

Title (en)
Piezoelectric pump assembly

Title (de)
Piezoelektrischer Pumpenantrieb

Title (fr)
Engrenage de pompe piézoélectrique

Publication
EP 1898087 A3 20110511 (DE)

Application
EP 07014364 A 20070721

Priority
DE 102006043219 A 20060911

Abstract (en)
[origin: EP1898087A2] The piezo electric pump drive system has a membrane as pumping organ with a resonance oscillating system, which has a resonance mass (12/1), supported elastically by a resonance spring. The resonance mass oscillations are generated from an electrical active piezo element (1), which drives the pumping organ in oscillating manner. A flat spring is provided as resonance spring (11/1) and support of the resonance mass, where the piezo element acts on a small lever arm (23). The resonance mass carries a large lever arm (24).

IPC 8 full level
F04B 17/03 (2006.01); **F04B 43/04** (2006.01); **F04B 43/09** (2006.01)

CPC (source: EP US)
F04B 17/003 (2013.01 - EP US); **F04B 45/043** (2013.01 - EP US); **F04B 45/047** (2013.01 - EP US)

Citation (search report)

- [X] JP S61103580 U 19860701
- [X] DE 3926348 A1 19900315 - NIPPON KEIKI WORKS [JP]
- [A] DE 10234584 B3 20040408 - FESTO AG & CO [DE]
- [A] EP 1593847 A2 20051109 - SARCOS LC [US]

Cited by
CN113482891A; CN114109786A; EP2133567A3; CN114640270A; US9802214B2; US10166568B2

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

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
EP 1898087 A2 20080312; **EP 1898087 A3 20110511**; DE 102006043219 B3 20080228

DOCDB simple family (application)
EP 07014364 A 20070721; DE 102006043219 A 20060911