

Title (en)
Injector with a servo valve

Title (de)
Einspritzventil mit einem Servoventil

Title (fr)
Injecteur avec une servovalve

Publication
EP 0976924 B1 20030917 (DE)

Application
EP 99112980 A 19990705

Priority
DE 19834667 A 19980731

Abstract (en)
[origin: EP0976924A2] The servo valve is used for the fuel injection valve of an internal combustion engine. There is a control space (4) above a piston (6) which is connected to the fuel injector needle. The contact space is connected with a second space (20) via a first throttle channel (3). A high-pressure bore (1) is connected to the second space via a wide access bore. Fuel may leave the control space via a bore (9) leading to a second throttle bore. There is a valve body (26) moved by a pushrod (16) attached to a piezoelectric actuator (18). The valve body is hemispherical and its flat surface may seal against a flat surface (24) at the end of the metal block containing the second space. The hemispherical surface is surrounded by a valve chamber (22) and when the valve body is in its upper position it engages a valve seat (28) to block off return flow to the fuel supply.

IPC 1-7
F02M 47/02

IPC 8 full level
F02M 47/02 (2006.01); **F02M 59/46** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)
F02M 47/027 (2013.01); **F02M 63/0026** (2013.01); **F02M 63/0036** (2013.01); **F02M 63/0045** (2013.01)

Cited by
DE10024702A1; DE10015268A1; DE10024703A1; DE102005046743B3; DE10131640A1; DE10123775B4; DE10066299B4; DE10066299B8; DE10055714B4; DE10132249A1; FR2824109A1; DE10254466B4; EP2354527A3; US7331329B2; WO0114721A1; WO0250423A1; WO03004858A1; WO03004857A1; WO2007098621A1; US8544771B2; DE102011015753A1; WO2012130452A1; US7216629B2; US6367453B1; US7575180B2; US6789743B2; EP1404964B1

Designated contracting state (EPC)
DE FR IT

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