

Title (en)  
Fuel injection valve

Title (de)  
Brennstoffeinspritzventil

Title (fr)  
Soupape d'injection de combustible

Publication  
**EP 1197652 A3 20020612 (DE)**

Application  
**EP 01123519 A 20010929**

Priority  
DE 10050054 A 20001010

Abstract (en)  
[origin: EP1197652A2] The fuel injection valve comprises a valve-closing body forming a seal with a valve seat surface formed on a valve seat body, and a twisting module. The twisting module comprises several wires (42) twisted around one another and inserted in a sleeve (44) . The wires fill a recess (43) in the sleeve to produce a spiral hollow chamber (45) between the wires and an inner wall (46) of the sleeve. Preferred Features: The hollow spaces between the wires and the inner wall are formed as flow channels. The wires are twisted together in the form of a cord. At least three wires are used. The wires are made of tungsten or glass fibers.

IPC 1-7  
**F02M 61/18**; **F02M 61/16**; **F02M 51/06**

IPC 8 full level  
**B05B 1/34** (2006.01); **F02M 51/06** (2006.01); **F02M 61/16** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP)  
**F02M 51/0664** (2013.01); **F02M 51/0671** (2013.01); **F02M 61/162** (2013.01); **F02M 61/168** (2013.01); **F02M 61/1806** (2013.01)

Citation (search report)  
• [A] DE 19906146 A1 20000817 - WALZEL PETER [DE]  
• [A] US 4487369 A 19841211 - DU ROCHER DANIEL J [US]  
• [A] DE 3411331 A1 19850725 - DAIMLER BENZ AG [DE]  
• [DA] DE 19736682 A1 19990225 - BOSCH GMBH ROBERT [DE]

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CN103261663A

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1197652 A2 20020417**; **EP 1197652 A3 20020612**; **EP 1197652 B1 20050831**; DE 10050054 A1 20020418; DE 10050054 B4 20050127; DE 50107266 D1 20051006; JP 2002195132 A 20020710

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