

Title (en)
Linear pump

Title (de)
Linearpumpe

Title (fr)
Pompe linéaire

Publication
EP 2365220 B1 20170823 (EN)

Application
EP 10002189 A 20100303

Priority
EP 10002189 A 20100303

Abstract (en)

[origin: EP2365220A1] The present invention relates to a fluid pump (1) for usage in a massage system in a vehicle seat comprising a housing (3) with a front wall (3d) at a front side and a rear wall (3e) at a rear side, a first actuator element (65) which is movable forwards and backwards, and a second actuator element (67) which is configured to be counter-directionally movable with respect to the first actuator element (65), characterised by further comprising a first piston (15) and a second piston (17) arranged at the front side, wherein the first piston (15) and the second piston (17) are movable backwards during an intake stroke and forwards during an exhaust stroke, and a third piston (107) and a fourth piston (99) arranged at the rear side, wherein the third piston (107) and the fourth piston (99) are movable forwards during an intake stroke and backwards during an exhaust stroke, wherein the first actuator element (65) is coupled to the first piston (15) and the third piston (107) such that the first piston (15) performs an intake stroke and the third piston (107) performs an exhaust stroke when the first actuator element (65) moves backwards, and such that the first piston (15) performs an exhaust stroke and the third piston (107) performs an intake stroke when the first actuator element (65) moves forwards, and the second actuator element (67) is coupled to the second piston (17) and to the fourth piston (99) such that the second piston (17) performs an exhaust stroke and the fourth piston (99) performs an intake stroke when the second actuator element (67) moves forwards, and such that the second piston (17) performs intake stroke and the fourth piston (99) performs an exhaust stroke when the second actuator element (67) moves backwards.

IPC 8 full level

F04B 1/00 (2006.01); **F04B 27/02** (2006.01); **F04B 35/04** (2006.01); **F04B 43/00** (2006.01); **F04B 43/02** (2006.01); **F04B 43/04** (2006.01);
F04B 45/04 (2006.01); **F04B 45/047** (2006.01)

CPC (source: EP US)

F04B 1/00 (2013.01 - EP US); **F04B 27/02** (2013.01 - EP); **F04B 35/045** (2013.01 - EP US); **F04B 43/0045** (2013.01 - EP)

Cited by

CN111067772A; US2022316464A1; US11898547B2; US10537471B2; US9750638B2; US9962288B2; US9915274B2; WO2015161149A1;
US9693896B2; US10182940B2

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 MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

EP 2365220 A1 20110914; EP 2365220 B1 20170823

DOCDB simple family (application)

EP 10002189 A 20100303