

Title (en)
FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)
KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

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

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Application
EP 03724844 A 20030325

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Abstract (en)
[origin: WO03098029A1] The invention relates to a fuel injection valve comprising a housing (1) in which a borehole (6) is formed, said borehole being defined by a valve seat (18) on the combustion chamber end thereof. An outer row of injection openings (116) and an inner row of injection openings (216) are formed in the valve seat. An outer valve needle (10) is guided in the borehole (6) in a longitudinally displaceable manner and controls the outer row of injection openings (116). An inner valve needle (12) is arranged in the outer valve needle (10) in a longitudinally displaceable manner, said inner valve needle co-operating with the valve seat (18) in order to control the inner row of injection openings (216). The inner valve needle (12) is pushed by a closing force in the direction of the valve seat (18), and, following a partial lift during the opening lifting movement of the outer valve needle away from its closing position, the outer valve needle (10) rests on an abutment shoulder (25) of the inner valve needle (12), thus moving said inner valve needle away from the valve seat (18). The outer valve needle (10), controlled by an actuator (20), can be displaced in the borehole (6) in such a way that, following a partial lift, it can be held in an intermediate position in which it does not rest on the abutment shoulder (25) of the inner valve needle (12).

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