

Title (en)

Multiple-stage double-acting hydraulic cylinder with hydraulic circuit, especially for elevating

Title (de)

Mehrstufiger, doppelt wirkender Hydraulikzylinder mit Hydraulikanordnung insbesondere für Hubarbeitssysteme

Title (fr)

Vérin hydraulique à plusieurs étages et à double effet avec circuit hydraulique, surtout pour élévateurs

Publication

**EP 0967399 A3 20000426 (DE)**

Application

**EP 99112185 A 19990624**

Priority

DE 29811413 U 19980625

Abstract (en)

[origin: EP0967399A2] The cylinder has an outer housing and at least two piston rods located one within the other. Annular chambers (18) between the first rod and the housing and between the two pistons respectively. The annular chambers are connected fluidly via bores (24) located in the piston rods, whereby the bores cross over a piston to form a connection between the outer and inner chamber. A stop valve (66) is provided in the connection with an auxiliary tank (68) through which the return of hydraulic fluid from the cylinder to the tank can be controlled.

IPC 1-7

**F15B 15/16**

IPC 8 full level

**B66C 23/70** (2006.01); **B66F 11/04** (2006.01); **F15B 11/024** (2006.01); **F15B 15/16** (2006.01); **F15B 15/28** (2006.01)

CPC (source: EP)

**B66C 23/705** (2013.01); **B66F 11/046** (2013.01); **F15B 11/024** (2013.01); **F15B 15/16** (2013.01); **F15B 15/2807** (2013.01)

Citation (search report)

- [A] DE 3206870 A1 19830915 - MONTAN HYDRAULIK GMBH & CO KG [DE]
- [A] US 4516468 A 19850514 - SHERIFF MERLE M [US]
- [A] EP 0016747 A1 19801001 - VOEST ALPINE AG [AT]
- [A] DE 3339851 C1 19850404 - MONTAN HYDRAULIK GMBH & CO KG
- [PDA] DE 29806602 U1 19990512 - BISON STEMATEC MASCHINENBAU UN [DE]

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