

Title (en)  
INJECTION NOZZLE

Title (de)  
EINSPRITZDÜSE

Title (fr)  
INJECTEUR

Publication  
**EP 1179134 B1 20070606 (DE)**

Application  
**EP 01915037 A 20010224**

Priority  
• DE 0100727 W 20010224  
• DE 10010863 A 20000306

Abstract (en)  
[origin: DE10010863A1] The nozzle (10) has a nozzle body (12) with two groups of nozzle holes (14,16), two nozzle needles (18,20) and a separate pressure chamber (24,34) for each nozzle needle. The nozzle needles can be independently switched between a closed position, in which the nozzle holes allocated to the needle are closed and an injection position, in which the nozzle holes are open. The two nozzle needles are arranged next to each other. An Independent claim is included for a method to operate the nozzle.

IPC 8 full level  
**F02M 45/08** (2006.01); **F02M 61/10** (2006.01); **F02M 47/02** (2006.01); **F02M 55/02** (2006.01); **F02M 61/04** (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP US)  
**F02M 45/086** (2013.01 - EP US); **F02M 47/02** (2013.01 - EP US); **F02M 2200/46** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**DE 10010863 A1 20010927**; BR 0104955 A 20020219; DE 50112588 D1 20070719; EP 1179134 A1 20020213; EP 1179134 B1 20070606; JP 2003526047 A 20030902; PL 350628 A1 20030127; US 2003098371 A1 20030529; US 6769634 B2 20040803; WO 0166932 A1 20010913

DOCDB simple family (application)  
**DE 10010863 A 20000306**; BR 0104955 A 20010224; DE 0100727 W 20010224; DE 50112588 T 20010224; EP 01915037 A 20010224; JP 2001565523 A 20010224; PL 35062801 A 20010224; US 95973102 A 20020219