

Title (en)

FUEL INJECTOR FOR AUTO-IGNITION INTERNAL COMBUSTION ENGINES

Title (de)

KRAFTSTOFFEINSPRITZDÜSE FÜR SELBSTZÜNDENDE BRENNKRAFTMASCHINEN

Title (fr)

INJECTEUR DE CARBURANT POUR MOTEURS A COMBUSTION INTERNE A AUTO-ALLUMAGE

Publication

EP 0980474 A1 20000223 (DE)

Application

EP 98936237 A 19980619

Priority

- DE 9801696 W 19980619
- DE 19755057 A 19971211

Abstract (en)

[origin: DE19755057A1] The invention relates to a fuel injector for auto-ignition internal combustion engines. Said injector comprises a body (30) with a conical seat surface (32) from which injection openings (34) originate. It also comprises a valve needle which is slidably guided in the entry zone of the blind bore, through a guiding section, against a closing force and against the direction of fuel flow. The valve needle has a closing cone (12) disposed at the end of a valve spindle connected to the guiding section and co-operating with the seat surface (32). The valve spindle (10) circumferentially defines an annular space (40) for fuel feeding. The inventive injector is characterised in that a throttle device with a variable throttle cross section is placed in the transition zone between the valve spindle (10) and the closing cone (20). Said throttle device allows for a varying amount of injected fuel, depending on the axial displacement of the valve needle.

IPC 1-7

F02M 45/12; **F02M 61/10**

IPC 8 full level

F02M 45/00 (2006.01); **F02M 45/12** (2006.01); **F02M 61/10** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP US)

F02M 45/00 (2013.01 - EP US); **F02M 45/12** (2013.01 - EP US); **F02M 61/10** (2013.01 - EP US); **F02M 61/18** (2013.01 - EP US); **F02M 61/1873** (2013.01 - EP US); **F02M 2200/28** (2013.01 - EP US)

Citation (search report)

See references of WO 9930028A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

DE 19755057 A1 19990617; DE 59810346 D1 20040115; EP 0980474 A1 20000223; EP 0980474 B1 20031203; JP 2001511231 A 20010807; JP 4223077 B2 20090212; US 6257506 B1 20010710; WO 9930028 A1 19990617

DOCDB simple family (application)

DE 19755057 A 19971211; DE 59810346 T 19980619; DE 9801696 W 19980619; EP 98936237 A 19980619; JP 52959999 A 19980619; US 35577599 A 19990913