

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 1045977 B1 20030903 (DE)**

Application  
**EP 99938137 A 19990608**

Priority  
• DE 9901660 W 19990608  
• DE 19837813 A 19980820

Abstract (en)  
[origin: DE19837813A1] The fuel injection valve has an axially movable valve element (50) in a valve body (10) bore with a valve closure head (52) on the combustion chamber end with a sealing surface (53) that works in conjunction with a valve seat surface (11), an injection opening in the head that is closed by the wall of the bore with the sealing surface on the seat and is opened as the valve moves outwards. The valve element is driven by an externally controllable element irrespective of the pressure in a pressure chamber. Two pressure shoulders (55) on the needle valve element have essentially identical pressure engagement surfaces. One of the pressure shoulders on the combustion chamber end of the valve body is arranged in a compensation chamber fluidically connected to the pressure chamber and closed at the end by an axially guided pressure sleeve (70).

IPC 1-7  
**F02M 61/08**; **F02M 51/06**

IPC 8 full level  
**F02M 47/02** (2006.01); **F02M 51/06** (2006.01); **F02M 61/08** (2006.01); **F02M 61/16** (2006.01); **F02M 63/02** (2006.01)

CPC (source: EP US)  
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