

Title (en)
PUMP WITH DISC-SHAPED CAVITY

Title (de)
PUMPE MIT SCHEIBENFÖRMIGEM HOHLRAUM

Title (fr)
POMPE A CAVITE EN FORME DE DISQUE

Publication
EP 2438302 B1 20150923 (EN)

Application
EP 09785228 A 20090603

Priority
GB 2009050615 W 20090603

Abstract (en)
[origin: WO2010139918A1] A pump having a substantially cylindrical shape and defining a cavity formed by a side wall closed at both ends by end walls wherein the cavity contains a fluid is disclosed. The pump further comprises an actuator operatively associated with at least one of the end walls to cause an oscillatory motion of the driven end wall to generate displacement oscillations of the driven end wall within the cavity. The pump further comprises an isolator operatively associated with a peripheral portion of the driven end wall to reduce dampening of the displacement oscillations. The pump further comprises a valve for controlling the flow of fluid through the valve. The valve has first and second plates with offsetting apertures and a sidewall disposed between the plates around the perimeter of the plates to form a cavity in fluid communication with the apertures. The valve further comprises a flap disposed and moveable between the first and second plates and having apertures substantially offset from the apertures of one plate and substantially aligned with the apertures of the other plate. The flap is motivated between the two plates in response to a change in direction of the differential pressure of fluid across the valve.

IPC 8 full level
F04B 43/04 (2006.01)

CPC (source: EP US)
F04B 43/046 (2013.01 - EP US); **F04B 45/047** (2013.01 - EP US)

Cited by
EP3722625A1; US11173240B2; US11564847B2; US11723809B2; US11285047B2; US11305047B2; US11564845B2; US11707564B2; WO2020209713A1; US10898388B2; US11123471B2; US12004904B2; US11160915B2; US11554203B2; US11701265B2; US11096831B2; US11896465B2; US11116669B2; US11648152B2; USD898925S; US11497653B2; USD999914S; US11992392B2; US12005182B2; US10660994B2; US11129931B2; US11903798B2; US12005181B2

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WO 2010139918 A1 20101209; AU 2009347422 A1 20111215; AU 2009347422 B2 20151126; AU 2016200869 A1 20160225; AU 2016200869 B2 20170608; BR PI0924510 A2 20200526; BR PI0924510 B1 20201124; BR PI0924510 B8 20220628; BR PI0924510 B8 20220802; CA 2764334 A1 20101209; CA 2764334 C 20161122; CN 102459899 A 20120516; CN 102459899 B 20160511; EP 2438302 A1 20120411; EP 2438302 B1 20150923; JP 2012528981 A 20121115; JP 5623515 B2 20141112; MX 2011012974 A 20120120; RU 2011153727 A 20130727; RU 2511832 C2 20140410; SG 176225 A1 20111229

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