

Title (en)
FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)
KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

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

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Application
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Abstract (en)
[origin: WO2004085832A1] The invention relates to a fuel injection valve comprising a valve body (1) containing a borehole (3) which is defined, on the combustion chamber end thereof, by a conical valve seat (13) from which a plurality of injection channels (11) extend, said injection channels having inlets (16) which are located in the valve seat (13) at the same height in relation to the longitudinal axis (7) of the borehole (3). A valve needle (5; 60; 62) is arranged in the borehole (3) in such a way that it can be longitudinally displaced, and a pressure chamber (20) is embodied between the wall of the borehole (3) and the valve needle (5; 60; 62). Said pressure chamber can be filled with fuel. A first conical surface (40) and a second conical surface (42) arranged downstream from the first are located on the combustion chamber end of the valve needle (5; 60; 62), a tight edge (45) being formed between said conical surfaces (40; 42). A peripheral first annular groove (50) is embodied in the second conical surface (42) of the valve needle (5; 60; 62), said annular groove extending in a radial plane in relation to the longitudinal axis (7) of the valve needle (5; 60; 62) and comprising an upstream edge (51) and a downstream edge (52), the downstream edge (52) extending, in the closing position of the valve needle (5; 60; 62), at the same level as the inlets (16) of the injection channels (11).

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