

Title (en)  
HYDRAULIC PISTON PUMP WITH POSITIVELY DRIVEN INLET VALVES

Publication  
**EP 0180510 B1 19881130 (FR)**

Application  
**EP 85402018 A 19851018**

Priority  
FR 8416051 A 19841019

Abstract (en)  
[origin: EP0180510A1] 1. An hydraulic pump having at least one reciprocably movable piston, each piston being associated with an inlet valve which is urged towards the closed position by a return spring, characterised by the fact that said return spring (16) is associated with a pusher element (15) actuated cyclically by a cam (21) driven by the pump drive shaft (1) ; such that, when the pusher element (15) is actuated by the cam (21), the action of the spring (16) on the valve (11) is nullified during the inlet phase and re-established at the end of said phase, which has the result that the valve (11) is free during this period and opens only if the inlet pressure is greater than the residual pressure prevailing in the cylinder (6) associated with said valve.

IPC 1-7  
**F04B 7/00**; F04B 21/02; F04B 1/14

IPC 8 full level  
**F04B 1/18** (2006.01); **F04B 7/00** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP)  
**F04B 1/18** (2013.01); **F04B 7/0053** (2013.01); **F04B 53/1022** (2013.01)

Cited by  
BE1015545A3; DE19708922B4; US10107279B2; WO2004106735A1

Designated contracting state (EPC)  
DE GB

DOCDB simple family (publication)  
**EP 0180510 A1 19860507**; **EP 0180510 B1 19881130**; DE 3566569 D1 19890105; FR 2572138 A1 19860425; FR 2572138 B1 19870123

DOCDB simple family (application)  
**EP 85402018 A 19851018**; DE 3566569 T 19851018; FR 8416051 A 19841019