

# CPC COOPERATIVE PATENT CLASSIFICATION

## B64C AEROPLANES; HELICOPTERS ([air-cushion vehicles B60V](#))

### NOTE

As far as possible, classification is made according to constructional features; classification according to particular kinds of aircraft is normally regarded as being of secondary importance, except in cases where this is considered to be the characteristic feature.

### WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[B64C 35/02](#)

covered by

[B64C 35/00](#)

### Aircraft structures or fairings ([boundary-layer controls B64C 21/00](#))

<b>1/00</b>	<b>Fuselages; Constructional features common to fuselages, wings, stabilising surfaces and the like (aerodynamical features common to fuselages, wings, stabilising surfaces, and the like <a href="#">B64C 23/00</a>; flight-deck installations <a href="#">B64D</a>)</b>	1/143	. . . . {of the plug type}
		1/1438	. . . . {of the sliding type}
		1/1446	. . . {Inspection hatches ( <a href="#">for engine cowls B64D 29/08</a> )}
		1/1453	. . . {Drain masts}
		1/1461	. . . {Structures of doors or surrounding frames}
		1/1469	. . . {Doors between cockpit and cabin}
		1/1476	. . {Canopies; Windscreens or similar transparent elements}
1/0009	. {Aerodynamic aspects}	1/1484	. . . {Windows ( <a href="#">B64C 1/1492</a> takes precedence)}
2001/0018	. {comprising two decks adapted for carrying passengers only}	1/1492	. . . {Structure and mounting of the transparent elements in the window or windscreen}
2001/0027	. . {arranged one above the other}	1/16	. specially adapted for mounting power plant
2001/0036	. . {arranged side by side at the same level}	1/18	. Floors
2001/0045	. {Fuselages characterised by special shapes}	1/20	. . specially adapted for freight
2001/0054	. {Fuselage structures substantially made from particular materials}	1/22	. Other structures integral with fuselages to facilitate loading {, e.g. cargo bays, cranes ( <a href="#">cargo door type ramps B64C 1/1415</a> )}
2001/0063	. . {from wood}	1/24	. Steps mounted on, and retractable within, fuselages ( <a href="#">readily removable B64D 9/00</a> )
2001/0072	. . {from composite materials}	1/26	. Attaching the wing or tail units or stabilising surfaces
2001/0081	. . {from metallic materials}	1/28	. Parts of fuselage relatively movable to improve pilots view
2001/009	. {comprising decompression panels or valves for pressure equalisation in fuselages or floors}	1/30	. Parts of fuselage relatively movable to reduce overall size for storage
1/06	. Frames; Stringers; Longerons; {Fuselage sections}	1/32	. Severable or jettisonable parts of fuselage facilitating emergency escape ( <a href="#">ejector seats B64D 25/10</a> )
1/061	. . {Frames}	1/34	. comprising inflatable structural components ( <a href="#">connection of valves to inflatable elastic bodies B60C 29/00</a> )
1/062	. . . {specially adapted to absorb crash loads}	1/36	. adapted to receive aerials or radomes ( <a href="#">aerials or radomes per se H01Q</a> )
1/063	. . . {Folding or collapsing to reduce overall dimensions, e.g. foldable tail booms ( <a href="#">folding or collapsing wings B64C 3/56</a> )}	1/38	. Constructions adapted to reduce effects of aerodynamic or other external heating {( <a href="#">cooling structural parts of aircrafts with air flow B64D 13/006</a> )}
1/064	. . {Stringers; Longerons}	1/40	. Sound or heat insulation, {e.g. using insulation blankets ( <a href="#">insulating elements for vehicles, in general B60R 13/08</a> )}
1/065	. . {Spars}	1/403	. . {Arrangement of fasteners specially adapted therefor, e.g. of clips ( <a href="#">in vehicles in general B60R 13/0206</a> )}
1/066	. . {Interior liners}		
1/067	. . . {comprising means for preventing icing or condensation conditions}		
1/068	. . {Fuselage sections}		
1/069	. . . {Joining arrangements therefor}		
1/08	. . Geodetic or other open-frame structures		
1/10	. . Bulkheads		
1/12	. . Construction or attachment of skin panels		
1/14	. Windows; Doors; Hatch covers or access panels; Surrounding frame structures; Canopies; Windscreens {accessories therefor, e.g. pressure sensors, water deflectors, hinges, seals, handles, latches, windscreen wipers} ( <a href="#">fairings movable in conjunction with undercarriage elements B64C 25/16</a> ; <a href="#">bomb doors B64D 1/06</a> )		
1/1407	. . {Doors; surrounding frames}		
1/1415	. . . {Cargo doors, e.g. incorporating ramps}		
1/1423	. . . {Passenger doors}		

