

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 \[B64C 21/00\]\(#\)\)](#)

| | | | |
|-------------|---|--------|---|
| 1/00 | Fuselages; Constructional features common to fuselages, wings, stabilising surfaces and the like (aerodynamical features common to fuselages, wings, stabilising surfaces, and the like B64C 23/00; flight-deck installations B64D) | 1/1438 | {of the sliding type} |
| | | 1/1446 | . . . {Inspection hatches (for engine cowls B64D 29/08)} |
| | | 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 (B64C 1/1492 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 (cargo door type ramps B64C 1/1415)} |
| 2001/0063 | . . {from wood} | 1/24 | . Steps mounted on, and retractable within, fuselages (readily removable B64D 9/00) |
| 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 (ejector seats B64D 25/10) |
| 1/061 | . . {Frames} | 1/34 | . comprising inflatable structural components (connection of valves to inflatable elastic bodies B60C 29/00) |
| 1/062 | . . . {specially adapted to absorb crash loads} | 1/36 | . adapted to receive aerials or radomes (aerials or radomes per se H01Q) |
| 1/063 | . . . {Folding or collapsing to reduce overall dimensions, e.g. foldable tail booms (folding or collapsing wings B64C 3/56)} | 1/38 | . Constructions adapted to reduce effects of aerodynamic or other external heating {(cooling structural parts of aircrafts with air flow B64D 13/006)} |
| 1/064 | . . {Stringers; Longerons} | 1/40 | . Sound or heat insulation, {e.g. using insulation blankets (insulating elements for vehicles, in general B60R 13/08)} |
| 1/065 | . . {Spars} | 1/403 | . . {Arrangement of fasteners specially adapted therefor, e.g. of clips (in vehicles in general B60R 13/0206)} |
| 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} (fairings movable in conjunction with undercarriage elements B64C 25/16 ; bomb doors B64D 1/06) | | |
| 1/1407 | . . {Doors; surrounding frames} | | |
| 1/1415 | . . . {Cargo doors, e.g. incorporating ramps} | | |
| 1/1423 | . . . {Passenger doors} | | |
| 1/143 | {of the plug type} | | |

| | | | |
|-------------|---|-------------|---|
| 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 B60R 16/00 ; supports for pipes, cables or protective tubing F16L 3/00 ; installations of electric cables or lines in vehicles H02G 3/00)} | 3/56 | . . Folding or collapsing to reduce overall dimensions of aircraft |
| 3/00 | Wings (stabilising surfaces B64C 5/00 ; ornithopter wings B64C 33/02) | 3/58 | . provided with fences or spoilers (adjustable for control purposes B64C 9/00) |
| 3/10 | . Shape of wings | 5/00 | Stabilising surfaces (attaching stabilising surfaces to fuselage B64C 1/26) |
| 3/14 | . . Aerofoil profile | 5/02 | . Tailplanes (fins B64C 5/06) |
| 3/141 | . . . {Circulation Control Airfoils} | 5/04 | . Noseplanes |
| 2003/142 | . . . {with variable camber along the airfoil chord} | 5/06 | . Fins (specially for wings B64C 5/08) |
| 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 B64C 1/26) |
| 2003/149 | . . . {for supercritical or transonic flow} | 7/00 | Structures or fairings not otherwise provided for |
| 3/16 | . . Frontal aspect | 7/02 | . Nacelles |
| 3/18 | . Spars; Ribs; Stringers (attaching wing unit to fuselage B64C 1/26) | 9/00 | Adjustable control surfaces or members, e.g. rudders (trimming stabilising surfaces B64C 5/10) |
| 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 B32B) | 9/06 | . with two or more independent movements |
| 3/22 | . Geodetic or other open-frame structures | 9/08 | . bodily displaceable (varying camber of wings B64C 3/44) |
| 3/24 | . Moulded or cast structures | 9/10 | . one surface adjusted by movement of another, e.g. servo tabs (B64C 9/04 takes precedence; adjusting surfaces of different type or function B64C 9/12) |
| 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 B64C 21/00) |
| 3/30 | . comprising inflatable structural components (connection of valves to inflatable elastic bodies B60C 29/00) | 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 B64C 3/58)} |
| 3/34 | . Integrally-constructed tanks, e.g. for fuel (other aircraft fuel tanks or fuel systems B64D) | 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 B64D 13/006)} | 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 B60C 29/00) | 9/32 | . Air braking surfaces (braking by parachutes B64D 17/80) |
| 3/48 | . . . by relatively-movable parts of wing structures | 9/323 | . . {associated with wings} |
| 3/50 | . . . by leading or trailing edge flaps (ailerons B64C 9/00) | 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 B64C 3/44) | 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} | | |

