

CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B64 AIRCRAFT; AVIATION; COSMONAUTICS

B64D EQUIPMENT FOR FITTING IN OR TO AIRCRAFT; FLIGHT SUITS; PARACHUTES; ARRANGEMENT OR MOUNTING OF POWER PLANTS OR PROPULSION TRANSMISSIONS IN AIRCRAFT

WARNING

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

B64D 15/18	covered by	B64D 15/16
B64D 25/102	covered by	B64D 25/10
B64D 25/105	covered by	B64D 25/10
B64D 25/108	covered by	B64D 25/10
B64D 25/11	covered by	B64D 25/10
B64D 25/112	covered by	B64D 25/10
B64D 25/115	covered by	B64D 25/10
B64D 25/118	covered by	B64D 25/10

1/00	Dropping, ejecting, releasing or receiving articles, liquids, or the like, in flight (refuelling during flight B64D 39/00; launching apparatus for projecting projectiles or missiles F41F 1/00, F41F 7/00; rocket or torpedo launchers F41F 3/00; weapon sights or aiming F41G)	7/06	. . movably mounted
		7/08	. Arrangement of rocket launchers
		9/00	Equipment for handling freight; Equipment for facilitating passenger embarkation or the like
		9/003	. {Devices for retaining pallets or freight containers}
1/02	. Dropping, ejecting, or releasing articles (jettisonable fuel reservoirs B64D 37/12)	2009/006	. {Rollers or drives for pallets of freight containers, e.g. PDU}
1/04	. . the articles being explosive, e.g. bombs	10/00	Flight suits
1/06	. . . Bomb releasing; Bomb doors	2010/002	. {Anti-g suits or garments}
1/08	. . the articles being load-carrying devices	2010/005	. {High altitude suits or garments, e.g. partial or total pressure}
1/10	. . . Stowage arrangements for the devices in aircraft	2010/007	. {Suits with cooling or heating means}
1/12	. . . Releasing	11/00	Passenger or crew accommodation; Flight-deck installations not otherwise provided for
1/14	. . . Absorbing landing shocks	11/0007	. {Devices specially adapted for food or beverage distribution services}
1/16	. Dropping or releasing powdered, liquid, or gaseous matter, e.g. for fire-fighting (jettisoning fuel B64D 37/26)	11/0015	. {Arrangements for entertainment or communications, e.g. radio, television}
1/18	. . by spraying, e.g. insecticides	11/00151	. . {Permanently mounted seat back monitors}
1/20	. . for sky-writing	11/00152	. . {Seat back fixtures for removable monitors, e.g. tablet computers}
1/22	. Taking-up articles from earth's surface	11/00153	. . {Monitors mounted on or in the seat other than the seat back}
3/00	Aircraft adaptations to facilitate towing or being towed	11/00154	. . {Loudspeakers mounted in the seat back}
3/02	. for towing targets	11/00155	. . {Individual entertainment or communication system remote controls therefor, located in or connected to seat components, e.g. to seat back or arm rest}
5/00	Aircraft transported by aircraft, e.g. for release or reberthing during flight	11/0023	. {Movable or removable cabin dividers, e.g. for class separation}
7/00	Arrangement of military equipment, e.g. armaments, armament accessories or military shielding, in aircraft; Adaptations of armament mountings for aircraft (dropping bombs or the like B64D 1/00)	11/003	. {Stowage devices for passengers' personal luggage}
7/02	. the armaments being firearms	2011/0038	. {Illumination systems for cabins as a whole}
7/04	. . fixedly mounted		