1/406	. . . {in combination with supports for lines, e.g. for pipes or cables (arrangement of elements of electric or fluid circuits specially adapted for vehicles, in general <a href="#">B60R 16/00</a> ; supports for pipes, cables or protective tubing <a href="#">F16L 3/00</a> ; installations of electric cables or lines in vehicles <a href="#">H02G 3/00</a> )}	3/56	. . Folding or collapsing to reduce overall dimensions of aircraft
<b>3/00</b>	<b>Wings</b> (stabilising surfaces <a href="#">B64C 5/00</a> ; ornithopter wings <a href="#">B64C 33/02</a> )	3/58	. provided with fences or spoilers (adjustable for control purposes <a href="#">B64C 9/00</a> )
3/10	. Shape of wings	<b>5/00</b>	<b>Stabilising surfaces</b> (attaching stabilising surfaces to fuselage <a href="#">B64C 1/26</a> )
3/14	. . Aerofoil profile	5/02	. Tailplanes (fins <a href="#">B64C 5/06</a> )
3/141	. . . {Circulation Control Airfoils}	5/04	. Noseplanes
2003/142	. . . {with variable camber along the airfoil chord}	5/06	. Fins (specially for wings <a href="#">B64C 5/08</a> )
2003/143	. . . {comprising interior channels}	5/08	. mounted on or supported by wings
2003/144	. . . {including a flat surface on either the extrados or intrados}	5/10	. adjustable
2003/145	. . . {comprising 'Gurney' flaps}	5/12	. . for retraction against or within fuselage or nacelle
2003/146	. . . {comprising leading edges of particular shape}	5/14	. . Varying angle of sweep
2003/147	. . . {comprising trailing edges of particular shape}	5/16	. . about spanwise axes
2003/148	. . . {comprising protuberances, e.g. for modifying boundary layer flow}	5/18	. . in area (attaching stabilising surfaces to fuselage <a href="#">B64C 1/26</a> )
2003/149	. . . {for supercritical or transonic flow}	<b>7/00</b>	<b>Structures or fairings not otherwise provided for</b>
3/16	. . Frontal aspect	7/02	. Nacelles
3/18	. Spars; Ribs; Stringers (attaching wing unit to fuselage <a href="#">B64C 1/26</a> )	<b>9/00</b>	<b>Adjustable control surfaces or members, e.g. rudders</b> (trimming stabilising surfaces <a href="#">B64C 5/10</a> )
3/182	. . {Stringers, longerons}	2009/005	. {Ailerons}
3/185	. . {Spars}	9/02	. Mounting or supporting thereof
3/187	. . {Ribs}	9/04	. with compound dependent movements
3/20	. Integral or sandwich constructions (layered products or sandwich constructions in general <a href="#">B32B</a> )	9/06	. with two or more independent movements
3/22	. Geodetic or other open-frame structures	9/08	. bodily displaceable (varying camber of wings <a href="#">B64C 3/44</a> )
3/24	. Moulded or cast structures	9/10	. one surface adjusted by movement of another, e.g. servo tabs ( <a href="#">B64C 9/04</a> takes precedence; adjusting surfaces of different type or function <a href="#">B64C 9/12</a> )
3/26	. Construction, shape, or attachment of separate skins, e.g. panels	9/12	. surfaces of different type or function being simultaneously adjusted
3/28	. Leading or trailing edges attached to primary structures, e.g. forming fixed slots	9/14	. forming slots (boundary-layer control <a href="#">B64C 21/00</a> )
3/30	. comprising inflatable structural components (connection of valves to inflatable elastic bodies <a href="#">B60C 29/00</a> )	2009/143	. . {comprising independently adjustable elements for closing or opening the slot between the main wing and leading or trailing edge flaps}
3/32	. specially adapted for mounting power plant	9/146	. . {at an other wing location than the rear or the front (wings provided with fixed fences or spoilers <a href="#">B64C 3/58</a> )}
3/34	. Integrally-constructed tanks, e.g. for fuel (other aircraft fuel tanks or fuel systems <a href="#">B64D</a> )	9/16	. . at the rear of the wing
3/36	. Structures adapted to reduce effects of aerodynamic or other external heating {(cooling structural parts of aircrafts with air flow <a href="#">B64D 13/006</a> )}	9/18	. . . by single flaps
3/38	. Adjustment of complete wings or parts thereof	9/20	. . . by multiple flaps
3/385	. . {Variable incidence wings}	9/22	. . at the front of the wing
3/40	. . Varying angle of sweep	9/24	. . . by single flap
3/42	. . Adjusting about chordwise axes	9/26	. . . by multiple flaps
3/44	. . Varying camber	9/28	. . by flaps at both the front and rear of the wing operating in unison
2003/445	. . . {by changing shape according to the speed, e.g. by morphing}	9/30	. Balancing hinged surfaces, e.g. dynamically
3/46	. . . by inflatable elements (connection of valves to inflatable elastic bodies <a href="#">B60C 29/00</a> )	9/32	. Air braking surfaces (braking by parachutes <a href="#">B64D 17/80</a> )
3/48	. . . by relatively-movable parts of wing structures	9/323	. . {associated with wings}
3/50	. . . by leading or trailing edge flaps (ailerons <a href="#">B64C 9/00</a> )	9/326	. . {associated with fuselages}
3/52	. . Warping	9/34	. collapsing or retracting against or within other surfaces or other members
3/54	. . Varying in area (flaps extendable to increase camber <a href="#">B64C 3/44</a> )	9/36	. . the members being fuselages or nacelles
2003/543	. . . {by changing shape according to the speed, e.g. by morphing}	9/38	. Jet flaps
3/546	. . . {by foldable elements}	<b>11/00</b>	<b>Propellers, e.g. of ducted type; Features common to propellers and rotors for rotorcraft</b> (rotors specially adapted for rotorcraft <a href="#">B64C 27/32</a> )

