- • {Editing text-bitmaps, e.g. alignment, spacing; Semantic analysis of bitmaps of text without OCR}
- N G06V 40/00**
- Recognition of biometric, human-related or animal-related patterns in image or video data**
- WARNING
Groups [G06V 40/00](#), [G06V 40/10](#), [G06V 40/103](#), [G06V 40/107](#), [G06V 40/11](#), [G06V 40/113](#), [G06V 40/117](#), [G06V 40/12](#), [G06V 40/1306](#), [G06V 40/1312](#), [G06V 40/1318](#), [G06V 40/1324](#), [G06V 40/1329](#), [G06V 40/1335](#), [G06V 40/1341](#), [G06V 40/1347](#), [G06V 40/1353](#), [G06V 40/1359](#), [G06V 40/1365](#), [G06V 40/1371](#), [G06V 40/1376](#), [G06V 40/1382](#), [G06V 40/1388](#), [G06V 40/1394](#), [G06V 40/14](#),

[G06V 40/15](#), [G06V 40/155](#), [G06V 40/16](#), [G06V 40/161](#), [G06V 40/162](#), [G06V 40/164](#), [G06V 40/165](#), [G06V 40/166](#), [G06V 40/167](#), [G06V 40/168](#), [G06V 40/169](#), [G06V 40/171](#), [G06V 40/172](#), [G06V 40/173](#), [G06V 40/174](#), [G06V 40/175](#), [G06V 40/176](#), [G06V 40/178](#), [G06V 40/179](#), [G06V 40/18](#), [G06V 40/19](#), [G06V 40/193](#), [G06V 40/197](#), [G06V 40/20](#), [G06V 40/23](#), [G06V 40/25](#), [G06V 40/28](#), [G06V 40/30](#), [G06V 40/33](#), [G06V 40/37](#), [G06V 40/376](#), [G06V 40/382](#), [G06V 40/388](#), [G06V 40/394](#), [G06V 40/40](#), [G06V 40/45](#), [G06V 40/50](#), [G06V 40/53](#), [G06V 40/55](#), [G06V 40/58](#), [G06V 40/60](#), [G06V 40/63](#), [G06V 40/67](#) and [G06V 40/70](#) are incomplete pending reclassification of documents from group [G06K 9/00](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- N G06V 40/10 • Human or animal bodies, e.g. vehicle occupants or pedestrians; Body parts, e.g. hands
- N G06V 40/103 • • {Static body considered as a whole, e.g. static pedestrian or occupant recognition}
- N G06V 40/107 • • {Static hand or arm}
- N G06V 40/11 • • • {Hand-related biometrics; Hand pose recognition}
- N G06V 40/113 • • • {Recognition of static hand signs}
- N G06V 40/117 • • • {Biometrics derived from hands}
- N G06V 40/12 • • Fingerprints or palmprints
- Q G06V 40/13 • • • Sensors therefor

WARNING

Group [G06V 40/13](#) is incomplete pending reclassification of documents from group [G06K 9/00](#).

Group [G06V 40/13](#) is also impacted by reclassification into group [G06V 40/145](#).

Groups [G06K 9/00](#), [G06V 40/13](#) and [G06V 40/145](#) should be considered in order to perform a complete search.

- N G06V 40/1306 • • • • {non-optical, e.g. ultrasonic or capacitive sensing}
- N G06V 40/1312 • • • • {direct reading, e.g. contactless acquisition}
- N G06V 40/1318 • • • • {using electro-optical elements or layers, e.g. electroluminescent sensing}
- N G06V 40/1324 • • • • {by using geometrical optics, e.g. using prisms ([G06V 40/1312](#) takes precedence)}
- N G06V 40/1329 • • • • {Protecting the fingerprint sensor against damage caused by the finger}
- N G06V 40/1335 • • • {Combining adjacent partial images (e.g. slices) to create a composite input or reference pattern; Tracking a sweeping finger movement}
- N G06V 40/1341 • • • {Sensing with light passing through the finger}
- N G06V 40/1347 • • • {Preprocessing; Feature extraction}
- N G06V 40/1353 • • • • {Extracting features related to minutiae or pores}
- N G06V 40/1359 • • • • {Extracting features related to ridge properties; Determining the fingerprint type, e.g. whorl or loop}
- N G06V 40/1365 • • • {Matching; Classification}
- N G06V 40/1371 • • • • {Matching features related to minutiae or pores}
- N G06V 40/1376 • • • • {Matching features related to ridge properties or fingerprint texture}
- N G06V 40/1382 • • • {Detecting the live character of the finger, i.e. distinguishing from a fake or cadaver finger}
- N G06V 40/1388 • • • • {using image processing}
- N G06V 40/1394 • • • • {using acquisition arrangements}

- N G06V 40/14
 - • Vascular patterns
 - N G06V 40/145
 - • • Sensors therefor
- WARNING
- Group [G06V 40/145](#) is incomplete pending reclassification of documents from groups [G06K 9/00](#) and [G06V 40/13](#).
Groups [G06K 9/00](#), [G06V 40/13](#) and [G06V 40/145](#) should be considered in order to perform a complete search.
- N G06V 40/15
 - • {Biometric patterns based on physiological signals, e.g. heartbeat, blood flow}
 - N G06V 40/155
 - • {use of biometric patterns for forensic purposes}
 - N G06V 40/16
 - • Human faces, e.g. facial parts, sketches or expressions
 - N G06V 40/161
 - • • {Detection; Localisation; Normalisation}
 - N G06V 40/162
 - • • • {using pixel segmentation or colour matching}
 - N G06V 40/164
 - • • • {using holistic features}
 - N G06V 40/165
 - • • • {using facial parts and geometric relationships}
 - N G06V 40/166
 - • • • {using acquisition arrangements}
 - N G06V 40/167
 - • • • {using comparisons between temporally consecutive images}
 - N G06V 40/168
 - • • {Feature extraction; Face representation}
 - N G06V 40/169
 - • • • {Holistic features and representations, i.e. based on the facial image taken as a whole}
 - N G06V 40/171
 - • • • {Local features and components; Facial parts (eye characteristics [G06V 40/18](#)); Occluding parts, e.g. glasses; Geometrical relationships}
 - N G06V 40/172
 - • • {Classification, e.g. identification}
 - N G06V 40/173
 - • • • {face re-identification, e.g. recognising unknown faces across different face tracks}
 - N G06V 40/174
 - • • {Facial expression recognition}
 - N G06V 40/175
 - • • • {Static expression}
 - N G06V 40/176
 - • • • {Dynamic expression}
 - N G06V 40/178
 - • • {estimating age from face image; using age information for improving recognition}
 - N G06V 40/179
 - • • {metadata assisted face recognition}
 - N G06V 40/18
 - • Eye characteristics, e.g. of the iris
 - N G06V 40/19
 - • • Sensors therefor
 - N G06V 40/193
 - • • {Preprocessing; Feature extraction}
 - N G06V 40/197
 - • • {Matching; Classification}
 - N G06V 40/20
 - Movements or behaviour, e.g. gesture recognition (recognition of facial expressions [G06V 40/16](#))
 - N G06V 40/23
 - • {Recognition of whole body movements, e.g. for sport training}
 - N G06V 40/25
 - • • {Recognition of walking or running movements, e.g. gait recognition}
 - N G06V 40/28
 - • {Recognition of hand or arm movements, e.g. recognition of deaf sign language (static hand signs [G06V 40/113](#))}
 - N G06V 40/30
 - Writer recognition; Reading and verifying signatures
 - N G06V 40/33
 - • {based only on signature image, e.g. static signature recognition}
 - N G06V 40/37
 - • {based only on signature signals such as velocity or pressure, e.g. dynamic signature recognition}
 - N G06V 40/376
 - • • {Acquisition}
 - N G06V 40/382
 - • • {Preprocessing; Feature extraction}

- N G06V 40/388 . . . {Sampling; Contour coding; Stroke extraction}
- N G06V 40/394 . . . {Matching; Classification}
- N G06V 40/40 . Spoof detection, e.g. liveness detection
- N G06V 40/45 . . {Detection of the body part being alive}
- N G06V 40/50 . Maintenance of biometric data or enrolment thereof
- N G06V 40/53 . . {Measures to keep reference information secret, e.g. cancellable biometrics}
- N G06V 40/55 . . {Performing matching on a personal external card, e.g. to avoid submitting reference information}
- N G06V 40/58 . . {Solutions for unknown imposter distribution}
- N G06V 40/60 . Static or dynamic means for assisting the user to position a body part for biometric acquisition
- N G06V 40/63 . . {by static guides}
- N G06V 40/67 . . {by interactive indications to the user}
- N G06V 40/70 . Multimodal biometrics, e.g. combining information from different biometric modalities

N G06V 2201/00 Indexing scheme relating to image or video recognition or understanding

- N G06V 2201/01 . Solutions for problems related to non-uniform document background
- N G06V 2201/02 . Recognising information on displays, dials, clocks
- N G06V 2201/03 . Recognition of patterns in medical or anatomical images
- N G06V 2201/031 . . of internal organs
- N G06V 2201/032 . . of protuberances, polyps nodules, etc.
- N G06V 2201/033 . . of skeletal patterns
- N G06V 2201/034 . . of medical instruments
- N G06V 2201/04 . Recognition of patterns in DNA microarrays
- N G06V 2201/05 . Recognition of patterns representing particular kinds of hidden objects, e.g. weapons, explosives, drugs
- N G06V 2201/06 . Recognition of objects for industrial automation
- N G06V 2201/07 . Target detection
- N G06V 2201/08 . Detecting or categorising vehicles
- N G06V 2201/09 . Recognition of logos
- N G06V 2201/10 . Recognition assisted with metadata
- N G06V 2201/11 . Technique with transformation invariance effect
- N G06V 2201/12 . Acquisition of 3D measurements of objects
- N G06V 2201/121 . . using special illumination
- N G06V 2201/122 . . Computational image acquisition in electron microscopy
- N G06V 2201/13 . Type of disclosure document
- N G06V 2201/131 . . Book
- N G06V 2201/132 . . Book chapter
- N G06V 2201/133 . . Survey article
- N G06V 2201/134 . . Technical report or standard
- N G06V 2201/135 . . Master, PhD or other thesis
- N G06V 2201/136 . . Tutorial

Project: MP0504 (G08B)

- U G08B 3/00 Audible signalling systems; Audible personal calling systems**

U	G08B 3/10	• using electric transmission; using electromagnetic transmission
M	G08B 3/1008	• • {Personal calling arrangements or devices, i.e. paging systems (telephonic systems with personal calling arrangements H04M 11/022; selective calling systems and call receivers H04W 84/00, H04W 84/00, H04W 68/00)}
U	G08B 3/1016	• • • {using wireless transmission (calling systems using transmission by inductive loop H04B 5/04)}
M	G08B 3/1083	• • • • {Pager locating systems (locating mobile subscribers in general H04W 64/00)}
M	G08B 3/14	• using explosives {{explosive signals for railways B61L; detonating alarm locks E05B 45/04}}
U	G08B 5/00	Visible signalling systems, e.g. personal calling systems, remote indication of seats occupied
M	G08B 5/002	• {Distress signalling devices, e.g. rescue balloons (vehicle optical signalling for indicating emergencies B60Q 1/52; balloons in general B64B 1/40)}
U	G08B 5/22	• using electric transmission; using electromagnetic transmission
M	G08B 5/222	• • {Personal calling arrangements or devices, i.e. paging systems (selective calling systems and call receivers H04W 84/00, H04W 84/00 , H04W 68/00)}
U	G08B 13/00	Burglar, theft or intruder alarms
U	G08B 13/02	• Mechanical actuation
M	G08B 13/08	• • by opening, e.g. of door, of window, of drawer, of shutter, of curtain, of blind {{alarm locks E05B 45/00; electrical switches operated by opening or closing of a door H01H 13/18}}
U	G08B 13/12	• • by the breaking or disturbance of stretched cords or wires
M	G08B 13/122	• • • {for a perimeter fence (features peculiar to electrified fences A01K 3/005 A01K 3/00 ; fences per se E04H 17/00)}
M	G08B 13/126	• • • {for a housing, e.g. a box, a safe, or a room (anti-theft means in containers B65D 2211/00)}
U	G08B 13/16	• Actuation by interference with mechanical vibrations in air or other fluid
M	G08B 13/1609	• • {using active vibration detection systems (active detection systems per se G01S)}
M	G08B 13/18	• Actuation by interference with heat, light, or radiation of shorter wavelength; Actuation by intruding sources of heat, light, or radiation of shorter wavelength
U	G08B 13/189	• • using passive radiation detection systems
M	G08B 13/19	• • • using infra-red radiation detection systems {{(G08B 13/194 takes precedence)}}
U	G08B 13/194	• • • using image scanning and comparing systems
U	G08B 13/196	• • • • using television cameras
U	G08B 13/19602	• • • • • {Image analysis to detect motion of the intruder, e.g. by frame subtraction}
M	G08B 13/19608	• • • • • • {Tracking movement of a target, e.g. by detecting an object predefined as a target, using target direction and or velocity to predict its new position (analysis of motion by image processing per se G06T 7/20)}
U	G08B 13/19617	• • • • • {Surveillance camera constructional details}
M	G08B 13/19626	• • • • • • {optical details, e.g. lenses, mirrors, multiple lenses or multiple lenses (G08B 13/19628 takes precedence)}
M	G08B 13/22	• Electrical actuation {{(G08B 13/2494 takes precedence)}}
U	G08B 13/24	• by interference with electromagnetic field distribution

