

**ECLA****EUROPEAN CLASSIFICATION****F23R**

**GENERATING COMBUSTION PRODUCTS OF HIGH PRESSURE OR HIGH VELOCITY, e.g. GAS-TURBINE COMBUSTION CHAMBERS** (using such products for specific purposes, see the relevant classes for the purposes; chemical aspects of gas production [C06D5/00](#); gas-turbine plants characterised by the arrangement of the combustion chamber in the plant [F02C3/14](#); arrangement of afterburners in jet-propulsion plants [F02K3/10](#); combustion chambers of rocket-engine plants [F02K9/00](#))

**F23R3/00**

**Continuous combustion chambers using liquid or gaseous fuel**

- F23R3/00B . [N: Wall structures ([F23R3/02](#) and [F23R3/00K](#) take precedence)]
- F23R3/00C . [N: Combined with pressure or heat exchangers]
- F23R3/00K . [N: constructed mainly of ceramic components]
- F23R3/02 . characterised by the air-flow or gas-flow configuration (reverse-flow combustion chambers [F23R3/54](#); cyclone or vortex type combustion chambers [F23R3/58](#))
- F23R3/04 . . Air inlet arrangements
- F23R3/04B . . . [N: using pipes]
- F23R3/06 . . . Arrangement of apertures along the flame tube
- F23R3/08 . . . . between annular flame tube sections, e.g. flame tubes with telescopic sections
- F23R3/10 . . . for primary air ([F23R3/06](#), [F23R3/04B](#) take precedence)
- F23R3/12 . . . . inducing a vortex
- F23R3/14 . . . . . by using swirl vanes
- F23R3/16 . . with devices inside the flame tube or the combustion chamber to influence the air or gas flow
- F23R3/18 . . . Flame stabilising means, e.g. flame holders for after-burners of jet-propulsion plants
- F23R3/20 . . . . incorporating fuel injection means
- F23R3/22 . . . . movable, e.g. to an inoperative position; adjustable, e.g. self-adjusting
- F23R3/24 . . . . of the fluid-screen type
- F23R3/26 . . Controlling the air flow
- F23R3/28 . characterised by the fuel supply ([burners F23D](#))
- F23R3/28B . . [N: Attaching or cooling of fuel injecting means] [\[C9410\]](#)
- F23R3/28D . . [N: having fuel-air premixing devices ([F23R3/30](#) takes precedence)] [\[N9410\]](#)
- F23R3/30 . . comprising fuel prevapourising devices
- F23R3/32 . . . being tubular
- F23R3/34 . . Feeding into different combustion zones

- F23R3/34C
  - • • [N: Pilot flames, i.e. fuel nozzles or injectors using only a very small proportion of the total fuel to insure continuous combustion (ignition in gas-turbine plants [F02C7/264](#); pilot flame igniters [F23Q9/00](#))]
- F23R3/34D
  - • • [N: for staged combustion] [N9410]
- F23R3/36
  - • Supply of different fuels
- F23R3/38
  - • comprising rotary fuel injection means
- F23R3/40
  - characterised by the used of catalytic means
- F23R3/42
  - characterised by the arrangement or form of the flame tubes or combustion chambers
- F23R3/42C
  - • [N: Combustion chambers comprising a tangential or helicoidal arrangement of the flame tubes]
- F23R3/44
  - • Combustion chambers comprising a [N: single] tubular flame tube within a tubular casing ([reverse-flow combustion chambers F23R3/54](#)) [C9412]
- F23R3/46
  - • Combustion chambers comprising an annular arrangement of [N: several essentially tubular] flame tubes within a common annular casing or within individual casings [C9412]
- F23R3/48
  - • • Flame tube interconnectors, e.g. cross-over tubes
- F23R3/50
  - • Combustion chambers comprising an annular flame tube within an annular casing ([toroidal combustion chambers F23R3/52](#))
- F23R3/52
  - • Toroidal combustion chambers
- F23R3/54
  - • Reverse-flow combustion chambers
- F23R3/56
  - • Combustion chambers having rotary flame tubes
- F23R3/58
  - • Cyclone or vortex type combustion chambers
- F23R3/60
  - • Support structures; Attaching or mounting means

**F23R5/00                      Continuous combustion chambers using solid or pulverulent fuel**

**F23R7/00                      Intermittent or explosive combustion chambers**