

Title (en)

DEVICE FOR THE INJECTION OF FUEL INTO THE COMBUSTION CHAMBER OF AN INTERNAL COMBUSTION ENGINE

Title (de)

VORRICHTUNG ZUM EINSPRITZEN VON KRAFTSTOFF IN DEN BRENNRAUM EINER BRENNKRAFTMASCHINE

Title (fr)

DISPOSITIF PERMETTANT L'INJECTION DE CARBURANT DANS LA CHAMBRE DE COMBUSTION D'UN MOTEUR A COMBUSTION INTERNE

Publication

EP 1778968 B1 20080206 (DE)

Application

EP 05763058 A 20050729

Priority

- AT 2005000301 W 20050729
- AT 13522004 A 20040806

Abstract (en)

[origin: WO2006012658A1] The invention relates to a device for the injection of fuel into the combustion chamber of an internal combustion engine, comprising an injector nozzle (5) and a nozzle needle (7), longitudinally-displaceable in the injector nozzle (5), which may be pressurised in the axial direction by a pressure in a control chamber (12), filled with fuel, for control of the opening and closing movement thereof. The control chamber (12) is connected to a supply line (14) and a drain line (19) and a solenoid valve (16) is arranged in at least one of the two lines, to which a valve closing body (25) is coupled, which may be pressed against a valve seat (26), and the operating body (21) is separated from the closing body (25) and the valve seat (26) by means of a bellows seal (28). The valve closing body is embodied as a valve ball (25) which may be pressed against a conical valve seat (26).

IPC 8 full level

F02M 47/02 (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP KR US)

F02M 47/02 (2013.01 - KR); **F02M 47/027** (2013.01 - EP US); **F02M 61/10** (2013.01 - KR); **F02M 61/166** (2013.01 - EP US);
F02M 61/18 (2013.01 - KR); **F02M 63/0015** (2013.01 - EP US); **F02M 63/0057** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2006012658 A1 20060209; AT 500889 A1 20060415; AT 500889 B1 20060915; AT 500889 B8 20070215; AT E385542 T1 20080215;
CN 100460663 C 20090211; CN 101035979 A 20070912; DE 502005002772 D1 20080320; EP 1778968 A1 20070502;
EP 1778968 B1 20080206; JP 2008509310 A 20080327; KR 100822955 B1 20080416; KR 20070046890 A 20070503;
US 2009205614 A1 20090820

DOCDB simple family (application)

AT 2005000301 W 20050729; AT 05763058 T 20050729; AT 13522004 A 20040806; CN 200580026635 A 20050729;
DE 502005002772 T 20050729; EP 05763058 A 20050729; JP 2007524123 A 20050729; KR 20077004534 A 20070226;
US 65949805 A 20050729