**NOTE**

## B64C 11/00

(continued)

Documents classified in [B64C 11/001](#) - [B64C 11/008](#) which also contain relevant information, covered by other subgroups of [B64C 11/00](#), are also classified in the appropriate subgroup of [B64C 11/00](#)

- 11/001 . {Shrouded propellers}
- 11/002 . {Braking propellers, e.g. for measuring the power output of an engine}
- 11/003 . {Variable-diameter propellers; Mechanisms therefor}
- 11/005 . {Spiral-shaped propellers}
- 11/006 . {Paddle wheels}
- 11/007 . {Propulsive discs, i.e. discs having the surface specially adapted for propulsion purposes}
- 11/008 . {characterised by vibration absorbing or balancing means (for rotorcraft [B64C 27/001](#))}
- 11/02 . Hub construction
- 11/04 . . Blade mountings
- 11/06 . . . for variable-pitch blades
- 11/065 . . . . {variable only when stationary}
- 11/08 . . . for non-adjustable blades
- 11/10 . . . . rigid
- 11/12 . . . . flexible
- 11/14 . . Spinners
- 11/16 . Blades
- 11/18 . . Aerodynamic features
- 11/20 . . Constructional features
- 11/205 . . . {for protecting blades, e.g. coating}
- 11/22 . . . Solid blades
- 11/24 . . . Hollow blades
- 11/26 . . . Fabricated blades
- 11/28 . . . Collapsible or foldable blades
- 11/30 . Blade pitch-changing mechanisms

**NOTE**

Groups [B64C 11/301](#), [B64C 11/303](#), [B64C 11/305](#) and [B64C 11/306](#) take precedence over [B64C 11/32](#), [B64C 11/38](#) and [B64C 11/44](#)

- 11/301 . . {characterised by blade position indicating means}
- 11/303 . . {characterised by comprising a governor}
- 11/305 . . {characterised by being influenced by other control systems, e.g. fuel supply}
- 11/306 . . {specially adapted for contrarotating propellers}
- 11/308 . . . {automatic}
- 11/32 . . mechanical
- 11/325 . . . {comprising feathering, braking or stopping systems}
- 11/34 . . . automatic
- 11/343 . . . . {actuated by the centrifugal force or the aerodynamic drag acting on the blades}
- 11/346 . . . . {actuated by the centrifugal force or the aerodynamic drag acting on auxiliary masses or surfaces}
- 11/36 . . . non-automatic
- 11/38 . . fluid, e.g. hydraulic
- 11/385 . . . {comprising feathering, braking or stopping systems}
- 11/40 . . . automatic
- 11/42 . . . non-automatic
- 11/44 . . electric

- 11/46 . Arrangements of or constructional features peculiar to multiple propellers ([B64C 11/306](#) takes precedence)
- 11/48 . . Units of two or more coaxial propellers
- 11/50 . . Phase synchronisation between multiple propellers

**13/00****Control systems or transmitting systems for actuating flying-control surfaces, lift-increasing flaps, air brakes, or spoilers**

- 13/02 . Initiating means
- 13/04 . . actuated personally
- 13/06 . . . adjustable to suit individual persons
- 13/08 . . . Trimming zero positions
- 13/10 . . . comprising warning devices
- 13/12 . . . Dual control apparatus
- 13/14 . . . lockable (locking in position to suit individual persons [B64C 13/06](#))
- 13/16 . . actuated automatically, e.g. responsive to gust detectors
- 13/18 . . . using automatic pilot
- 13/20 . . . using radiated signals
- 13/22 . . . readily revertible to personal control
- 13/24 . Transmitting means
- 13/26 . . without power amplification or where power amplification is irrelevant
- 13/28 . . . mechanical
- 13/30 . . . . using cable, chain, or rod mechanisms
- 13/32 . . . . using cam mechanisms
- 13/34 . . . . using toothed gearing
- 13/36 . . . fluid
- 13/38 . . with power amplification
- 13/40 . . . using fluid pressure
- 13/42 . . . . having duplication or stand-by provisions
- 13/44 . . . . overriding of personal controls; with automatic return to inoperative position
- 13/46 . . . . with artificial feel
- 13/48 . . . . characterised by the fluid being gaseous
- 13/50 . . . using electrical energy
- 13/503 . . . . {Fly-by-Wire}
- 2013/506 . . . . . {using electro-hydrostatic actuators (EHA's)}

**15/00****Attitude, flight direction, or altitude control by jet reaction**

- 15/02 . the jets being propulsion jets
- 15/12 . . the power plant being tiltable
- 15/14 . the jets being other than main propulsion jets ([jet flaps B64C 9/38](#))

