

Title (en)

Fuel injection valve for internal combustion engines

Title (de)

Kraftstoffeinspritzventil für Brennkraftmaschinen

Title (fr)

soupape d'injection de carburant pour moteurs a combustion interne.

Publication

EP 1154152 A3 20041208 (DE)

Application

EP 01109235 A 20010414

Priority

DE 10023322 A 20000512

Abstract (en)

[origin: EP1154152A2] The injection valve has a pre-loaded longitudinally elastic sleeve-shaped element (35,37) to charge a valve member (10) in closing direction. The sleeve element is rotary-symmetrical, and is e.g. bellows-shaped. The bellows consist of truncated cone-shaped parts of different heights, with facing edges being rounded.

IPC 1-7

F02M 63/00; **F02M 45/08**; **F02M 61/10**; **F02M 61/20**

IPC 8 full level

F02M 45/08 (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP)

F02M 45/083 (2013.01); **F02M 61/20** (2013.01)

Citation (search report)

- [X] GB 404067 A 19340111 - BRYCE LTD, et al
- [X] FR 1273461 A 19611013
- [X] DE 4110531 A1 19921001 - BROSER ERICH [DE]
- [X] FR 2168712 A5 19730831 - BRETING OLIVIER [FR]
- [A] GB 293171 A 19280705 - TORKILD VALDEMAR HEMMINGSEN
- [A] WO 0008333 A1 20000217 - BOSCH GMBH ROBERT [DE], et al

Cited by

US6712289B1; WO2007098988A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1154152 A2 20011114; **EP 1154152 A3 20041208**; DE 10023322 A1 20011115

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