2011/0046	. {Modular or preassembled units for creating cabin interior structures}	11/0641	. . . {Seats convertible into beds}
2011/0053	. {Cabin passenger reading lights}	11/0642	. . . {Adjustable headrests}
2011/0061	. {Windows displaying outside view, artificially generated}	11/0643	. . . {Adjustable foot or leg rests}
2011/0069	. {Rest berths, beds or the like}	11/0644	. . . {Adjustable arm rests}
2011/0076	. . {for crew members, e.g. for sleeping during flight}	11/0646	. . {Seats characterised by special features of stationary arms, foot or head rests}
2011/0084	. . {Bed units for passengers attached to the ceiling of the fuselage}	11/0647	. . {Seats characterised by special upholstery or cushioning features}
2011/0092	. . {Arrangements for mounting stretchers in aircraft cabins}	11/0648	. . {Lower frame constructions}
11/02	. Toilet fittings	11/0649	. . {Seats characterised by special features for reducing weight}
11/04	. Galleys	11/0689	. . {specially adapted for pilots}
11/06	. {Arrangements of seats, or adaptations or details specially adapted for aircraft seats (crew seat constructions for emergency purposes B64D 25/04)}	11/0691	. . {specially adapted for cabin crew}
11/0601	. . {Arrangement of seats for non-standard seating layouts, e.g. seats staggered horizontally or vertically, arranged in an angled or fishbone layout, or facing in other directions than the direction of flight}	11/0693	. . {Width modification of seat assemblies, e.g. for class modification}
11/0602	. . {Seat modules, i.e. seat systems including furniture separate from the seat itself}	11/0696	. . {Means for fastening seats to floors, e.g. to floor rails}
11/0604	. . . {including a bed, e.g. cocoon type passenger seat modules}	11/0697	. . {Seats suspended from aircraft ceiling}
11/0605	. . . {including tables or desks}	11/0698	. . {Seats suspended from aircraft walls}
11/0606	. . {with privacy shells, screens, separators or the like (class dividers B64D 11/0023)}	13/00	Arrangements or adaptations of air-treatment apparatus for aircraft crew or passengers, or freight space
11/0607	. . {with devices specially adapted for exercising during travel; with devices specially adapted to prevent thrombosis}	2013/003	. {Cabin ventilation nozzles}
11/0611	. . {with means for holding the passenger in a standing position}	13/006	. {the air being used to cool structural parts of the aircraft}
11/0612	. . {specially adapted for children}	13/02	. the air being pressurised
11/0616	. . {with ejection means}	13/04	. . Automatic control of pressure
11/0619	. . {with energy absorbing means specially adapted for mitigating impact loads for passenger seats, e.g. at a crash}	13/06	. the air being conditioned (pressurising B64D 13/02)
11/062	. . {Belts or other passenger restraint means for passenger seats}	2013/0603	. . {Environmental Control Systems}
11/06205	. . . {Arrangements of airbags}	2013/0607	. . . {providing hot air or liquid for deicing aircraft parts, e.g. aerodynamic surfaces or windows}
11/0621	. . . . {Airbag initiation or activation means}	2013/0611	. . . {combined with auxiliary power units (APU's)}
11/0624	. . {Arrangements of electrical connectors, e.g. for earphone, internet or electric supply}	2013/0614	. . . {with subsystems for cooling avionics}
11/0626	. . {with individual temperature or ventilation control}	2013/0618	. . . {with arrangements for reducing or managing bleed air, using another air source, e.g. ram air}
11/0627	. . {Seats combined with storage means}	2013/0622	. . . {used in combination with boundary layer control systems}
11/0629	. . . {the storage means being specially adapted for emergency equipment}	2013/0625	. . . {comprising means for distribution effusion of conditioned air in the cabin}
11/0631	. . . . {for life vests}	2013/0629	. . . {with subsystems for cooling food, catering or special loads}
11/0632	. . . . {for breathing apparatus}	2013/0633	. . . {including chemical reaction-based thermal management systems}
11/0633	. . . . {for devices other than life vests and intended for external use, e.g. parachutes or life rafts}	2013/0637	. . . {with CO ₂ removers}
11/0636	. . . {Personal storage means or waste disposal bags}	2013/064	. . . {comprising more than one system, e.g. dual systems}
11/0638	. . {with foldable tables, trays or cup holders}	2013/0644	. . . {including electric motors or generators}
11/0639	. . {with features for adjustment or converting of seats}	2013/0648	. . . {with energy recovery means, e.g. using turbines}
11/06395	. . . {characterised by the arrangement of electric motors for adjustment}	2013/0651	. . . {comprising filters, e.g. dust filters}
11/064	. . . {Adjustable inclination or position of seats}	2013/0655	. . . {with zone or personal climate controls}
		2013/0659	. . . {comprising provisions for cooling fuel systems}
		2013/0662	. . . {with humidity control}
		2013/0666	. . . {with means for preventing icing within the ECS components}
		2013/067	. . . {with air ionizers}
		2013/0674	. . . {comprising liquid subsystems}
		2013/0677	. . . {comprising on board oxygen generator systems}
		2013/0681	. . . {with oxygen control}
		2013/0685	. . . {with ozone control}