**17/00****Aircraft stabilisation not otherwise provided for**

- 17/02 . by gravity or inertia-actuated apparatus
- 17/04 . . by pendular bodies
- 17/06 . . by gyroscopic apparatus ([automatic pilot control B64C 13/18](#))
- 17/08 . by ballast supply or discharge ([for lighter-than-air aircraft B64B](#))
- 17/10 . Transferring fuel to adjust trim

**19/00****Aircraft control not otherwise provided for**

- 19/02 . Conjoint controls

**Influencing air-flow over aircraft surfaces, not otherwise provided for**

<b>21/00</b>	<b>Influencing air-flow over aircraft surfaces by affecting boundary-layer flow (boundary-layer control in general <a href="#">F15D</a>)</b>
21/02	. by use of slot, ducts, porous areas, or the like
21/025	. . {for simultaneous blowing and sucking}
21/04	. . for blowing ( <a href="#">B64C 21/08</a> takes precedence)
21/06	. . for sucking ( <a href="#">B64C 21/08</a> takes precedence)
21/08	. . adjustable
21/10	. using other surface properties, e.g. roughness
<b>23/00</b>	<b>Influencing air-flow over aircraft surfaces, not otherwise provided for</b>
23/005	. {by other means not covered by groups <a href="#">B64C 23/02</a> - <a href="#">B64C 23/08</a> , e.g. by electric charges, magnetic panels, piezoelectric elements, static charges or ultrasounds}
23/02	. by means of rotating members of cylindrical or similar form
23/04	. by generating shock waves
23/06	. by generating vortices
23/065	. . {at the wing tip, e.g. winglets, splines}
23/08	. using Magnus effect
<b>25/00</b>	<b>Alighting gear (air-cushion alighting gear <a href="#">B60V 3/08</a>)</b>
25/001	. {Devices not provided for in the groups <a href="#">B64C 25/02</a> - <a href="#">B64C 25/68</a> }
2025/003	. . {Means for reducing landing gear noise, or turbulent flow around it, e.g. landing gear doors used as deflectors}
2025/005	. . {Tail skids for fuselage tail strike protection on tricycle landing gear aircraft}
2025/006	. . {Landing gear legs comprising torque arms}
2025/008	. . {Comprising means for modifying their length, e.g. for kneeling, for jumping, or for leveling the aircraft}
25/02	. Undercarriages
25/04	. . Arrangement or disposition on aircraft
25/06	. . fixed
25/08	. . non-fixed, e.g. jettisonable
25/10	. . . retractable, foldable, or the like
25/12	. . . . sideways
2025/125	. . . . . {into the fuselage, e.g. main landing gear pivotally retracting into or extending out of the fuselage}
25/14	. . . . fore-and-aft
25/16	. . . . Fairings movable in conjunction with undercarriage elements
25/18	. . . . Operating mechanisms
25/20	. . . . . mechanical
25/22	. . . . . fluid
25/24	. . . . . electric
25/26	. . . . . Control or locking systems therefor
25/28	. . . . . with indicating or warning devices
25/30	. . . . . emergency actuated
25/32	. characterised by the ground or like engaging elements ( <a href="#">arrestor hooks <a href="#">B64C 25/68</a></a> )
2025/325	. . {specially adapted for helicopters}
25/34	. . wheeled type, e.g. multi-wheeled bogies
2025/345	. . . {Multi-wheel bogies having one or more steering axes}

25/36	. . . Arrangements or adaptations of wheels, tyres, or axles in general ( <a href="#">construction of wheels or axles <a href="#">B60B</a></a> ; <a href="#">construction of tyres in general <a href="#">B60C</a></a> )
25/38	. . Endless-track type
25/40	. . the elements being rotated before touch-down
25/405	. . . {Powered wheels, e.g. for taxing}
25/42	. . Arrangements or adaptations of brakes ( <a href="#">the ground braking force being regulated, at least in part, by a speed condition, e.g. acceleration or deceleration of the ground engaging alighting gear, <a href="#">B60T 8/32</a></a> )
25/423	. . . {Braking devices acting by reaction of gaseous medium ( <a href="#">B64C 25/426</a> takes precedence; <a href="#">using rockets <a href="#">B64D 27/023</a></a> )}
25/426	. . . {Braking devices providing an automatic sequence of braking}
25/44	. . . Actuating mechanisms
25/445	. . . . {Brake regulators for preventing somersaulting}
25/46	. . . . Brake regulators for preventing skidding or aircraft somersaulting ( <a href="#">anti-skidding regulators; electric or electronic controllers therefor <a href="#">B60T 8/1703</a></a> )}
25/48	. . . . differentially operated for steering purposes
25/50	. . Steerable undercarriages; Shimmy damping ( <a href="#">steering devices applicable to land vehicles <a href="#">B62D</a></a> )
25/505	. . . {Shimmy damping}
25/52	. . Skis or runners
25/54	. . Floats
25/56	. . . inflatable ( <a href="#">connection of valves to inflatable elastic bodies <a href="#">B60C 29/00</a></a> )
25/58	. . Arrangements or adaptations of shock-absorbers or springs ( <a href="#">shimmy dampers <a href="#">B64C 25/50</a></a> ; <a href="#">vehicle suspension arrangements in general <a href="#">B60G</a></a> ; <a href="#">shock absorber per se <a href="#">F16F</a></a> )
25/60	. . . Oleo legs
25/62	. . . Spring shock-absorbers; Springs
25/64	. . . . using rubber or like elements
25/66	. . Convertible alighting gear; Combinations of different kinds of ground or like engaging elements
25/68	. Arrestor hooks ( <a href="#">arresting gear, e.g. on aircraft carriers <a href="#">B64F</a></a> )

