

Title (en)  
SEAL FOR A PISTON-CYLINDER UNIT

Title (de)  
DICHTUNGSANORDNUNG AN EINER KOLBEN-ZYLINDER-EINHEIT

Title (fr)  
DISPOSITIF D'ETANCHEITE POUR UNITE PISTON-CYLINDRE

Publication  
**EP 0739450 A1 19961030 (DE)**

Application  
**EP 95935791 A 19951109**

Priority  
• CH 9500259 W 19951109  
• CH 339294 A 19941114

Abstract (en)  
[origin: WO9615368A1] The device comprises a cylinder (3) and a piston (7) which is contactlessly guided in relation to the cylinder (3). Between the jacket surfaces (15, 14) of the cylinder (3) and the piston (7) there is a gap seal (12) with a very thin uniform annular cross-section. The surface areas (14, 15) of the cylinder liner (4) and the piston (7) are substantially smooth and consist of a material with a lower coefficient of linear expansion than steel. The sealing gap and central guidance of the piston (7) in the cylinder liner (4) is ensured by two guides (8, 9) rigidly secured to the housing (5). Said guides (8, 9) are elastic along the central axis (2) of the piston-cylinder unit and very rigid in transversely to the central axis (2). The arrangement of a gap seal between the piston (7) and the cylinder (3) formed with the aid of these guides (8, 9) is contactless with the minimum gap and there is no frictional wear on the sealing materials, the movements of the piston (7) being guided completely centrally in relation to the cylinder (3).

IPC 1-7  
**F04B 35/04**; **F04B 39/04**

IPC 8 full level  
**F02F 5/00** (2006.01); **F04B 35/04** (2006.01); **F04B 39/00** (2006.01); **F04B 39/04** (2006.01)

CPC (source: EP US)  
**F04B 35/045** (2013.01 - EP US); **F04B 39/045** (2013.01 - EP US)

Citation (search report)  
See references of WO 9615368A1

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

DOCDB simple family (publication)  
**WO 9615368 A1 19960523**; AT E166949 T1 19980615; AU 3769295 A 19960606; AU 691351 B2 19980514; CA 2181169 A1 19960523; CN 1071845 C 20010926; CN 1138890 A 19961225; DE 59502408 D1 19980709; DK 0739450 T3 19990201; EP 0739450 A1 19961030; EP 0739450 B1 19980603; ES 2118631 T3 19980916; JP 3512192 B2 20040329; JP H09507894 A 19970812; US 5826491 A 19981027

DOCDB simple family (application)  
**CH 9500259 W 19951109**; AT 95935791 T 19951109; AU 3769295 A 19951109; CA 2181169 A 19951109; CN 95191211 A 19951109; DE 59502408 T 19951109; DK 95935791 T 19951109; EP 95935791 A 19951109; ES 95935791 T 19951109; JP 51561496 A 19951109; US 66950396 A 19960710