

SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

F02 COMBUSTION ENGINES; HOT-GAS OR COMBUSTION-PRODUCT ENGINE PLANTS

F02F CYLINDERS, PISTONS, OR CASINGS FOR COMBUSTION ENGINES; ARRANGEMENTS OF SEALINGS IN COMBUSTION ENGINES (specially adapted for rotary-piston or oscillating-piston internal-combustion engines F02B; specially adapted for gas-turbine plants F02C; specially adapted for jet-propulsion plants F02K) [2]

Note(s)

1. Attention is drawn to the Notes preceding class F01.
2. Class F16 takes precedence over this subclass, except for subject matter specific to combustion engines.

1/00 Cylinders; Cylinder heads (in general F16J)
 1/02 • having cooling means (cylinder heads F02F 1/26)
 1/04 • • for air cooling
 1/06 • • • Shape or arrangement of cooling fins; Finned cylinders
 1/08 • • • • running-liner and cooling-part of cylinder being different parts or of different material
 1/10 • • for liquid cooling
 1/12 • • • Preventing corrosion of liquid-swept surfaces
 1/14 • • • Cylinders with means for directing, guiding, or distributing liquid stream
 1/16 • • • Cylinder liners of wet type
 1/18 • Other cylinders
 1/20 • • characterised by constructional features providing for lubrication
 1/22 • • characterised by having ports in cylinder wall for scavenging or charging
 1/24 • Cylinder heads
 1/26 • • having cooling means
 1/28 • • • for air cooling
 1/30 • • • • Finned cylinder heads
 1/32 • • • • the cylinder heads being of overhead-valve type
 1/34 • • • • with means for directing or distributing cooling medium (F02F 1/32 takes precedence)
 1/36 • • • for liquid cooling
 1/38 • • • • the cylinder heads being of overhead-valve type
 1/40 • • • • cylinder heads with means for directing, guiding, or distributing liquid stream (F02F 1/38 takes precedence)

1/42 • • Shape or arrangement of intake or exhaust channels in cylinder heads

3/00 Pistons (in general F16J)
 3/02 • having means for accommodating or controlling heat expansion
 3/04 • • having expansion-controlling inserts
 3/06 • • • the inserts having bimetallic effect
 3/08 • • • the inserts being ring-shaped
 3/10 • having surface coverings (F02F 3/02 takes precedence)
 3/12 • • on piston heads
 3/14 • • • within combustion chambers
 3/16 • having cooling means
 3/18 • • the means being a liquid or solid coolant, e.g. sodium, in a closed chamber in piston
 3/20 • • the means being a fluid flowing through or along piston
 3/22 • • • the fluid being liquid
 3/24 • having means for guiding gases in cylinders, e.g. for guiding scavenging charge in two-stroke engines
 3/26 • having combustion chamber in piston head (the surface thereof being covered F02F 3/14)
 3/28 • Other pistons with specially-shaped head

5/00 Piston rings, e.g. associated with piston crown

7/00 Casings, e.g. crankcases (engine casings in general F16M)

11/00 Arrangements of sealings in combustion engines (piston rings F02F 5/00; sealings per se F16J)