

Title (en)  
FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)  
KRAFTSTOFFEINSPRITZVENTIL FUR BRENNKRAFTMASCHINEN

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

Publication  
**EP 1276987 A1 20030122 (DE)**

Application  
**EP 01940145 A 20010410**

Priority  
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• DE 10019153 A 20000418

Abstract (en)  
[origin: WO0179688A1] A fuel injection valve comprising a valve body (1) which is axially tensed against a valve retaining body (3) and in which a bore (5) is made, the end of said bore being sealed on the combustion chamber side, whereby a valve seat (32) and at least one injection opening (34) are provided. A piston-shaped valve member (10) is arranged in the bore (5) and guided with a first (110) and second radial expansion (210) in said bore (5). The valve member (10) surrounds a pressure chamber (23) which can be filled with fuel and which extends towards the valve seat (32) in the form of an annular channel surrounding the valve member (10). A valve piston (12) is arranged inside the hole (5) opposite the combustion chamber in relation to the valve member (10). Said valve piston seals the pressure chamber (23) and rests against the valve member (10). The first radial expansion (110) has more slack in the bore (5) than the second radial expansion (210), thereby reducing the friction of the valve member (10) during longitudinal movement. The first radial expansion (10) is only used for guiding purposes, while the pressure chamber (23) is sealed by the valve piston (12), i.e. by means of a separate component from the valve member (10).

IPC 1-7  
**F02M 61/10**; **F02M 61/12**

IPC 8 full level  
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