

Title (en)
Piston pump

Title (de)
Kolbenpumpe

Title (fr)
Pompe à piston

Publication
EP 1160451 A3 20030618 (DE)

Application
EP 01113234 A 20010530

Priority
DE 20009848 U 20000531

Abstract (en)
[origin: EP1160451A2] A section of the pump's piston which protrudes into the working chamber(13) has an extension(19) with smaller diameter and which by a shoulder(21) is connected to the end face of the piston. The extension has thickened free piston end with a sealing face(23) facing the shoulder. At least one valve disc(26) is provided between the shoulder and sealing face and is guided in the working chamber and with an axial thickness which is smaller than the distance between the sealing face and shoulder so that the valve disc is axially movable to and fro on the extension.

IPC 1-7
F04B 53/12

IPC 8 full level
F04B 53/12 (2006.01)

CPC (source: EP US)
F04B 53/122 (2013.01 - EP US)

Citation (search report)

- [A] EP 0391489 A1 19901010 - FLOW INT CORP [US]
- [A] EP 0878621 A2 19981118 - MITSUBISHI ELECTRIC CORP [JP]
- [A] EP 0933524 A2 19990804 - MITSUBISHI ELECTRIC CORP [JP]

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

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EP 1160451 A2 20011205; EP 1160451 A3 20030618; EP 1160451 B1 20040804; AT E272795 T1 20040815; DE 50103070 D1 20040909; US 2002015649 A1 20020207; US 6499974 B2 20021231

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