**Aircraft kinds and components not otherwise provided for**

<b>27/00</b>	<b>Rotorcraft; Rotors peculiar thereto (alighting gear <a href="#">B64C 25/00</a>)</b>
27/001	. {Vibration damping devices}
2027/002	. . {mounted between the rotor drive and the fuselage}
2027/003	. . {mounted on rotor hub, e.g. a rotary force generator}
2027/004	. . {using actuators, e.g. active systems}
2027/005	. . {using suspended masses}
27/006	. {Safety devices}
27/007	. . {adapted for detection of blade cracks}
27/008	. {Rotors tracking or balancing devices}
27/02	. Gyroplanes
27/021	. . {Rotor or rotor head construction ( <a href="#">for helicopters <a href="#">B64C 27/32</a></a> )}
27/022	. . . {Devices for folding or adjusting the blades}



27/023	. . . {Construction of the blades; Coating of the blades}	27/52	. Tilting of rotor bodily relative to fuselage (of <a href="#">see-saw type construction B64C 27/43</a> )
27/024	. . . {Devices for shifting the rotor axis}	27/54	. Mechanisms for controlling blade adjustment or movement relative to rotor head, e.g. lag-lead movement
27/025	. . . {Rotor drives, in particular for taking off; Combination of autorotation rotors and driven rotors}	27/56	. . Initiating means, e.g. actuated personally
27/026	. . . {Devices for converting a fixed wing into an autorotation rotor and viceversa}	27/57	. . . automatic or condition responsive, e.g. responsive to rotor speed, torque or thrust
27/027	. . {Control devices using other means than the rotor}	27/58	. . Transmitting means
27/028	. . {Other constructional elements; Rotor balancing}	27/59	. . . mechanical
27/04	. Helicopters	27/605	. . . . including swash plate, spider or cam mechanisms
27/06	. . with single rotor	27/615	. . . . including flaps mounted on blades
27/08	. . with two or more rotors	27/625	. . . . including rotating masses or servo rotors
27/10	. . . arranged coaxially	27/635	. . . . specially for controlling lag-lead movements of blades
27/12	. . Rotor drives	27/64	. . . . using fluid pressure
2027/125	. . . {including toroidal transmissions, e.g. of the CVT type}	27/68	. . . . using electrical energy
27/14	. . . Direct drive between power plant and rotor hub	27/72	. . Means acting on blades
27/16	. . . Drive of rotors by means, e.g. propellers, mounted on rotor blades	2027/7205	. . . {on each blade individually, e.g. individual blade control [IBC]}
27/18	. . . . the means being jet-reaction apparatus	2027/7211	. . . . {without flaps}
27/20	. Rotorcraft characterised by having shrouded rotors, e.g. flying platforms	2027/7216	. . . . . {using one actuator per blade}
27/22	. Compound rotorcraft, i.e. aircraft using in flight the features of both aeroplane and rotorcraft	2027/7222	. . . . . {using airfoil deformation}
27/24	. . with rotor blades fixed in flight to act as lifting surfaces	2027/7227	. . . . . {using blowing slots actuated by piezoelectric actuators}
27/26	. . characterised by provision of fixed wings	2027/7233	. . . . . {using higher-harmonic control [HHC]}
27/28	. . with forward-propulsion propellers pivotable to act as lifting rotors	2027/7238	. . . . . {by controlling existing swash plate actuators}
27/30	. . with provision for reducing drag of inoperative rotor	2027/7244	. . . . . {by using dedicated actuators}
27/32	. Rotors (features common to rotors and propellers <a href="#">B64C 11/00</a> )	2027/725	. . . . . {using jets controlled by piezoelectric actuators}
27/322	. . {Blade travel limiting devices, e.g. droop stops}	2027/7255	. . . . . {using one or more swash plates}
27/325	. . {Circulation-control rotors}	2027/7261	. . . . . {with flaps}
27/327	. . {Retention means relieving the stress from the arm, e.g. tie-bars}	2027/7266	. . . . . {actuated by actuators}
27/33	. . having flexing arms	2027/7272	. . . . . {of the electro-hydraulic type}
27/35	. . having elastomeric joints	2027/7277	. . . . . {of the magnetostrictive type}
27/37	. . having articulated joints ( <a href="#">B64C 27/33</a> , <a href="#">B64C 27/35</a> take precedence)	2027/7283	. . . . . {of the piezoelectric type}
27/39	. . . with individually articulated blades, i.e. with flapping or drag hinges	2027/7288	. . . . . {of the memory shape type}
27/41	. . . with flapping or universal joint, common to the blades	2027/7294	. . . . . {actuated mechanically, e.g. by means of linkages}
27/43	. . . . see-saw type, i.e. two-bladed rotor	27/78	. . in association with pitch adjustment of blades of anti-torque rotor
27/45	. . . with a feathering hinge only	27/80	. . for differential adjustment of blade pitch between two or more lifting rotors
27/46	. . Blades	27/82	. characterised by the provision of an auxiliary rotor or fluid-jet device for counter-balancing lifting rotor torque or changing direction of rotorcraft
27/463	. . . {Blade tips}	2027/8209	. . {Electrically driven tail rotors}
27/467	. . . Aerodynamic features ( <a href="#">B64C 27/463</a> takes precedence)	2027/8218	. . {wherein the rotor or the jet axis is inclined with respect to the longitudinal horizontal or vertical plane of the helicopter}
27/473	. . . Constructional features ( <a href="#">B64C 27/463</a> takes precedence)	2027/8227	. . {comprising more than one rotor}
2027/4733	. . . . {Rotor blades substantially made from particular materials}	2027/8236	. . {including pusher propellers}
2027/4736	. . . . . {from composite materials}	2027/8245	. . {using air jets}
27/48	. . . . Root attachment to rotor head	2027/8254	. . {Shrouded tail rotors, e.g. "Fenestron" fans}
27/50	. . . . Blades foldable to facilitate stowage of aircraft	2027/8263	. . {comprising in addition rudders, tails, fins, or the like}
27/51	. Damping of blade movements	2027/8272	. . . {comprising fins, or movable rudders}
		2027/8281	. . . {comprising horizontal tail planes}
		2027/829	. . . {comprising a V-tail units}

