

Title (en)

HYDROSTATIC DISPLACEMENT DRIVE FOR LIFTING AND LOWERING AND HOLDING LOADS, IN PARTICULAR FOR LIFTS

Title (de)

HYDROSTATISCHER ANTRIEB ZUM HEBEN UND SENKEN UND ZUM HALTEN VON LASTEN, INSBESONDERE FÜR AUFZÜGE

Title (fr)

SYSTEME DE COMMANDE HYDROSTATIQUE POUR FAIRE MONTER ET FAIRE DESCENDRE ET POUR MAINTENIR DES CHARGES, NOTAMMENT POUR DES ASCENSEURS

Publication

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Application

**EP 98914771 A 19980428**

Priority

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- CH 100497 A 19970430

Abstract (en)

[origin: WO9849085A2] The invention relates to a hydraulic or pneumatic drive for lifting and lowering loads, in particular for lifts. It has a working cylinder (11) forming a pressure chamber (14) connected to a pressure fluid source (39) and subjected to a pressure fluid. It also has a lifting piston (1) tightly guided in the working cylinder and a guide rod (15) arranged in the working cylinder. The guide rod (15) projects into the interior of the lifting piston (1) which tightly encloses the guide rod (15). The end (4) of the lifting piston (1) which projects into the pressure chamber (14) forms an annular face (5) which is subjected to pressure fluid. The interior of the lifting piston (1) forms an additional pressure chamber (7) subjected to pressure fluid and which is connected to its own pressure fluid source (40). The pressure fluid source connected to the working cylinder (11) delivers pressure fluid at a substantially constant pressure, whereas the pressure fluid source (49) connected to the additional pressure chamber (7) delivers pressure fluid at a variable pressure. The additional pressure chamber (7), subjected to pressure fluid, subdivides the total force needed to lift a load into two partial forces, one of which acts upon the annular face and the other in the interior of the lifting piston, close under the load. In this way, the partial force acting upon the entire length of the lifting piston and subjecting the piston to buckling is substantially reduced. It is thus possible to reduce the amount of material required without affecting buckling resistance.

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