

Title (en)
Injection valve

Title (de)
Einspritzventil

Title (fr)
Soupape d'injection

Publication
EP 2236812 A1 20101006 (EN)

Application
EP 09004292 A 20090325

Priority
EP 09004292 A 20090325

Abstract (en)
Injection valve (170) comprising an injection valve housing (200) with an injection valve cavity (190) and a valve needle (120) being axially moveable within the injection valve cavity (190). The valve needle (120) comprises a valve needle housing (100) with a valve needle cavity (180) and a sealing element (110) preventing a fluid injection in a closing position and permitting the fluid injection in further positions. A valve needle body (20) being fixedly coupled to the sealing element (110), whereas the valve needle body (20) is disposed at least partially within the valve needle cavity (180) to divide the valve needle cavity (180) into a first and second fluid volume (220, 230). At least one first fluid passage (70) hydraulically connects the first fluid volume (220) with the injection valve cavity (190). At least one spring element (50) is preloaded and acts on the valve needle body (20) towards a maximum axial expansion of the valve needle (120).

IPC 8 full level
F02M 61/20 (2006.01)

CPC (source: EP)
F02M 61/20 (2013.01); **F02M 61/205** (2013.01); **F02M 2200/304** (2013.01)

Citation (applicant)
US 6523759 B1 20030225 - D ARRIGO ANGELO [US]

Citation (search report)
• [X] US 5288025 A 19940222 - CERNY MARK S [US]
• [X] DE 102005023368 A1 20061123 - SIEMENS AG [DE]
• [A] GB 2099077 A 19821201 - BOSCH GMBH ROBERT
• [A] GB 2312926 A 19971112 - BOSCH GMBH ROBERT [DE]
• [A] US 2002066804 A1 20020606 - AOTA MASAYUKI [JP], et al

Designated contracting state (EPC)
DE FR IT

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2236812 A1 20101006; EP 2236812 B1 20111012

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