- U G08B 13/2402
 - • • {Electronic Article Surveillance [EAS], i.e. systems using tags for detecting removal of a tagged item from a secure area, e.g. tags for detecting shoplifting (mechanical aspects of the tags, e.g. related to locking [E05B 73/0017](#); RFID readers [G06K 7/00](#); RFID tags [G06K 19/00](#); access control systems [G07C 9/00](#); anti-theft control in point of sale systems [G07G 3/003](#); security seals [G09F 3/03](#))}
- U G08B 13/2405
 - • • • {characterised by the tag technology used}
- U G08B 13/2414
 - • • • {using inductive tags}
- M G08B 13/2417
 - • • • • {having a radio frequency identification chip ~~(radio frequency identification tags per se G06K 19/00; inventory or logistics in general G06Q 10/00)~~}
- U G08B 13/2428
 - • • • {Tag details}
- M G08B 13/2434
 - • • • • {Tag housing and attachment details ~~(transponders in containers B65D 2203/10; anti-theft means in containers B65D 2211/00)~~}
- U G08B 13/2437
 - • • • • {Tag layered structure, processes for making layered tags}
- M G08B 13/2445
 - • • • • {Tag integrated into item to be protected, e.g. source tagging ~~(anti-theft means in containers B65D 2211/00)~~}
- U G08B 17/00** **Fire alarms; Alarms responsive to explosion**
- U G08B 17/10
 - Actuation by presence of smoke or gases {, e.g. automatic alarm devices for analysing flowing fluid materials by the use of optical means}
- M G08B 17/103
 - • using a light-emitting and receiving device
- M G08B 17/11
 - • using an ionisation chamber for detecting smoke or gas ~~{(gas analysis by investigating the ionisation G01N 27/62)}~~
- M G08B 21/00** **Alarms responsive to a single specified undesired or abnormal ~~operating~~ condition and not ~~elsewhere~~ ~~otherwise~~ provided for**
- U G08B 25/00** **Alarm systems in which the location of the alarm condition is signalled to a central station, e.g. fire or police telegraphic systems**
- U G08B 25/01
 - characterised by the transmission medium
- M G08B 25/06
 - • using power transmission lines ~~{(systems in general for transmission of information via power distribution lines H04B 3/54)}~~

Project: MP0536 (G08C)

- U G08C 13/00** **Arrangements for influencing the relationship between signals at input and output, e.g. differentiating, delaying**
- M G08C 13/02
 - to yield a signal which is a function of two or more signals, e.g. sum; ~~or~~ product

Project: RP0760 (G08G)

- U G08G 5/00** **Traffic control systems for aircraft {, e.g. air-traffic control [ATC]}**

NOTES

1. This groups covers arrangements, located in the aircraft or on the ground, for controlling aircraft within a traffic environment.
2. This group does not cover arrangements for control of position, course, altitude or attitude of aircraft not specific to a traffic environment, e.g. automatic pilots, which are covered by group [G05D 1/00](#).
3. In this group the following term is used with the meaning indicated:
 - "traffic" includes traffic on the ground and in the air.
4. Attention is drawn to the following places which might be interesting for search:
 - mechanical aspects of equipment for fitting in or to aircraft [B64D](#)

- combined instruments indicating more than one navigational value
[G01C 23/00](#)

G08G 5/0073

- {Surveillance aids (~~scene image recognition G06K 9/00624~~~~scene image recognition G06V 20/00~~)}

Project: RP0759 (G10K)

- U G10K 11/00** **Methods or devices for transmitting, conducting or directing sound in general; Methods or devices for protecting against, or for damping, noise or other acoustic waves in general**
- U G10K 11/18 • Methods or devices for transmitting, conducting, or directing sound
([G10K 11/02](#), [G10K 11/36](#) take precedence; medical stethoscopes [A61B 7/02](#))
- U G10K 11/26 • • Sound-focusing or directing, e.g. scanning {(horns for impedance matching
[G10K 11/02](#); megaphones [G10K 11/08](#))}
- G10K 11/28 • • • using reflection, e.g. parabolic reflector {(hearing aids
~~A61F 11/008~~[A61F 11/30](#))}

Project: RP0100-F (G11B)

- U G11B 5/00** **Recording by magnetisation or demagnetisation of a record carrier; Reproducing by magnetic means; Record carriers therefor ([G11B 11/00](#) {and [G11B 13/00](#)} take precedence)**

NOTE

Subgroups [G11B 5/02](#) - [G11B 5/86](#) take precedence over subgroups
[G11B 5/004](#) - [G11B 5/016](#)

- U G11B 5/62 • Record carriers characterised by the selection of the material

NOTE

This group does not cover compositions, materials or processes, per se, which are covered by the relevant subclasses of section [B](#) or [C](#).

- M G11B 5/73 • • Base layers {, i.e. all non-magnetic layers lying under a lowermost magnetic recording layer, e.g. including any non-magnetic layer in between a first magnetic recording layer and either an underlying substrate or a soft magnetic underlayer}

WARNING

Group G11B 5/73 is incomplete pending reclassification of documents from group G11B 5/7305.

Group G11B 5/73 is also impacted by reclassification into groups G11B 5/733, G11B 5/7334, G11B 5/736 - G11B 5/7377 and G11B 5/739 - G11B 5/73937.

All groups listed in this warning should be considered in order to perform a complete search.

- D G11B 5/7305
—(Frozen) • • {with bonding agent in the material}

WARNING

Group G11B 5/7305 is no longer used for the classification of documents as of May 1, 2019.

The content of this group is being reclassified into groups G11B 5/73, G11B 5/733, G11B 5/7334, G11B 5/736 - G11B 5/7377 and G11B 5/739 - G11B 5/73937.

All groups listed in this warning should be considered in order to perform a complete search.

- D G11B 5/731
—(Frozen)
- • • {without bonding agent in the material}
- WARNING
Group G11B 5/731 is no longer used for the classification of documents as of May 1, 2019.
The content of this group is being reclassified into groups G11B 5/736 – G11B 5/7377 and G11B 5/739 – G11B 5/73937.
All groups listed in this warning should be considered in order to perform a complete search.
- D G11B 5/7315
—(Frozen)
- • • • {substrates}
- WARNING
Group G11B 5/7315 is no longer used for the classification of documents as of May 1, 2019.
The content of this group is being reclassified into groups G11B 5/739 – G11B 5/73937.
All groups listed in this warning should be considered in order to perform a complete search.
- D G11B 5/7325
—(Frozen)
- • • • {layers between substrate and first magnetic recording layer other than soft magnetic layers and seed layers}
- WARNING
Group G11B 5/7325 is no longer used for the classification of documents as of May 1, 2019.
The content of this group is being reclassified into groups G11B 5/736 – G11B 5/7377 and G11B 5/739 – G11B 5/73937.
All groups listed in this warning should be considered in order to perform a complete search.
- M G11B 5/733
- • • characterised by the addition of non-magnetic particles {(base layers having a non-magnetic layer under a soft magnetic layer [G11B 5/736](#); magnetic recording media substrates [G11B 5/739](#))}
- NOTES
1. ~~4.~~ {This subgroup covers: non-magnetic base layer structures characterised by the addition of non-magnetic particles.}
 2. {This subgroup does not cover: magnetic layer structures comprising one or more layers of magnetisable material homogeneously mixed with a bonding agent (even when also containing non-magnetic particles), which are covered by [G11B 5/68](#) (in particular, [G11B 5/708](#) and [G11B 5/7085](#)).}
- WARNING
Group G11B 5/733 is incomplete pending reclassification of documents from groups G11B 5/73 and G11B 5/7305.
Group G11B 5/733 is also impacted by reclassification into groups G11B 5/7334, G11B 5/736 – G11B 5/7377 and G11B 5/739 – G11B 5/73937.
All groups listed in this warning should be considered in order to perform a complete search.
- M G11B 5/7334
- • • • {Base layer characterised by composition or structure}
- WARNING
Group G11B 5/7334 is incomplete pending reclassification of documents from groups G11B 5/73, G11B 5/7305, and G11B 5/733.
All groups listed in this warning should be considered in order to perform a complete search.

M	G11B 5/735	<ul style="list-style-type: none"> • • • characterised by the back layer {(magnetic recording media substrates G11B 5/739)} <p><u>WARNING</u> Group G11B 5/735 is impacted by reclassification into groups G11B 5/7353 - G11B 5/7358 and G11B 5/739 - G11B 5/73937. All groups listed in this warning should be considered in order to perform a complete search.</p>
M	G11B 5/7353	<ul style="list-style-type: none"> • • • {for a thin film medium where the magnetic recording layer structure has no bonding agent} <p><u>WARNING</u> Group G11B 5/7353 is incomplete pending reclassification of documents from group G11B 5/735. Groups G11B 5/735 and G11B 5/7353 should be considered in order to perform a complete search.</p>
M	G11B 5/7356	<ul style="list-style-type: none"> • • • {comprising non-magnetic particles in the back layer, e.g. particles of TiO₂, ZnO or SiO₂} <p><u>WARNING</u> Groups G11B 5/7356 and G11B 5/7358 are incomplete pending reclassification of documents from group G11B 5/735. All groups listed in this warning should be considered in order to perform a complete search.</p>
M	G11B 5/736	<ul style="list-style-type: none"> • • • {Non-magnetic layer under a soft magnetic layer, e.g. between a substrate and a soft magnetic underlayer [SUL] or a keeper layer (magnetic recording media substrates G11B 5/739)} <p><u>WARNING</u> Groups G11B 5/736, G11B 5/7361, G11B 5/7362, G11B 5/7363, G11B 5/7364, G11B 5/7365, G11B 5/7366, and G11B 5/7367 are incomplete pending reclassification of documents from groups G11B 5/73, G11B 5/7305, G11B 5/731, G11B 5/7325, and G11B 5/733. All groups listed in this warning should be considered in order to perform a complete search.</p>
M	G11B 5/7368	<ul style="list-style-type: none"> • • • {Non-polymeric layer under the lowermost magnetic recording layer (base layers having a non-magnetic layer under a soft magnetic layer G11B 5/736; magnetic recording media substrates G11B 5/739)} <p><u>WARNING</u> Groups G11B 5/7368, G11B 5/7369, G11B 5/737, G11B 5/7371, G11B 5/7373, G11B 5/7375, and G11B 5/7377 are incomplete pending reclassification of documents from groups G11B 5/73, G11B 5/7305, G11B 5/731, G11B 5/7325, and G11B 5/733. All groups listed in this warning should be considered in order to perform a complete search.</p>
M	G11B 5/739	<ul style="list-style-type: none"> • • • {Magnetic recording media substrates} <p><u>WARNING</u> Groups G11B 5/739, G11B 5/73911, G11B 5/73913, G11B 5/73915, G11B 5/73917, G11B 5/73919, G11B 5/73921, G11B 5/73923, G11B 5/73925, G11B 5/73927, G11B 5/73929, G11B 5/73931, G11B 5/73933, G11B 5/73935, and G11B 5/73937 are incomplete pending reclassification of documents from groups G11B 5/73, G11B 5/7305, G11B 5/731, G11B 5/7315, G11B 5/7325, G11B 5/733, and G11B 5/735.</p>

All groups listed in this warning should be considered in order to perform a complete search.

Project: MP0518 (G21F)

- M G21F 7/00 **Shielded cells or rooms** (~~chambers provided with manipulating devices in general B25J~~)
- M G21F 7/06
 - Structural combination with remotely-controlled apparatus, e.g. with manipulators (~~manipulators B25J; remote control in general G05~~)

Project: RP0760 (H01L)

- H01L 23/00 **Details of semiconductor or other solid state devices** ([H01L 25/00](#) takes precedence {; structural arrangements for testing or measuring during manufacture or treatment, or for reliability measurements [H01L 22/00](#); arrangements for connecting or disconnecting semiconductor or solid-state bodies, or methods related thereto [H01L 24/00](#); ~~finger print sensors G06K 9/00006~~; ~~finger print sensors G06V 40/12~~})

NOTE

This group does not cover:

- details of semiconductor bodies or of electrodes of devices provided for in group [H01L 29/00](#), which details are covered by that group;
- details peculiar to devices provided for in a single main group of groups [H01L 31/00](#) - [H01L 51/00](#), which details are covered by those groups.

