

Title (en)  
Hydraulic directional spool valve.

Title (de)  
Hydraulisches Wegeschieberventil.

Title (fr)  
Dispositif de distribution hydraulique à tiroir.

Publication  
**EP 0088017 A2 19830907 (FR)**

Application  
**EP 83400385 A 19830225**

Priority  
• FR 8203239 A 19820226  
• FR 8205928 A 19820406

Abstract (en)  
1. A hydraulic distribution device of the servovalve type comprising a body (100) closed at one of its ends by a cap (102), this body imprisoning a lining (104), said lining (104) as well as said body (100) comprising bores (106, 107) in which can slide a slider (108), grooves (120, 122, 123, 126, 127) being arranged in said body (100) and said lining (104), a central groove (120) communicating with a fluid pressure source (P), two utilisation grooves (122, 123) disposed on either side of said central groove (120) and two terminal grooves (126, 127) communicating with a low pressure fluid source (T), said slider (108) comprising two axial bores (109, 116), a first bore (109), which is supplied with a mobile means (110, 229) obturating it and in which terminates a first channel (133) connected to the fluid pressure source (P) and a second channel (135) connected to the low pressure fluid source (T), the bottom of said bore (109) constituting a first chamber (115), and a second bore (116) comprising a counter-reaction needle (117) resting at one of its ends against the bottom of the cap (102), the bottom of said second bore (116) constituting a second chamber (118) permanently communicating with said fluid pressure source (P), said mobile means (110, 229) being movable by a motor (113) and putting into communication, according to the moving direction, a control chamber (115) opposed to the second chamber (118) and of a cross-section greater than that of the latter, either with said fluid pressure source (P) via the first channel (133), or with said source of low pressure fluid (T) via the second channel (135), said slider (108) being thus driven into one direction or the inverse direction and thus making communicate on the one hand one of said utilisation grooves (122, 123) with the fluid pressure source (P) and on the other hand the other utilisation groove (122, 123) with the low pressure fluid source (T) and vice-versa, characterised in that the control chamber is constituted by the first chamber (115), that said mobile means is a spiral-threaded screw (110) driven into rotation in said first bore (109) by said motor (113), the thread (111A) being placed in the equilibrium state in front of the ends of the first and the second channel (133, 135) terminating in said first bore (109), said ends being distanced by at least one pitch of the thread (111A) of the screw, and in that the thread (111A) of the screw (110) uncovers in one rotation direction the end of the first channel (113) and in the other rotation direction the end of the second channel (115).

Abstract (fr)  
L'invention est relative à un dispositif de commande de déplacement d'une tige d'un amplificateur hydraulique. Elle a pour objet un dispositif de commande du déplacement d'une tige d'un amplificateur hydraulique comprenant un piston (3) mobile dans un cylindre (1), ledit piston divisant le cylindre en une première (5) et une seconde (6) chambre, ledit piston ayant une première face (3A) constituant une paroi mobile de la première chambre (5) et une seconde face (3B) de section supérieure à celle de la première face et constituant une paroi mobile de la seconde chambre (6), la tige du piston traversent le cylindre par une traversée étanche, ledit piston étant muni d'une cavité axiale cylindrique (7), ledit cylindre étant muni d'une première conduite (13) reliant l'intérieur au cylindre à une source de fluide sous pression (P) et d'une seconde conduite (16) reliant l'intérieur du cylindre à une bêche de retour (T), caractérisé en ce que le piston (3) est muni d'un moyen pour mettre en communication, selon le sens de rotation d'un moteur (10), la première ou la deuxième chambre avec la source de pression, entraînant le piston dans l'un ou l'autre sens respectivement, ledit moyen étant totalement à l'intérieur dudit piston. Application à un dispositif de distribution hydraulique à tiroir.

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Cited by  
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