

Title (en)  
DIAPHRAGM PUMP WITH REDUCED LEAK EXTENSION IN THE EVENT OF OVERLOAD

Title (de)  
MEMBRANPUMPE MIT REDUZIERTER LECKAGEERGÄNZUNG IM ÜBERLASTFALL

Title (fr)  
POMPE À MEMBRANE À COMPENSATION DES FUITES RÉDUITE EN CAS DE SURCHARGE

Publication  
**EP 3167191 B1 20191030 (DE)**

Application  
**EP 15738312 A 20150710**

Priority  
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• EP 2015065907 W 20150710

Abstract (en)  
[origin: WO2016005596A1] A diaphragm pump comprises a diaphragm which separates a hydraulic chamber (6) from a delivery chamber, wherein the delivery chamber is connected to a suction port and to a pressure port, and pressure can be applied using a pulsating working fluid pressure to the hydraulic chamber (6) that can be filled with a working fluid, and the diaphragm can be moved back and forth between a pressure position, in which the volume of the delivery chamber is smaller, and a suction position, in which the volume of the delivery chamber is larger. The hydraulic chamber (6) is connected to a working fluid reservoir via a leak extension valve (5), wherein the leak extension valve (5) is configured such that if the pressure in the hydraulic chamber in the suction position of the diaphragm is smaller than a predefined minimum value, the leak extension valve (5) opens, and the hydraulic chamber (6) comprises an outlet channel which is closed by a pressure limiting valve which is configured such that if the pressure rises above a predefined maximum value in the hydraulic chamber (6) the pressure limiting valve opens and working fluid can leave the hydraulic chamber (6) via the outlet channel. The working fluid reservoir is arranged in a first (1) and in a second chamber (2), wherein the two chambers (1,2) are connected to each other via a first connecting channel (4).

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