

Title (en)

CIRCUIT FOR CONTROLLING A DOUBLE-ACTION HYDRAULIC DRIVE CYLINDER

Title (de)

SCHALTUNG ZUR ANSTEUERUNG EINES DOPPELTWIRKENDEN HYDRAULISCHEN ANTRIEBSZYLINDERS

Title (fr)

MONTAGE POUR COMMANDER UN CYLINDRE D'ENTRAINEMENT HYDRAULIQUE A DOUBLE EFFET

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Application

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Abstract (en)

[origin: WO2007019712A1] The invention relates to a circuit for controlling a double-action hydraulic drive cylinder (1), which is controlled by a directional control valve (5) equipped with working connections (A, B). Hydraulic fluid can be fed to a piston chamber (11), whereas hydraulic oil simultaneously discharges from a rod chamber (12), and hydraulic fluid can be fed to a rod chamber (12), whereas hydraulic oil simultaneously discharges from a piston chamber (11). The invention is characterized in that: the piston chamber (11) is connected to the rod chamber (12) via a parallel connection consisting of a pressure limiting valve (21) and of a controllable load maintaining valve (26) and via an automatic regeneration check valve (22) arranged parallel thereto; a first pretensioning valve (24) and an automatic by-pass check valve (28) situated antiparallel thereto are arranged between the connection point between the pressure limiting valve (21), load maintaining valve (26), the regeneration control valve (22) and the working connection (A) of the directional control valve (5); and another pretensioning valve (30; 45) is arranged inside a line between the rod chamber (12) and a tank in a series connection with the directional control valve (5). The invention enables a regeneration from the piston chamber (11) to the rod chamber (12) whereby reducing the power requirement for operating the pump.

IPC 8 full level

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Citation (search report)

See references of WO 2007019712A1

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