

Title (en)  
FUEL-INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)  
KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

Title (fr)  
SOUPAPE D'INJECTION DE CARBURANT DESTINEE A DES MOTEURS A COMBUSTION INTERNE

Publication  
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Application  
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Abstract (en)  
[origin: WO2005095785A1] The invention relates to a fuel-injection valve comprising an outer valve needle (15), which co-operates with a valve seat by means of a longitudinal displacement (20), to open and close at least one outer injection orifice (22). An inner valve needle (17) is situated in the outer valve needle (15), said inner needle co-operating with the valve seat (20) by means of a longitudinal displacement to open and close at least one inner injection orifice (24). The fuel pressure in a control chamber (28) that can be filled with pressurised fuel acts on the outer valve needle (15) and the inner valve needle (17) in such a way that a closing force is exerted in the direction of the valve seat (20) on said inner valve needle (17) and outer valve needle (15). The inner valve needle (17) is provided with an inner pressure surface (48) and the outer valve needle (15) is provided with an outer pressure surface (49), which, when pressure is applied, exert a respective hydraulic opening force on the inner valve needle (17) and the outer valve needle (15) in opposition to the closing force. The outer valve needle (15) is at least partially surrounded by an inlet chamber (12), in which pressurised fuel is constantly available, the inner pressure surface (48) and the outer pressure surface (49) being constantly impinged by the fuel in the inlet chamber (12).

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