

Title (en)  
ROTATIONAL PRESSURE EXCHANGER

Title (de)  
ROTATIONS-DRUCKAUSTAUSCHER

Title (fr)  
ECHANGEUR DE PRESSION ROTATIF

Publication  
**EP 1747379 A1 20070131 (DE)**

Application  
**EP 05739914 A 20050429**

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Abstract (en)  
[origin: WO2005116456A1] The invention relates to a pressure exchanger for transmitting pressure energy from a liquid flow of one liquid system to a liquid flow of another liquid system comprising a housing that is provided with inlet pipes and outlet pipes for liquid flows having different pressure states. A cylindrical rotor is disposed in the housing so as to rotate about the longitudinal axis thereof. Said rotor is provided with a plurality of passages which are located on an annular plane that surrounds the longitudinal axis of the rotor and encompass a hole on each face of the rotor. Inlet ports and outlet ports for the inlet pipes and outlet pipes of the liquid flows are positioned opposite the faces of the rotor at the housing end inside the housing while sealing zones are placed between the inlet ports and outlet ports in the housing. Furthermore, radially extending sealing webs are arranged between the passage holes on the faces of the rotor. The passages of the rotor are adapted to be connected to the inlet ports and outlet ports of the housing so as to alternately conduct high-pressure liquid and low-pressure liquid from the respective pipe system during rotation of the rotor. A pressure surge-reducing secondary flow zone is placed at the transition between an inlet port and the sealing zone, both of which are located at the housing end, and/or at the transition between the front openings of the passages located in the rotor and the sealing webs located at the rotor end.

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