

Title (en)  
Injection nozzles

Title (de)  
Einspritzdüse

Title (fr)  
Buse à injection

Publication  
**EP 2799706 A1 20141105 (EN)**

Application  
**EP 13166122 A 20130501**

Priority  
EP 13166122 A 20130501

Abstract (en)  
An injection nozzle 21 comprises a needle 22 within a nozzle body 23. The end 24 of the needle 22 is biased into contact with a conical seat 25 within the nozzle body 23 by a compression spring (not shown), so as to seal the nozzle 21. The end 27 of the nozzle body 23 includes small apertures 28 through which fuel is injected into the engine. The injection nozzle 21 includes an upper guiding region 30, for centring the needle 22 within the nozzle body 23. A lower guide in the form of a collar 31 functions to centre the lower part of the needle 22 within the nozzle body 23. The collar is in the form of a solid circular ring having a flat upper end 32 and lower conical surface 33. The side of the needle 22 is formed with flutes 37 to provide channels for passage of the fuel. Alternatively, the collar 31 may be formed with a slots or circular holes 40 to provide such channels.

IPC 8 full level  
**F02M 61/18** (2006.01); **F02M 61/12** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01); **F02M 51/06** (2006.01); **F02M 61/04** (2006.01)

CPC (source: EP)  
**F02M 47/027** (2013.01); **F02M 61/042** (2013.01); **F02M 61/12** (2013.01); **F02M 61/1873** (2013.01); **F02M 61/1893** (2013.01);  
**F02M 2200/50** (2013.01)

Citation (search report)  
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Designated extension state (EPC)  
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