

Title (en)
Hydraulic cylinder with stroke end damping

Title (de)
Hydraulikzylinder mit Endlagendämpfung

Title (fr)
Cylindre hydraulique avec amortissement des fins de course

Publication
EP 1621780 A1 20060201 (DE)

Application
EP 05014290 A 20050630

Priority
DE 102004036424 A 20040727

Abstract (en)
The hydraulic cylinder (1), with a piston (14) and a pressure zone (5) for the hydraulic medium, has a ring zone (10) filled with hydraulic medium as a damper radially between the inner side of the cylinder and the outer side of the piston and axially between a ring (16) attached to the piston and a piston head (3). For movement damping at the end of the piston stroke, the ring zone is connected to the pressure zone through at least one throttle opening (18) formed by the attached ring. At least one valve opening in the connection is closed when the piston is advanced and open when the piston is retracted. The reverse movement of the piston is also damped at the end stage.

IPC 8 full level
F15B 15/22 (2006.01)

CPC (source: EP)
F15B 15/22 (2013.01)

Citation (search report)

- [Y] GB 2122305 A 19840111 - TOKICO LTD
- [YD] DE 29707639 U1 19970821 - STILL GMBH [DE]
- [A] GB 2012913 A 19790801 - GIRLING LTD
- [A] EP 1260479 A2 20021127 - RAYMOND CORP [US]

Cited by
DE102011105363A1; EP1975478A1; DE102012107197A1; US9926178B2; WO2016028742A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1621780 A1 20060201; EP 1621780 B1 20080521; AT E396342 T1 20080615; DE 102004036424 A1 20060323;
DE 502005004170 D1 20080703

DOCDB simple family (application)
EP 05014290 A 20050630; AT 05014290 T 20050630; DE 102004036424 A 20040727; DE 502005004170 T 20050630