

Title (en)  
DIAPHRAGM PUMP

Title (de)  
MEMBRANPUMPE

Title (fr)  
POMPE A DIAPHRAGME

Publication  
**EP 1625377 A1 20060215 (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 1-7  
**G01M 19/00**

IPC 8 full level  
**F04B 43/073** (2006.01); **F04B 43/067** (2006.01); **F04B 53/06** (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)

Designated contracting state (EPC)  
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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

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**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