

Title (en)  
Fuel injection valve

Title (de)  
Brennstoffeinspritzventil

Title (fr)  
Soupape d'injection de combustible

Publication  
**EP 1195516 A3 20040102 (DE)**

Application  
**EP 01123836 A 20011005**

Priority  
DE 10049519 A 20001006

Abstract (en)  
[origin: EP1195516A2] The valve has a valve needle guide (31), connected to a valve seat body (5) and containing fuel channels (35). The channels are positioned in several peripheral rows. Number and relative position of the channels have been chosen, so that a characteristic line is adjusted, which represents a dynamic fuel flow through the injection valve dependent upon a valve needle stroke. The needle guide is formed on the intake-sided end face (32) of the valve seat body. This is a hollow cylinder and extends from that end face.

IPC 1-7  
**F02M 61/18**; **F02M 61/16**; **F02M 51/06**; **F02M 61/12**; **F02M 45/12**

IPC 8 full level  
**F02M 61/10** (2006.01); **F02M 45/12** (2006.01); **F02M 51/06** (2006.01); **F02M 51/08** (2006.01); **F02M 61/04** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP)  
**F02M 45/12** (2013.01); **F02M 51/0671** (2013.01); **F02M 61/162** (2013.01); **F02M 61/18** (2013.01); **F02M 61/188** (2013.01)

Citation (search report)

- [E] WO 0229242 A2 20020411 - BOSCH GMBH ROBERT [DE], et al
- [X] US 5823161 A 19981020 - POTZ DETLEV [DE], et al
- [XY] EP 0789142 A1 19970813 - ISUZU MOTORS LTD [JP]
- [YD] DE 19625059 A1 19980102 - BOSCH GMBH ROBERT [DE]

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1195516 A2 20020410**; **EP 1195516 A3 20040102**; **EP 1195516 B1 20060607**; DE 10049519 A1 20020418; DE 10049519 B4 20060112; DE 50110018 D1 20060720; JP 2002155834 A 20020531

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**EP 01123836 A 20011005**; DE 10049519 A 20001006; DE 50110018 T 20011005; JP 2001312032 A 20011009