11/00 Propellers, e.g. of ducted type; Features common to propellers and rotors for rotorcraft (rotors specially adapted for rotorcraft [B64C 27/32](#))

NOTE

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

- 21/00 Influencing air-flow over aircraft surfaces by affecting boundary-layer flow (boundary-layer control in general F15D)**
 21/02 . by use of slot, ducts, porous areas, or the like
 21/025 . . {for simultaneous blowing and sucking}
 21/04 . . for blowing (B64C 21/08 takes precedence)
 21/06 . . for sucking (B64C 21/08 takes precedence)
 21/08 . . adjustable
 21/10 . using other surface properties, e.g. roughness
- 23/00 Influencing air-flow over aircraft surfaces, not otherwise provided for**
 23/005 . {by other means not covered by groups B64C 23/02 - B64C 23/08, 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
- 25/00 Alighting gear (air-cushion alighting gear B60V 3/08)**
 25/001 . {Devices not provided for in the groups B64C 25/02 - B64C 25/68}
 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 (arrestor hooks B64C 25/68)
 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 (construction of wheels or axles B60B; construction of tyres in general B60C)
 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 (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, B60T 8/32)
 25/423 . . . {Braking devices acting by reaction of gaseous medium (B64C 25/426 takes precedence; using rockets B64D 27/023)}
 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 {(anti-skidding regulators; electric or electronic controllers therefor B60T 8/1703)}
 25/48 differentially operated for steering purposes
 25/50 . . Steerable undercarriages; Shimmy damping (steering devices applicable to land vehicles B62D)
 25/505 . . . {Shimmy damping}
 25/52 . . Skis or runners
 25/54 . . Floats
 25/56 . . . inflatable (connection of valves to inflatable elastic bodies B60C 29/00)
 25/58 . . Arrangements or adaptations of shock-absorbers or springs (shimmy dampers B64C 25/50; vehicle suspension arrangements in general B60G; shock absorber per se F16F)
 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 (arresting gear, e.g. on aircraft carriers B64F)

Aircraft kinds and components not otherwise provided for

- 27/00 Rotorcraft; Rotors peculiar thereto (alighting gear B64C 25/00)**
 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 (for helicopters B64C 27/32)} | 27/50 | Blades foldable to facilitate stowage of aircraft |
| 27/022 | . . . {Devices for folding or adjusting the blades} | 27/51 | . Damping of blade movements |
| 27/023 | . . . {Construction of the blades; Coating of the blades} | 27/52 | . Tilting of rotor bodily relative to fuselage (of see-saw type construction B64C 27/43) |
| 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 B64C 11/00) | 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 (B64C 27/33 , B64C 27/35 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 (B64C 27/463 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 (B64C 27/463 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} |
| | | 2027/8263 | . . {comprising in addition rudders, tails, fins, or the like} |
| | | 2027/8272 | . . . {comprising fins, or movable rudders} |
| | | 2027/8281 | . . . {comprising horizontal tail planes} |

