

Title (en)
INJECTOR USED TO INJECT FUEL INTO INTERNAL COMBUSTION CHAMBERS IN INTERNAL COMBUSTION ENGINES, PARTICULARLY, A PIEZO-ACTUATOR CONTROLLED COMMON-RAIL-INJECTOR

Title (de)
INJEKTOR ZUR EINSPRITZUNG VON KRAFTSTOFF IN BRENNRÄUME VON BRENNKRAFTMASCHINEN, INSBESONDERE PIEZOAKTORGESTEUERTER COMMON-RAIL-INJEKTOR

Title (fr)
INJECTEUR DESTINE A L'INJECTION DE CARBURANT DANS LES CHAMBRES DE COMBUSTION DE MOTEURS A COMBUSTION INTERNE, NOTAMMENT INJECTEUR A PRESSION MODULEE (COMMON-RAIL) COMMANDE PAR UN ACTIONNEUR PIEZO-ELECTRIQUE

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Abstract (en)
[origin: WO2005050003A1] The invention relates to an injector which is used to inject fuel into internal combustion chambers in internal combustion engines, particularly, a piezo-actuator controlled common-rail-injector. Said injector comprises control means (17), particularly a piezo actuator (13), which are arranged in an injector body (10) and which actuate a control valve (20), which is disposed in a valve plate (18), by means of at least one multiplying piston (14). The invention also relates to a nozzle body (31) comprising a nozzle outlet which is disposed on the combustion chamber (free) side end thereof, a nozzle needle (33) which is arranged in an axially displaceable manner and/or which can be actuated in a longitudinal recess (32) of the nozzle body (31); a throttle disk (25) which is arranged between the nozzle body (31) and the control valve (20) and which is closed on the rear end (oriented away from the nozzle outlet) of the longitudinal recess (32). Said throttle disk forms an opening stop for the nozzle needle (33) which co-operates with the rear front surface (orientated away from the nozzle outlet) of the nozzle needle (33) and defines the opening stroke of the nozzle needle (33), and a control chamber (45) formed between the rear nozzle needle front surface and the throttle disk (25), said control chamber being hydraulically connected to a pressure connection (29) which is used to supply fuel. The invention is characterised in that a cylindrical retaining body (24) is arranged in the injector body (10), said retaining body receiving the multiplying piston(s) and the valve plate (18) containing the control valve (20).

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