Title (en)

HYDRAULIC DIRECTIONAL SPOOL VALVE

Publication

EP 0088017 B1 19871119 (FR)

Application

EP 83400385 A 19830225

Priority

- FR 8203239 A 19820226
- FR 8205928 A 19820406

Abstract (en)

[origin: EP0088017A2] 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 emprisoning 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).

IPC 1-7

F15B 9/10; F15B 13/042

IPC 8 full level

F15B 9/10 (2006.01)

CPC (source: EP)

F15B 9/10 (2013.01)

Cited by

DE3339578A1; FR2544444A1; FR2806760A1; EP0117209A1; FR2547664A1; EP0296104A1; US4907492A; EP0117207A1; EP0894982A3; EP0117208A1; EP0767310A3; EP2848821A1; US8074558B2; US7735517B2; WO9114103A1; WO9319300A1; WO2008088447A1

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

EP 0088017 A2 19830907; **EP 0088017 A3 19840404**; **EP 0088017 B1 19871119**; DE 3374578 D1 19871223

DOCDB simple family (application)

EP 83400385 A 19830225; DE 3374578 T 19830225