

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

Title (de)  
KRAFTSTOFFEINSPRITZEINRICHTUNG FÜR EINE BRENNKRAFTMASCHINE

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

Publication  
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Application  
**EP 02792635 A 20021206**

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Abstract (en)  
[origin: WO03069154A1] The invention relates to a fuel injection system comprising a high pressure fuel pump (10) and a fuel injection valve (12) connected to said pump, for each cylinder of the internal combustion engine. A pump piston (18) of the high pressure fuel pump (10) defines a pump working area (22) which is connected to a pressure chamber (40) of the fuel injection valve (12). Said fuel injection valve comprises an injection valve element (28) which is used to control injection openings (32) and can be displaced against a closing force in an opening direction by means of the pressure in the pressure chamber (40). A connection (66) between the pump working area (22) and a discharge chamber (24) is controlled by a first control valve (68), and a connection (64) between a control pressure chamber (52) associated with the pump working area (22) and a discharge chamber (24) is controlled by a second control valve (70). A throttle point (63, 65) is respectively provided in connections (62, 64) between the control pressure chamber (52) and the pump working area (22) and between the control pressure chamber and the discharge chamber (24). Another pressure chamber (54) is connected to the pump working area (22) and is defined by a pressure surface (53) by which means another force is exerted on the injection valve element (28) in the closing direction.

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