

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 1395747 A1 20040310 (DE)**

Application  
**EP 02727264 A 20020323**

Priority  
• DE 0201080 W 20020323  
• DE 10125943 A 20010529

Abstract (en)  
[origin: WO02097261A1] The invention relates to a fuel injection valve for internal combustion engines, comprising a valve body (1) in which a bore hole (3) is formed, said bore hole having a longitudinal axis (14). A valve seat (17) is formed on the combustion chamber side end of said bore hole. At least one injection opening (20) is situated in the region of the valve seat (17), connecting the bore hole (3) to the combustion chamber of the internal combustion engine. A valve element (5) is arranged in the bore hole (3) in a longitudinally displaceable manner, said valve element co-operating with the valve seat (17) by means of a sealing surface (15), in order to control the at least one injection opening (20). A pressure chamber (10) is formed between the wall of the bore hole (3) and the valve element (5), and can be filled with fuel under high pressure. The valve body (1) is surrounded by a housing (22) in the region of the pressure chamber (10), said housing comprising anisotropic properties of resistance, in such a way that the valve body (1) has less deformation due to the pressure in the pressure chamber.

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

IPC 8 full level  
**F02M 61/10** (2006.01); **F02M 61/14** (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP US)  
**F02M 61/10** (2013.01 - EP US); **F02M 61/166** (2013.01 - EP US)

Citation (search report)  
See references of WO 02097261A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02097261 A1 20021205**; DE 10125943 A1 20021205; DE 50201843 D1 20050127; EP 1395747 A1 20040310; EP 1395747 B1 20041222; JP 2004519623 A 20040702; US 2004050972 A1 20040318; US 6832600 B2 20041221

DOCDB simple family (application)  
**DE 0201080 W 20020323**; DE 10125943 A 20010529; DE 50201843 T 20020323; EP 02727264 A 20020323; JP 2003500408 A 20020323; US 33371403 A 20030714