

Title (en)  
Fuel injector

Title (de)  
Brennstoffeinspritzventil

Title (fr)  
Injecteur de carburant

Publication  
**EP 1431569 B1 20090923 (DE)**

Application  
**EP 03015166 A 20030704**

Priority  
DE 10259800 A 20021219

Abstract (en)  
[origin: EP1431569A2] The device (1) has a piezoelectric, electrostrictive or magnetostrictive actuator (4) and a valve needle (3) that interacts with the valve needle with a valve closure body that interacts with a valve seat surface. The actuator is mounted with one end movable and the other acting on the valve needle. The second end (13) of the actuator is directly or indirectly axially guided by an elastic and flexible membrane (8).

IPC 8 full level  
**F02M 51/06** (2006.01); **F02M 61/12** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)  
**F02M 51/0603** (2013.01); **F02M 61/12** (2013.01); **F02M 61/166** (2013.01)

Cited by  
CN108138734A; KR20180063889A; US10570864B2; WO2017060285A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 1431569 A2 20040623; EP 1431569 A3 20051130; EP 1431569 B1 20090923**; DE 10259800 A1 20040701; DE 50311942 D1 20091105

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