

Title (en)  
Swash plate type hydraulic pump or motor

Title (de)  
Schrägscheiben-Pumpe oder -Motor

Title (fr)  
Pompe ou moteur avec plateau en bias

Publication  
**EP 1519006 A1 20050330 (EN)**

Application  
**EP 04023085 A 20040928**

Priority  
JP 2003338588 A 20030929

Abstract (en)  
A swash plate type hydraulic pump or motor has a first swash plate (30) and a second swash plate (40) which cause a first piston (8) and a second piston (9), respectively, to move reciprocally, opposing each other, so as to expand and contract a volume chamber (10) according to rotation of a cylinder block (4). A rod shape valve body (60) is disposed pushed into a through hole (12) of a shaft axis of the cylinder block (4) so as to be free to rotate relative to the cylinder block (4). A pair of supply and discharge ports (61) that open and supply high pressure and low pressure, respectively, are formed in an outer circumferential surface of the valve body (60). A cylinder port (11) is formed connecting the volume chamber (10) and an inner circumferential surface of the through hole of the cylinder block. The cylinder port (11) is arranged in a position opposite to the supply and discharge port (61). <IMAGE>

IPC 1-7  
**F01B 3/00**; **F04B 1/20**; **F04B 1/22**

IPC 8 full level  
**F01B 3/00** (2006.01); **F03C 1/06** (2006.01); **F03C 1/24** (2006.01); **F03C 1/26** (2006.01); **F04B 1/20** (2006.01); **F04B 1/22** (2006.01)

CPC (source: EP US)  
**F01B 3/0035** (2013.01 - EP US); **F04B 1/205** (2013.01 - EP US); **F04B 1/22** (2013.01 - EP US)

Citation (search report)  
• [XA] DE 2609185 A1 19770908 - GUEHRING GOTTLIEB FA  
• [XA] US 2229715 A 19410128 - JOSEPH ZIMMERMANN HANS  
• [XA] US 2741188 A 19560410 - WILHELM WEMHONER  
• [X] DE 823828 C 19511206 - THEOBALD WALTER [DE]  
• [X] GB 709183 A 19540519 - FIELDING & PLATT LTD  
• [A] DE 952150 C 19561108 - FRITZ SPIERIG

Cited by  
CN104685209A; FR2977644A1; GB2545878A; GB2545878B; US2022275792A1; WO2009071319A1

Designated contracting state (EPC)  
DE FR

DOCDB simple family (publication)  
**EP 1519006 A1 20050330**; **EP 1519006 B1 20061220**; DE 602004003761 D1 20070201; DE 602004003761 T2 20070405;  
JP 2005105900 A 20050421; JP 4124716 B2 20080723; US 2005095144 A1 20050505

DOCDB simple family (application)  
**EP 04023085 A 20040928**; DE 602004003761 T 20040928; JP 2003338588 A 20030929; US 95068604 A 20040928