Title (en)
PNEUMATIC-AND-HYDRAULIC CYLINDER WITH PISTON ROD INTERLOCK

Title (de)
DRUCKLUFT- UND HYDRAULIKZYLINDER MIT KOLBENSTANGENVERRIEGELUNG

Title (fr)
CYLINDRE PNEUMATIQUE HYDRAULIQUE À VERROUILLAGE DE TIGE DE PISTON

Publication
EP 1977116 A1 20081008 (EN)

Application
EP 06769514 A 20060721

Priority
• PL 2006000051 W 20060721
• PL 37879406 A 20060123

Abstract (en)
[origin: WO2007084018A1] Pneumatic-and-hydraulic cylinder with interlock of its piston rod consisting of cylinder with two end covers, internal piston rod provided with piston moving between said covers as well as with eye bolt, both said covers being interconnected with pipe connector through angular connectors, wherein one end of the cylindrical sleeve (1) is provided with tight-mounted front cover (4) with locking unit (6) and at the other end said sleeve is provided with tight-mounted rear cover (7) with locking unit (8). Both the front cover (4) and the rear cover (7) are provided with locking units of similar design, whereas the locking unit (6) of said front cover (4) consists of plunger (23) mounted tight on piston rod (3) and in the seat of sleeve body (3CB), with steel balls (27) located in-between and adjacent to the surface piston rod (3), which is pressed from above with helical springs (35) that are based in the lid (29) covering the upper end of the sleeve body (1) as well as the unlocking ring (13), mounted rotatably on its external surface, said unlocking ring (13) being connected with said body through springing means (19) so that its turning angle is limited.

IPC 8 full level
F15B 15/26 (2006.01)

CPC (source: EP)
F15B 15/261 (2013.01)

Citation (search report)
See references of WO 2007084018A1

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 LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2007084018 A1 20070726; AT E501362 T1 20110315; DE 602006020628 D1 20110421; EP 1977116 A1 20081008;
EP 1977116 B1 20110309; PL 210645 B1 20120229; PL 378794 A1 20070806

DOCDB simple family (application)
PL 2006000051 W 20060721; AT 06769514 T 20060721; DE 602006020628 T 20060721; EP 06769514 A 20060721; PL 37879406 A 20060123