

Title (en)  
FUEL INJECTION DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
KRAFTSTOFFEINSPRITZEINRICHTUNG FÜR EINE BRENNKRAFTMASCHINE

Title (fr)  
SYSTEME D'INJECTION DE CARBURANT POUR MOTEUR A COMBUSTION INTERNE

Publication  
**EP 1430219 A1 20040623 (DE)**

Application  
**EP 02764516 A 20020713**

Priority  
• DE 0202575 W 20020713  
• DE 10146745 A 20010922

Abstract (en)  
[origin: WO03027490A1] The fuel injection device comprises a fuel injection valve (12) with an injection valve member (34), by means of which at least one injection opening (36) is controlled. The injection valve member (34) is pressurised by the pressure in a pressure chamber (44) in the fuel injection valve (12) and may be displaced by the same against a closing spring (48) arranged in a spring chamber (50). The pressure chamber is supplied with fuel under high pressure by a high pressure fuel pump (10) for an injection of fuel. The injection valve member (34) is at least indirectly pressurised in the closing direction by the pressure in the spring chamber (50) of the fuel injection valve (12). The pressure in the spring chamber (50) is variable, whereby the spring chamber (50) comprises a connection to a pressure source (66), which may be controlled by means of an electric valve (67). Different opening pressures for the fuel injection valve (12) can thus be achieved for a pre-injection and a main injection of fuel.

IPC 1-7  
**F02M 61/20**; **F02M 45/08**; **F02M 45/12**; **F02M 57/02**; **F02M 63/00**; **F02M 59/36**

IPC 8 full level  
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