

ECLA**EUROPEAN CLASSIFICATION****B04B**

CENTRIFUGES (high-speed drum mills [B02C19/11](#); domestic spin driers [D06F](#); analysing, measuring or monitoring physical or chemical properties of samples during centrifuging, see the relevant subclasses for these procedures, e.g. [G01N](#))

Note

This subclass covers machines or apparatus for separating, mixing, drying, extracting, purifying, or like treating in which centrifugal effects are generated by rotary bowls or other rotors. Where such machines or apparatus involve pumping effects, such effects must be incidental or subsidiary to the treating.

Guide heading:

Types of centrifuges; Centrifuges characterised by discharging means

B04B1/00

Centrifuges with rotary bowls provided with solid jackets for separating predominantly liquid mixtures with or without solid particles

B04B1/02

- . without inserted separating walls

B04B1/04

- . with inserted separating walls

B04B1/06

- . . of cylindrical shape

B04B1/08

- . . of conical shape

B04B1/10

- . with discharging outlets in the plane of the maximum diameter of the bowl [N: (cleaning [B04B15/06](#))]

B04B1/12

- . . with continuous discharge

B04B1/14

- . . with periodical discharge

B04B1/16

- . . . with discharging outlets controlled by the rotational speed of the bowl

B04B1/18

- controlled by the centrifugal force of an auxiliary liquid

B04B1/20

- . discharging solid particles from the bowl by a conveying screw coaxial with the bowl axis and rotating relatively to the bowl

B04B1/20A

- . . [N: with an abrasion-resistant conveyer or drum]

B04B1/20D

- . . [N: Driving control or mechanisms; Arrangement of transmission gearing]

B04B3/00

Centrifuges with rotary bowls in which solid particles or bodies become separated by centrifugal force and simultaneous sifting or filtering

B04B3/02

- . discharging solid particles from the bowl by means coaxial with the bowl axis and moving to and fro, i.e. push-type centrifuges

B04B3/02D

- . . [N: with a reversible filtering device]

B04B3/04

- . discharging solid particles from the bowl by a conveying screw coaxial with the bowl axis and rotating relatively to the bowl

B04B3/06

- . discharging solid particles by vibrating the bowl

B04B3/08

- . discharging solid particles by bowl walls in the form of endless bands

B04B5/00 Other centrifuges

- B04B5/00B . [N: Centrifugal separators or filters for fluid circulation systems, e.g. for lubricant oil circulation systems]
- B04B5/02 . Centrifuges consisting of a plurality of separate bowls rotating round an axis situated between the bowls
- B04B5/04 . Radial chamber apparatus for separating predominantly liquid mixtures, e.g. butyrometers
- B04B5/04B . . [N: for liquids contained in receptacles ([B04B5/04C](#) takes precedence)]
- B04B5/04B2 . . . [N: comprising test tubes]
- B04B5/04B2B [N: pivotably mounted]
- B04B5/04B4 [N: with flexible receptacles]
- B04B5/04C . . [N: with means for adding or withdrawing liquid substances during the centrifugation, e.g. continuous centrifugation]
- B04B5/06 . Centrifugal counter-current apparatus
- B04B5/08 . Centrifuges for separating predominantly gaseous mixtures
- B04B5/10 . Centrifuges combined with other apparatus, e.g. electrostatic separators; Sets or systems of several centrifuges ([B04B5/12](#) takes precedence; magnetic or electrostatic separators [B03C](#); [N: amassing particles by electric fields, e.g. by agglomeration [B03C3/017B](#)])
- B04B5/12 . Centrifuges in which rotors other than bowls generate centrifugal effects in stationary containers

Guide heading: Elements; Accessories**B04B7/00 Elements of centrifuges** (drives [B04B9/00](#); feeding, charging, or discharging appurtenances or devices [B04B11/00](#))

- B04B7/02 . Casings; Lids ([shock absorbers, vibration dampers F16F](#))
- B04B7/04 . . Casings facilitating discharge
- B04B7/06 . . Safety devices; [N: [Regulating](#)]
- B04B7/08 . Rotary bowls ([centrifugal casting machines B22D](#))
- B04B7/08B . . [N: [fibre- or metal-reinforced](#)]
- B04B7/10 . . Bowls for shaping solids
- B04B7/12 . . Inserts, e.g. armouring plates
- B04B7/14 . . . for separating walls of conical shape
- B04B7/16 . . . Sieves or filters ([filters in general B01D](#); [sieves in general B07B](#))
- B04B7/18 . . formed or coated with sieving or filtering elements ([filters in general B01D](#); [sieves in general B07B](#))

B04B9/00 Drives specially designed for centrifuges; Arrangement or disposition of

transmission gearing; Suspending or balancing rotary bowls

- B04B9/02 . Electric motor drives [N: (dynamo-electric machines associated with centrifuges [H02K7/16](#))]
- B04B9/04 . . Direct drive
- B04B9/06 . Fluid drive
- B04B9/08 . Arrangement or disposition of transmission gearing [N: (for solid bowl screw centrifuges [B04B1/20D](#)); Couplings; Brakes]
- B04B9/10 . Control of the drive; Speed regulating [N: (for solid bowl screw centrifuges [B04B1/20D](#))]
- B04B9/12 . Suspending rotary bowls; [N: Bearings; Packings for bearings]
- B04B9/14 . Balancing rotary bowls ([balancing per se G01M](#)); [N: Schrappers]
- B04B9/14F . . [N: Unbalance detection devices]

- B04B11/00** **Feeding, charging, or discharging bowls** ([B04B1/00](#), [B04B3/00](#), [B04B7/04](#) take precedence)
- B04B11/02 . Continuous feeding or discharging; Control arrangements therefor
- B04B11/04 . Periodical feeding or discharging; Control arrangements therefor
- B04B11/04B . . [N: Load indication with or without control arrangements]
- B04B11/05 . . Base discharge
- B04B11/06 . Arrangement of distributors or collectors in centrifuges
- B04B11/08 . Skimmers or scrapers for discharging; [N: Regulating thereof]
- B04B11/08B . . [N: Skimmers for discharging liquid] [N0607]

- B04B13/00** **Control arrangements specially designed for centrifuges; Programme control of centrifuges** ([control arrangements for feed, charge, or discharge B04B11/00](#))
- B04B13/00B . [N: Rotor identification systems]

- B04B15/00** **Other accessories for centrifuges**
- B04B15/02 . for cooling, heating, or heat insulating
- B04B15/04 . for suppressing the formation of foam
- B04B15/06 . for cleaning bowls, filters, sieves, inserts, or the like
- B04B15/08 . for ventilating or producing a vacuum in the centrifuge

- B04B15/10 . for forming a filtering layer in the rotary bowl
- B04B15/12 . for drying or washing the separated solid particles