

Title (en)

Reversible pump for driving hydraulic cylinders

Title (de)

Umkehrbare Pumpeneinheit zum Antrieb hydraulischer Zylinder

Title (fr)

Unité de pompage réversible pour l'entraînement de cylindres hydrauliques

Publication

EP 1557564 A1 20050727 (EN)

Application

EP 04250372 A 20040123

Priority

EP 04250372 A 20040123

Abstract (en)

A pump and motor assembly (10) for supplying fluid to a double acting hydraulic cylinder the ends of which are connected to two exit ports (1, 2) provided on the pump housing (11). A single acting piston (5) reciprocates and rotates simultaneously on the piston axis with the reciprocating motion imparted by a single row ball bearing (13) mounted on the piston (5) and inclined at an angle to the piston axis and having a single point on the outer race of the single row ball bearing (13) restrained. The pump includes two one way check valves (25, 26 and 27, 28) in passages between a reservoir (24) and the exit ports (1,2) that allow fluid to be drawn into the pumping chamber (7) when the attached cylinder is expanding. A bleed valve, constructed using two balls (30, 31) allows fluid displaced by the rod of a double acting cylinder to be returned through a third passage (35) to the reservoir (24) when the attached cylinder is retracting. <IMAGE>

IPC 1-7

F04B 7/06

IPC 8 full level

F04B 7/06 (2006.01)

CPC (source: EP)

F04B 7/06 (2013.01)

Citation (search report)

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- [XD] US 5015157 A 19910514 - PINKERTON DENNIS [US], et al
- [XD] US 3083895 A 19630402 - WELLES JR DONALD P

Cited by

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Designated contracting state (EPC)

FR IT

DOCDB simple family (publication)

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