

Title (en)
Valve assembly for an injection valve and injection valve

Title (de)
Ventilanordnung für ein Einspritzventil und Einspritzventil

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

Publication
EP 2218900 A1 20100818 (EN)

Application
EP 09002146 A 20090216

Priority
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Abstract (en)
Valve assembly (14) of an injection valve (10), the valve assembly (14) comprising a valve body (20) including a central longitudinal axis (X), the valve body (20) comprising a cavity (24) with a fluid outlet portion (28), a valve needle (22) axially movable in the cavity (24), the valve needle (22) preventing a fluid flow through the fluid outlet portion (28) in a closing position and releasing the fluid flow through the fluid outlet portion (28) in further positions. The valve needle (22) has a guide portion (46) being designed to guide the valve needle (22) in the valve body (20) and having fluid channels (48) being designed to enable a fluid flow to the fluid outlet portion (28), a tip portion (50) being designed to act together with the valve body (20) to prevent the fluid flow through the fluid outlet portion (28), and a lower needle portion (42) being arranged axially between the guide portion (46) and the tip portion (50). The lower needle portion (42) comprises a recess portion (44) with an annular recess (45). The lower needle portion (42) has an axial length (L_LN) of about 7 mm and about 8 mm. The guide portion (46) has an axial length (L_G) of about 2 mm to about 3 mm. The channels (48) in the guide portion (46) have a total cross sectional area (A_CH) of about 2 mm². Injection valve (10) with an actuator unit (16) and the valve assembly (14).

IPC 8 full level
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CPC (source: EP)
F02M 51/0603 (2013.01); **F02M 61/08** (2013.01); **F02M 61/12** (2013.01)

Citation (search report)
• [X] GB 2112455 A 19830720 - LUCAS IND PLC
• [X] DE 10346212 A1 20050421 - BOSCH GMBH ROBERT [DE]
• [X] EP 0153494 A1 19850904 - BOSCH GMBH ROBERT [DE]
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RU2629851C2; EP3018340A1; CN105579696A; US9995262B2; WO2016071853A1

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Designated extension state (EPC)
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