

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 1252433 B1 20050831 (DE)**

Application  
**EP 00993183 A 20001110**

Priority  
• DE 0004011 W 20001110  
• DE 19954288 A 19991111

Abstract (en)  
[origin: DE19954288A1] An injection valve element (24) controls an injection opening (26). A control valve (18) affects movement in the injection valve element with a control valve element (62) for regulating pressure in a pressure control area (48). The control valve element moves through adjusting force created by a piezo actuator (80) and thus regulates a pressure control area link with a balancing area (12).

IPC 1-7  
**F02M 47/02**; **F02M 59/46**

IPC 8 full level  
**F02M 61/10** (2006.01); **F02M 45/08** (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 51/06** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)  
**F02M 45/08** (2013.01 - EP US); **F02M 47/02** (2013.01 - EP US); **F02M 47/025** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 59/46** (2013.01 - KR); **F02M 2200/21** (2013.01 - EP US); **F02M 2200/703** (2013.01 - EP US)

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