

Title (en)  
DEVICE FOR RESTRICTING THE THROUGHFLOW QUANTITY AT A PUMP, AND PUMP ARRANGEMENT HAVING A DEVICE OF THIS TYPE

Title (de)  
EINRICHTUNG ZUR DURCHFLUSSMENGENBEGRENZUNG AN EINER PUMPE UND PUMPENANORDNUNG MIT SOLCH EINER EINRICHTUNG

Title (fr)  
DISPOSITIF DE LIMITATION DE DÉBIT D'UNE POMPE ET ENSEMBLE POMPE MUNI D'UN TEL DISPOSITIF

Publication  
**EP 2399030 B1 20190605 (DE)**

Application  
**EP 10702676 A 20100204**

Priority  
• EP 2010051359 W 20100204  
• DE 102009000943 A 20090218

Abstract (en)  
[origin: WO2010094574A1] A device (2) for restricting the throughflow quantity at a pump (3), in particular at a suction-throttled delivery pump for fuel injection systems of air-compressing, self-igniting internal combustion engines, has a feed channel (4) on the suction side of the pump (3), which feed channel (4) is connected on an outlet side (8) to an inlet (9) of a pump (3), a cut-off channel (6) which can be connected on its inlet side (10) at least indirectly to an outlet (12) of the pump (3) and which opens on its outlet side (13) laterally at an opening point (14) into the feed channel (4), and a pressure control valve (7) which is arranged in the cut-off channel (6). Furthermore, a throttle (5) is provided which is arranged in the feed channel (4) between the opening point (14) and the outlet side (8) of the feed channel (4). A transverse flow is caused at the opening point (14) by a cut-off quantity which is discharged via the cut-off channel (6), which transverse flow is superimposed with a main flow through the feed channel (4). As a result, a lateral incident flow of the throttle (5) can be achieved, as a result of which the effective throttle diameter is reduced. A given pressure difference at the pump (3) can therefore be reduced. Furthermore, Furthermore, a pump arrangement (1) with the pump (3) and the device (2) for restricting the throughflow quantity is disclosed.

IPC 8 full level  
**F02C 7/236** (2006.01); **F04B 23/08** (2006.01); **F04B 23/14** (2006.01); **F04B 49/24** (2006.01); **F04C 14/24** (2006.01); **F04F 5/10** (2006.01)

CPC (source: EP)  
**F04B 23/08** (2013.01); **F04B 23/14** (2013.01); **F04B 49/24** (2013.01); **F04F 5/10** (2013.01)

Cited by  
EP4273388A1

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 MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102009000943 A1 20100819**; CN 102325996 A 20120118; CN 102325996 B 20160203; EP 2399030 A1 20111228; EP 2399030 B1 20190605; WO 2010094574 A1 20100826

DOCDB simple family (application)  
**DE 102009000943 A 20090218**; CN 201080008397 A 20100204; EP 10702676 A 20100204; EP 2010051359 W 20100204