2013/0688	. . . {with means for recirculating cabin air}	17/46	. . Closing means
2013/0692	. . . {with special provisions against smoke from cigarettes}	17/48	. . with separate pack for extractor of auxiliary parachute
2013/0696	. . . {with provisions for starting power plants}	17/50	. . formed with separate compartments for main canopy, rigging lines, or auxiliary parachute
13/08	. . the air being heated or cooled	17/52	. . Opening, e.g. manual
15/00	De-icing or preventing icing on exterior surfaces of aircraft	17/54	. . . automatic
15/02	. by ducted hot gas or liquid	17/56	. . . . responsive to barometric pressure
15/04	. . Hot gas application	17/58	. . . . responsive to time-delay mechanism
15/06	. . Liquid application	17/60	. . . . by static line
15/08	. . . exuded from surface	17/62	. Deployment
15/10	. . . sprayed over surface	17/64	. . by extractor parachute
15/12	. by electric heating (heating arrangements specially adapted for transparent or reflecting areas H05B 3/84)	17/66	. . . attached to hem of main canopy
15/14	. . controlled cyclically along length of surface	17/68	. . . attached to apex of main canopy
15/16	. by mechanical means, e.g. pulsating mats or shoes attached to, or built into, surface	17/70	. . by springs
15/163	. . {using electro-impulsive devices}	17/72	. . by explosive or inflatable means
15/166	. . {using pneumatic boots}	17/725	. . . {by explosive means}
15/20	. Means for detecting icing or initiating de-icing	17/74	. . Sequential deployment of a plurality of canopies
15/22	. . Automatic initiation by icing detector	17/76	. . facilitated by method of folding or packing
17/00	Parachutes (non-canopied parachutes B64D 19/00)	17/78	. in association with other load-retarding apparatus
17/02	. Canopy arrangement or construction	17/80	. in association with aircraft, e.g. for braking thereof
	NOTE	19/00	Non-canopied parachutes
	{B64D 17/025 takes precedence over B64D 17/04 - B64D 17/20}	19/02	. Rotary-wing parachutes
17/025	. . {for gliding chutes}	21/00	Testing of parachutes
17/04	. . formed with two or more canopies arranged about a common axis	23/00	Training of parachutists
17/06	. . formed with two or more canopies arranged in a cluster	25/00	Emergency apparatus or devices, not otherwise provided for
17/08	. . Secondary or shock-absorbing canopies attached to load line	25/02	. Supports or holding means for living bodies
17/10	. . Ribbon construction or the like	25/04	. . Seat modifications
17/12	. . constructed to provide variable or non-uniform porosity over area of canopy	25/06	. . Harnessing
17/14	. . with skirt or air-deflecting panels	25/08	. Ejecting or escaping means
17/16	. . . secured to hem of main canopy	25/10	. . Ejector seats
17/18	. . Vent arrangement or construction	25/12	. . Ejectable capsules
17/20	. . . variable in area	25/14	. . Inflatable escape chutes
17/22	. Load suspension	25/16	. . Dinghy stowage
17/24	. . Rigging lines	25/18	. . Flotation gear
17/26	. . . attached to hem of canopy	25/20	. . Releasing of crash-position indicators
17/28	. . . attached to apex of canopy	27/00	Arrangement or mounting of power plants in aircraft; Aircraft characterised by the type or position of power plants
17/30	. . Harnesses	2027/005	. {Aircraft with an unducted turbofan comprising contra-rotating rotors, e.g. contra-rotating open rotors [CROR]}
17/32	. . . Construction of quick-release box	27/02	. Aircraft characterised by the type or position of power plants
17/34	. . adapted to control direction or rate of descent	27/023	. . {of rocket type, e.g. for assisting taking-off or braking}
17/343	. . . {by reefing means}	27/026	. . {comprising different types of power plants, e.g. combination of a piston engine and a gas-turbine (Hybrid electric aircraft B64D 27/33)}
17/346	. . . {by anti-squid lines}	27/04	. . of piston type
17/36	. . incorporating friction devices or frangible connections to reduce shock loading of canopy ({B64D 17/343, B64D 17/346 take precedence})	27/06	. . . within, or attached to, wings
17/38	. . Releasable fastening devices between parachute and load or pack	27/08	. . . within, or attached to, fuselages
17/383	. . . {Cargo release hooks}	27/10	. . of gas-turbine type (jet aircraft B64D 27/16)
17/386	. . . {Devices adapted to cut lines or straps}	27/12	. . . within, or attached to, wings
17/40	. Packs	27/14	. . . within, or attached to, fuselages
17/42	. . rigid	27/16	. . of jet type
17/44	. . . forming part of load	27/18	. . . within, or attached to, wings
		27/20	. . . within, or attached to, fuselages
		27/22	. . using atomic energy

