

Title (en)

A fuel injection device for internal combustion engines

Title (de)

Kraftstoffeinspritzvorrichtung für Brennkraftmaschinen

Title (fr)

Dispositif d'injection de combustible pour moteurs à combustion interne

Publication

EP 0949415 B1 20041013 (DE)

Application

EP 98123745 A 19981214

Priority

DE 19816316 A 19980411

Abstract (en)

[origin: EP0949415A2] The fuel injection system includes a HP fuel storage (1) with a pressure sensor (6). A fuel injection valve (9) controlled by a control unit (8) is supplied with fuel, and has an element (14), the opening and closing of which, is determined by a pressure, acting on this valve element in a control chamber (24). The valve element must be relieved, for carrying out an injection of the pressure in the control chamber. A control valve (31) sequentially controls two different discharge cross-sections of a discharge duct (49) of the control chamber, one after the other facilitating a matched opening of the fuel injection valve element, for a first and a main injection of fuel.

IPC 1-7

F02M 47/02; **F02M 45/08**

IPC 8 full level

F02M 45/08 (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 51/00** (2006.01); **F02M 59/46** (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP US)

F02M 45/08 (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 63/0026** (2013.01 - EP US); **F02M 63/0056** (2013.01 - EP US); **F02M 63/0078** (2013.01 - EP US)

Cited by

EP1041272A3; EP1640604A1; EP1016783A3; US6561435B2; WO0208598A1; WO0050761A1; WO2004079180A1; WO2005095787A1; EP1781932A1

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EP 98123745 A 19981214; DE 19816316 A 19980411; DE 59812121 T 19981214; JP 10326899 A 19990409; US 28961799 A 19990412