

Title (en)  
Pneumatic cylinder

Title (de)  
Pneumatischer Zylinder

Title (fr)  
Vérin pneumatique

Publication  
**EP 2292936 A1 20110309 (DE)**

Application  
**EP 10174127 A 20100826**

Priority  
DE 202009012039 U 20090904

Abstract (en)  
The cylinder (1) has a cylinder housing (2) and a piston rod (4) comprising a piston element (3). The piston element and the piston rod are supported in an axially movable manner relative to the cylinder housing, where the cylinder housing is made from pressure-free cast polypropylene. A metal cylinder pipe (5) is arranged as a cylinder sleeve for the piston element, in the housing, where the piston element is supported in the sleeve in an axially movable manner. The housing has fastening devices (7) for fastening the cylinder to a welding machine e.g. welding gun.

Abstract (de)  
Die Erfindung betrifft einen pneumatischer Zylinder, insbesondere zum Einsatz in einer Schweißeinrichtung, z.B. einer Punktschweißzange oder eines Punktschweißportals, mit einem Zylindergehäuse (2) und einer zumindest ein Kolbenelement (3) aufweisende Kolbenstange (4), wobei das Kolbenelement (3) und die Kolbenstange (4) relativ zum Zylindergehäuse (2) axial verschieblich gelagert sind, wobei das Zylindergehäuse (2) aus einem drucklos vergossenen Polyamid ausgebildet ist.

IPC 8 full level  
**F15B 15/14** (2006.01)

CPC (source: EP)  
**F15B 15/1428** (2013.01); **F15B 15/1447** (2013.01); **F15B 15/1452** (2013.01); **F15B 2215/305** (2013.01)

Citation (applicant)  
• DE 9207582 U1 19920820  
• EP 1255046 B1 20050713 - REXROTH MECMAN GMBH [DE]

Citation (search report)  
• [XY] GB 1006395 A 19650929 - PRESSED STEEL COMPANY  
• [YD] DE 9207582 U1 19920820  
• [YD] EP 1255046 A2 20021106 - REXROTH MECMAN GMBH [DE]  
• [Y] GB 1107647 A 19680327 - GILBERT JOSEPH GUEST  
• [A] US 2975264 A 19610314 - ALFRED FETZ

Citation (examination)  
• DE 1976411 U 19680104 - YULE COURTENAY EDENBOROUGH [GB]  
• DE 1917500 A1 19701008 - BUERKERT CHRISTIAN

Cited by  
CN105221512A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)  
BA ME RS

DOCDB simple family (publication)  
**DE 202009012039 U1 20091203**; EP 2292936 A1 20110309

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