

Title (en)
Piston-type rotator

Title (de)
Kolbendrehmaschine

Title (fr)
Rotateur de type piston

Publication
EP 2159411 A1 20100303 (EN)

Application
EP 08015251 A 20080829

Priority
EP 08015251 A 20080829

Abstract (en)
The present invention relates to hydraulic rotators used in hydraulic cranes. The object is to develop a rotator with higher torque and minimised dimensions. The rotator includes an outer casing (1); cylinder assembly (2); flanged axle (3). The cylinder assembly (2) comprises an assembly of block (8) with milled cylindrical openings-cylinders wherein in each of the cylindrical opening two pistons (9) and springs (11) between them are inserted so that the pistons (9) can move in opposite from each other direction under the force of hydraulic pressure and actuate the unit revolving the outer casing (1) interconnected with working appliances. On both sides of cylinder assembly (2), axial bearings (14) are mounted to take up axial loads from upper and bottom covers (4;5), the spacer (6) contains a pressed-in sliding bearing (15), enabling the rotation of outer casing (1) relatively to the cylinder assembly (2). Pressure is directed to the distribution valve (16) via channel (1'), then via channels on to the cylinders in cylinder assembly (2). Once the pressure reaches the cylinder, pistons (9) start moving in opposite directions and actuating the balls (10). Torque is generated, as a result of tangential force, causing the rotation of outer casing (1).

IPC 8 full level
F03C 1/06 (2006.01); **B66C 3/00** (2006.01); **B66C 13/08** (2006.01); **E02F 3/36** (2006.01)

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B66C 3/005 (2013.01); **E02F 3/3681** (2013.01); **F03C 1/06** (2013.01); **F03C 1/0613** (2013.01)

Citation (applicant)
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• WO 9626326 A1 19960829 - THUMM HEINZ OELHYDRAULIK [DE], et al
• US 2617360 A 19521111 - BARKER VIRGIL D
• US 4086845 A 19780502 - TAKAGI KINZO
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Citation (search report)
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• [A] US 4086845 A 19780502 - TAKAGI KINZO
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