

Title (en)

Fuel injection valve

Title (de)

Kraftstoffeinspritzventil

Title (fr)

Soupape d'injection de combustible

Publication

EP 0890735 A3 20011010 (DE)

Application

EP 98109048 A 19980519

Priority

DE 19729827 A 19970711

Abstract (en)

[origin: EP0890735A2] The valve sealing surface (44) works in conjunction with a valve seat (45) arranged on the valve body. Several sprayholes are arranged in the valve body beneath the valve seat (45) and have rounded inlet apertures. A part of the spray holes (53) has a degree of rounding different from the remainder of the spray holes (57). The inlet apertures have individual spray holes (53,57) on their side facing the valve member (41) with a different degree of rounding from their side turned away from the valve member (41). The degree of rounding of the spray holes is matched to the arrangement of the spray holes in the valve body, to the installation in a combustion chamber of the engine and to the combustion chamber shape in the engine.

IPC 1-7

F02M 61/18

IPC 8 full level

F02M 61/16 (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP US)

F02M 61/168 (2013.01 - EP US); **F02M 61/1806** (2013.01 - EP US); **F02M 61/182** (2013.01 - EP US); **F02M 61/184** (2013.01 - EP US)

Citation (search report)

- [X] US 4578164 A 19860325 - MATSUI YUKIO [JP], et al
- [PX] EP 0809017 A1 19971126 - STEYR DAIMLER PUCH AG [AT]
- [Y] EP 0370659 A1 19900530 - LUCAS IND PLC [GB]
- [Y] JP H0267459 A 19900307 - NIPPON DENSO CO
- [A] DE 19507188 C1 19960814 - BOSCH GMBH ROBERT [DE]
- [A] US 4069978 A 19780124 - EL MOUSSA WADID

Cited by

FR2796104A1; WO03093669A1; WO0060234A1; EP1644636B2

Designated contracting state (EPC)

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EP 98109048 A 19980519; DE 19729827 A 19970711; DE 59813768 T 19980519; JP 19284298 A 19980708; US 11427798 A 19980713