Project: MP0527 (H01L)

- U H01L 24/00 **{Arrangements for connecting or disconnecting semiconductor or solid-state bodies; Methods or apparatus related thereto}**

NOTES

1. This group does not cover:

- details of semiconductor bodies or of electrodes of devices provided for in group [H01L 29/00](#), which details are covered by that group;
- details peculiar to devices provided for in a single main group of groups [H01L 31/00](#) - [H01L 51/00](#), which details are covered by those groups.
- printed circuits, which are covered by groups [H05K 1/00](#) - [H05K 1/189](#);
- apparatus or manufacturing processes for printed circuits, which are covered by groups [H05K 3/00](#) - [H05K 3/4685](#);
- manufacture or treatment of parts, which are covered by group [H01L 21/48](#) and subgroups except [H01L 21/4885](#) - [H01L 21/4896](#);
- assemblies of semiconductor devices, which are covered by groups [H01L 21/50](#) - [H01L 21/568](#);
- applying interconnections to be used for carrying current between separate components within a device, which is covered by group [H01L 21/768](#) and subgroups;
- containers or seals, which are covered by groups [H01L 23/02](#) - [H01L 23/10](#);
- mountings, which are covered by groups [H01L 23/12](#) - [H01L 23/15](#) and subgroups;
- arrangements for cooling, heating, ventilating or temperature compensation, which are covered by groups [H01L 23/34](#) - [H01L 23/4735](#);
- arrangements for conducting electric current, which are covered by groups [H01L 23/48](#) - [H01L 23/50](#), and by groups [H01L 23/52](#) - [H01L 23/5389](#);
- structural electrical arrangements, which are covered by groups [H01L 24/80](#) - [H01L 23/66](#);

- assemblies of semiconductor or other solid state devices, which are covered by groups [H01L 25/00](#) - [H01L 25/18](#).

2. In this group the following indexing codes are used : [H01L 24/00](#), [H01L 2224/00](#), [H01L 2924/00](#), and subgroups thereof

- | | | |
|---|------------|---|
| U | H01L 24/01 | <ul style="list-style-type: none"> • {Means for bonding being attached to, or being formed on, the surface to be connected, e.g. chip-to-package, die-attach, "first-level" interconnects; Manufacturing methods related thereto} |
| M | H01L 24/02 | <ul style="list-style-type: none"> • {Bonding areas (on insulating substrates, e.g. chip carriers, H01L 23/49816, H01L 23/49838, H01L 23/5389); Manufacturing methods related thereto} <p>WARNING
Groups H01L 24/02 — H01L 24/09 are incomplete pending reclassification of documents from groups H01L 24/02 and H01L 24/10.
Groups H01L 24/02 — H01L 24/09 and H01L 24/10 should be considered in order to perform a complete search.</p> |
| M | H01L 24/18 | <ul style="list-style-type: none"> • {High density interconnect [HDI] connectors; Manufacturing methods related thereto (interconnection structure between a plurality of semiconductor chips H01L 23/5389)} <p>WARNING
Groups H01L 24/18 — H01L 24/25 are incomplete pending reclassification of documents from groups H01L 24/18 and H01L 24/82.
Groups H01L 24/18 — H01L 24/25 and H01L 24/82 should be considered in order to perform a complete search.</p> |
| M | H01L 24/34 | <ul style="list-style-type: none"> • {Strap connectors, e.g. copper straps for grounding power devices; Manufacturing methods related thereto} <p>WARNING
Groups H01L 24/34 — H01L 24/41 are incomplete pending reclassification of documents from groups H01L 24/34, H01L 24/01, H01L 24/42, and H01L 24/85.
Groups H01L 24/34 — H01L 24/41 and H01L 24/01, H01L 24/42, H01L 24/85 should be considered in order to perform a complete search.</p> |
| M | H01L 24/50 | <ul style="list-style-type: none"> • {Tape automated bonding [TAB] connectors, i.e. film carriers; Manufacturing methods related thereto (thin flexible metallic tape with or without a film carrier H01L 23/49572, flexible insulating substrates H01L 23/4985, H01L 23/5387)} <p>WARNING
Group H01L 24/50 is incomplete pending reclassification of documents from group H01L 24/86.
Groups H01L 24/50 and H01L 24/86 should be considered in order to perform a complete search.</p> |
| U | H01L 24/80 | <ul style="list-style-type: none"> • {Methods for connecting semiconductor or other solid state bodies using means for bonding being attached to, or being formed on, the surface to be connected} |
| M | H01L 24/84 | <ul style="list-style-type: none"> • {using a strap connector} <p>WARNING
Group H01L 24/84 is incomplete pending reclassification of documents from group H01L 24/85.
Group H01L 24/84 and H01L 24/85 should be considered in order to perform a complete search.</p> |

M H01L 24/93 • {Batch processes}

WARNING

Group H01L 24/93 is incomplete pending reclassification of documents from groups H01L 24/80 – H01L 24/90.
Groups H01L 24/93 and H01L 24/80 – H01L 24/90 should be considered in order to perform a complete search.

Project: RP0547-F (H01L)

U H01L 27/00 **Devices consisting of a plurality of semiconductor or other solid-state components formed in or on a common substrate (details thereof [H01L 23/00](#), [H01L 29/00](#) - [H01L 51/00](#); assemblies consisting of a plurality of individual solid state devices [H01L 25/00](#))**

NOTES

1. In this group, with the exception of groups [H01L 27/115](#) - [H01L 27/11597](#), the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. When classifying in this group, subject matter relating to electrically programmable read-only memories is classified in group [H01L 27/115](#), irrespective of the last place priority rule.

U H01L 27/28 • including components using organic materials as the active part, or using a combination of organic materials with other materials as the active part

U H01L 27/32 • • with components specially adapted for light emission, e.g. flat-panel displays using organic light-emitting diodes [OLED] {(combination of organic light sensitive components with organic light emitting components, e.g. optocoupler [H01L 27/288](#))}

U H01L 27/3241 • • • {Matrix-type displays}

U H01L 27/3244 • • • • {Active matrix displays}

M H01L 27/3246 • • • • • {Pixel defining structures, e.g. banks}

WARNING

Group H01L 27/3246 is incomplete pending reclassification of documents from group H01L 27/3295.
Groups H01L 27/3295 and H01L 27/3246 should be considered in order to perform a complete search.

M H01L 27/3276 • • • • • {Wiring lines}

WARNING

Group H01L 27/3276 is incomplete pending reclassification of documents from group H01L 27/3297.
Groups H01L 27/3297 and H01L 27/3276 should be considered in order to perform a complete search.

U H01L 27/3281 • • • • {Passive matrix displays}

M H01L 27/3283 • • • • • {including banks or shadow masks}

WARNING

Group H01L 27/3283 is incomplete pending reclassification of documents from group H01L 27/3295.
Groups H01L 27/3295 and H01L 27/3283 should be considered in order to perform a complete search.

M	H01L 27/3288	<ul style="list-style-type: none"> • • • • {Wiring lines} <p>WARNING Group H01L 27/3288 is incomplete pending reclassification of documents from group H01L 27/3297. Groups H01L 27/3297 and H01L 27/3288 should be considered in order to perform a complete search.</p>
D	H01L 27/3295 —(Frozen)	<ul style="list-style-type: none"> • • • • {including banks or shadow masks} <p>WARNING Group H01L 27/3295 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H01L 27/3246 and H01L 27/3283. Groups H01L 27/3295, H01L 27/3246 and H01L 27/3283 should be considered in order to perform a complete search.</p>
D	H01L 27/3297 —(Frozen)	<ul style="list-style-type: none"> • • • • {Wiring lines, e.g. power supply lines} <p>WARNING Group H01L 27/3297 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H01L 27/3276 and H01L 27/3288. Groups H01L 27/3297, H01L 27/3276 and H01L 27/3288 should be considered in order to perform a complete search.</p>
U	H01L 51/00	Solid state devices using organic materials as the active part, or using a combination of organic materials with other materials as the active part; Processes or apparatus specially adapted for the manufacture or treatment of such devices, or of parts thereof (devices consisting of a plurality of components formed in or on a common substrate H01L 27/28; thermoelectric devices using organic material H01L 35/00, H01L 37/00; piezoelectric, electrostrictive or magnetostrictive elements using organic material H01L 41/00)
U	H01L 51/50	<ul style="list-style-type: none"> • specially adapted for light emission, e.g. organic light emitting diodes [OLED] or polymer light emitting devices [PLED] (organic semiconductor lasers H01S 5/36 {; circuit arrangements for OLED or PLED H05B 45/60; control arrangements for organic electroluminescent displays G09G 3/3208})
U	H01L 51/5048	<ul style="list-style-type: none"> • • {Carrier transporting layer}
D	H01L 51/5052 —(Frozen)	<ul style="list-style-type: none"> • • • {Doped transporting layer} <p>WARNING Groups H01L 51/5052 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H01L 51/506 and H01L 51/5076. Groups H01L 51/5052, H01L 51/506 and H01L 51/5076 should be considered in order to perform a complete search.</p>
U	H01L 51/5056	<ul style="list-style-type: none"> • • • {Hole transporting layer}
M	H01L 51/506	<ul style="list-style-type: none"> • • • • {comprising a dopant} <p>WARNING Group H01L 51/506 is incomplete pending reclassification of documents from group H01L 51/5052. Groups H01L 51/5052 and H01L 51/506 should be considered in order to perform a complete search.</p>

- U H01L 51/5072 • • • {Electron transporting layer}
- M H01L 51/5076 • • • • {comprising a dopant}

WARNING

Group H01L 51/5076 is incomplete pending reclassification of documents from group H01L 51/5052.

Groups H01L 51/5052 and H01L 51/5076 should be considered in order to perform a complete search.

Project: MP0516 (H01M)**M H01M 4/00****Electrodes**NOTE

In classifying electrodes of hybrid cells, the individual half-cells of the hybrid cell are considered separately, e.g. an electrode in the primary half of a primary/fuel type hybrid cell is considered to be a primary-cell electrode covered by H01M 4/06.

- M H01M 4/02 • Electrodes composed of, or comprising, active material
- M H01M 4/36 • • Selection of substances as active materials, active masses, active liquids
 ~~{{electrode materials of hybrid or double layer capacitors H01G 11/30-
 H01G 11/50}}~~
- M H01M 4/64 • • Carriers or collectors ~~{{current collector for hybrid or electric double layer
 capacitors H01G 11/66}}~~
- U H01M 4/86 • Inert electrodes with catalytic activity, e.g. for fuel cells
- U H01M 4/90 • • Selection of catalytic material
- M H01M 4/92 • • • Metals of platinum group (H01M 4/94, ~~{~~ H01M 4/9058) take precedence)

U H01M 6/00**Primary cells; Manufacture thereof**NOTE

In this group, primary cells are electrochemical generators in which the cell energy is present in chemical form and is not regenerated.

- U H01M 6/04 • Cells with aqueous electrolyte
- U H01M 6/06 • • Dry cells, i.e. cells wherein the electrolyte is rendered non-fluid
- M H01M 6/08 • • • with cup-shaped electrodes
- M H01M 6/14 • Cells with non-aqueous electrolyte ~~{{(H01M 10/05 takes precedence)}}~~
- M H01M 6/16 • • with organic electrolyte (H01M 6/18, ~~{{(H01M 10/05 take precedence)}}~~ takes precedence)
- M H01M 6/50 • Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)

WARNING

Group H01M 6/50 is impacted by reclassification into group H01M 50/569.

Groups H01M 6/50 and H01M 50/569 should be considered in order to perform a complete search.

M H01M 8/00**Fuel cells; Manufacture thereof**NOTE

~~Fuel cells are electrochemical generators wherein the reactants are supplied from outside~~

In this group, the following expression is used with the meaning indicated:

- *"Fuel cell" means an electrochemical generator wherein the reactants are supplied from outside.*

- U H01M 8/04
 - Auxiliary arrangements, e.g. for control of pressure or for circulation of fluids
- U H01M 8/04007
 - • related to heat exchange
- U H01M 8/04067
 - • • {Heat exchange or temperature measuring elements, thermal insulation, e.g. heat pipes, heat pumps, fins}
- M H01M 8/04074
 - • • • {Heat exchange unit structures specially adapted for fuel cell ~~(heat exchanger for fuel cells F28D-2021/0043)~~}
- U H01M 8/10
 - Fuel cells with solid electrolytes
- U H01M 8/1009
 - • with one of the reactants being liquid, solid or liquid-charged ([H01M 8/12](#) takes precedence)
- U H01M 8/1011
 - • • Direct alcohol fuel cells [DAFC], e.g. direct methanol fuel cells [DMFC]
- M H01M 8/1013
 - • • • {Other direct alcohol fuel cells [DAFC] ~~(DMFCs H01M 8/1011)~~}
- U H01M 8/1016
 - • characterised by the electrolyte material ([H01M 8/12](#) takes precedence)
- U H01M 8/1018
 - • • Polymeric electrolyte materials
- U H01M 8/1069
 - • • • characterised by the manufacturing processes
- M H01M 8/1072
 - • • • • by chemical reactions, e.g. *in-situ**insitu* polymerisation or *in-situ**insitu* crosslinking
- U H01M 8/12
 - • operating at high temperature, e.g. with stabilised ZrO₂ electrolyte
- U H01M 8/124
 - • • characterised by the process of manufacturing or by the material of the electrolyte
- U H01M 8/1246
 - • • • the electrolyte consisting of oxides
- M H01M 8/1273
 - • • • • {Fuel cells with solid halide electrolytes ~~(solid halide electrolyte H01M 2300/008)~~}
- M H01M 2008/128
 - • • {Fuel cells with solid halide electrolytes ~~(solid halide electrolyte H01M 2300/008)~~}
- U H01M 8/14
 - Fuel cells with fused electrolytes
- M H01M 8/146
 - • {Fuel cells with molten hydroxide ~~(molten hydroxide electrolyte H01M 2300/006)~~}

M H01M 10/00

Secondary cells; Manufacture thereof

NOTE

Secondary *In this group, secondary* cells are accumulators receiving and supplying electrical energy by means of reversible electrochemical reactions.

