

Title (en)

Adjustment valve for adjusting the supply volume of a pressure pump

Title (de)

Verstellventil für die Verstellung des Fördervolumens einer Verdrängerpumpe

Title (fr)

Souape de réglage pour le réglage du volume d'alimentation d'une pompe volumétrique

Publication

EP 2014919 B1 20170104 (DE)

Application

EP 08159994 A 20080709

Priority

DE 102007033146 A 20070713

Abstract (en)

[origin: EP2014919A2] The valve (20) has a valve housing (21), and a valve piston (22) that is movably supported in the valve housing, where the valve piston exhibits an absorption surface (23) for the valve adjustment pressure of the fluid. A valve spring (25) works along the force that is exerted by the valve adjustment pressure on the valve piston. A magnetic coil (27) and an anchor (28) are provided for adjusting the valve piston in a direction of force that is exerted by the valve adjustment pressure, where the coil and the anchor are elastically adjustable. An independent claim is also included for a displacement pump with an adjustable supply volume.

IPC 8 full level

F04C 2/18 (2006.01); **F04C 14/18** (2006.01)

CPC (source: EP US)

F04C 14/185 (2013.01 - EP US); **F04C 14/223** (2013.01 - EP US); **F04C 2210/14** (2013.01 - EP US); **F04C 2270/18** (2013.01 - EP US); **F04C 2270/20** (2013.01 - EP US); **Y10T 137/86622** (2015.04 - EP US); **Y10T 137/86702** (2015.04 - EP US)

Citation (examination)

- US 5645352 A 19970708 - MENTEN FRANK [DE]
- US 6318818 B1 20011120 - BRACHERT JOST [DE], et al
- DE 3905937 A1 19900830 - BOSCH GMBH ROBERT [DE]
- EP 0908364 A2 19990414 - GEN MOTORS CORP [US]
- US 2006104823 A1 20060518 - HUNTER DOUGLAS G [US], et al
- US 6244839 B1 20010612 - COLE JACK H [US], et al
- US 5876185 A 19990302 - SCHIMPF JAMES E [US], et al
- FR 2326600 A1 19770429 - LUCAS INDUSTRIES LTD [GB]

Citation (opposition)

- Opponent : BONTAZ CENTRE R & D,
- US 5645352 A 19970708 - MENTEN FRANK [DE]
 - US 6318818 B1 20011120 - BRACHERT JOST [DE], et al
 - DE 3905937 A1 19900830 - BOSCH GMBH ROBERT [DE]
 - EP 0908364 A2 19990414 - GEN MOTORS CORP [US]
 - US 2006104823 A1 20060518 - HUNTER DOUGLAS G [US], et al
 - US 6244839 B1 20010612 - COLE JACK H [US], et al
 - US 5876185 A 19990302 - SCHIMPF JAMES E [US], et al
 - FR 2326600 A1 19770429 - LUCAS INDUSTRIES LTD [GB]
 - US 2005142006 A1 20050630 - VOIGT DIETER [DE]
 - US 4600364 A 19860715 - NAKATANI TOHRU [JP], et al
 - EP 1350930 A1 20031008 - BORGWARNER INC [US]
 - US 2002114708 A1 20020822 - HUNTER DOUGLAS G [US], et al

Cited by

US10451471B2; US9678511B2; EP2836945A2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

EP 08159994 A 20080709; DE 102007033146 A 20070713; EP 16206318 A 20080709; HU E08159994 A 20080709; JP 2008182053 A 20080711; US 17155908 A 20080711