

Title (en)
UNLOCKABLE NON-RETURN VALVE FOR VERY HIGH SYSTEM PRESSURES

Title (de)
ENTSPERRBARES RÜCKSCHLAGVENTIL FÜR SEHR HOHE SYSTEMDRÜCKE

Title (fr)
CLAPET ANTIRETOUR DEBLOCABLE POUR SYSTEME DE TRES FORTES PRESSIONS

Publication
EP 1313953 A1 20030528 (DE)

Application
EP 01940379 A 20010428

Priority
• DE 10042716 A 20000831
• EP 0104806 W 20010428

Abstract (en)
[origin: WO0218799A1] The invention relates to an unlockable non-return valve used for very high system pressures, and a valve housing (35) provided with a continuous receiving bore (36) lying on a valve axis (37), a push-piston (70) which can be subjected to pressure on a piston collar (71) in order to unlock a closing member (50) and which is guided on both sides of the piston collar (71) on end sections (79,80) having at least approximately the same diameter in the direction of the valve axis. Two inserts (60) are disposed in the receiving bore on each side of the piston collar. The end section of the push-piston plunges into said inserts. The end section is guided in a first insert made of a metal material with good sliding qualities, close to the piston collar and a second insert (44,45) following said first insert is provided with a high pressure seal (86) supported by the first insert, lying radially adjacent to the end section of the push-piston (70), whereby the first insert has a guidance diameter for the push-piston for only a short distance on the front surface thereof facing the piston collar and a support ring (88) is arranged axially between the high pressure seal and the first insert in a receiving element (87) whose diameter is substantially smaller than the outer diameter of the inserts (44,60,55), said support ring also being made of a metal material exhibiting good sliding qualities and being produced with only a narrow amount of slackness in relation to the end section and with a large amount of radial slackness in relation to the receiving element.

IPC 1-7
F15B 13/01

IPC 8 full level
F16K 15/18 (2006.01); **F15B 13/01** (2006.01)

CPC (source: EP US)
F15B 13/01 (2013.01 - EP US); **F15B 2211/3127** (2013.01 - EP US); **Y10T 137/7876** (2015.04 - EP US)

Citation (search report)
See references of WO 0218799A1

Designated contracting state (EPC)
DE FR GB IT LU

DOCDB simple family (publication)
WO 0218799 A1 20020307; DE 10042716 A1 20020314; EP 1313953 A1 20030528; JP 2004529291 A 20040924; US 2004094207 A1 20040520; US 6820645 B2 20041123

DOCDB simple family (application)
EP 0104806 W 20010428; DE 10042716 A 20000831; EP 01940379 A 20010428; JP 2002523490 A 20010428; US 36253603 A 20030716