- U H01M 10/05
 - Accumulators with non-aqueous electrolyte ([H01M 10/39](#) takes precedence)
- M H01M 10/056
 - • characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes ~~(electrolytes for hybrid or electric double layer capacitors H01G 11/54)~~
- U H01M 10/42
 - Methods or arrangements for servicing or maintenance of secondary cells or secondary half-cells ([H01M 10/60](#) takes precedence)
- M H01M 10/48
 - • Accumulators combined with arrangements for measuring, testing or indicating ~~condition, e.g. the condition of cells, e.g. the~~ level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. *details* of voltage sensing terminals, [H01M 50/569](#))

WARNING

Group [H01M 10/48](#) is impacted by reclassification into group [H01M 50/569](#). Groups [H01M 10/48](#) and [H01M 50/569](#) should be considered in order to perform a complete search.

- U H01M 10/60 • Heating or cooling; Temperature control
- M H01M 10/63 • • Control systems (~~measurement of temperature H01M 10/486~~; charging or discharging in response to temperature [H01M 10/44](#) {, [H01M 10/443](#)}; ~~measurement of temperature H01M 10/48~~ {, [H01M 10/486](#)})

M H01M 12/00 Hybrid cells; Manufacture thereof (hybrid capacitors [H01G 11/00](#))

NOTES

1. This group does not cover hybrid cells comprising capacitor electrodes and battery electrodes, which are covered by group [H01G 11/00](#).
2. In this group, hybrid cells are electrochemical generators having two different types of half-cells, the half-cell being an electrode-electrolyte combination of either a primary, a secondary or a fuel cell.

WARNING

Group [H01M 12/00](#) is impacted by reclassification into group [H01G 11/00](#) – [H01G 11/86](#).

All groups listed in this Warning should be considered in order to perform a complete search.

U H01M 50/00 Constructional details or processes of manufacture of the non-active parts of electrochemical cells other than fuel cells, e.g. hybrid cells

- U H01M 50/50 • Current conducting connections for cells or batteries

WARNING

Group [H01M 50/50](#) is impacted by reclassification into group [H01M 50/569](#).

Groups [H01M 50/50](#) and [H01M 50/569](#) should be considered in order to perform a complete search.

- M H01M 50/569 • • Constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. [details](#) of voltage sensing terminals (battery terminal connectors with integrated measuring arrangements [G01R 31/364](#))

WARNING

Group [H01M 50/569](#) is incomplete pending reclassification of documents from groups [H01M 6/50](#), [H01M 6/5044](#), [H01M 6/505](#), [H01M 6/5055](#), [H01M 6/5061](#), [H01M 10/48](#), [H01M 10/482](#), [H01M 10/484](#), [H01M 10/486](#), [H01M 10/488](#), [H01M 50/50](#), [H01M 50/502](#), and [H01M 50/543](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U H01M 50/572 • • Means for preventing undesired use or discharge

WARNING

Group [H01M 50/572](#) is impacted by reclassification into groups [H01M 6/5044](#), [H01M 50/574](#), [H01M 50/583](#), [H01M 50/584](#), [H01M 50/586](#), [H01M 50/588](#), [H01M 50/59](#), [H01M 50/591](#), [H01M 50/593](#), [H01M 50/595](#), and [H01M 50/597](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- U H01M 50/584 • • for preventing incorrect connections inside or outside the batteries

WARNING

Groups [H01M 50/584](#), [H01M 50/586](#), [H01M 50/588](#), [H01M 50/59](#), [H01M 50/595](#), and [H01M 50/597](#) are incomplete pending reclassification of documents from group [H01M 50/572](#).

All groups listed in this Warning should be considered in order to perform a complete search.

- M H01M 50/586 • • • inside the batteries, e.g. ~~of electrodes or electrode connections~~*incorrect connections of electrodes*
- M H01M 50/588 • • • outside the batteries, e.g. *incorrect connections* of terminals or busbars

Project: MP0536 (H01R)

M H01R ELECTRICALLY-CONDUCTIVE CONNECTIONS; STRUCTURAL ASSOCIATIONS OF A PLURALITY OF MUTUALLY-INSULATED ELECTRICAL CONNECTING ELEMENTS; COUPLING DEVICES; CURRENT COLLECTORS

NOTES1. This subclass covers:

- all kinds of contact-making ~~disconnectible~~*disconnectable* and non-~~disconnectible electric line connectors~~*disconnectable electric line connecting devices*, coupling devices, lamp or similar holders or current collectors for all kinds of electric lines, cables or apparatus;
- non-printed means for electric connections to or between printed circuits.

2. This subclass does not cover mounting of connections in or *on* specified apparatus. Such mounting is covered by the relevant subclass for such apparatus, e.g. mounting in junction or distribution boxes is covered by subclass [H02B](#) or [H02G](#), high-temperature connections for heating elements is covered by group [H05B 3/08](#). Structural association of one part of a ~~two-part~~ coupling device with specific electric apparatus is classified with the apparatus, e.g. association of cap with incandescent lamp is covered by subclass [H01K](#).

3. In this subclass, the following expressions are used with the meaning indicated:

- ~~"pin" is a rigid or flexible conductor for engagement with an appropriately shaped socket to establish contact therewith;~~
"pin" is a rigid or flexible conductor for engagement with an appropriately shaped socket to establish contact therewith;
- ~~"socket" is a rigid or flexible conductor for receiving an appropriate pin to establish electrical contact therewith;~~
"socket" is a rigid or flexible conductor for receiving an appropriate pin to establish electrical contact therewith;
- ~~"coupling devices" are devices having two or more parts specially adapted so as to be capable of ready and repeated physical engagement or disengagement, without the use of a tool, for the purpose of establishing or breaking an electrical path. Examples of such devices having more than two parts are:~~
"coupling devices" are devices having two or more parts specially adapted so as to be capable of ready and repeated physical engagement or disengagement, without the use of a tool, for the purpose of establishing or breaking an electrical path. Examples of such devices having more than two parts:
 - a. adapters for linking two coupling parts;
 - b. rails or bus-bars provided with a plurality of discrete connecting locations for counterparts.

4. General details are classified in groups [H01R 4/00](#), [H01R 9/00](#), [H01R 11/00](#), [H01R 12/00](#).

5. {In this subclass, a contact in a coupling device is regarded as an additional earth contact only if this contact is clearly designed for that purpose.}

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0548-F (H01S)

- U H01S 5/00 Semiconductor lasers (superluminescent diodes [H01L 33/00](#))**
- NOTE
Attention is drawn to Special Rules of classification at [C07F](#), which Special Rules indicate to which version of the periodic table of chemical elements CPC refers. In this group, the Periodic System used is the 8 group system indicated by Roman numerals in the Periodic Table thereunder.
- M H01S 5/005** • {Optical components external to the laser cavity, specially adapted therefor, e.g. for homogenisation or merging of the beams or for manipulating laser pulses, e.g. pulse shaping ([H01S 5/026](#), [H01S 5/18388](#) take precedence)}
- WARNING
~~Group H01S 5/005 is impacted by reclassification into group H01S 5/0087. Groups H01S 5/005 and H01S 5/0087 should be considered in order to perform a complete search.~~
- M H01S 5/0087** • • {for illuminating phosphorescent or fluorescent materials, e.g. using optical arrangements specifically adapted for guiding or shaping laser beams illuminating these materials}
- WARNING
~~Group H01S 5/0087 is incomplete pending reclassification of documents from group H01S 5/005. Groups H01S 5/005 and H01S 5/0087 should be considered in order to perform a complete search.~~

Project: MP0517 (H01S)

- U H01S 5/02** • Structural details or components not essential to laser action
- U H01S 5/022** • • Mountings; Housings
- WARNING
Group [H01S 5/022](#) is impacted by reclassification into groups [H01S 5/02218](#) and [H01S 5/0239](#).
Groups [H01S 5/022](#), [H01S 5/02218](#), and [H01S 5/0239](#) should be considered in order to perform a complete search.
- U H01S 5/0233** • • • Mounting configuration of laser chips
- WARNING
Group [H01S 5/0233](#) is impacted by reclassification into group [H01S 5/02335](#).
Groups [H01S 5/0233](#) and [H01S 5/02335](#) should be considered in order to perform a complete search.
- M H01S 5/02335** • • • Up-side up mountings, e.g. **ep****epi**-side up mountings or junction up mountings
- WARNING
Group [H01S 5/02335](#) is incomplete pending reclassification of documents from group [H01S 5/0233](#).
Groups [H01S 5/0233](#) and [H01S 5/02335](#) should be considered in order to perform a complete search.

Project: RP0733 (H02K)

M H02K **DYNAMO-ELECTRIC MACHINES (dynamo-electric relays [H01H 53/00](#); conversion of DC or AC input power into surge output power [{H03K 3/53}](#))**

NOTES

1. This subclass covers the structural adaptation of dynamo-electric machines for the purpose of their control.
2. This subclass does not cover starting, regulating, electronically commutating, braking, or otherwise controlling motors, generators or dynamo-electric converters, in general, which **are** covered by subclass [H02P](#).
3. Attention is drawn to the Notes following the titles of class [B81](#) and subclass [B81B](#) relating to "microstructural devices" and "microstructural systems".
4. Group [H02K 16/00](#) takes precedence over groups [H02K 17/00](#) - [H02K 53/00](#). {This Note corresponds to IPC Note (1) relating to [H02K 17/00](#) - [H02K 53/00](#).}
5. {In this subclass, it is desirable to add the indexing codes of [H02K 2201/00-H02K 2213/12](#).}

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- U H02K 1/00** **Details of the magnetic circuit (magnetic circuits for relays [H01H 50/16](#))**
- U H02K 1/06 . characterised by the shape, form or construction
 - U H02K 1/22 . . Rotating parts of the magnetic circuit
 - U H02K 1/27 . . . Rotor cores with permanent magnets
 - M H02K 1/2706 {~~Inner rotor~~} *Inner rotors*
 - M H02K 1/2713 {~~where~~ the magnetisation axis of the magnets ~~is axial~~} *being axial, e.g. claw-pole type*
 - M H02K 1/272 {~~where~~ the magnetisation axis of the magnets ~~is radial or tangential~~} *being perpendicular to the rotor axis*
 - M H02K 1/2726 {~~the rotor~~ consisting of a single magnet or ~~of a plurality of axially juxtaposed single magnets~~} *two or more axially juxtaposed single magnets*
 - M H02K 1/2733 {Annular magnets}
 - M H02K 1/274 {~~consisting of a plurality of circumferentially positioned magnets~~} *the rotor consisting of two or more circumferentially positioned magnets*
 - M H02K 1/2746 {~~the rotor~~ consisting of magnets arranged with the same polarity}, *e.g. consequent pole type*
 - M H02K 1/2753 {~~the rotor~~ consisting of magnets or groups of magnets arranged with alternating polarity}
 - M H02K 1/276 {Magnets embedded in the magnetic core}, *e.g. interior permanent magnets [IPM]*
 - U H02K 1/2766 {having a flux concentration effect}
 - C H02K 1/278 {Surface mounted magnets; ~~Inset magnets~~}

WARNING

Group [H02K 1/278](#) is impacted by reclassification into groups [H02K 1/2781](#) and [H02K 1/2783](#).

Groups [H02K 1/278](#), [H02K 1/2781](#) and [H02K 1/2783](#) should be considered in order to perform a complete search.

