

Title (en)
DIAPHRAGM PUMP

Title (de)
MEMBRANPUMPE

Title (fr)
POMPE A DIAPHRAGME

Publication
EP 1625377 A4 20111123 (EN)

Application
EP 03738931 A 20030516

Priority
US 0315699 W 20030516

Abstract (en)
[origin: WO2004106884A1] A diaphragm pump which overcomes the problem of diaphragm failure due to overfill of the oil transfer chamber and the inability to self-prime. A notch is provided in the upper portion of the surface of the cylinder so that air can be forced back to the reservoir. In addition, the bias spring connected to the diaphragm and supported by the piston is made stiff with a spring constant that produces a bias pressure that can overcome abnormal suction pressures.

IPC 8 full level
F04B 43/067 (2006.01); **G01M 19/00** (2006.01); **G01M 99/00** (2011.01)

CPC (source: EP US)
F04B 43/067 (2013.01 - EP US); **F04B 43/073** (2013.01 - EP US); **F04B 53/06** (2013.01 - EP)

Citation (search report)

- [X] US 6554578 B1 20030429 - SIEGEL NORBERT [DE]
- [X] US 3254845 A 19660607 - SCHLOSSER PAUL W
- [X] US 3107624 A 19631022 - WILLIAMS WILLIAM A
- See references of WO 2004106884A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2004106884 A1 20041209; AU 2003245292 A1 20050121; BR 0318302 A 20060711; BR PI0318302 B1 20170328; CN 100538314 C 20090909; CN 1781015 A 20060531; DK 1625377 T3 20170522; EP 1625377 A1 20060215; EP 1625377 A4 20111123; EP 1625377 B1 20170329; EP 3096013 A1 20161123; EP 3096013 B1 20190904; ES 2630179 T3 20170818; JP 2006526099 A 20061116; JP 4530988 B2 20100825

DOCDB simple family (application)
US 0315699 W 20030516; AU 2003245292 A 20030516; BR 0318302 A 20030516; CN 03826452 A 20030516; DK 03738931 T 20030516; EP 03738931 A 20030516; EP 16174972 A 20030516; ES 03738931 T 20030516; JP 2005500402 A 20030516