

Title (en)
Fuel injection valve for internal combustion engines

Title (de)
Kraftstoffeinspritzventil für Brennkraftmaschinen

Title (fr)
Soupape d'injection de combustible pour moteurs à combustion interne

Publication
EP 0872636 A3 20020123 (DE)

Application
EP 98106006 A 19980402

Priority
DE 19716226 A 19970418

Abstract (en)
[origin: EP0872636A2] The arrangement includes an, axial in a drill hole (7) of a valve body (1) adjustable valve element (9) which comprises a valve head (11) at its end towards the combustion chamber, forming a valve closing element. The valve head comprises a sealing surface (13) on its side facing the valve body, with which it works together with a valve seat surface (17) provided at the front of the valve body facing the combustion chamber and with injection apertures (29) in the valve element head. The injection apertures lead away from a pressure chamber (19) formed between the valve element and the wall of the drill hole. The injection apertures are blocked by the wall of the drill hole when the valve element seats on the valve seat, and are opened by emerging the valve element from the drill hole through an outward directed movement of the valve element. The valve element is activated by a control element from the outside, independent of a high fuel pressure in the pressure chamber.

IPC 1-7
F02M 61/08; F02M 61/04; F02M 51/06

IPC 8 full level
F02M 51/00 (2006.01); **F02M 51/06** (2006.01); **F02M 61/04** (2006.01); **F02M 61/08** (2006.01)

CPC (source: EP)
F02M 51/005 (2013.01); **F02M 51/0603** (2013.01); **F02M 61/045** (2013.01); **F02M 61/08** (2013.01)

Citation (search report)
• [XY] DE 4325904 A1 19950209 - DAIMLER BENZ AG [DE]
• [YA] DE 4306072 A1 19940908 - SIEMENS AG [DE]
• [YA] EP 0324905 A1 19890726 - TOYOTA MOTOR CO LTD [JP]
• [A] US 5031841 A 19910716 - SCHAEFER HANS-JUERGEN [DE]
• [A] DE 19534445 A1 19970320 - MAN NUTZFAHRZEUGE AG [DE]
• [A] DE 4442764 A1 19960605 - BOSCH GMBH ROBERT [DE]

Cited by
US7886993B2; FR2782795A1; EP1077326A3; FR2786269A1; DE19943142A1; WO0157393A3; WO03085253A1

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0872636 A2 19981021; EP 0872636 A3 20020123; DE 19716226 A1 19981029; DE 19716226 C2 19990422

DOCDB simple family (application)
EP 98106006 A 19980402; DE 19716226 A 19970418