- N H02K 1/2781 Magnets shaped to vary the mechanical air gap between the magnets and the stator
- WARNING
Group [H02K 1/2781](#) is incomplete pending reclassification of documents from group [H02K 1/278](#).
Groups [H02K 1/278](#) and [H02K 1/2781](#) should be considered in order to perform a complete search.
- N H02K 1/2783 with magnets arranged in Halbach arrays
- WARNING
Group [H02K 1/2783](#) is incomplete pending reclassification of documents from group [H02K 1/278](#).
Groups [H02K 1/278](#) and [H02K 1/2783](#) should be considered in order to perform a complete search.
- C H02K 1/2786 ~~{Outer rotor}~~Outer rotors
- WARNING
Group [H02K 1/2786](#) is impacted by reclassification into groups [H02K 1/2787](#), [H02K 1/2788](#), [H02K 1/2789](#), [H02K 1/279](#), [H02K 1/2791](#), [H02K 1/27915](#) and [H02K 1/2792](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H02K 1/2787 the magnetisation axis of the magnets being perpendicular to the rotor axis
- WARNING
Groups [H02K 1/2787](#), [H02K 1/2788](#), [H02K 1/2789](#), [H02K 1/279](#), [H02K 1/2791](#), [H02K 1/27915](#) and [H02K 1/2792](#) are incomplete pending reclassification of documents from group [H02K 1/2786](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H02K 1/2788 the rotor consisting of a single magnet or two or more axially juxtaposed single magnets
- N H02K 1/2789 the rotor consisting of two or more circumferentially positioned magnets
- N H02K 1/279 Magnets embedded in the magnetic core
- N H02K 1/2791 Surface mounted magnets; Inset magnets
- N H02K 1/27915 Magnets shaped to vary the mechanical air gap between the magnets and the stator
- N H02K 1/2792 with magnets arranged in Halbach arrays
- C H02K 1/2793 ~~{Rotor axially facing stator}~~Rotors axially facing stators
- WARNING
Group [H02K 1/2793](#) is impacted by reclassification into groups [H02K 1/2795](#), [H02K 1/2796](#) and [H02K 1/2798](#).
All groups listed in this Warning should be considered in order to perform a complete search.
- N H02K 1/2795 the rotor consisting of two or more circumferentially positioned magnets
- WARNING
Groups [H02K 1/2795](#), [H02K 1/2796](#) and [H02K 1/2798](#) are incomplete pending reclassification of documents from group [H02K 1/2793](#).

All groups listed in this Warning should be considered in order to perform a complete search.

N H02K 1/2796 where both axial sides of the rotor face a stator

N H02K 1/2798 where both axial sides of the stator face a rotor

U H02K 7/00 Arrangements for handling mechanical energy structurally associated with dynamo-electric machines, e.g. structural association with mechanical driving motors or auxiliary dynamo-electric machines

M H02K 7/10 . Structural association with clutches, brakes, gears, pulleys or mechanical starters

NOTE

{Group [H02K 7/12](#) takes precedence over groups [H02K 7/102](#) - [H02K 7/118](#)}

Project: MP0518 (H03K)

M H03K PULSE TECHNIQUE (measuring pulse characteristics [G01R](#); modulating sinusoidal oscillations with pulses [H03C](#); transmission of digital information [H04L](#); discriminator circuits detecting phase difference between two signals by counting or integrating cycles of oscillation [H03D 3/04](#); automatic control, starting, synchronisation or stabilisation of generators of electronic oscillations or pulses where the type of generator is irrelevant or unspecified [H03L](#); coding, decoding or code conversion, in general [H03M](#))

NOTES

1. This subclass covers:

- methods, circuits, devices, or apparatus using active elements operating in a discontinuous or switching manner for generating, counting, amplifying, shaping, modulating, demodulating, or otherwise manipulating signals;
- electronic switching not involving contact-making and braking;
- logic circuits handling electric pulses.

2. In this subclass, the following expression is used with the meaning indicated:

- "active element" exercises control over the conversion of input energy into an oscillation or a discontinuous flow of energy.

3. In this subclass, where the claims of a patent document are not limited to a specific circuit element, the document is classified at least according to the elements used in the described embodiment.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

[H03K 17/695](#) covered by [H03K 17/687](#)

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: N/A (H04L)**H04L**

TRANSMISSION OF DIGITAL INFORMATION, e.g. TELEGRAPHIC COMMUNICATION ({coding or ciphering apparatus for cryptographic or other purposes involving the need for secrecy [G09C](#);} arrangements common to telegraphic and telephonic communication [H04M](#))

NOTE

This subclass covers transmission of signals having been supplied in digital form and includes data transmission, telegraphic communication and methods or arrangements for monitoring.

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

H04L 9/18	covered by	H04L 9/065
H04L 9/20	covered by	H04L 9/0656
H04L 9/22	covered by	H04L 9/0662
H04L 9/24	covered by	H04L 9/0662
H04L 9/26	covered by	H04L 9/0668
H04L 9/28	covered by	H04L 9/002 , H04L 9/008 , H04L 9/06 , H04L 9/08 , H04L 9/30 , H04L 9/32
H04L 12/20	covered by	H04L 29/00
H04L 12/24	covered by	H04L 41/00
H04L 12/26	covered by	H04L 43/00
H04L 12/58	covered by	H04L 51/00
H04L 12/60-H04L 12/62	covered by	H04L 12/54
H04L 12/70	covered by	H04L 47/00
H04L 12/701	covered by	H04L 45/00
H04L 12/703	covered by	H04L 45/28
H04L 12/705	covered by	H04L 45/18
H04L 12/707	covered by	H04L 45/22, H04L 45/24
H04L 12/709	covered by	H04L 45/245
H04L 12/711	covered by	H04L 45/22, H04L 45/24
H04L 12/713	covered by	H04L 45/586
H04L 12/715	covered by	H04L 45/04, H04L 45/46, H04L 45/64
H04L 12/717	covered by	H04L 45/42
H04L 12/721	covered by	H04L 45/06, H04L 45/12, H04L 45/123, H04L 45/124, H04L 45/127, H04L 45/14, H04L 45/26, H04L 45/32, H04L 45/34, H04L 45/36, H04L 45/38, H04L 45/40, H04L 45/44, H04L 45/566, H04L 45/62, H04L 45/66, H04L 45/68, H04L 45/70, H04L 45/72
H04L 12/723	covered by	H04L 45/50-H04L 45/507
H04L 12/725	covered by	H04L 45/30-H04L 45/308
H04L 12/727	covered by	H04L 45/121
H04L 12/729	covered by	H04L 45/125
H04L 12/733	covered by	H04L 45/122, H04L 45/126, H04L 45/20

H04L 12/735	covered by	H04L 45/128-H04L 45/1287
H04L 12/741	covered by	H04L 45/54, H04L 45/74, H04L 45/745
H04L 12/743	covered by	H04L 45/7453, H04L 45/7457
H04L 12/745	covered by	H04L 45/748
H04L 12/747	covered by	H04L 45/742
H04L 12/749	covered by	H04L 45/741
H04L 12/751	covered by	H04L 45/02, H04L 45/025, H04L 45/026, H04L 45/08, H04L 45/10
H04L 12/753	covered by	H04L 45/48
H04L 12/755	covered by	H04L 45/021
H04L 12/757	covered by	H04L 45/023
H04L 12/759	covered by	H04L 45/023
H04L 12/761	covered by	H04L 45/16
H04L 12/763	covered by	H04L 45/00
H04L 12/771	covered by	H04L 45/56, H04L 45/563
H04L 12/773	covered by	H04L 45/60
H04L 12/775	covered by	H04L 45/58, H04L 45/583
H04L 12/781	covered by	H04L 45/52
H04L 12/801	covered by	H04L 47/10, H04L 47/11, H04L 47/115, H04L 47/12, H04L 47/127, H04L 47/13- H04L 47/196, H04L 47/29, H04L 47/33, H04L 47/34, H04L 47/35, H04L 47/37, H04L 47/39
H04L 12/803	covered by	H04L 47/122, H04L 47/125
H04L 12/805	covered by	H04L 47/36, H04L 47/365
H04L 12/807	covered by	H04L 47/27
H04L 12/811	covered by	H04L 47/38
H04L 12/813	covered by	H04L 47/20
H04L 12/815	covered by	H04L 47/22, H04L 47/225, H04L 47/23
H04L 12/819	covered by	H04L 47/21, H04L 47/215
H04L 12/823	covered by	H04L 47/32-H04L 47/326
H04L 12/825	covered by	H04L 47/25-H04L 47/266
H04L 12/827	covered by	H04L 47/25-H04L 47/266
H04L 12/829	covered by	H04L 47/25-H04L 47/266
H04L 12/833	covered by	H04L 47/2458, H04L 47/31
H04L 12/835	covered by	H04L 47/30
H04L 12/841	covered by	H04L 47/28-H04L 47/286
H04L 12/851	covered by	H04L 47/24, H04L 47/2408, H04L 47/2425, H04L 47/2433, H04L 47/245, H04L 47/2483
H04L 12/853	covered by	H04L 47/2416
H04L 12/855	covered by	H04L 47/2466
H04L 12/857	covered by	H04L 47/2491
H04L 12/859	covered by	H04L 47/2475
H04L 12/861	covered by	H04L 49/90, H04L 49/9005, H04L 49/9031-H04L 49/9094

H04L 12/863	covered by	H04L 47/50, H04L 47/54; H04L 47/62-H04L 47/627; H04L 47/628, H04L 47/6285; H04L 47/6295
H04L 12/865	covered by	H04L 47/6275
H04L 12/867	covered by	H04L 47/629
H04L 12/869	covered by	H04L 47/58, H04L 47/60
H04L 12/873	covered by	H04L 47/52, H04L 47/521; H04L 47/522, H04L 47/524; H04L 47/527, H04L 47/528
H04L 12/875	covered by	H04L 47/56-H04L 47/568
H04L 12/877	covered by	H04L 47/525
H04L 12/879	covered by	H04L 49/901, H04L 49/9026
H04L 12/883	covered by	H04L 49/9015, H04L 49/9021
H04L 12/885	covered by	H04L 49/90, H04L 49/9005; H04L 49/9031-- H04L 49/9094
H04L 12/891	covered by	H04L 47/41
H04L 12/893	covered by	H04L 47/40
H04L 12/901	covered by	H04L 2012/5603-- H04L 2012/5687
H04L 12/903	covered by	H04L 2012/5603-- H04L 2012/5687
H04L 12/905	covered by	H04L 2012/5603-- H04L 2012/5687
H04L 12/911	covered by	H04L 47/70-H04L 47/748; H04L 47/78, H04L 47/781; H04L 47/782, H04L 47/783; H04L 47/788, H04L 47/82- H04L 47/829
H04L 12/913	covered by	H04L 47/724
H04L 12/915	covered by	H04L 47/785, H04L 47/787; H04L 47/787
H04L 12/917	covered by	H04L 47/76
H04L 12/919	covered by	H04L 47/765, H04L 47/767
H04L 12/923	covered by	H04L 47/762
H04L 12/925	covered by	H04L 47/722
H04L 12/927	covered by	H04L 47/80-H04L 47/808
H04L 12/931	covered by	H04L 49/00, H04L 49/20-- H04L 49/208, H04L 49/35-- H04L 49/508, H04L 49/60-- H04L 49/70
H04L 12/933	covered by	H04L 49/10-H04L 49/1592
H04L 12/935	covered by	H04L 49/30-H04L 49/3009
H04L 12/937	covered by	H04L 49/253-H04L 49/255
H04L 12/939	covered by	H04L 49/55-H04L 49/557
H04L 12/943	covered by	H04L 49/55-H04L 49/557
H04L 12/945	covered by	H04L 49/55-H04L 49/557
H04L 12/947	covered by	H04L 49/25, H04L 49/251; H04L 49/252, H04L 49/256; H04L 49/257, H04L 49/258
H04L 12/951	covered by	H04L 2012/5603-- H04L 2012/5687

H04L 12/953	covered by	H04L 2012/5603-- H04L 2012/5687
H04L 12/955	covered by	H04L 2012/5603-- H04L 2012/5687
H04L 25/04	covered by	H04L 25/03
H04L 25/17	covered by	H04L 25/02 - H04L 25/0298
H04L 25/18	covered by	H04L 25/027
H04L 25/28	covered by	H04L 25/0268
H04L 25/30	covered by	H04L 25/061
H04L 25/32	covered by	H04L 25/49
H04L 25/34	covered by	H04L 25/4917
H04L 25/48	covered by	H04L 25/49
H04L 25/52	covered by	H04L 25/20
H04L 25/54	covered by	H04L 25/20
H04L 25/56	covered by	H04L 25/202
H04L 25/58	covered by	H04L 25/20
H04L 25/60	covered by	H04L 25/207
H04L 25/62	covered by	H04L 25/205
H04L 25/64	covered by	H04L 25/245
H04L 25/66	covered by	H04L 25/247

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

Project: RP0716 (H04M)

