

Title (en)  
FUEL INJECTION DEVICE

Title (de)  
KRAFTSTOFFEINSPRITZVORRICHTUNG

Title (fr)  
DISPOSITIF D'INJECTION DE CARBURANT

Publication  
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Application  
**EP 04738652 A 20040609**

Priority  
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• DE 10333696 A 20030724

Abstract (en)  
[origin: WO2005010342A1] The invention relates to a fuel injection device (1) comprising an injection valve (9), a line (5), which supplies fuel under high pressure to the injection valve (9) during operation, a control valve (41), which controls the pressure in a control chamber (43) of the injection valve, this control chamber being connected to said line (5), and the moving valve part (51) of the control valve can be actuated by an actuator (31) via a hydraulic coupler (38), which has two plungers (39, 40) that interact with a coupler volume of the coupler. The injection valve also comprises means for filling the coupler volume with pressurized fuel via guide gaps (65, 67) of the plungers (39, 40), whereby the plungers (39, 40) are placed inside one another while being parallel to one another. A translator space (72) is placed at the ends of the plungers (39, 40), said ends facing the actuator (31). A filling space (71-2) is provided inside the outer plunger (39) and is connected to said line (5). One of the plungers (39) is mechanically coupled to the actuator (31) via a rod (61), and the other plunger (40) actuates the control valve (41) via a rod (63), whereby the direction of the closing movement of the moving valve part (51) matches the direction of fuel flowing out of the control chamber (43) so that the control valve is subjected, at least in part, to an equilibrium of forces due to the force acting upon the other plunger (40) inside the translator space (72).

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