

Title (en)  
DIAPHRAGM PUMP

Title (de)  
MEMBRANPUMPE

Title (fr)  
POMPE A DIAPHRAGME

Publication  
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Application  
**EP 04714736 A 20040226**

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Abstract (en)  
[origin: WO2004083639A1] The invention relates to a diaphragm pump (1) comprising a working diaphragm (3) that, during pumping movements, oscillates between a bottom dead center and an upper dead center. Said working diaphragm (3) delimits a pump chamber (7) between itself and a concave pump chamber wall (6) and when located at the upper dead center, the working diaphragm (3) rests against the pump chamber wall (6). The inventive diaphragm pump is characterized in that its working diaphragm (3) has an inner and outer annular zone (8, 9), which can be deformed during pumping movements, and in that a stiffened diaphragm area which, in essence, cannot be deformed during pumping movements is placed between these annular zones (8, 9). This non-deformable diaphragm area can be stiffened, for example, by means of stiffening ribs (10), which are radially oriented and interspaced in the peripheral direction. The working diaphragm (3) of the inventive diaphragm pump (1), even in the event of differences in pressure loads occurring between the upper side and lower side of the diaphragm, neither tends to increase the total chamber volume nor reduce the suction chamber volume.

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