

Title (en)

Fuel injector for fuel injection systems

Title (de)

Einspritzventil für Kraftstoffeinspritzsysteme

Title (fr)

Injecteur à combustible pour systèmes d'injection de combustible

Publication

EP 0952333 B1 20040623 (DE)

Application

EP 99106924 A 19990408

Priority

DE 19817320 A 19980418

Abstract (en)

[origin: EP0952333A2] The valve has an injector housing containing a piezo stack, a valve housing with a movable valve closure device with a nozzle needle (8) actuated by the piezo stack, a restoring device for the valve closing device and a displacement piston actuated by the piezo stack followed by a control piston which increases the displacement distance. Hydraulic sequential gain is achieved by a working piston that actuates the nozzle needle and increases the actuation force.

IPC 1-7

F02M 51/06; **F02M 47/00**

IPC 8 full level

F02M 47/00 (2006.01); **F02M 51/06** (2006.01); **F02M 55/00** (2006.01); **F02M 61/08** (2006.01)

CPC (source: EP US)

F02M 51/0603 (2013.01 - EP US); **F02M 55/002** (2013.01 - EP US); **F02M 61/08** (2013.01 - EP US); **F02M 2200/703** (2013.01 - EP US)

Cited by

EP1174615A3; EP1703119A1; DE10006319A1; WO2006008200A1; US6776354B2; US7451938B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0952333 A2 19991027; **EP 0952333 A3 20020213**; **EP 0952333 B1 20040623**; DE 19817320 C1 19991111; DE 59909783 D1 20040729; US 6302333 B1 20011016

DOCDB simple family (application)

EP 99106924 A 19990408; DE 19817320 A 19980418; DE 59909783 T 19990408; US 29376799 A 19990419