

Title (en)  
FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)  
KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

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

Publication  
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Application  
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Abstract (en)  
[origin: WO0151804A2] The invention relates to a fuel injection valve for internal combustion engines. The inventive valve comprises a valve body (1). A valve member (7) is arranged in said body and in a bore (5) against a closing force and in an axially moveable manner. The valve member (7) is provided with an essentially conical valve member point (30) on the end thereof. Said point rests on a valve seat (11) with a component of the lateral area thereof, whereby said component serves as valve sealing surface (9). Said valve seat is configured on an end of the bore (5), whereby said end faces the combustion chamber. A ring groove (23) is configured in the transitional area between the valve member (7) and the valve member point (30). Said groove partially undercuts the valve sealing surface (9) and thus forms an annular collar (28) which is springy and elastic. When the valve member (7) is in the opening position, the conical angle (  $\beta$  ) of the valve sealing surface (9) is slightly greater than the conical angle (  $\alpha$  ) of the valve seat (11) so that the annular collar (28) first contacts the valve seat (11) with the outer edge when the valve member (7) performs a closing movement and is further formed towards the inside by means of the additional closing movement, whereby said edge is designed as a sealing edge (34). The sealing edge (34) is thus not pressed into the valve seat (11) and the diameter of the seat thus remains unchanged throughout the service life of the fuel injection valve.

IPC 1-7  
**F02M 61/18**

IPC 8 full level  
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