<b>29/00</b>	<b>Aircraft capable of landing or taking-off vertically</b> (attitude, flight direction, or altitude control by jet reaction <a href="#">B64C 15/00</a> ; rotorcraft <a href="#">B64C 27/00</a> ; air-cushion vehicles <a href="#">B60V</a> )	<b>39/00</b>	<b>Aircraft not otherwise provided for</b>
29/0008	. {having its flight directional axis horizontal when grounded}	39/001	. {Flying saucers}
29/0016	. . {the lift during taking-off being created by free or ducted propellers or by blowers}	39/003	. {with wings, paddle wheels, bladed wheels, moving or rotating in relation to the fuselage (rotorcraft <a href="#">B64C 27/00</a> , ornithopters <a href="#">B64C 33/00</a> )}
29/0025	. . . {the propellers being fixed relative to the fuselage}	39/005	. . {about a horizontal transversal axis}
29/0033	. . . {the propellers being tiltable relative to the fuselage}	39/006	. . {about a vertical axis}
29/0041	. . {the lift during taking-off being created by jet motors}	39/008	. . {about a longitudinal axis}
29/005	. . . {the motors being fixed relative to the fuselage}	39/02	. characterised by special use
29/0058	. . . {with vertical jet}	39/022	. . {Tethered aircraft}
29/0066	. . . {with horizontal jet and jet deflector}	39/024	. . {of the remote controlled vehicle type, i.e. RPV}
29/0075	. . . {the motors being tiltable relative to the fuselage}	39/026	. . {for use as personal propulsion unit}
29/0083	. . {the lift during taking-off being created by several motors of different type}	39/028	. . {Micro-sized aircraft}
29/0091	. {Accessories not provided for elsewhere}	39/04	. having multiple fuselages or tail booms
29/02	. having its flight directional axis vertical when grounded	39/06	. having disc- or ring-shaped wings {( <a href="#">B64C 39/001</a> takes precedence)}
29/04	. . characterised by jet-reaction propulsion	39/062	. . {having annular wings}
<b>30/00</b>	<b>Supersonic-type aircraft</b>	39/064	. . . {with radial airflow}
<b>31/00</b>	<b>Aircraft intended to be sustained without power plant; Powered hang-glider-type aircraft; Microlight-type aircraft</b>	39/066	. . {having channel wings}
31/02	. Gliders, e.g. sailplanes ( <a href="#">hang-gliders B64C 31/028</a> )	39/068	. . {having multiple wings joined at the tips}
31/024	. . with auxiliary power plant	39/08	. having multiple wings {( <a href="#">B64C 39/06</a> takes precedence)}
31/028	. Hang-glider-type aircraft; Microlight-type aircraft	39/10	. All-wing aircraft {( <a href="#">B64C 39/001</a> takes precedence)}
31/0285	. . {Safety devices}	2039/105	. {of blended wing body type}
31/032	. . having delta shaped wing	39/12	. Canard-type aircraft
31/036	. . having parachute-type wing ( <a href="#">parachutes B64D 17/00</a> )		
31/04	. Man-powered aircraft ( <a href="#">ornithopters B64C 33/00</a> )		
31/06	. Kites ( <a href="#">hang-gliders B64C 31/028</a> ; toy aspects <a href="#">A63H 27/08</a> ; towed targets <a href="#">F41J</a> {for propelling boats <a href="#">B63H 9/0685</a> ; for propelling wind driven boards, control means and harnesses therefor <a href="#">B63B 35/7976</a> })		
2031/065	. . {of inflatable wing type}		
<b>33/00</b>	<b>Ornithopters</b>		
33/02	. Wings; Actuating mechanisms therefor		
33/025	. . {the entire wing moving either up or down}		
<b>35/00</b>	<b>Flying-boats; Seaplanes</b> ( <a href="#">alighting gear B64C 25/00</a> )		
35/001	. {with means for increasing stability on the water}		
35/002	. . {using adjustable auxiliary floats}		
35/003	. . {using auxiliary floats at the wing tips}		
35/005	. {with propellers, rudders or brakes acting in the water}		
35/006	. {with lift generating devices}		
35/007	. {Specific control surfaces therefor}		
35/008	. {Amphibious sea planes}		
<b>37/00</b>	<b>Convertible aircraft</b> (vehicles capable of travelling in or on different media <a href="#">B60F</a> )		
37/02	. Flying units formed by separate aircraft (towing, air-refuelling, or aircraft-carrying aircraft <a href="#">B64D</a> )		
		<b>2201/00</b>	<b>Unmanned aerial vehicles; Equipment therefor</b>
		2201/02	. characterized by type of aircraft
		2201/021	. . Airplanes, i.e. having wings and tail planes
		2201/022	. . Balloons, blimps or airships
		2201/024	. . Helicopters, or autogiros
		2201/025	. . Ornithopters, i.e. generating lift and propulsion by flapping wings or insect like means
		2201/027	. . Flying platforms
		2201/028	. . of all-wing types
		2201/04	. characterised by type of power plant
		2201/042	. . by electric motors; Electric power sources therefor, e.g. fuel cells, solar panels or batteries
		2201/044	. . by internal combustion engines, e.g. oscillating piston or rotary piston engines
		2201/046	. . by rocket engines, ramjets, or pulse-reactors
		2201/048	. . by jet turbines, or turbofans
		2201/06	. characterised by in-flight supply of energy
		2201/063	. . by refueling
		2201/066	. . by recharging of batteries, e.g. by induction
		2201/08	. characterised by the launching method
		2201/082	. . Released from other aircraft
		2201/084	. . using catapults
		2201/086	. . by taking-off horizontally by own power, e.g. from a runway
		2201/088	. . Vertical take-off using special means (for <a href="#">helicopters B64C 2201/024</a> ; for <a href="#">balloons B64C 2201/022</a> )
		2201/10	. characterised by the lift producing means
		2201/101	. . Lifting aerostatically, e.g. using lighter-than-air gases in chambers
		2201/102	. . Deployable wings, e.g. foldable or morphing wings
		2201/104	. . Fixed wings
		2201/105	. . Inflatable wings
		2201/107	. . Parachutes; Parasails; Kites; Membranes

