

Title (en)
WORKING CYLINDER HAVING PRESSURE MEDIUM FLOW TRANSFER

Title (de)
ARBEITSZYLINDER MIT DRUCKMEDIUMÜBERSTRÖMUNG

Title (fr)
VÉRIN À FUITE CONTRÔLÉE

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Application
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Abstract (en)
[origin: WO2014124624A1] The invention relates to a working cylinder for pressure medium flow transfer between the working chambers of a double-acting hydraulic working cylinder in the vicinity of the end positions of the piston. A working cylinder according to the invention is characterised in that the piston (1) has a first and a second annular elastic seal (13; 14). The first annular elastic seal (13) is mounted against a first side plate (10) axially in the direction of a second side plate (11) and is supported on one side by the first side plate (10), the second annular elastic seal (14) is mounted against the second side plate (11) axially in the direction of the first side plate (10) and is supported on one side by the second side plate (11). Each of said annular elastic seals (13;14) is elastically deformable when pressure is applied in the direction of a central portion (12), forming a gap with respect to the cylinder tube inner wall (15). When pressure is applied in the opposite direction, the elastic deformation of the annular elastic seal (13, 14) is limited by the respective side plate (10; 11) and the annular elastic seal (13, 14) exerts a sealing force. The working cylinder is further characterised in that the cylinder tube (1) comprises a first and a second recess (20; 21), wherein the first recess (20) is arranged axially in such a way that only the first annular elastic seal (13) in a first end position of the piston (9) is positioned above the first recess (20) and by means of the first recess (20) a first flow transfer cross-section opens between the first annular elastic seal (13) and the cylinder tube (1), wherein the second recess (21) is arranged axially in such a way that only the second annular elastic seal (14) in a second end position of the piston (9) is positioned above the second recess (21) and by means of the second recess (21) a second flow transfer cross-section opens between the second elastic annular seal (14) and the cylinder tube (1).

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