

Title (en)  
HYDRAULIC PUMP OR MOTOR

Title (de)  
HYDRAULISCHE PUMPE ODER MOTOR

Title (fr)  
POMPE OU MOTEUR HYDRAULIQUE

Publication  
**EP 1030057 B1 20070815 (EN)**

Application  
**EP 98947948 A 19981020**

Priority  
• JP 9804732 W 19981020  
• JP 28696497 A 19971020

Abstract (en)  
[origin: EP1030057A1] Pistons and shoes are allowed to slide slightly on contact surfaces thereof, but are surely prevented from separating from each other. There are provided a rotating disk rotatably supported in a housing, and a cylinder block rotatably supported in the housing. The cylinder block has an of rotation inclined relative to an axis of rotation of the rotating disk. A plurality of cylinder bores are arranged on a circle about the axis of rotation of the cylinder block, and pistons are slidably accommodated in the respective cylinder bores. Semi-spherical shoes having spherical surfaces contacted with the rotating disk and flat smooth surfaces on the opposite side contacted with the pistons are provided. Connecting devices are further provided for connecting the pistons and the shoes to each other. The connecting devices allow the pistons and shoes to slide on each other in a direction along their contact surfaces, but prevent them from moving in a direction away from each other. A valve plate fixed to the housing is slidably contacted with a bottom surface of the cylinder block, and allows successive inflow and outflow of a working fluid to and from the respective cylinder bores as the cylinder block rotates. A joint is provided to connect the rotating disk and the cylinder block to each other to cause synchronous rotation of both. Either the rotating disk or the cylinder block is connected to a drive shaft. <IMAGE>

IPC 8 full level  
**F04B 1/24** (2006.01); **F03C 1/30** (2006.01); **F04B 1/12** (2006.01); **F04B 53/18** (2006.01)

CPC (source: EP)  
**F04B 1/126** (2013.01); **F04B 1/24** (2013.01); **F04B 53/18** (2013.01)

Cited by  
WO2008080444A1; CN108286492A; CN103075316A; US8316995B2

Designated contracting state (EPC)  
DE DK FI FR GB SE

DOCDB simple family (publication)  
**EP 1030057 A1 20000823**; **EP 1030057 A4 20040630**; **EP 1030057 B1 20070815**; DE 69838260 D1 20070927; DE 69838260 T2 20071220; DK 1030057 T3 20071203; JP 3894463 B2 20070322; JP H11117856 A 19990427; WO 9920899 A1 19990429

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