

Title (en)

FUEL INJECTION VALVE FOR HIGH-PRESSURE FUEL INJECTION

Title (de)

KRAFTSTOFF-EINSPRITZVENTIL FÜR EINE HOCHDRUCKEINSPRITZUNG

Title (fr)

SOUPAPE D'INJECTION DE CARBURANT POUR INJECTION SOUS HAUTE PRESSION

Publication

**EP 1066465 B1 20040317 (DE)**

Application

**EP 99966842 A 19991208**

Priority

- DE 9903913 W 19991208
- DE 19859484 A 19981222

Abstract (en)

[origin: DE19859484A1] The invention relates to a fuel injection valve for high-pressure fuel injection from a central high-pressure line (6) to the combustion chambers of an internal combustion engine. The inventive valve (1) comprises a valve seat (2), a valve ball (3) and a guide element (4) for the valve ball (3). The guide element (4) presses the valve ball (3) against the valve seat (2) in order to close the injection control valve. In an open position, the guide element exposes the valve ball (3) to the effects of a prestressing spring (5). The valve ball (3) is raised above the seat (2) of the valve by means of a high pressure jet that is supplied by a control chamber (7) which cooperates with a second high-pressure line (6) via a discharging outlet port (8) when open. A diffuser (9) is arranged between the valve seat (2) and the outlet port (8). The outlet port (8), diffuser (9) and valve seat (2) form an approximately funnel shape with steep walls, whereby the conical angle thereof is a right to sharp angle.

IPC 1-7

**F02M 47/02**

IPC 8 full level

**F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 59/46** (2006.01)

CPC (source: EP KR US)

**F02M 47/027** (2013.01 - EP US); **F02M 61/04** (2013.01 - KR); **F02M 63/0036** (2013.01 - EP US); **F02M 63/0071** (2013.01 - EP US); **F02M 63/0077** (2013.01 - EP US); **F02M 2547/003** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**DE 19859484 A1 20000706**; DE 59908890 D1 20040422; EP 1066465 A1 20010110; EP 1066465 B1 20040317; JP 2002533607 A 20021008; KR 100692113 B1 20070312; KR 20010041144 A 20010515; US 6378502 B1 20020430; WO 0037793 A1 20000629

DOCDB simple family (application)

**DE 19859484 A 19981222**; DE 59908890 T 19991208; DE 9903913 W 19991208; EP 99966842 A 19991208; JP 2000589826 A 19991208; KR 20007009193 A 20000821; US 62271800 A 20001002