

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  
**EP 1045978 B1 20040407 (DE)**

Application  
**EP 99938166 A 19990611**

Priority  
• DE 9901705 W 19990611  
• DE 19843344 A 19980922

Abstract (en)  
[origin: DE19843344A1] The valve sealing surface (9) controls the fuel through passage to at least one injection aperture (13) issuing in the engine combustion chamber. The valve sealing surface also works in conjunction with a valve seat (11) at the combustion chamber-side end of the bore (5). In the guide surface (23) of the valve member (7) a number of recesses are provided, which center the valve member hydraulically in the bore (5). The recesses are formed as grooves (25) running crossways to the axis of the valve member. The grooves have a radially formed cross-section, the radius being preferably 0.1 mm.

IPC 1-7  
**F02M 61/16**; **F02M 61/10**

IPC 8 full level  
**F02M 61/10** (2006.01); **F02M 61/12** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP US)  
**F02M 61/10** (2013.01 - EP US); **F02M 61/12** (2013.01 - EP US); **F02M 61/16** (2013.01 - EP US)

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