

Title (en)  
FUEL INJECTION VALVE

Title (de)  
BRENNSTOFFEINSPRITZVENTIL

Title (fr)  
SOUPAPE D'INJECTION DE CARBURANT

Publication  
**EP 1055065 B1 20040225 (DE)**

Application  
**EP 99955711 A 19990915**

Priority  
• DE 9902931 W 19990915  
• DE 19856920 A 19981210

Abstract (en)  
[origin: DE19856920A1] The invention relates to a fuel injection valve comprising an excitable actuating device (10, 11, 12), a valve needle (5) that is moved axially by the actuating device (10, 11, 12) and which is connected to a valve closing body (7). Said valve closing body (7) cooperates with a valve seat surface (29) to open and close the valve. A perforated disk (21) is mounted downstream from the valve seat surface (29), which is cup or pot-shaped and has a bottom part (22) and a retaining edge (26) protruding therefrom. The thin perforated disk (21) consisting of a sheet metal has bulgings (36) in the transition area from the bottom part (22) to the retaining edge (26) to enhance the rigidity of the perforated disk (21). The fuel injection valve is particularly suitable for fuel injection systems in mixture-compressing, spark-ignited internal combustion engines.

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

IPC 8 full level  
**F02M 51/08** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP KR US)  
**F02M 61/10** (2013.01 - KR); **F02M 61/1853** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**DE 19856920 A1 20000615**; AU 1260000 A 20000626; AU 748415 B2 20020606; BR 9907833 A 20001024; CN 1116516 C 20030730; CN 1292848 A 20010425; DE 59908651 D1 20040401; EP 1055065 A1 20001129; EP 1055065 B1 20040225; JP 2002531770 A 20020924; KR 20010040792 A 20010515; RU 2230216 C2 20040610; US 6371391 B1 20020416; WO 0034648 A1 20000615

DOCDB simple family (application)  
**DE 19856920 A 19981210**; AU 1260000 A 19990915; BR 9907833 A 19990915; CN 99803864 A 19990915; DE 59908651 T 19990915; DE 9902931 W 19990915; EP 99955711 A 19990915; JP 2000587072 A 19990915; KR 20007008686 A 20000809; RU 2000123434 A 19990915; US 62208400 A 20000927