

Title (en)

Solenoid actuated relief valve for electro-hydraulic lifting devices

Title (de)

Magnetbetätigtes Ablassventil eines elektrohydraulischen Hubmoduls

Title (fr)

Electrovanne d'évacuation de levage électrohydraulique

Publication

**EP 0837275 B1 20020417 (DE)**

Application

**EP 97117260 A 19971006**

Priority

- DE 29617922 U 19961015
- US 94820397 A 19971009

Abstract (en)

[origin: EP0837275A1] A main valve seating (S) has a closure element containing a control chamber containing a magnetically operated relay valve (C). A closure member (G) is pressed by the magnet against a spring (22) with a steep characteristic curve. The closure element and the main valve seating form a volume adjustment (E) dependent on the stroke. A throttle (28) in front of the control chamber (27) is smaller or at most as big as, the passage (29) in the relay valve. The passage is at most as large as a hole with a diameter of 0.6 mm. The hard spring exerts pressure on a plunger (24) with a roughly conical tip in the closure direction of the relay valve. The passage is an axial hole in the closure element. The magnet (6) contains a movable tie piece (20) in contact with the plunger in the opening direction of the relay valve.

IPC 1-7

**F16K 31/40**

IPC 8 full level

**B66F 9/22** (2006.01); **F15B 13/01** (2006.01); **F15B 13/00** (2006.01)

CPC (source: EP US)

**B66F 9/22** (2013.01 - EP US); **F15B 13/01** (2013.01 - EP US); **F15B 2013/008** (2013.01 - EP US)

Cited by

EP2392819A1; EP2270340A1; DE102012002189B3; DE19849877A1; DE10343608B4; EP2466152A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IT LI NL SE

DOCDB simple family (publication)

**DE 29617922 U1 19961128**; EP 0837275 A1 19980422; EP 0837275 B1 20020417; US 6017015 A 20000125

DOCDB simple family (application)

**DE 29617922 U 19961015**; EP 97117260 A 19971006; US 94820397 A 19971009