

Title (en)
FUEL INJECTION VALVE

Title (de)
BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1112446 A1 20010704 (DE)

Application
EP 99953591 A 19990825

Priority

- DE 9902658 W 19990825
- DE 19838949 A 19980827
- DE 19907860 A 19990224

Abstract (en)
[origin: US6938840B1] A fuel injector, in particular a high pressure injector for direct injection of fuel into a combustion chamber of an internal combustion engine having externally supplied ignition and mixture compression, is characterized in that a valve needle, which is movable axially along a longitudinal axis of the valve, has a specially designed valve closing section on its downstream end. To open and close the valve, the valve closing section works together with a fixed valve seat. Swirl-producing elements are arranged upstream from the valve seat while a flattened face running perpendicular to the longitudinal axis of the valve is provided on the downstream end of the valve closing section downstream from the valve seat.

IPC 1-7
F02M 61/16; **F02M 61/18**

IPC 8 full level
F02M 51/06 (2006.01); **F02M 51/08** (2006.01); **F02M 61/10** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP US)
F02M 51/0671 (2013.01 - EP US); **F02M 61/162** (2013.01 - EP US); **F02M 61/18** (2013.01 - EP US)

Citation (search report)
See references of WO 0012892A1

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

DOCDB simple family (publication)
US 6938840 B1 20050906; EP 1112446 A1 20010704; EP 1112446 B1 20021106; JP 2002523683 A 20020730; JP 4469502 B2 20100526; WO 0012892 A1 20000309

DOCDB simple family (application)
US 76385701 A 20010531; DE 9902658 W 19990825; EP 99953591 A 19990825; JP 2000567845 A 19990825