U	H04M 1/00	Substation equipment, e.g. for use by subscribers (subscriber services or facilities provided at exchanges H04M 3/00 ; prepayment telephone coin boxes H04M 17/00 ; current supply arrangements H04M 19/08)
U	H04M 1/02	• Constructional features of telephone sets
M	H04M 1/0202	• • {Portable telephone sets, e.g. cordless phones, mobile phones or bar type handsets (constructional features of telephone transmitters or receivers, e.g. of speakers or microphones H04M 1/03 ; mounting of the dialing module H04M 1/23 ; with protection against RF exposure H04B 1/3838)}
D	H04M 2001/0204	• • • {including a battery compartment} <administratively transferred to H04M 1/0262 >
U	H04M 1/0254	• • • {comprising one or a plurality of mechanically detachable modules}
M	H04M 1/0258	• • • • {for a headset device (constructional features of headsets H04M 1/05 ; headsets for handsfree use H04M 1/6058)}
U	H04M 1/026	• • • {Details of the structure or mounting of specific components}
M	H04M 1/0264	• • • • {for a camera module assembly (photo or video cameras per se G03B ; television cameras per se H04N 5/225)}
M	H04M 1/0266	• • • • {for a display module assembly (for fixed telephones H04M 1/0295)}
M	H04M 1/17	• Hygienic or sanitary devices on telephone equipment (for mouthpieces or earpieces per se H04R 1/12)

Project: RP0702-F (H04M)

- M H04M 1/247
- Telephone sets including user guidance or feature selection means facilitating their use (user interfaces specially adapted for cordless or mobile telephones [H04M 1/724](#))

WARNING

Group H04M 1/247 is impacted by reclassification into groups H04M 1/724, H04M 1/72403, H04M 1/72406, H04M 1/72409, H04M 1/72412, H04M 1/72415, H04M 1/72418, H04M 1/72421, H04M 1/72424, H04M 1/72427, H04M 1/7243, H04M 1/72433, H04M 1/72436, H04M 1/72439, H04M 1/72442, H04M 1/72445, H04M 1/72448, H04M 1/72451, H04M 1/72454, H04M 1/72457, H04M 1/7246, H04M 1/72463, H04M 1/72466, H04M 1/72469, H04M 1/72472, H04M 1/72475, H04M 1/72478, H04M 1/72481, and H04M 1/72484.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0716 (H04M)

- U H04M 1/26
- Devices for calling a subscriber ([H04M 1/66](#) takes precedence)
- M H04M 1/27
- • Devices whereby a plurality of signals may be stored simultaneously ~~{{(devices disposed in the exchange H04M 3/424, H04M 3/44)}}~~
- U H04M 1/66
- with means for preventing unauthorised or fraudulent calling (verifying user identity or authority in secret or secure digital communications [H04L 9/32](#))
- U H04M 1/667
- • Preventing unauthorised calls from a telephone set ([H04M 1/677](#) takes precedence)
- U H04M 1/67
- • • by electronic means
- M H04M 1/675
- • • the user being required to insert a coded card, e.g. a smart card carrying an integrated circuit chip ~~{{(for constructional features in portable telephones H04B 1/3816)}}~~

Project: RP0702-F (H04M)

- M H04M 1/71
- Substation extension arrangements

WARNING

Group H04M 1/71 is incomplete pending reclassification of documents from group H04M 1/72.

Groups H04M 1/72 and H04M 1/71 should be considered in order to perform a complete search.

- M H04M 1/72
- Mobile telephones; Cordless telephones, i.e. devices for establishing wireless links to base stations without route selection

WARNING

Group H04M 1/72 is impacted by reclassification into group H04M 1/71.

Groups H04M 1/72 and H04M 1/71 should be considered in order to perform a complete search.

- M H04M 1/724
- • User interfaces specially adapted for cordless or mobile telephones

WARNING

Groups H04M 1/724 - H04M 1/72484 are incomplete pending reclassification of documents from group H04M 1/247.

All groups listed in this Warning should be considered in order to perform a complete search.

Project: RP0716 (H04M)

- U H04M 1/725 · · Cordless telephones (user interfaces specially adapted therefor [H04M 1/724](#))
- M H04M 1/73 · · · Battery saving arrangements ~~{{(by switching on/off the receiving circuit H04B 1/1615)}}~~

Project: RP0760 (H04N)

- U H04N 1/00 Scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission; Details thereof**
- U H04N 1/0035 · {User-machine interface; Control console (input or output arrangements for computers [G06F 3/00](#))}
- U H04N 1/00352 · · {Input means ([H04N 1/00411](#) takes precedence; input arrangements for computers [G06F 3/00](#))}
- H04N 1/00381 · · · {Input by recognition or interpretation of visible user gestures (manual input means, e.g. digitisers, writing tablets [H04N 1/00392](#); ~~recognition algorithms G06K 9/00335~~; gesture input to computers [G06F 3/017](#); ~~recognition algorithms G06V 40/20~~)}
- U H04N 21/00 Selective content distribution, e.g. interactive television or video on demand [VOD] (real-time bi-directional transmission of motion video data [H04N 7/14](#) {; broadcast or conference over packet switching networks [H04L 12/18](#)})**

NOTES**1. This group covers :**

- interactive video distribution processes, systems, or elements thereof, which are characterised by point-to-multipoint system configurations, and which are mainly used for motion video data unidirectional distribution or delivery resulting from interactions between systems operators, e.g. access or service providers, or users e.g. subscribers, and system elements.
- such systems include dedicated communication systems, such as television distribution systems, which primarily distribute or deliver motion video data in the manner indicated, which may, in addition, provide a framework for further, diverse data communications or services in either unidirectional or bi-directional form. However, video will occupy most of the downlink bandwidth in the distribution process.
- typically, system operators interface with transmitter-side elements or users' interface with receiver-side elements in order to facilitate, through interaction with such elements, the dynamic control of data processing or data flow at various points in the system. This interaction is typically occasional or intermittent in nature.
- processes, systems or elements thereof specially adapted to the generation, distribution and processing of data, which is either associated with video content, e.g. metadata, ratings, or related to the user or his environment and which has been actively or passively gathered. This data is either used to facilitate interaction or to alter or target the content.

2. In this main group, the first place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

3. In this main group, the following terms and expressions are used with the meaning indicated:

additional data - designates still pictures, textual, graphical or executable data such as software. It is used to convey supplemental information and can be generated prior to or during the distribution process itself, e.g. metadata, keys.

content designates video or audio streams, which may be combined with additional data. Video data will always be present and occupy most of the downlink bandwidth in the distribution process

server - designates an apparatus designed for adapting the content received from the content provider to the distribution network. It also manages the distribution to client devices or intermediate components over a network. Further servers may also be present for gathering or generating additional data, e.g. rights management server

additional data server - designates a server, which sole purpose is the distribution or management of additional data. It is not in charge of the distribution of video or audio data

client - designates an apparatus such as a TV receiver, a set-top-box, a PC-TV, a mobile appliance (e.g. mobile phone or receiver in a vehicle), for receiving video, audio and possibly additional data from one or several servers or intermediate components via a network for further processing, storing or displaying. It can also transmit this data on a home-based local network to further devices, e.g. a home server transmitting video to PCs and set-top-boxes within a home.

local network - pertains to a restricted area, e.g. a home or a vehicle, and designates the link between a client and its peripheral devices

network - is to be distinguished from "local network": "network" designates the link between the server and the clients, or between the server and the intermediate components, or between the intermediate components and the clients, or between remotely located clients

distribution - encompasses broadcasting, multicasting and unicasting techniques for transmitting content from one or more sources to one or more receiving stations. The distribution follows a request by a receiving station to the source, e.g. VOD or from a customization of the content by the source, e.g. targeting advertisements to a demographic group in a unidirectional or bidirectional system. Additionally, distribution encompasses techniques where the client acts as a source and another client acts as a receiving station, e.g. a peer-to-peer system for sharing video among client devices

end-user - designates a physical person, e.g. a TV viewer, who consumes the content using the client device. He is the final recipient of the content distributed by the server

interaction - covers actions occurring between or among two or more objects that have an effect upon one another, wherein objects comprise users, system operators, system elements, or content. The user may interact with content locally at the client device, e.g. for requesting additional data stored within the client device. The user may interact with content remotely through a server e.g. for VOD playback control or for uploading video to a server. The client device may interact with the content e.g. selecting content based upon the user profile. The client device may interact with a server using a return channel, e.g. for authenticating client or uploading client hardware capabilities. The server may interact with a client device, e.g. to force a client to tune to an advertisement channel

upstream - designates the direction of data flow towards the source, e.g. a server receiving a request via a mobile phone network.

downstream - designates the direction of data flow towards a client, e.g. a client receiving data originating from a server elementary stream

An elementary stream (ES) as defined by the MPEG system layer designates the output of an audio or video encoder.

- U H04N 21/20 • Servers specifically adapted for the distribution of content, e.g. VOD servers; Operations thereof
- U H04N 21/23 • • Processing of content or additional data; Elementary server operations; Server middleware

- U H04N 21/234
 - • • Processing of video elementary streams, e.g. splicing of video streams, manipulating MPEG-4 scene graphs
- H04N 21/23418
 - • • {involving operations for analysing video streams, e.g. detecting features or characteristics (*television picture signal circuitry for scene change detection* [H04N 5/147](#); filtering for image enhancement [G06T 5/00](#); *methods or arrangements for recognising scenes* [G06K 9/00624](#); *methods or arrangements for recognising scenes* [G06V 20/00](#); arrangements characterised by components specially adapted for monitoring, identification or recognition of video in broadcast systems [H04H 60/59](#); *television picture signal circuitry for scene change detection* [H04N 5/147](#)}}
- U H04N 21/40
 - Client devices specifically adapted for the reception of or interaction with content, e.g. set-top-box [STB]; Operations thereof
- U H04N 21/43
 - • Processing of content or additional data, e.g. demultiplexing additional data from a digital video stream; Elementary client operations, e.g. monitoring of home network or synchronising decoder's clock; Client middleware {(demultiplexing of data packets for data networks, e.g. RTP/UDP [H04L 29/06176](#))}
- U H04N 21/442
 - • • Monitoring of processes or resources, e.g. detecting the failure of a recording device, monitoring the downstream bandwidth, the number of times a movie has been viewed, the storage space available from the internal hard disk {(arrangements for monitoring broadcast services or broadcast-related services [H04H 60/29](#); arrangements for identifying or recognising characteristics with a direct linkage to broadcast information [H04H 60/35](#); monitoring of user activities for profile generation for accessing a video database [G06F 16/739](#); monitoring in wireless networks [H04W 24/00](#))}
- U H04N 21/44213
 - • • {Monitoring of end-user related data (arrangements for monitoring the users' behaviour or opinions in broadcast systems [H04H 60/33](#))}
- H04N 21/44218
 - • • • {Detecting physical presence or behaviour of the user, e.g. using sensors to detect if the user is leaving the room or changes his face expression during a TV program (*methods or arrangements for acquiring or recognising human faces, facial parts, facial sketches, facial expressions* [G06K 9/00221](#); *methods or arrangements for recognising movements or behaviour* [G06K 9/00335](#); *methods or arrangements for recognising human body or animal bodies or body parts* [G06K 9/00362](#); *methods or arrangements for recognising human body or animal bodies or body parts* [G06V 40/10](#); *methods or arrangements for acquiring or recognising human faces, facial parts, facial sketches, facial expressions* [G06V 40/16](#); *methods or arrangements for recognising movements or behaviour* [G06V 40/20](#); arrangements for identifying users in broadcast systems [H04H 60/45](#))}

Project: RP0249-F (H04R)

- U H04R 25/00

Deaf-aid sets {, i.e. electro-acoustic or electro-mechanical hearing aids; Electric tinnitus maskers providing an auditory perception (electrical stimulation of auditory nerves to promote the auditory function [A61N 1/36038](#); optical stimulation of auditory nerves to promote the auditory function [A61N 5/0622](#))}

NOTE

Classification should be directed to groups [H04R 25/02](#), [H04R 25/04](#) or [H04R 25/50](#) and its subgroups, if and only if the technical subject in consideration cannot be classified elsewhere under the main group [H04R 25/00](#)
- U H04R 25/55
 - {using an external connection, either wireless or wired}

M	H04R 25/556	<ul style="list-style-type: none"> • {External connectors, e.g. plugs or modules (H04R 25/607 takes precedence)} <p>WARNING Group H04R 25/556 is impacted by reclassification into group H04R 25/607. Groups H04R 25/556 and H04R 25/607 should be considered in order to perform a complete search.</p>
M	H04R 25/60	<ul style="list-style-type: none"> • {Mounting or interconnection of hearing aid parts, e.g. inside tips, housings or to ossicles (ear wax retarders, e.g. mounting thereof H04R 25/654)} <p>WARNING Group H04R 25/60 is impacted by reclassification into groups H04R 25/603, H04R 25/607, H04R 25/609, and H04R 2225/57. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04R 25/603	<ul style="list-style-type: none"> • {of mechanical or electronic switches or control elements} <p>WARNING Group H04R 25/603 is incomplete pending reclassification of documents from groups H04R 25/60 and H04R 2225/61. Groups H04R 25/60, H04R 2225/61, and H04R 25/603 should be considered in order to perform a complete search.</p>
M	H04R 25/607	<ul style="list-style-type: none"> • {of earhooks} <p>WARNING Group H04R 25/607 is incomplete pending reclassification of documents from groups H04R 25/556, H04R 25/60, and H04R 2225/021. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H04R 25/609	<ul style="list-style-type: none"> • {of circuitry (of electronic switches or control elements H04R 25/603)} <p>WARNING Group H04R 25/609 is incomplete pending reclassification of documents from group H04R 25/60. Groups H04R 25/60 and H04R 25/609 should be considered in order to perform a complete search.</p>
U	H04R 25/65	<ul style="list-style-type: none"> • {Housing parts, e.g. shells, tips or moulds, or their manufacture} <p>NOTE Housing parts for mechanical mounting or interconnection of hearing aid parts covered by H04R 25/60 are to be classified in H04R 25/60</p>
M	H04R 25/652	<ul style="list-style-type: none"> • {Ear tips; Ear moulds (hybrid ear moulds or post-processing thereof for their customisation H04R 25/659)} <p>WARNING Group H04R 25/652 is impacted by reclassification into group H04R 25/659. Groups H04R 25/652 and H04R 25/659 should be considered in order to perform a complete search.</p>
U	H04R 25/658	<ul style="list-style-type: none"> • {Manufacture of housing parts}
M	H04R 25/659	<ul style="list-style-type: none"> • {Post-processing of hybrid ear moulds for customisation, e.g. in-situ curing} <p>WARNING Group H04R 25/659 is incomplete pending reclassification of documents from groups H04R 25/652 and H04R 25/658.</p>

Groups H04R 25/652, H04R 25/658, and H04R 25/659 should be considered in order to perform a complete search.