| | | | |
|--------------|--|----------------|--|
| 2027/829 | . . . {comprising a V-tail units} | 37/02 | . Flying units formed by separate aircraft (towing, air-refuelling, or aircraft-carrying aircraft B64D) |
| 29/00 | Aircraft capable of landing or taking-off vertically (attitude, flight direction, or altitude control by jet reaction B64C 15/00 ; rotorcraft B64C 27/00 ; air-cushion vehicles B60V) | 39/00 | Aircraft not otherwise provided for |
| 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 B64C 27/00 , ornithopters B64C 33/00)} |
| 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 (B64C 39/001 takes precedence) |
| 29/04 | . . characterised by jet-reaction propulsion | 39/062 | . . {having annular wings} |
| 30/00 | Supersonic-type aircraft | 39/064 | . . . {with radial airflow} |
| 31/00 | Aircraft intended to be sustained without power plant; Powered hang-glider-type aircraft; Microlight-type aircraft | 39/066 | . . {having channel wings} |
| 31/02 | . Gliders, e.g. sailplanes (hang-gliders B64C 31/028) | 39/068 | . . {having multiple wings joined at the tips} |
| 31/024 | . . with auxiliary power plant | 39/08 | . having multiple wings (B64C 39/06 takes precedence) |
| 31/028 | . Hang-glider-type aircraft; Microlight-type aircraft | 39/10 | . All-wing aircraft (B64C 39/001 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 (parachutes B64D 17/00) | | |
| 31/04 | . Man-powered aircraft (ornithopters B64C 33/00) | | |
| 31/06 | . Kites (hang-gliders B64C 31/028 ; toy aspects A63H 27/08 ; towed targets F41J {for propelling boats B63H 9/0685 ; for propelling wind driven boards, control means and harnesses therefor B63B 35/7976 }) | | |
| 2031/065 | . . {of inflatable wing type} | | |
| 33/00 | Ornithopters | 2201/00 | Unmanned aerial vehicles; Equipment therefor |
| 33/02 | . Wings; Actuating mechanisms therefor | 2201/02 | . characterized by type of aircraft |
| 33/025 | . . {the entire wing moving either up or down} | 2201/021 | . . Airplanes, i.e. having wings and tail planes |
| 35/00 | Flying-boats; Seaplanes (alighting gear B64C 25/00) | 2201/022 | . . Balloons, blimps or airships |
| 35/001 | . {with means for increasing stability on the water} | 2201/024 | . . Helicopters, or autogiros |
| 35/002 | . . {using adjustable auxiliary floats} | 2201/025 | . . Ornithopters, i.e. generating lift and propulsion by flapping wings or insect like means |
| 35/003 | . . {using auxiliary floats at the wing tips} | 2201/027 | . . Flying platforms |
| 35/005 | . {with propellers, rudders or brakes acting in the water} | 2201/028 | . . of all-wing types |
| 35/006 | . {with lift generating devices} | 2201/04 | . characterised by type of power plant |
| 35/007 | . {Specific control surfaces therefor} | 2201/042 | . . by electric motors; Electric power sources therefor, e.g. fuel cells, solar panels or batteries |
| 35/008 | . {Amphibious sea planes} | 2201/044 | . . by internal combustion engines, e.g. oscillating piston or rotary piston engines |
| 37/00 | Convertible aircraft (vehicles capable of travelling in or on different media B60F) | 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 helicopters B64C 2201/024 ; for balloons B64C 2201/022) |
| | | 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 | 2230/16 | . by blowing other fluids over the surface than air, e.g. He, H, O ₂ or exhaust gases |
| 2201/105 | . . Inflatable wings | 2230/18 | . by using small jets that make the fluid flow oscillate |
| 2201/107 | . . Parachutes; Parasails; Kites; Membranes | 2230/20 | . by passively inducing fluid flow, e.g. by means of a pressure difference between both ends of a slot or duct |
| 2201/108 | . . using rotors, or propellers | 2230/22 | . by using a surface having multiple apertures of relatively small openings other than slots |
| 2201/12 | . adapted for particular use | 2230/24 | . by using passive resonance cavities, e.g. without transducers |
| 2201/121 | . . for dropping bombs; for electronic warfare; Flying bombs | 2230/26 | . by using rib lets or hydrophobic surfaces |
| 2201/122 | . . as communication relays, e.g. high altitude platforms | 2230/28 | . at propeller or rotor blades |
| 2201/123 | . . for imaging, or topography | 2700/00 | Codes corresponding to the former IdT classification |
| 2201/125 | . . for meteorology | 2700/62 | . Codes corresponding to the former IdT classification of class 62 |
