

Title (en)

Fuel injection valve for internal combustion engines

Title (de)

Brennstoffeinspritzventil für Verbrennungskraftmaschinen

Title (fr)

Injecteur de combustible pour moteurs à combustion interne

Publication

**EP 0686763 B1 19990901 (DE)**

Application

**EP 95107718 A 19950520**

Priority

CH 178294 A 19940606

Abstract (en)

[origin: EP0686763A1] The fuel injection valve has a control piston (50), the opening and closing movements of which are controlled by two control spaces (70,74). The volume and fuel control pressure of the second one can be altered by the movement of the piston. The opening motion is slowed down by the pressure in the second control space, at least at first. For the closing movement, the control piston is accelerated at a certain pressure in the second control space to cut off the injection aperture (21) more rapidly. Relief elements (77) equalise the pressure between the second control space and the high pressure region. <IMAGE>

IPC 1-7

**F02M 47/02**

IPC 8 full level

**F02M 47/00** (2006.01); **F02M 45/00** (2006.01); **F02M 47/02** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

**F02M 45/00** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); **F02M 63/0054** (2013.01 - EP US); **F02M 2200/304** (2013.01 - EP US); **F02M 2547/001** (2013.01 - EP US); **Y10T 137/86405** (2015.04 - EP US)

Cited by

WO0240855A1; EP0908618A3; EP1118765A3; FR2748529A1; US6244245B1; DE102007025050B3; EP1371839A3; AT502260B1; FR2752268A1; EP0787900A3; EP0853196A1; US5992767A; EP0798459A3; EP1118765A2; WO9966193A1; WO9805858A1; WO02053904A1; WO02086309A1; WO9919619A1; WO2020150760A1

Designated contracting state (EPC)

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**EP 0686763 A1 19951213**; **EP 0686763 B1 19990901**; AT E184078 T1 19990915; DE 59506715 D1 19991007; EP 0807757 A1 19971119; JP H07332193 A 19951222; US 5685483 A 19971111; US 5842640 A 19981201

DOCDB simple family (application)

**EP 95107718 A 19950520**; AT 95107718 T 19950520; DE 59506715 T 19950520; EP 97112502 A 19950520; JP 16304595 A 19950606; US 46242295 A 19950605; US 91560297 A 19970821