

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 1546547 B1 20061122 (DE)

Application
EP 03737862 A 20030425

Priority
• DE 0301350 W 20030425
• DE 10245573 A 20020927

Abstract (en)
[origin: WO2004031570A1] The invention relates to a fuel injection valve for internal combustion engines with a valve body (1), in which a drilling (3) is embodied, defined at the combustion chamber end thereof by a conical valve seat (12). A piston-like valve needle (5) is arranged in the drilling (3), such as to be longitudinally displaced, which comprises a valve sealing surface (10) at the combustion chamber end thereof which has two conical surfaces (20; 22). The second conical surface (22) is arranged on the combustion chamber side of the first conical surface (20) and an annular groove (25) runs between the conical surfaces (20; 22) the edge thereof facing away from the combustion chamber acting as a sealing edge (27) on location of the valve sealing surface (10) on the valve seat (12). Recesses are embodied on the valve seat (12) and/or on the valve sealing surface (10), hydraulically connecting the annular groove (25) with a section between the valve seat (12) and valve sealing surface (10) on the combustion chamber side of the annular groove (25).

IPC 8 full level
F02M 61/18 (2006.01)

CPC (source: EP US)
F02M 61/18 (2013.01 - EP US); **F02M 61/1866** (2013.01 - EP US); **F02M 61/1873** (2013.01 - EP US)

Cited by
EP1496246A1; DE102010030344A1; WO2011160991A1

Designated contracting state (EPC)
DE FR IT

DOCDB simple family (publication)
WO 2004031570 A1 20040415; CN 100416087 C 20080903; CN 1685146 A 20051019; DE 10245573 A1 20040408; DE 50305785 D1 20070104; EP 1546547 A1 20050629; EP 1546547 B1 20061122; JP 2006500514 A 20060105; US 2005284964 A1 20051229; US 7347389 B2 20080325

DOCDB simple family (application)
DE 0301350 W 20030425; CN 03823138 A 20030425; DE 10245573 A 20020927; DE 50305785 T 20030425; EP 03737862 A 20030425; JP 2004540459 A 20030425; US 52630805 A 20050302