

Title (en)
Fluid actuated working cylinder

Title (de)
Fluidbetätigter Arbeitszylinder

Title (fr)
Vérin hydraulique actionné par fluide

Publication
EP 0898102 A3 19990707 (DE)

Application
EP 98113640 A 19980722

Priority
DE 29714681 U 19970816

Abstract (en)
[origin: EP0898102A2] The cylinder has ring shaped valves (17) operated by ring shaped solenoid coils (23). A piston rod (12) and seal are mounted in its middle. The solenoid action is parallel to the piston rod. The solenoid is coaxial to the piston rod. At least one of the valves surrounds the piston rod. Another similar valve can be fitted to the opposite face of the cylinder. The valve seal comprises a ring shaped lipped unit acting together with a sealing ring.

IPC 1-7
F16K 31/06

IPC 8 full level
F15B 13/04 (2006.01); **F15B 13/044** (2006.01); **F15B 15/14** (2006.01); **F15B 15/20** (2006.01); **F16J 10/02** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP)
F15B 13/0405 (2013.01); **F15B 13/044** (2013.01); **F15B 15/1433** (2013.01); **F15B 15/149** (2013.01); **F15B 15/202** (2013.01)

Citation (search report)
• [YA] US 5318157 A 19940607 - KEMPF CHRISTIAN [FR]
• [DY] DE 4439667 A1 19960509 - FESTO KG [DE]
• [A] EP 0297194 A1 19890104 - BENDIX ESPANA [ES]

Cited by
EP1284382A3; EP1760378A3

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
DE 29714681 U1 19971016; DE 59807938 D1 20030522; EP 0898102 A2 19990224; EP 0898102 A3 19990707; EP 0898102 B1 20030416

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