| 2201/126 | . . adapted for performing different kinds of missions, e.g. multipurpose use | 2700/6201 | . . Airplanes, helicopters, autogyros |
| 2201/127 | . . for photography, or video recording, e.g. by using cameras | 2700/6202 | . . . Characteristics not limited to an aircraft type |
| 2201/128 | . . for transporting goods other than bombs | 2700/6204 | Materials |
| 2201/14 | . characterised by flight control | 2700/6205 | Protection means, e.g. against rust, water, fire |
| 2201/141 | . . autonomous, i.e. by navigating independently from ground or air stations, e.g. by using inertial navigation systems [INS] | 2700/6207 | Stabilisation |
| 2201/143 | . . . adapted for flying in formations | 2700/6208 | Longitudinal and transversal stability |
| 2201/145 | . . . using satellite radio beacon positioning systems, e.g. GPS | 2700/6209 | automatically controlled |
| 2201/146 | . . Remote controls | 2700/6211 | with movable weight not acting as pendulum |
| 2201/148 | . . . using tethers for connecting to ground station | 2700/6212 | with weight acting as pendulum |
| 2201/16 | . characterised by type of propulsion unit | 2700/6214 | with parts of the aircraft acting as pendulum |
| 2201/162 | . . using ducted fans or propellers | 2700/6215 | with fluid acting as pendulum |
| 2201/165 | . . using unducted propellers | 2700/6216 | by gyroscopical effect (also in combination with pendulum) |
| 2201/167 | . . using rockets, ramjets, pulse jets, plasma, or the like | 2700/6218 | by other pulse power source, e.g. aerodynamical effect, propellers |
| 2201/18 | . characterised by landing method | 2700/6219 | by auxiliary fixed or movable surfaces or other special devices, or surfaces acting as parachutes |
| 2201/182 | . . by being caught in mid-air, or next to the ground, e.g. using a net | 2700/6221 | manually controlled |
| 2201/185 | . . by deploying parachutes, or the like | 2700/6222 | with movable weight not acting as pendulum |
| 2201/187 | . . by landing horizontally, e.g. on a runway | 2700/6223 | with weight acting as pendulum |
| 2201/20 | . Methods for transport, or storage of unmanned aerial vehicles | 2700/6225 | by gyroscopical effect (also in combination with pendulum) |
| 2201/201 | . . in containers | 2700/6226 | by other pulse power source; e.g. aerodynamical effect, popeller |
| 2201/203 | . . in rucksacks, or bags to be carried by persons | 2700/6228 | by auxiliary planes or parachutes |
| 2201/205 | . . by waterborne vehicles, e.g. ships or submarines or by hovercraft | 2700/6229 | Special devices to stabilise or to compensate a helicopter rotor by other means than counter rotating rotor |
| 2201/206 | . . by airborne vehicles, e.g. airplanes or helicopters | 2700/623 | Special devices to stabilise or to compensate a gyroplane pivoting torque |
| 2201/208 | . . by landborne vehicles, e.g. trucks, lorries, tanks or cars | 2700/6232 | . . . Airplanes with fixed or movable wings |
| 2201/22 | . having stealth characteristics | 2700/6233 | Design, structure or mounting of wings |
| 2203/00 | Flying model aircraft, flying toy aircraft | 2700/6235 | Guy-wires assemblies; Connections between wings and fuselage |
| 2211/00 | Modular constructions of airplanes or helicopters | 2700/6236 | Honeycomb stiffeners |
| 2220/00 | Active noise reduction systems | 2700/6238 | Pressure equalising devices between the inside of the wing and the atmosphere |
| 2230/00 | Boundary layer controls | 2700/6239 | Ful wing structures |
| 2230/02 | . by using acoustic waves generated by transducers | 2700/624 | Wings or parts thereof movable during flight |
| 2230/04 | . by actively generating fluid flow | 2700/6242 | adjustable about several axes |
| 2230/06 | . by explicitly adjusting fluid flow, e.g. by using valves, variable aperture or slot areas, variable pump action or variable fluid pressure | 2700/6243 | Control systems |
| 2230/08 | . by influencing fluid flow by means of surface cavities, i.e. net fluid flow is null | | |
| 2230/10 | . by influencing fluid flow by heating using other means than combustion | | |
| 2230/12 | . by using electromagnetic tiles, fluid ionizers, static charges or plasma | | |
| 2230/14 | . achieving noise reductions | | |

| | | |
|-----------|-----------|--|
| 2700/6245 | | by warping of wings tips |
| 2700/6246 | | by auxiliary surfaces at the wings tips |
| 2700/6247 | | by auxiliary surfaces outside the wings tips |
| 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 |