SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B64 AIRCRAFT; AVIATION; COSMONAUTICS

B64G **COSMONAUTICS; VEHICLES OR EQUIPMENT THEREFOR** (apparatus for, or methods of, winning materials from extraterrestrial sources E21C 51/00)

Note(s)

1. This subclass covers only vehicles, equipment or the like, which are specially adapted for cosmonautics.
2. This subclass does not cover vehicles and equipment applicable to both cosmonautics and aeronautics, which are covered by the appropriate aeronautical subclasses of class B64.
3. In this subclass, the following term is used with the meaning indicated:
   - "cosmonautics" includes all transport outside the earth's atmosphere, and thus includes artificial earth satellites, and interplanetary and interstellar travel.

1/00 **Cosmonautic vehicles [3]**

1/10 • Artificial satellites; Systems of such satellites; Interplanetary vehicles (space shuttles B64G 1/14; radio transmission systems using satellites H04B 7/185)

1/12 • • manned **[3]**

1/14 • Space shuttles **[3]**

1/16 • Extraterrestrial cars (land vehicle aspects B60-B62) **[3]**

1/22 • Parts of, or equipment specially adapted for fitting in or to, cosmonautic vehicles **[3]**

1/24 • • Guiding or controlling apparatus, e.g. for attitude control (jet-propulsion plants F02K; navigation or navigational instruments, see the relevant subclasses, e.g. G01C; automatic pilots G05D 1/00) **[3]**

1/26 • • • using jets **[3]**

1/28 • • • using inertia or gyro effect **[3]**

1/32 • • • using earth's magnetic field **[3]**

1/34 • • • using gravity gradient **[3]**

1/36 • • • using sensors, e.g. sun-sensors, horizon sensors **[3]**

1/38 • • • damping of oscillations, e.g. nutation dampers **[3]**

1/40 • • Arrangements or adaptations of propulsion systems (B64G 1/26 takes precedence; propulsion plants per se, see the relevant subclasses, e.g. F02K, F03H) **[3]**

1/42 • • Arrangements or adaptations of power supply systems (power supply systems per se, see the relevant subclasses) **[3]**

1/44 • • • using radiation, e.g. deployable solar arrays (solar cells per se H01L 31/00) **[3]**

1/46 • • Arrangements or adaptations of devices for control of environment or living conditions (space suits B64G 6/00) **[3]**

1/48 • • • for treatment of the atmosphere (B64G 1/50 takes precedence; air conditioning in general F24F) **[3]**

1/50 • • • for temperature control (temperature control in general G05D 23/00) **[3]**

1/52 • • Protection, safety or emergency devices; Survival aids (life-saving in general A62) **[3]**

1/54 • • • Protection against radiation (against radiation in general G21F) **[3]**

1/56 • • • Protection against meteorites (meteorite detectors B64G 1/68) **[3]**

1/58 • • • Thermal protection, e.g. heat shields (thermal insulation in general F16L 59/00; chemical aspects, see the relevant classes) **[3]**

1/60 • • Crew or passenger accommodations **[3]**

1/62 • • Systems for re-entry into the earth's atmosphere; Retarding or landing devices **[3]**

1/64 • • Systems for coupling or separating cosmonautic vehicles or parts thereof, e.g. docking arrangements **[3]**

1/66 • • Arrangements or adaptations of apparatus or instruments, not otherwise provided for (instruments per se, see the relevant classes, e.g. aerials for use in satellites H01Q 1/28) **[3]**

1/68 • • • of meteorite detectors **[3]**

3/00 **Observing or tracking cosmonautic vehicles** (radio or other waves systems for navigation or tracking G01S)

4/00 **Tools specially adapted for use in space [3]**

5/00 **Ground equipment for vehicles, e.g. starting towers, fuelling arrangements** (B64G 3/00 takes precedence)

6/00 **Space suits [3]**

7/00 **Simulating cosmonautic conditions, e.g. for conditioning crews** (simulators for teaching or training purposes G09B 9/00)

99/00 **Subject matter not provided for in other groups of this subclass [2009.01]**