

Title (en)
HYDRAULIC MANUALLY-OPERATED SINGLE-PISTON PUMP

Publication
EP 0308468 B1 19900822 (DE)

Application
EP 88903168 A 19880331

Priority
DE 3710919 A 19870401

Abstract (en)
[origin: WO8807495A1] In a hydraulic manually-operated single-piston pump, the piston (3) has a first channel (14, 20) which runs from the piston interior (7) to the rod interior (5) and which has a non-return valve (15-19) which opens during the return stroke. The piston (3) is further provided with at least a second channel (22, 23, 25) running from the piston interior (7) to the rod interior (5), which is designed, at least over a part of its length, as a throttle drilling (23, 25).

IPC 1-7
B66F 3/42; F04B 21/04

IPC 8 full level
F04B 9/14 (2006.01); **F04B 53/12** (2006.01)

CPC (source: EP US)
F04B 53/129 (2013.01 - EP US)

Designated contracting state (EPC)
CH FR LI SE

DOCDB simple family (publication)
DE 3710919 C1 19880630; EP 0308468 A1 19890329; EP 0308468 B1 19900822; JP H01502840 A 19890928; US 4923373 A 19900508; WO 8807495 A1 19881006

DOCDB simple family (application)
DE 3710919 A 19870401; DE 8800211 W 19880331; EP 88903168 A 19880331; JP 50301288 A 19880331; US 27632188 A 19881121