U H04R 2225/00 Details of deaf aids covered by [H04R 25/00](#), not provided for in any of its subgroups

M H04R 2225/021 • Behind the ear [BTE] hearing aids

WARNING

Group H04R 2225/021 is impacted by reclassification into groups H04R 2225/0213, H04R 2225/0216, and H04R 25/607.
All groups listed in this Warning should be considered in order to perform a complete search.

M H04R 2225/0213 • • Constructional details of earhooks, e.g. shape, material

WARNING

Group H04R 2225/0213 is incomplete pending reclassification of documents from group H04R 2225/021.
All groups listed in this Warning should be considered in order to perform a complete search.

M H04R 2225/0216 • • BTE hearing aids having a receiver in the ear mould

WARNING

Group H04R 2225/0216 is incomplete pending reclassification of documents from group H04R 2225/021.
Groups H04R 2225/021 and H04R 2225/0216 should be considered in order to perform a complete search.

M H04R 2225/57 • Aspects of electrical interconnection between hearing aid parts

WARNING

Group H04R 2225/57 is incomplete pending reclassification of documents from group H04R 25/60.
Groups H04R 25/60 and H04R 2225/57 should be considered in order to perform a complete search.

M H04R 2225/61 • Aspects relating to mechanical or electronic switches or control elements, e.g. functioning

WARNING

Group H04R 2225/61 is impacted by reclassification into group H04R 25/603.
Groups H04R 2225/61 and H04R 25/603 should be considered in order to perform a complete search.

Project: RP0753 (H05B)

M H05B

ELECTRIC HEATING; ELECTRIC LIGHTING LIGHT SOURCES NOT OTHERWISE PROVIDED FOR; CIRCUIT ARRANGEMENTS FOR ELECTRIC LIGHT SOURCES, IN GENERAL

NOTE

In this subclass, the following special cases occur:

- a. Among the general applications covered by sections other than section H, it is worth noting that electric heating in general is covered by subclasses F24D or F24H or class F27, and that electric lighting in general is partly covered by class F21, since in section H (see Note I(c) after the title of section H) there are places in H05B which cover the same technical subjects;
- b. In the two cases referred to in Note (a) above, the subclasses of section F, which deal with the respective subjects, essentially cover in the first place

the whole mechanical aspect of the apparatus or devices, whereas the electrical aspect, as such, is covered by subclass H05B;

c. In the case of lighting, this mechanical aspect should be taken to cover the material arrangement of the various electric elements, i.e. their geometrical or physical position in relation to one another; this aspect is covered by subclasses of class F21, the elements themselves and the primary circuits remaining in section H. The same applies to electric light sources, when combined with light sources of a different kind. These are covered by subclass H05B, whereas the physical arrangement which their combination constitutes is covered by subclasses of class F21;

d. As regards heating, not only the electric elements and circuitry designs, as such, are covered by subclass H05B, but also the electric aspects of their arrangement, where these concern cases of general application; electric furnaces being considered as such. The physical disposition of the electric elements in furnaces is covered by section F. If a comparison is made with electric welding circuits, which are covered by subclass B23K in connection with welding, it can be seen that electric heating is not covered by the general rule stated in Note II after the title of section H.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

M	H05B 1/00 - H05B 11/00	Heating Electric heating
M	H05B 6/00	Heating by electric, magnetic, or electromagnetic fields (radiation therapy using microwaves A61N 5/02)
M	H05B 31/00 - H05B 47/00 <i>H05B 35/00</i>	Lighting Electric light sources
U	H05B 33/00	Electroluminescent light sources
U	H05B 33/02	• Details
D	H05B 33/08	• • Circuit arrangements for operating electroluminescent light sources (for operating light emitting diodes H05B 45/00)
		<u>WARNING</u> Group H05B 33/08 is impacted by reclassification into group H05B 45/00. Groups H05B 33/08 and H05B 45/00 should be considered in order to perform a complete search: <administratively transferred to H05B 44/00 >
N	H05B 39/00 - H05B 47/00	Circuit arrangements
M	H05B 39/00	Circuit arrangements or apparatus for operating incandescent light sources (<i>structurally associated with the incandescent lamps H01K 1/62</i>)
M	H05B 41/00	Circuit arrangements or apparatus for igniting or operating discharge lamps (<i>structurally associated with the discharge lamps H01J 61/54, H01J 61/56</i>)
N	H05B 44/00	Circuit arrangements for operating electroluminescent light sources (for operating light emitting diodes H05B 45/00)

M	H05B 45/00	<p>Circuit arrangements for operating light emitting diodes [LEDLEDs]</p> <p><u>WARNING</u> Group H05B 45/00 is incomplete pending reclassification of documents from group H05B 33/08. Group H05B 45/00 is also impacted by reclassification into groups H05B 45/30-H05B 45/397. Groups H05B 33/08, H05B 45/00, and H05B 45/30-H05B 45/397 should be considered in order to perform a complete search.</p>
M	H05B 45/10	<ul style="list-style-type: none"> Controlling the intensity of the light <p><u>WARNING</u> Group H05B 45/10 is impacted by reclassification into groups H05B 45/12 and H05B 45/18. Groups H05B 45/10, H05B 45/12, and H05B 45/18 should be considered in order to perform a complete search.</p>
M	H05B 45/12	<ul style="list-style-type: none"> using optical feedback <p><u>WARNING</u> Group H05B 45/12 is incomplete pending reclassification of documents from group H05B 45/10. Groups H05B 45/10 and H05B 45/12 should be considered in order to perform a complete search.</p>
M	H05B 45/18	<ul style="list-style-type: none"> using temperature feedback <p><u>WARNING</u> Group H05B 45/18 is incomplete pending reclassification of documents from group H05B 45/10. Groups H05B 45/10 and H05B 45/18 should be considered in order to perform a complete search.</p>
M	H05B 45/20	<ul style="list-style-type: none"> Controlling the colour of the light <p><u>WARNING</u> Group H05B 45/20 is impacted by reclassification into group H05B 45/28. Groups H05B 45/20 and H05B 45/28 should be considered in order to perform a complete search.</p>
M	H05B 45/28	<ul style="list-style-type: none"> using temperature feedback <p><u>WARNING</u> Group H05B 45/28 is incomplete pending reclassification of documents from group H05B 45/20. Groups H05B 45/20 and H05B 45/28 should be considered in order to perform a complete search.</p>
M	H05B 45/30	<ul style="list-style-type: none"> Driver circuits <p><u>WARNING</u> Group H05B 45/30 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/30 should be considered in order to perform a complete search.</p>
M	H05B 45/305	<ul style="list-style-type: none"> Frequency-control circuits <p><u>WARNING</u> Group H05B 45/305 is incomplete pending reclassification of documents from group H05B 45/00.</p>

Groups H05B 45/00 and H05B 45/305 should be considered in order to perform a complete search.

M H05B 45/31

- Phase-control circuits

WARNING

Group H05B 45/31 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/31 should be considered in order to perform a complete search.

M H05B 45/315

- • Reverse phase-control circuits

WARNING

Group H05B 45/315 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/315 should be considered in order to perform a complete search.

M H05B 45/32

- Pulse-control circuits

WARNING

Group H05B 45/32 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/32 should be considered in order to perform a complete search.

M H05B 45/325

- • Pulse-width modulation [PWM]

WARNING

Group H05B 45/325 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/325 should be considered in order to perform a complete search.

M H05B 45/327

- • Burst dimming

WARNING

Group H05B 45/327 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/327 should be considered in order to perform a complete search.

M H05B 45/33

- • Pulse-amplitude modulation [PAM]

WARNING

Group H05B 45/33 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/33 should be considered in order to perform a complete search.

M H05B 45/335

- • Pulse-frequency modulation [PFM]

WARNING

Group H05B 45/335 is incomplete pending reclassification of documents from group H05B 45/00.
Groups H05B 45/00 and H05B 45/335 should be considered in order to perform a complete search.

M	H05B 45/34	<ul style="list-style-type: none"> • Voltage stabilisation; Maintaining constant voltage <p><u>WARNING</u> Group H05B 45/34 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/34 should be considered in order to perform a complete search.</p>
M	H05B 45/345	<ul style="list-style-type: none"> • Current stabilisation; Maintaining constant current <p><u>WARNING</u> Group H05B 45/345 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/345 should be considered in order to perform a complete search.</p>
M	H05B 45/347	<ul style="list-style-type: none"> • Dynamic headroom control [DHC] <p><u>WARNING</u> Group H05B 45/347 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/347 should be considered in order to perform a complete search.</p>
M	H05B 45/35	<ul style="list-style-type: none"> • Balancing circuits <p><u>WARNING</u> Group H05B 45/35 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/35 should be considered in order to perform a complete search.</p>
M	H05B 45/355	<ul style="list-style-type: none"> • Power factor correction [PFC]; Reactive power compensation <p><u>WARNING</u> Group H05B 45/355 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/355 should be considered in order to perform a complete search.</p>
M	H05B 45/357	<ul style="list-style-type: none"> • specially adapted for retrofit LED light sources <p><u>WARNING</u> Group H05B 45/357 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/357 should be considered in order to perform a complete search.</p>
M	H05B 45/3574	<ul style="list-style-type: none"> • Emulating the electrical or functional characteristics of incandescent lamps <p><u>WARNING</u> Group H05B 45/3574 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/3574 should be considered in order to perform a complete search.</p>
M	H05B 45/3575	<ul style="list-style-type: none"> • by means of dummy loads or bleeder circuits, e.g. for dimmers <p><u>WARNING</u> Group H05B 45/3575 is incomplete pending reclassification of documents from group H05B 45/00.</p>

		Groups H05B 45/00 and H05B 45/3575 should be considered in order to perform a complete search.
M	H05B 45/3577	<ul style="list-style-type: none"> Emulating the dimming characteristics, brightness or colour temperature of incandescent lamps <p>WARNING Group H05B 45/3577 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/3577 should be considered in order to perform a complete search.</p>
M	H05B 45/3578	<ul style="list-style-type: none"> Emulating the electrical or functional characteristics of discharge lamps <p>WARNING Group H05B 45/3578 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/3578 should be considered in order to perform a complete search.</p>
M	H05B 45/36	<ul style="list-style-type: none"> Circuits for reducing <i>or suppressing</i> harmonics, ripples or electromagnetic interferences [EMI] <p>WARNING Group H05B 45/36 is incomplete pending reclassification of documents from group H05B 45/00. Groups H05B 45/00 and H05B 45/36 should be considered in order to perform a complete search.</p>
M	H05B 45/37	<ul style="list-style-type: none"> Converter circuits <p>WARNING Group H05B 45/37 is incomplete pending reclassification of documents from group H05B 45/00. Group H05B 45/37 is also impacted by reclassification into groups H05B 45/3725, H05B 45/375, H05B 45/38, H05B 45/382, H05B 45/385, H05B 45/39, and H05B 45/392. All groups listed in this Warning should be considered in order to perform a complete search.</p>
M	H05B 45/3725	<ul style="list-style-type: none"> Switched mode power supply [SMPS] <p>WARNING Group H05B 45/3725 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/3725 should be considered in order to perform a complete search.</p>
M	H05B 45/375	<ul style="list-style-type: none"> using buck topology <p>WARNING Group H05B 45/375 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/375 should be considered in order to perform a complete search.</p>
M	H05B 45/38	<ul style="list-style-type: none"> using boost topology <p>WARNING Group H05B 45/38 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37.</p>

