

Title (en)  
FUEL INJECTOR

Title (de)  
KRAFTSTOFFINJEKTOR

Title (fr)  
INJECTEUR DE CARBURANT

Publication  
**EP 1163440 B1 20051005 (EN)**

Application  
**EP 00911038 A 20000320**

Priority  

- GB 0000963 W 20000320
- GB 9906090 A 19990318
- GB 9912913 A 19990603

Abstract (en)  
[origin: WO0055490A1] A fuel injector comprising a valve needle (10) engagable with a seating to control fuel flow through an outlet, the valve needle (10) slidable in a first bore and including at least one thrust surface oriented such that the application of fuel under pressure thereto applies a force to the valve needle (10) urging the valve needle (10) away from the seating; a valve member (48) for controlling fuel pressure within a control chamber (38) for controlling the position of the valve needle (10) relative to the seating; and a piston member (36) slidable within a second bore (28), and defining, with the second bore (28), the control chamber (38); wherein the piston member (36) is exposed at one end portion thereof to fuel pressure within the control chamber (38), is cooperable with the valve needle (10) to transmit the force applied by the fuel pressure to the valve needle (10), and has an effective area exposable to fuel pressure so as to urge the valve needle (10) towards the seating greater than the effective area of the thrust surface or surfaces, respective opposite end portions of the piston member (36) and the valve needle (10) defining, with the first and/or second bore an intermediate chamber (44), the injector being arranged so as to permit the pressure in the intermediate chamber to be varied during an injection cycle.

IPC 1-7  
**F02M 47/02**

IPC 8 full level  
**F02M 47/02** (2006.01)

CPC (source: EP)  
**F02M 47/027** (2013.01)

Cited by  
CN102066740A; WO2009103819A1; EP2194543A1; EP2093410A1; US8708249B2; EP2743490A1

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**WO 0055490 A1 20000921**; DE 60022991 D1 20051110; DE 60022991 T2 20060713; EP 1163440 A1 20011219; EP 1163440 B1 20051005

DOCDB simple family (application)  
**GB 0000963 W 20000320**; DE 60022991 T 20000320; EP 00911038 A 20000320