2201/108	. . using rotors, or propellers	2230/20	. by passively inducing fluid flow, e.g. by means of a pressure difference between both ends of a slot or duct
2201/12	. adapted for particular use	2230/22	. by using a surface having multiple apertures of relatively small openings other than slots
2201/121	. . for dropping bombs; for electronic warfare; Flying bombs	2230/24	. by using passive resonance cavities, e.g. without transducers
2201/122	. . as communication relays, e.g. high altitude platforms	2230/26	. by using rib lets or hydrophobic surfaces
2201/123	. . for imaging, or topography	2230/28	. at propeller or rotor blades
2201/125	. . for meteorology		
2201/126	. . adapted for performing different kinds of missions, e.g. multipurpose use	<b>2700/00</b>	<b>Codes corresponding to the former IdT classification</b>
2201/127	. . for photography, or video recording, e.g. by using cameras	2700/62	. Codes corresponding to the former IdT classification of class 62
2201/128	. . for transporting goods other than bombs	2700/6201	. . Airplanes, helicopters, autogyros
2201/14	. characterised by flight control	2700/6202	. . . Characteristics not limited to an aircraft type
2201/141	. . autonomous, i.e. by navigating independently from ground or air stations, e.g. by using inertial navigation systems [INS]	2700/6204	. . . . Materials
2201/143	. . . adapted for flying in formations	2700/6205	. . . . Protection means, e.g. against rust, water, fire
2201/145	. . . using satellite radio beacon positioning systems, e.g. GPS	2700/6207	. . . . Stabilisation
2201/146	. . Remote controls	2700/6208	. . . . . Longitudinal and transversal stability
2201/148	. . . using tethers for connecting to ground station	2700/6209	. . . . . automatically controlled
2201/16	. characterised by type of propulsion unit	2700/6211	. . . . . with movable weight not acting as pendulum
2201/162	. . using ducted fans or propellers	2700/6212	. . . . . with weight acting as pendulum
2201/165	. . using unducted propellers	2700/6214	. . . . . with parts of the aircraft acting as pendulum
2201/167	. . using rockets, ramjets, pulse jets, plasma, or the like	2700/6215	. . . . . with fluid acting as pendulum
2201/18	. characterised by landing method	2700/6216	. . . . . by gyroscopical effect (also in combination with pendulum)
2201/182	. . by being caught in mid-air, or next to the ground, e.g. using a net	2700/6218	. . . . . by other pulse power source, e.g. aerodynamical effect, propellers
2201/185	. . by deploying parachutes, or the like	2700/6219	. . . . . by auxiliary fixed or movable surfaces or other special devices, or surfaces acting as parachutes
2201/187	. . by landing horizontally, e.g. on a runway	2700/6221	. . . . . manually controlled
2201/20	. Methods for transport, or storage of unmanned aerial vehicles	2700/6222	. . . . . with movable weight not acting as pendulum
2201/201	. . in containers	2700/6223	. . . . . with weight acting as pendulum
2201/203	. . in rucksacks, or bags to be carried by persons	2700/6225	. . . . . by gyroscopical effect (also in combination with pendulum)
2201/205	. . by waterborne vehicles, e.g. ships or submarines or by hovercraft	2700/6226	. . . . . by other pulse power source; e.g. aerodynamical effect, popeller
2201/206	. . by airborne vehicles, e.g. airplanes or helicopters	2700/6228	. . . . . by auxiliary planes or parachutes
2201/208	. . by landborne vehicles, e.g. trucks, lorries, tanks or cars	2700/6229	. . . . . Special devices to stabilise or to compensate a helicopter rotor by other means than counter rotating rotor
2201/22	. having stealth characteristics	2700/623	. . . . . Special devices to stabilise or to compensate a gyroplane pivoting torque
<b>2203/00</b>	<b>Flying model aircraft, flying toy aircraft</b>	2700/6232	. . . Airplanes with fixed or movable wings
<b>2211/00</b>	<b>Modular constructions of airplanes or helicopters</b>	2700/6233	. . . . Design, structure or mounting of wings
<b>2220/00</b>	<b>Active noise reduction systems</b>	2700/6235	. . . . . Guy-wires assemblies; Connections between wings and fuselage
<b>2230/00</b>	<b>Boundary layer controls</b>	2700/6236	. . . . . Honeycomb stiffeners
2230/02	. by using acoustic waves generated by transducers	2700/6238	. . . . . Pressure equalising devices between the inside of the wing and the atmosphere
2230/04	. by actively generating fluid flow	2700/6239	. . . . . Ful wing structures
2230/06	. by explicitly adjusting fluid flow, e.g. by using valves, variable aperture or slot areas, variable pump action or variable fluid pressure	2700/624	. . . . . Wings or parts thereof movable during flight
2230/08	. by influencing fluid flow by means of surface cavities, i.e. net fluid flow is null	2700/6242	. . . . . adjustable about several axes
2230/10	. by influencing fluid flow by heating using other means than combustion	2700/6243	. . . . . Control systems
2230/12	. by using electromagnetic tiles, fluid ionizers, static charges or plasma	2700/6245	. . . . . by warping of wings tips
2230/14	. achieving noise reductions	2700/6246	. . . . . by auxiliary surfaces at the wings tips
2230/16	. by blowing other fluids over the surface than air, e.g. He, H, O <sub>2</sub> or exhaust gases	2700/6247	. . . . . by auxiliary surfaces outside the wings tips
2230/18	. by using small jets that make the fluid flow oscillate		

