

Title (en)
DIAPHRAGM PUMP

Title (de)
MEMBRANPUMPE

Title (fr)
POMPE A DIAPHRAGME

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Application
EP 17710257 A 20170313

Priority
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Abstract (en)
[origin: WO2017157819A1] A diaphragm pump comprises a carrier part (1), - a drive motor (2) which is arranged thereon with a drive shaft (3) which rotates about a main rotational axis (HR), a pump head (4, 4') with a pump chamber (8, 8') which is delimited by a diaphragm which is driven in an oscillating manner, and an inlet connector (11) and outlet connector (10) which are arranged on the carrier part (1) and can be alternately connected in each case to the pump chamber (8, 8') via a shuttle valve arrangement (12, 12') in the sense of an intake and exhaust cycle, wherein the pump head (4, 4') is mounted rotationally in the carrier part (1) and is connected to the drive shaft (3) in an orientation, wherein the oscillation direction (SR) of the diaphragm (7, 7') is directed orthogonally with respect to the main rotational axis (HR) of the drive shaft (3), a drive transmission element (13, 13') is provided for the diaphragm (7, 7'), which drive transmission element (13, 13') = is mounted firstly on the pump head (4, 4') such that it can be displaced in the oscillation direction (SR) of the diaphragm (7, 7') and is connected in terms of drive kinematics by way of a coupling element (21, 21') to the diaphragm (7, 7'), and = is guided in a bearing plate (17) which is mounted such that it can be rotated eccentrically with respect to the main rotational axis (HR), in such a way that said drive transmission element (13, 13') can be displaced orthogonally with respect to the oscillation direction (SR) of the diaphragm (7, 7'), in such a way that = in the case of the rotation of the pump head (4, 4') which is brought about by the drive shaft (3), and in the case of the rotational driving of the drive transmission element (13, 13') by way of the pump head (4, 4'), the drive transmission element (13, 13') generates the oscillatory movement of the diaphragm (7, 7') in the pump chamber (8, 8') by way of its coupling element (21, 21') on account of the eccentricity-induced displacements of the drive transmission element (13, 13') relative to the pump head (4, 4') and to the bearing plate (17), and, as a result of the rotation of the pump head (4, 4'), a pump medium line (22) which is arranged therein is connected alternately to the inlet (11) or outlet connector (10).

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