

Title (en)
Valve assembly and injection valve

Title (de)
Ventilanordnung und Einspritzventil

Title (fr)
Ensemble de soupape et soupape d'injection

Publication
EP 2282042 A1 20110209 (EN)

Application
EP 09008639 A 20090701

Priority
EP 09008639 A 20090701

Abstract (en)
Valve assembly (4) of an injection valve (2), the valve assembly (4) comprising a valve body (10) including a central longitudinal axis (L), the valve body (10) having a cavity (11) which comprises an inner guide surface (12) in a guide area of the valve body (10), the cavity (11) having a fluid inlet portion (42) and a fluid outlet portion (44), a valve needle (13) axially movable in the cavity (11), the valve needle (13) having an outer surface (32) and preventing a fluid flow through the fluid outlet portion (44) in a closing position and releasing the fluid flow through the fluid outlet portion (44) in further positions, and a guide element (34). The guide element (34) is ball-shaped. The guide element (34) is arranged in the cavity (11) coaxially to the valve needle (13) and extends radially from the outer surface (32) of the valve needle (13) to the inner guide surface (12) of the valve body (10).

IPC 8 full level
F02M 51/06 (2006.01); **F02M 61/12** (2006.01)

CPC (source: EP)
F02M 51/0675 (2013.01); **F02M 61/12** (2013.01)

Citation (applicant)
• US 4779838 A 19881025 - GREINER MAX [DE], et al
• FR 2533971 A1 19840406 - BENDIX CORP [US]

Citation (search report)
• [X] FR 2904378 A1 20080201 - RENAULT SAS [FR]
• [X] FR 2533971 A1 19840406 - BENDIX CORP [US]
• [X] US 4779838 A 19881025 - GREINER MAX [DE], et al
• [X] WO 9716641 A1 19970509 - SIEMENS AUTOMOTIVE CORP LP [US]
• [X] FR 2890122 A3 20070302 - RENAULT SAS [FR]

Cited by
EP2851551A1; US9995262B2; WO2015039821A1; JP2014092100A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2282042 A1 20110209; EP 2282042 B1 20130403

DOCDB simple family (application)
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