2700/6249	. . . . .	by propellers
2700/625	. . . . .	by jet flaps
2700/6252	. . . . .	Control systems assemblies
2700/6253	. . . . .	Feedback compensation devices
2700/6254	. . . . .	Control systems or transmitting systems for actuating control surfaces
2700/6256	. . . . .	Control devices for fins or rudders
2700/6257	. . . . .	by hydraulic, pneumatical or electrical means
2700/6259	. . . . .	Control devices for feed-back compensating and guiding surfaces
2700/626	. . . . .	by hydraulic, pneumatical or electrical means
2700/6261	. . . . .	Transmission systems
2700/6263	. . . . .	Servo actuators; Auxiliary motors
2700/6264	. . . . .	Vibrations suppressing devices
2700/6266	. . . . .	Safety devices
2700/6267	. . . . .	Control devices for a special position of the flying aircraft or a special position of the pilot
2700/6269	. . . . .	Control from outside the aircraft
2700/627	. . . . .	Influencing airflow over aircraft surfaces
2700/6271	. . . . .	by fluid flow around the aircraft
2700/6273	. . . . .	lift being provided by static devices, e.g. balloons
2700/6274	. . . . .	by other means, e.g. propellers, rotors, air jets
2700/6276	. . . . .	Rotorcraft
2700/6277	. . . . .	with driven or windmilling propellers
2700/6278	. . . . .	Features common for any type of rotorcraft
2700/628	. . . . .	Devices for the adjustment of the blades; Folding blades
2700/6281	. . . . .	Helicopters
2700/6283	. . . . .	Rotor construction
2700/6284	. . . . .	Blades control devices
2700/6285	. . . . .	Drag reducing devices for an inoperative rotor
2700/6287	. . . . .	Rotor drives
2700/6288	. . . . .	Hydraulic, electric or man powered rotorcrafts
2700/629	. . . . .	Rotors which can be used as propulsion means
2700/6291	. . . . .	Rotors stowable in the wings
2700/6292	. . . . .	Control means using other devices than the rotor
2700/6294	. . . . .	Construction parts, e.g. frames; Balancing; Flight control; Brakes
2700/6295	. . . . .	Aircraft specially adapted for special uses
2700/6297	. . . . .	for military uses
2700/6298	. . . . .	Gliders