

Title (en)

POSITIVE DISPLACEMENT PUMP

Title (de)

VERDRÄNGERPUMPE

Title (fr)

POMPE VOLUMÉTRIQUE

Publication

**EP 2761180 B1 20181121 (DE)**

Application

**EP 12770085 A 20120928**

Priority

- DE 102011054073 A 20110930
- DE 102011054074 A 20110930
- EP 2012069160 W 20120928

Abstract (en)

[origin: WO2013045598A2] The invention relates to a positive displacement pump (100), comprising a drive unit (1) and a pump unit (2) having several working chambers (4, 4'), several displacement elements (3, 3'), and at least three cylinders (5), preferably exactly three cylinders (5), wherein the pump unit (2) is double-acting. The invention further relates to a piston diaphragm pump forming a positive displacement pump, wherein a diaphragm stroke is caused by means of working liquid present on the first side of a diaphragm and a medium to be pumped is conducted through a diaphragm chamber bounded by the second side of the diaphragm due to the diaphragm stroke, and the diaphragm stroke is caused at a diaphragm position different from a vertical position of the diaphragm.

IPC 8 full level

**F04B 9/109** (2006.01); **F04B 11/00** (2006.01); **F04B 43/06** (2006.01)

CPC (source: EP US)

**F04B 9/1095** (2013.01 - EP US); **F04B 11/005** (2013.01 - EP US); **F04B 27/08** (2013.01 - US); **F04B 43/06** (2013.01 - EP US)

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2013045598 A2 20130404; WO 2013045598 A3 20130530;** AU 2012314408 A1 20140508; AU 2012314408 B2 20160526;  
AU 2016203015 A1 20160602; AU 2016203015 B2 20180614; BR 112014007364 A2 20170404; BR 112014007364 B1 20210928;  
CA 2861136 A1 20130404; CA 2861136 C 20180424; CL 2014000755 A1 20140725; EP 2761180 A2 20140806; EP 2761180 B1 20181121;  
IN 3132CHN2014 A 20150703; PE 20141978 A1 20141218; US 2014248160 A1 20140904; US 9695808 B2 20170704

DOCDB simple family (application)

**EP 2012069160 W 20120928;** AU 2012314408 A 20120928; AU 2016203015 A 20160510; BR 112014007364 A 20120928;  
CA 2861136 A 20120928; CL 2014000755 A 20140327; EP 12770085 A 20120928; IN 3132CHN2014 A 20140425; PE 2014000439 A 20120928;  
US 201214347243 A 20120928