

Title (en)  
FUEL INJECTOR

Title (de)  
KRAFTSTOFFINJEKTOR

Title (fr)  
INJECTEUR DE CARBURANT

Publication  
**EP 2510215 B1 20130911 (DE)**

Application  
**EP 10768434 A 20101007**

Priority  
• DE 102009047559 A 20091207  
• EP 2010064962 W 20101007

Abstract (en)  
[origin: WO2011069706A1] The invention relates to a fuel injector for injecting fuel into a combustion chamber of an internal combustion engine, comprising a magnetic actuator (1) for directly actuating a preferably needle-shaped injection valve member (2), the stroke movement of which can open or close at least one injection opening (3) of the fuel injector. The magnetic actuator (1) comprises an armature element (4) that can be moved in a stroke motion for controlling the control pressure in a control volume (5). According to the invention, the fuel injector further comprises a hydraulic booster (6) having a hydraulic effective surface A1 limiting the control volume (5) that is greater than a hydraulic effective surface A2 of the injection valve member (2) limiting the control volume (5) and/or greater than a hydraulic effective surface A3 of the armature element (4) limiting the control volume (5). The hydraulic booster (6) can be mechanically coupled to the injection valve member (2) or the armature element (4) such that the hydraulic effective surface A1 of the hydraulic booster (6) effects a power amplification during a first phase of the stroke movement of the injection valve member (2) and a path amplification during a second phase of the stroke movement of the injection valve member (2).

IPC 8 full level  
**F02M 51/06** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)  
**F02M 51/061** (2013.01); **F02M 61/167** (2013.01); **F02M 2200/703** (2013.01)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102009047559 A1 20110609**; EP 2510215 A1 20121017; EP 2510215 B1 20130911; WO 2011069706 A1 20110616

DOCDB simple family (application)  
**DE 102009047559 A 20091207**; EP 10768434 A 20101007; EP 2010064962 W 20101007