27/24	. . using steam or spring force (jet aircraft B64D 27/16)	2033/045	. . {comprising infrared suppressors}
27/30	. . Aircraft characterised by electric power plants	33/06	. . {Silencing exhaust or propulsion jets}
27/31	. . . within, or attached to, wings	33/08	. of power plant cooling systems
27/32	. . . within, or attached to, fuselages	33/10	. . Radiator arrangement
27/33	. . . Hybrid electric aircraft	33/12	. . . of retractable type
27/34	. . . All-electric aircraft	35/00	Transmitting power from power plants to propellers or rotors; Arrangements of transmissions
27/35	. . . Arrangements for on-board electric energy production, distribution, recovery or storage	35/02	. specially adapted for specific power plants
27/351	. . . . using energy recovery	35/021	. . for electric power plants
27/353	. . . . using solar cells	35/022	. . . of hybrid-electric type
27/355	. . . . using fuel cells	35/023	. . . . of series-parallel type
27/357	. . . . using batteries	35/024	. . . . of series type
27/359	. . . . using capacitors	35/025	. . . . of parallel type
27/40	. Arrangements for mounting power plants in aircraft	35/026	. . . the electric power plant being integral with the propeller or rotor
27/402	. . {comprising box like supporting frames, e.g. pylons or arrangements for embracing the power plant}	35/04	. characterised by the transmission driving a plurality of propellers or rotors
27/404	. . {Suspension arrangements specially adapted for supporting vertical loads}	35/06	. . the propellers or rotors being counter-rotating
27/406	. . {Suspension arrangements specially adapted for supporting thrust loads, e.g. thrust links}	35/08	. characterised by the transmission being driven by a plurality of power plants (for hybrid-electric power plants B64D 35/022)
29/00	Power-plant nacelles, fairings or cowlings	37/00	Arrangements in connection with fuel supply for power plant (refuelling during flight B64D 39/00)
29/02	. associated with wings	37/005	. {Accessories not provided for in the groups B64D 37/02 - B64D 37/28 }
29/04	. associated with fuselages	37/02	. Tanks (tanks constructed integrally with aircraft wings B64C 3/34)
29/06	. Attaching of nacelles, fairings or cowlings	37/04	. . Arrangement thereof in or on aircraft
29/08	. Inspection panels for power plants	37/06	. . Constructional adaptations thereof
31/00	Power plant control systems; Arrangement of power plant control systems in aircraft	37/08	. . . Internal partitioning
31/02	. Initiating means	37/10	. . . to facilitate fuel pressurisation
31/04	. . actuated personally	37/12	. . . jettisonable
31/06	. . actuated automatically	37/14	. . Filling or emptying (transferring fuels to adjust aircraft trim B64C 17/10)
31/08	. . . for keeping cruising speed constant	37/16	. . . Filling systems (ground installations for fuelling aircraft B64F 1/28)
31/09	. . . in response to power plant failure	37/18	. . . . Conditioning fuel during filling
31/10	. . . . for preventing asymmetric thrust	37/20	. . . Emptying systems
31/12	. . . for equalising or synchronising power plants	37/22	. . . . facilitating emptying in any position of tank
31/14	. Transmitting means between initiating means and power plants	37/24	. . . . using gas pressure
31/16	. for electric power plants	37/26	. . . . Jettisoning of fuel
31/18	. . for hybrid-electric power plants	37/28	. . . . Control thereof
33/00	Arrangement in aircraft of power plant parts or auxiliaries not otherwise provided for	37/30	. Fuel systems for specific fuels
33/02	. of combustion air intakes	37/32	. Safety measures not otherwise provided for, e.g. preventing explosive conditions
2033/0206	. . {comprising noise reduction means, e.g. acoustic liners}	2037/325	. . {Fuel tanks with provisions for reduction hydraulic ram shocks due to projectile impacts}
2033/0213	. . {specially adapted for auxiliary power units (APU's)}	37/34	. Conditioning fuel, e.g. heating (during filling B64D 37/18)
2033/022	. . {comprising bird or foreign object protections}	39/00	Refuelling during flight
2033/0226	. . {comprising boundary layer control means}	39/02	. Means for paying-in or out hose
2033/0233	. . {comprising de-icing means}	39/04	. Adaptations of hose construction
2033/024	. . {comprising cooling means}	39/06	. Connecting hose to aircraft; Disconnecting hose therefrom
2033/0246	. . {comprising particle separators}	41/00	Power installations for auxiliary purposes
2033/0253	. . {specially adapted for particular type of aircraft}	2041/002	. {Mounting arrangements for auxiliary power units (APU's)}
2033/026	. . . {for supersonic or hypersonic aircraft}	2041/005	. {Fuel cells}
2033/0266	. . {specially adapted for particular type of power plants}	41/007	. {Ram air turbines}
2033/0273	. . . {for jet engines}		
2033/028	. . . {for piston engines}		
2033/0286	. . . {for turboprop engines}		
2033/0293	. . . {for turbofan engines}		
33/04	. of exhaust outlets or jet pipes		

