

Title (en)  
Injection nozzle

Title (de)  
Einspritzdüse

Title (fr)  
Buse à injection

Publication  
**EP 2083165 A1 20090729 (EN)**

Application  
**EP 08001566 A 20080122**

Priority  
EP 08001566 A 20080122

Abstract (en)  
An injection nozzle (30) for a compression-ignition internal combustion engine, the injection nozzle (30) comprising: a nozzle body (32) provided with a bore (35) within which a valve needle (34) is movable along a primary valve needle axis (A-A), the valve needle (34) being engageable with a valve seating (38) defined by the bore (35) to control fuel delivery through a nozzle outlet; the bore (35) comprising first and second regions (36, 37), the second bore region (37) having a smaller diameter than the first bore region (36), and a transition (48) between the first and second bore regions (36, 37); the valve needle (34) including a guide region (44) for guiding the movement of the valve needle (34) within the nozzle body (32), the guide region (44) comprising a shoulder portion (54) and a relieved region disposed downstream of the shoulder portion (54); wherein, when the valve needle (34) is in a zero lift state, the shoulder portion (54) is disposed adjacent to the transition (48) so as to define a restriction therebetween for restricting the flow of fuel therethrough, and the overlap between the shoulder portion (54) and the transition (48) in the direction of the primary valve needle axis (A-A) is less than the height of the full lift of the valve needle (34).

IPC 8 full level  
**F02M 45/12** (2006.01); **F02M 61/12** (2006.01)

CPC (source: EP)  
**F02M 45/12** (2013.01); **F02M 61/12** (2013.01); **F02M 61/1886** (2013.01); **F02M 61/205** (2013.01); **F02M 2200/28** (2013.01)

Citation (search report)  
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Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2083165 A1 20090729**; WO 2009092690 A1 20090730

DOCDB simple family (application)  
**EP 08001566 A 20080122**; EP 2009050554 W 20090119