Title (en)

Positive displacement pump for transporting a fluid with automatic adaptation to the compressibility of the fluid

Title (de)

Positive Abstandspumpe zum Transport einer Flüssigkeit mit automatischer Anpassung auf die Komprimierbarkeit der Flüssigkeit

Title (fr)

Pompe à déplacement positif pour transporter un fluide avec adaptation automatique pour la compressibilité du fluide

Publication

EP 1953387 A2 20080806 (EN)

Application

EP 08000832 A 20080117

Priority

DE 102007005736 A 20070131

Abstract (en)

A positive displacement pump (1) for transporting a thud with automatic adaptation to the compressibility of that fluid has a pumping chamber (15) with a variable volume (V) which is on the one hand delimited by a rigid chamber cover plate (10) and on the other hand by an elastic diaphragm (9), a suction channel (29) which is in flow connection with the pumping chamber (15) for sucking the fluid to be transported into the pumping chamber (15), an outlet channel (24) which is in flow connection with the pumping chamber (15) for discharging the fluid to be transported from the pumping chamber (15), and a drive device (29) for cyclically increasing and reducing the current volume (V) of the pumping chamber (15), with the drive device (29) being connected to the diaphragm (9) by means of a diaphragm connecting element (34; 34a; 34b) which is spring-mounted in the drive device (29) by means of a spring element (33; 33a; 33b).

IPC 8 full level

F04B 43/02 (2006.01); **F04B 45/04** (2006.01)

CPC (source: EP US)

F04B 43/02 (2013.01 - EP US); **F04B 45/04** (2013.01 - EP US)

Cited by

US9784264B2; WO2014174072A1; WO2012016962A3; WO2012016959A3; WO2016080058A1; WO2023118581A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 08000832 A 20080117; CN 200810007109 A 20080131; DE 102007005736 A 20070131; US 1466008 A 20080115