		<p>Groups H05B 45/00, H05B 45/37, and H05B 45/38 should be considered in order to perform a complete search.</p>
M	H05B 45/382	<ul style="list-style-type: none">• • • with galvanic isolation between input and output <p><u>WARNING</u> Group H05B 45/382 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/382 should be considered in order to perform a complete search.</p>
M	H05B 45/385	<ul style="list-style-type: none">• • • using flyback topology <p><u>WARNING</u> Group H05B 45/385 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/385 should be considered in order to perform a complete search.</p>
M	H05B 45/39	<ul style="list-style-type: none">• • • Circuits containing inverter bridges <p><u>WARNING</u> Group H05B 45/39 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/39 should be considered in order to perform a complete search.</p>
M	H05B 45/392	<ul style="list-style-type: none">• • • wherein the LEDs are placed as freewheeling diodes at the secondary side of an isolation transformer <p><u>WARNING</u> Group H05B 45/392 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/37. Groups H05B 45/00, H05B 45/37, and H05B 45/392 should be considered in order to perform a complete search.</p>
M	H05B 45/395	<ul style="list-style-type: none">• • Linear regulators <p><u>WARNING</u> Group H05B 45/395 is incomplete pending reclassification of documents from group H05B 45/00. Group H05B 45/395 is also impacted by reclassification into group H05B 45/397. Groups H05B 45/00, H05B 45/395, and H05B 45/397 should be considered in order to perform a complete search.</p>
M	H05B 45/397	<ul style="list-style-type: none">• • • Current mirror circuits <p><u>WARNING</u> Group H05B 45/397 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/395. Groups H05B 45/00, H05B 45/395, and H05B 45/397 should be considered in order to perform a complete search.</p>
M	H05B 45/40	<ul style="list-style-type: none">• Details of LED load circuits <p><u>WARNING</u> Group H05B 45/40 is impacted by reclassification into group H05B 45/42. Groups H05B 45/40 and H05B 45/42 should be considered in order to perform a complete search.</p>

M	H05B 45/42	<ul style="list-style-type: none"> • Antiparallel configurations <p>WARNING Group H05B 45/42 is incomplete pending reclassification of documents from group H05B 45/40. Groups H05B 45/40 and H05B 45/42 should be considered in order to perform a complete search.</p>
C	H05B 45/50	<ul style="list-style-type: none"> • responsive to malfunctions <i>or undesirable behaviour</i> of LEDs; responsive to LED life; Protective circuits <p>WARNING Group H05B 45/50 is impacted by reclassification into <i>groups</i> group H05B 45/52, H05B 45/54, and H05B 45/56. H05B 45/59. All groups listed in this Warning <i>Groups H05B 45/50 and H05B 45/59</i> should be considered in order to perform a complete search.</p>
M	H05B 45/52	<ul style="list-style-type: none"> • in a parallel array of LEDs <p>WARNING Group H05B 45/52 is incomplete pending reclassification of documents from group H05B 45/50. Groups H05B 45/50 and H05B 45/52 should be considered in order to perform a complete search.</p>
M	H05B 45/54	<ul style="list-style-type: none"> • in a series array of LEDs <p>WARNING Group H05B 45/54 is incomplete pending reclassification of documents from group H05B 45/50. Groups H05B 45/50 and H05B 45/54 should be considered in order to perform a complete search.</p>
M	H05B 45/56	<ul style="list-style-type: none"> • involving measures to prevent abnormal temperature of the LEDs <p>WARNING Group H05B 45/56 is incomplete pending reclassification of documents from group H05B 45/50. Groups H05B 45/50 and H05B 45/56 should be considered in order to perform a complete search.</p>
U	H05B 45/58	<ul style="list-style-type: none"> • involving end of life detection of LEDs
N	H05B 45/59	<ul style="list-style-type: none"> • <i>for reducing or suppressing flicker or glow effects</i> <p>WARNING Group H05B 45/59 is incomplete pending reclassification of documents from groups H05B 45/00 and H05B 45/50. Groups H05B 45/00, H05B 45/50 and H05B 45/59 should be considered in order to perform a complete search.</p>
M	H05B 45/60	<ul style="list-style-type: none"> • {Circuit arrangements for operating light emitting diodes [LEDs] comprising organic materials, e.g. polymer LEDs [PLED] or organic LEDs [OLED] <i>LEDs comprising organic material, e.g. for operating organic light-emitting diodes [OLEDs] or polymer light-emitting diodes [PLEDs]</i>
M	H05B 46/00	Circuit arrangements for <i>operating</i> light sources using a charge of combustible material

- M H05B 47/00** **Circuit arrangements for operating light sources in general, i.e. where the type of ~~the~~ light source is not relevant**

WARNING

Group H05B 47/00 is impacted by reclassification into groups H05B 47/10 – H05B 47/29:

Groups H05B 47/00 and H05B 47/10 – H05B 47/29 should be considered in order to perform a complete search.

- M H05B 47/10** • Controlling the light source

WARNING

Group H05B 47/10 is incomplete pending reclassification of documents from group H05B 47/00:

Group H05B 47/10 is also impacted by reclassification into groups H05B 47/165 and H05B 47/17:

All groups listed in this Warning should be considered in order to perform a complete search.

- M H05B 47/105** • • in response to determined parameters

WARNING

Group H05B 47/105 is incomplete pending reclassification of documents from group H05B 47/00:

Group H05B 47/105 is also impacted by reclassification into groups H05B 47/115, H05B 47/125, H05B 47/13, H05B 47/135, and H05B 47/14:

All groups listed in this Warning should be considered in order to perform a complete search.

- M H05B 47/11** • • • by determining the brightness or colour temperature of ambient light

WARNING

Group H05B 47/11 is incomplete pending reclassification of documents from group H05B 47/00:

Groups H05B 47/00 and H05B 47/11 should be considered in order to perform a complete search.

- M H05B 47/115** • • • by determining the presence or movement of objects or living beings

WARNING

Group H05B 47/115 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/105:

Groups H05B 47/00, H05B 47/105, and H05B 47/115 should be considered in order to perform a complete search.

- M H05B 47/12** • • • • by detecting audible sound

WARNING

Group H05B 47/12 is incomplete pending reclassification of documents from group H05B 47/00:

Groups H05B 47/00 and H05B 47/12 should be considered in order to perform a complete search.

- M H05B 47/125** • • • • by using cameras

WARNING

Group H05B 47/125 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/105:

Groups H05B 47/00, H05B 47/105, and H05B 47/125 should be considered in order to perform a complete search.

M	H05B 47/13	<ul style="list-style-type: none"> • • • by using passive infrared detectors <p><u>WARNING</u> Group H05B 47/13 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/105. Groups H05B 47/00, H05B 47/105, and H05B 47/13 should be considered in order to perform a complete search.</p>
M	H05B 47/135	<ul style="list-style-type: none"> • • • by determining the type of light source being controlled (electrical parameters of light source being controlled H05B 47/14) <p><u>WARNING</u> Group H05B 47/135 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/105. Groups H05B 47/00, H05B 47/105, and H05B 47/135 should be considered in order to perform a complete search.</p>
M	H05B 47/14	<ul style="list-style-type: none"> • • • by determining electrical parameters of the light source <p><u>WARNING</u> Group H05B 47/14 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/105. Groups H05B 47/00, H05B 47/105, and H05B 47/14 should be considered in order to perform a complete search.</p>
M	H05B 47/155	<ul style="list-style-type: none"> • • Coordinated control of two or more light sources <p><u>WARNING</u> Group H05B 47/155 is incomplete pending reclassification of documents from group H05B 47/00. Groups H05B 47/00 and H05B 47/155 should be considered in order to perform a complete search.</p>
M	H05B 47/16	<ul style="list-style-type: none"> • • by timing means <p><u>WARNING</u> Group H05B 47/16 is incomplete pending reclassification of documents from group H05B 47/00. Groups H05B 47/00 and H05B 47/16 should be considered in order to perform a complete search.</p>
M	H05B 47/165	<ul style="list-style-type: none"> • • following a pre-assigned programmed sequence; Logic control [LC] <p><u>WARNING</u> Group H05B 47/165 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/10. Groups H05B 47/00, H05B 47/10, and H05B 47/165 should be considered in order to perform a complete search.</p>
M	H05B 47/17	<ul style="list-style-type: none"> • • Operational modes, e.g. switching from manual to automatic mode or prohibiting specific operations <p><u>WARNING</u> Group H05B 47/17 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/10. Groups H05B 47/00, H05B 47/10, and H05B 47/17 should be considered in order to perform a complete search.</p>
M	H05B 47/175	<ul style="list-style-type: none"> • • by remote control <p><u>WARNING</u> Group H05B 47/175 is incomplete pending reclassification of documents from group H05B 47/00.</p>

Groups H05B 47/00 and H05B 47/175 should be considered in order to perform a complete search.

M H05B 47/18

- • • via data-bus transmission

WARNING

Group H05B 47/18 is incomplete pending reclassification of documents from group H05B 47/00.
Groups H05B 47/00 and H05B 47/18 should be considered in order to perform a complete search.

M H05B 47/185

- • • via power line carrier transmission

WARNING

Group H05B 47/185 is incomplete pending reclassification of documents from group H05B 47/00.
Groups H05B 47/00 and H05B 47/185 should be considered in order to perform a complete search.

M H05B 47/19

- • • via wireless transmission

WARNING

Group H05B 47/19 is incomplete pending reclassification of documents from group H05B 47/00.
Group H05B 47/19 is also impacted by reclassification into group H05B 47/195.
Groups H05B 47/00, H05B 47/19, and H05B 47/195 should be considered in order to perform a complete search.

M H05B 47/195

- • • • the transmission using visible or infrared light

WARNING

Group H05B 47/195 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/19.
Groups H05B 47/00, H05B 47/19, and H05B 47/195 should be considered in order to perform a complete search.

M H05B 47/20

- Responsive to malfunctions or to light source life; for protection

WARNING

Group H05B 47/20 is incomplete pending reclassification of documents from group H05B 47/00.
Group H05B 47/20 is also impacted by reclassification into groups H05B 47/24, H05B 47/25, H05B 47/26, and H05B 47/28.
All groups listed in this Warning should be considered in order to perform a complete search.

M H05B 47/21

- • of two or more light sources connected in parallel

WARNING

Group H05B 47/21 is incomplete pending reclassification of documents from group H05B 47/00.
Groups H05B 47/00 and H05B 47/21 should be considered in order to perform a complete search.

M H05B 47/22

- • • {with communication between the lamps and a central unit}

WARNING

Group H05B 47/22 is incomplete pending reclassification of documents from group H05B 47/00.
Groups H05B 47/00 and H05B 47/22 should be considered in order to perform a complete search.

M	H05B 47/23	<ul style="list-style-type: none"> • of two or more light sources connected in series <p><u>WARNING</u> Group H05B 47/23 is incomplete pending reclassification of documents from group H05B 47/00. Groups H05B 47/00 and H05B 47/23 should be considered in order to perform a complete search.</p>
M	H05B 47/235	<ul style="list-style-type: none"> • • {with communication between the lamps and a central unit} <p><u>WARNING</u> Group H05B 47/235 is incomplete pending reclassification of documents from group H05B 47/00. Groups H05B 47/00 and H05B 47/235 should be considered in order to perform a complete search.</p>
M	H05B 47/24	<ul style="list-style-type: none"> • Circuit arrangements for protecting against overvoltage <p><u>WARNING</u> Group H05B 47/24 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/20. Groups H05B 47/00, H05B 47/20, and H05B 47/24 should be considered in order to perform a complete search.</p>
M	H05B 47/25	<ul style="list-style-type: none"> • Circuit arrangements for protecting against overcurrent <p><u>WARNING</u> Group H05B 47/25 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/20. Groups H05B 47/00, H05B 47/20, and H05B 47/25 should be considered in order to perform a complete search.</p>
M	H05B 47/26	<ul style="list-style-type: none"> • Circuit arrangements for protecting against earth faults <p><u>WARNING</u> Group H05B 47/26 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/20. Groups H05B 47/00, H05B 47/20, and H05B 47/26 should be considered in order to perform a complete search.</p>
M	H05B 47/28	<ul style="list-style-type: none"> • Circuit arrangements for protecting against abnormal temperature <p><u>WARNING</u> Group H05B 47/28 is incomplete pending reclassification of documents from groups H05B 47/00 and H05B 47/20. Groups H05B 47/00, H05B 47/20, and H05B 47/28 should be considered in order to perform a complete search.</p>
M	H05B 47/29	<ul style="list-style-type: none"> • Circuits providing for substitution of the light source in case of its failure <p><u>WARNING</u> Group H05B 47/29 is incomplete pending reclassification of documents from group H05B 47/00. Groups H05B 47/00 and H05B 47/29 should be considered in order to perform a complete search.</p>