

Title (en)  
INJECTION NOZZLE WITH A FUEL FILTER

Title (de)  
EINSPRITZDÜSE MIT KRAFTSTOFFFILTER

Title (fr)  
INJECTEUR POURVU D'UN FILTRE A CARBURANT

Publication  
**EP 1478843 B1 20050608 (DE)**

Application  
**EP 03708080 A 20030201**

Priority  
• DE 10208544 A 20020227  
• EP 0301014 W 20030201

Abstract (en)  
[origin: WO03072933A1] Disclosed is an injection nozzle (1) with a fuel filter for a reciprocating internal combustion engine, comprising a filter body (8) in the pressure duct (13) of a nozzle holder (2) which is provided with a holding body (3) and a nozzle body (4). The filter surface or filter slots of the inventive injection nozzle (1) is/are formed by bore holes in the filter body (8) and filter elements that are movably arranged therein. The filter elements are configured as loose balls (19) forming filter slots with the walls of the bore holes (18) such that said loose balls (19) can pulsate as a result of the flow of fuel and dynamically reduce the size of residues.

IPC 1-7  
**F02M 61/16**

IPC 8 full level  
**F02M 37/22** (2006.01); **F02M 61/16** (2006.01); **F02M 69/00** (2006.01)

CPC (source: EP KR US)  
**F02M 61/16** (2013.01 - KR); **F02M 61/165** (2013.01 - EP US)

Designated contracting state (EPC)  
CZ DE ES GB IT SI

DOCDB simple family (publication)  
**WO 03072933 A1 20030904**; AU 2003212232 A1 20030909; CN 1630784 A 20050622; DE 10208544 A1 20030911; DE 50300637 D1 20050714; EP 1478843 A1 20041124; EP 1478843 B1 20050608; ES 2234454 T1 20050701; ES 2234454 T3 20051201; JP 2005518502 A 20050623; KR 20040086440 A 20041008; US 2005116068 A1 20050602

DOCDB simple family (application)  
**EP 0301014 W 20030201**; AU 2003212232 A 20030201; CN 03803589 A 20030201; DE 10208544 A 20020227; DE 50300637 T 20030201; EP 03708080 A 20030201; ES 03708080 T 20030201; JP 2003571592 A 20030201; KR 20047013226 A 20030201; US 50428004 A 20040811