

Title (en)
FUEL INJECTOR

Title (de)
KRAFTSTOFFINJEKTOR

Title (fr)
INJECTEUR DE CARBURANT

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Application
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Abstract (en)
[origin: WO2011069707A1] The invention relates to a fuel injector for injecting fuel into a combustion chamber of an internal combustion engine, having a magnetic actuator (1) for actuating a nozzle needle (4) guided so as to effect a lift movement in a bore (2) of a nozzle body (3), the lift movement of the nozzle needle causing at least one injection opening (5) of the fuel injector to be opened or closed. According to the invention, the nozzle needle (4) has a hydraulically effective surface A1, which axially limits a control volume (6) via which the nozzle needle (4) can be hydraulically coupled to a preferably coaxially arranged magnetic needle (7). The magnetic needle is guided so as to effect a lift movement in a central bore (8) in an intermediate piston (9) and has a hydraulically effective surface A2 axially limiting the control volume (6) and smaller than the surface A1 of the nozzle needle (4), so that the hydraulic coupling effects a power increase during a first phase of the opening lift of the nozzle needle (4).

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