

Title (en)
FUEL INJECTION VALVE

Title (de)
BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1423604 B1 20050504 (DE)

Application
EP 02754212 A 20020614

Priority
• DE 0202174 W 20020614
• DE 10142301 A 20010829

Abstract (en)
[origin: DE10142301A1] The fuel injection valve, for direct fuel injection into the cylinders of an internal combustion motor, has an actuator to operate the valve needle and give the opening and closing movements of the valve closure at the valve seat surface of the valve seat body (5). At least one fuel injection opening is downstream of the valve seat. A flame protection cone (34) is at the outflow end (35) of the valve unit, formed at the valve seat body, with a pointed cone shape. The axial length (L) of the flame protection cone is up to three times the diameter (DB) of the valve unit at the valve seat body.

IPC 1-7
F02M 61/18

IPC 8 full level
F02M 51/06 (2006.01); **F02M 57/00** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)
F02M 51/0671 (2013.01 - EP US); **F02M 57/00** (2013.01 - EP US); **F02M 61/18** (2013.01 - EP KR US); **F02M 61/165** (2013.01 - EP US);
F02M 2200/505 (2013.01 - EP US)

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 10142301 A1 20030320; DE 50203025 D1 20050609; EP 1423604 A1 20040602; EP 1423604 B1 20050504; JP 2005504219 A 20050210;
KR 20040029017 A 20040403; US 2004026536 A1 20040212; US 7021564 B2 20060404; WO 03027488 A1 20030403

DOCDB simple family (application)
DE 10142301 A 20010829; DE 0202174 W 20020614; DE 50203025 T 20020614; EP 02754212 A 20020614; JP 2003531023 A 20020614;
KR 20047002698 A 20020614; US 41554403 A 20030908