

Title (en)  
INJECTION NOZZLE

Title (de)  
EINSPRITZDÜSE

Title (fr)  
INJECTEUR

Publication  
**EP 1853813 A1 20071114 (DE)**

Application  
**EP 05825330 A 20051221**

Priority  

- EP 2005057047 W 20051221
- DE 102005007542 A 20050218
- DE 102005026514 A 20050609

Abstract (en)  
[origin: US2008093484A1] An injection nozzle for an internal combustion engine, in particular in a motor vehicle, the nozzle including a nozzle body having at least one injection port, a nozzle needle supported to execute a stroke inside the nozzle body to control an injection of fuel through the at least one injection port, a booster piston that is drive-coupled to an actuator and having a booster surface, the nozzle needle or a needle unit including the nozzle needle having a control surface that is hydraulically coupled to the booster surface. A bypass piston is supported to execute a stroke inside the booster piston, the bypass piston having a bypass surface that is hydraulically coupled to the booster surface, the bypass piston resting against a stop that is stationary in relation to the nozzle body, in an initial state in which the nozzle needle closes the at least one injection port, and the bypass piston having a reservoir surface that delimits a reservoir provided inside the booster piston.

IPC 8 full level  
**F02M 47/02** (2006.01); **F02M 51/06** (2006.01)

CPC (source: EP US)  
**F02M 47/02** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 51/0603** (2013.01 - EP US)

Citation (search report)  
See references of WO 2006087046A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**US 2008093484 A1 20080424**; AT E414848 T1 20081215; DE 102005026514 A1 20060824; DE 102005026514 B4 20081224;  
DE 502005006031 D1 20090102; EP 1853813 A1 20071114; EP 1853813 B1 20081119; JP 2008530438 A 20080807;  
WO 2006087046 A1 20060824

DOCDB simple family (application)  
**US 81379405 A 20051221**; AT 05825330 T 20051221; DE 102005026514 A 20050609; DE 502005006031 T 20051221;  
EP 05825330 A 20051221; EP 2005057047 W 20051221; JP 2007555465 A 20051221