

Title (en)
Piston-cylinder type actuator.

Title (de)
Zylinder-Kolben-Stelleinrichtung.

Title (fr)
Vérin à cylindre et piston.

Publication
EP 0508973 A1 19921014 (EN)

Application
EP 92850083 A 19920410

Priority
SE 9101083 A 19910411

Abstract (en)
In a piston-cylinder type actuator, at least one cylinder end wall (13, 14) is rigidly mounted to the cylinder tube (10) by being at least partly introduced into the cylinder tube (10) and provided with at least one peripheral groove (33, 34) which is engaged by one or more lock lugs (35, 36) formed by plastic deformation of the cylinder tube (10) simultaneously with the introduction of the end wall (13, 14) into the cylinder tube (10). <IMAGE>

IPC 1-7
F15B 15/14; F16J 10/02

IPC 8 full level
F15B 15/14 (2006.01)

CPC (source: EP)
F15B 15/1438 (2013.01)

Citation (search report)
• [A] DE 4002558 A1 19900823 - KNAPP MIKROHYDRAULIK GMBH [DE]
• [A] DE 2115053 A1 19721005 - KNAPP MIKROHYDRAULIK GMBH
• [A] CH 501168 A 19701231 - BOSCH GMBH ROBERT [DE]
• [A] US 2487512 A 19491108 - ALEXANDER BERGER
• [X] PATENT ABSTRACTS OF JAPAN vol. 6, no. 267 (M-182)(1145) 25 December 1982 & JP-A-57 157 863 (SHIYOUWA) 29 September 1982

Cited by
DE4433649A1; DE19603384A1; DE4414583A1; DE19537038A1; DE19537038B4

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DE FR GB IT

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DE 69212197 T3 20000525; SE 468326 B 19921214; SE 9101083 D0 19910411; SE 9101083 L 19921012

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