

Title (en)
FUEL INJECTION VALVE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
BRENNSTOFF-EINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT POUR MOTEURS A COMBUSTION INTERNE

Publication
EP 1618298 A1 20060125 (DE)

Application
EP 04707203 A 20040202

Priority
• EP 2004000929 W 20040202
• DE 10319285 A 20030429

Abstract (en)
[origin: DE10319285B3] The valve needle (22) is spring-loaded (40) toward its closed position and has a conical end (20a) fitting into a conical valve seat (20b). An actuator (24) at its top end has a circular armature (24c) extending between ring-shaped upper (26a) and lower (26b) magnetic coils. The high-pressure fuel supply enters a side channel (12) and passes downward through an annular space (16) toward the injection nozzle.

IPC 1-7
F02M 51/06; **F02M 45/08**

IPC 8 full level
F02M 45/08 (2006.01); **F02M 51/06** (2006.01)

CPC (source: EP KR US)
F02M 45/08 (2013.01 - EP KR US); **F02M 51/0621** (2013.01 - EP KR US); **F02M 51/0653** (2013.01 - EP KR US);
H01F 2007/1676 (2013.01 - EP KR US)

Citation (search report)
See references of WO 2004097207A1

Cited by
WO2017050967A1; US10823305B2

Designated contracting state (EPC)
DE ES FR GB IT SE

DOCDB simple family (publication)
DE 10319285 B3 20040923; CN 1780979 A 20060531; DE 502004007492 D1 20080814; EP 1618298 A1 20060125; EP 1618298 B1 20080702; JP 2006524771 A 20061102; KR 20060021303 A 20060307; US 2007175436 A1 20070802; US 7533834 B2 20090519; WO 2004097207 A1 20041111

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DE 10319285 A 20030429; CN 200480011651 A 20040202; DE 502004007492 T 20040202; EP 04707203 A 20040202; EP 2004000929 W 20040202; JP 2006504406 A 20040202; KR 20057020626 A 20051029; US 55471304 A 20040202