

Title (en)
FUEL INJECTION NOZZLE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
KRAFTSTOFFEINSPRITZDÜSE FÜR EINE BRENNKRAFTMASCHINE

Title (fr)
INJECTEUR DE CARBURANT POUR MOTEUR A COMBUSTION INTERNE

Publication
EP 1076772 B1 20021002 (DE)

Application
EP 99924908 A 19990507

Priority
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• EP 9903160 W 19990507

Abstract (en)
[origin: DE19820513A1] The nozzle is used in a common rail injection system and has a needle (11) moved by an actuating device. The needle has a sharp tip (121) extending into a small chamber (110) from which the fuel flows through spray nozzle passages (120). Fuel from the supply flows into a conical portion of the nozzle with a first taper angle (alpha1) of 60 degrees. The needle has a conical portion leading into a portion with a gentle taper (alpha3) of 30-40 degrees followed by a more sharply tapered portion (alpha2) of 58.5 degrees which seals against the tapered bore of the nozzle. There is a groove (19) in the tip, immediately downstream of the sealing portion, facing a matching groove (18) in the bore of the nozzle. A tapering annular chamber (17) leads into the tip chamber.

IPC 1-7
F02M 61/18

IPC 8 full level
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CPC (source: EP US)
F02M 61/18 (2013.01 - EP US); **F02M 61/1873** (2013.01 - EP US)

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