

Title (en)
Fuel injection valve

Title (de)
Brennstoffeinspritzventil

Title (fr)
Injecteur de carburant

Publication
EP 1519036 B1 20070530 (DE)

Application
EP 04104634 A 20040923

Priority
DE 10344880 A 20030926

Abstract (en)
[origin: EP1519036A1] The fuel injector valve for an internal combustion engine has a tubular nozzle (44) with a conical valve seat (34) at the tip. The end (33) of the valve needle (20) fits into the valve seat and an annular gap (38) surrounds the needle. Fuel flows through the gap and is directly injected into the combustion chamber when the valve needle is pushed down by the piezoelectric, electrostrictive or magnetostrictive actuator. The needle moves through a fixed guide bush (45) and is fastened to a flange (48) urged upward by a coil spring (28). A second flange (49) on the needle is connected to a bellows (24) which may be filled with air.

IPC 8 full level
F02M 61/16 (2006.01); **F02M 47/04** (2006.01); **F02M 51/06** (2006.01); **F02M 59/46** (2006.01)

CPC (source: EP)
F02M 47/046 (2013.01); **F02M 51/0603** (2013.01); **F02M 61/167** (2013.01)

Cited by
JP2013539838A; CN101649797A; CN113738540A; US8905334B2; WO2010112275A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 1519036 A1 20050330; EP 1519036 B1 20070530; DE 10344880 A1 20050414; DE 502004003928 D1 20070712

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