

Title (en)
FUEL INJECTION NOZZLE FOR INTERNAL COMBUSTION ENGINES WITH SELF-IGNITION

Title (de)
KRAFTSTOFFEINSPRITZDÜSE FÜR SELBSTZÜNDENDE BRENNKRAFTMASCHINEN

Title (fr)
GICLEUR DE CARBURANT POUR MOTEURS A COMBUSTION INTERNE A AUTO-ALLUMAGE

Publication
EP 1045982 B1 20040324 (DE)

Application
EP 99947222 A 19990716

Priority
• DE 9902204 W 19990716
• DE 19847460 A 19981015

Abstract (en)
[origin: DE19847460A1] The section of the injection orifice (20) at first converges (21) and then diverges (22) to the combustion chamber, the injection orifice to be either circular, elliptical or in slot shape. The narrowest section of the orifice necessarily lies in the center of the axial extent of the orifice.

IPC 1-7
F02M 61/18

IPC 8 full level
F02M 61/16 (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP KR)
F02M 61/18 (2013.01 - KR); **F02M 61/182** (2013.01 - EP); **F02M 61/1833** (2013.01 - EP)

Designated contracting state (EPC)
DE ES FR GB IT

DOCDB simple family (publication)
DE 19847460 A1 20000420; BR 9917602 A 20021001; DE 59908951 D1 20040429; EP 1045982 A1 20001025; EP 1045982 B1 20040324; JP 2002527678 A 20020827; KR 100627745 B1 20060926; KR 20010033112 A 20010425; WO 0023707 A1 20000427

DOCDB simple family (application)
DE 19847460 A 19981015; BR 9917602 A 19990716; DE 59908951 T 19990716; DE 9902204 W 19990716; EP 99947222 A 19990716; JP 2000577405 A 19990716; KR 20007006475 A 20000614