- 43/00 Arrangements or adaptations of instruments**
- 43/02 . for indicating aircraft speed or stalling conditions
- 45/00 Aircraft indicators or protectors not otherwise provided for**
- 45/0005 . {Devices specially adapted to indicate the position of a movable element of the aircraft, e.g. landing gear}
- 2045/001 . . {for indicating symmetry of flaps deflection}
- 45/0015 . {Devices specially adapted for the protection against criminal attack, e.g. anti-hijacking systems}
- 45/0018 . . {means on aircraft for restricting unauthorized access to the aircraft}
- 45/0021 . . {means for restricting access to flight deck}
- 45/0026 . . . {by creating a secure space between the flight deck and cabin}
- 45/0028 . . . {doors or door arrangements specially adapted to restrict unauthorized access}
- 45/0029 {electrically actuated}
- 45/0031 . . {means for overriding or restricting access to flight controls}
- 45/0034 . . . {by ground-control override}
- 45/0036 . . {by disabling or restraining attackers}
- 45/0039 . . . {by electrical shock}
- 45/0042 . . . {by spraying or injecting chemicals}
- 45/0044 . . . {by restraining within seats}
- 45/0048 . . . {by harnesses, nets, ropes, or the like (B64D 45/0044 takes precedence)}
- 45/0051 . . {by monitoring passengers or crew on aircraft}
- 45/0053 . . . {using visual equipment, e.g. cameras}
- 45/0056 . . . {detecting passenger or crew behavior by sensors, e.g. biometrics}
- 45/0059 . . {by communicating emergency situations to ground control or between crew members}
- 45/0061 . . {by protecting cabin or cargo hold from bombs}
- 45/0063 . . {by avoiding the use of electronic equipment during flight, e.g. of mobile phones or laptops}
- 2045/0065 . {Black boxes, devices automatically broadcasting distress signals}
- 2045/007 . {Indicators or signs in the cabin, e.g. exit signs or seat numbering}
- 2045/0075 . {Adaptations for use of electronic flight bags in aircraft; Supports therefor in the cockpit}
- 2045/008 . {Devices for detecting or indicating hard landing}
- 2045/0085 . {Devices for aircraft health monitoring, e.g. monitoring flutter or vibration}
- 2045/009 . {Fire detection or protection; Erosion protection, e.g. from airborne particles}
- 2045/0095 . {Devices specially adapted to avoid bird strike}
- 45/02 . Lightning protectors; Static dischargers
- 45/04 . Landing aids; Safety measures to prevent collision with earth's surface
- 45/06 . . mechanical
- 45/08 . . optical
- 47/00 Equipment not otherwise provided for**
- 47/02 . Arrangements or adaptations of signal or lighting devices
- 47/04 . . the lighting devices being primarily intended to illuminate the way ahead
- 47/06 . . for indicating aircraft presence
- 47/08 . Arrangements of cameras
- 2203/00 Aircraft or airfield lights using LEDs**
- 2205/00 Aircraft with means for ground manoeuvring, such as taxiing, using an auxiliary thrust system, e.g. jet-engines, propellers or compressed air**
- 2221/00 Electric power distribution systems onboard aircraft**
- 2231/00 Emergency oxygen systems**
- 2231/02 . Supply or distribution systems
- 2231/025 . . Oxygen masks; Mask storages; Features related to mask deployment
- 2241/00 NACA type air intakes**
- 2201/00 Airbags mounted in aircraft for any use**