

Title (en)

ELECTROMAGNETICALLY OPERATED FUEL-INJECTION VALVE.

Title (de)

ELEKTROMAGNETISCH BETÄTIGBARES BRENNSTOFFEINSPRITZVENTIL.

Title (fr)

SOUPAPE D'INJECTION DE CARBURANT A COMMANDE ELECTROMAGNETIQUE.

Publication

**EP 0479958 B1 19950705 (DE)**

Application

**EP 91905793 A 19910322**

Priority

- DE 9100250 W 19910322
- DE 4013832 A 19900430

Abstract (en)

[origin: WO9117356A1] In prior art electromagnetically operated fuel-injection valves, the opening distance of the valve needle is limited by a stop pin which abuts the end of the valve needle remote from the valve seat when the valve is in the open position. Fuel-injection valves of this kind have a long overall length and, owing to their high mass, poor dynamic-control characteristics. The fuel-injection valve disclosed has a stop pin (38), located in a blind-end bore in the stepped inner pole (1), which projects into the throughbore (34) in the tubular armature (30). When the valve is open, the spherical valve-obturation element (31) abuts the stop pin (38). The armature (30) is connected directly to the valve-obturation element (31), thus giving a very short and mobile valve element. The valve disclosed has not only excellent dynamic-control behaviour, but also a short, compact design. The valve disclosed is particularly suitable for fuel-injection systems in spark-ignition and compression-type internal-combustion engines.

IPC 1-7

**F02M 51/08**

IPC 8 full level

**F02M 51/06** (2006.01); **F02M 51/08** (2006.01)

CPC (source: EP US)

**F02M 51/0614** (2013.01 - EP US); **F02M 51/0667** (2013.01 - EP US); **F02M 51/08** (2019.01 - EP US); **Y10S 239/90** (2013.01 - EP US)

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

**WO 9117356 A1 19911114**; DE 4013832 A1 19911031; DE 59105921 D1 19950810; EP 0479958 A1 19920415; EP 0479958 B1 19950705; ES 2074711 T3 19950916; JP 2851426 B2 19990127; JP H04507125 A 19921210; KR 100202218 B1 19990615; KR 920702751 A 19921006; US 5222673 A 19930629

DOCDB simple family (application)

**DE 9100250 W 19910322**; DE 4013832 A 19900430; DE 59105921 T 19910322; EP 91905793 A 19910322; ES 91905793 T 19910322; JP 50566291 A 19910322; KR 910701925 A 19911220; US 77810591 A 19911213