

Title (en)  
LIGHT PLUNGER PISTON FOR INTERNAL COMBUSTION ENGINES.

Title (de)  
LEICHTER TAUCHKOLBEN FÜR VERBRENNUNGSMOTOREN.

Title (fr)  
PISTON PLONGEUR LEGER POUR MOTEURS A COMBUSTION INTERNE.

Publication  
**EP 0449848 B1 19940209 (DE)**

Application  
**EP 89912953 A 19891129**

Priority  
• DE 3843761 A 19881224  
• DE 3843866 A 19881224

Abstract (en)  
[origin: WO9007642A1] A plunger piston of minimal weight and size operates with minimal noise. To this end, the upper region of the piston rod is separated from the piston head by a horizontal slit on the counterpressure side of a plane passing through the longitudinal axis of the piston pin and that of the piston. In addition, the rod can be longer on the pressure side than on the counterpressure side.

IPC 1-7  
**F02F 3/02**

IPC 8 full level  
**F02F 3/02** (2006.01); **F02F 3/04** (2006.01); **F16J 1/00** (2006.01); **F02B 1/04** (2006.01)

CPC (source: EP KR US)  
**F02F 3/02** (2013.01 - KR); **F02F 3/022** (2013.01 - EP US); **F02F 3/025** (2013.01 - EP US); **F02B 1/04** (2013.01 - EP US)

Cited by  
CN107917013A

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 9007642 A1 19900712**; BR 8907852 A 19911008; DE 58906955 D1 19940324; EP 0449848 A1 19911009; EP 0449848 B1 19940209; JP 2983621 B2 19991129; JP H04502501 A 19920507; KR 910700404 A 19910315; KR 970003153 B1 19970314; US 5158008 A 19921027

DOCDB simple family (application)  
**DE 8900745 W 19891129**; BR 8907852 A 19891129; DE 58906955 T 19891129; EP 89912953 A 19891129; JP 50012990 A 19891129; KR 900701873 A 19900823; US 68858391 A 19910624