

Title (en)
PISTON MACHINE

Title (de)
KOLBENMASCHINE

Title (fr)
MACHINE A PISTON

Publication
EP 1710394 A1 20061011 (EN)

Application
EP 05710990 A 20050111

Priority
• RU 2005000003 W 20050111
• RU 2004101033 A 20040120

Abstract (en)
A machine proposed for use in energy producing industry as an engine, a pump and a compressor. The machine has a crankcase 1, a cylinder 2, and a piston 3 and a piston rod 4, two crankshafts 6 and 7 rotating in opposite directions. An inner hollow 12 of the piston communicates with a throughgoing axial passage 13 of the piston rod 4 located in the crankcase with the possibility of a reciprocating movement in a suction pipe 14; wherein the passage 13 of the piston rod is formed with a diffusor 27 from the side of the hollow 12 of the piston 3 and with a confusor 28 from the side of the suction pipe 14. Pumping valves 18 are arranged on the cover 5 of the cylinder, and suction valves 16 are arranged on the front wall of the piston; wherein the piston rod 16 and the connecting rods 10 and 11 of the crankshaft 6 and 7 are hingedly connected with a traverse 29. The invention provides a reduction of a waste space and reduction of hydraulic losses.

IPC 8 full level
F01B 9/02 (2006.01); **F01L 3/20** (2006.01); **F01L 21/04** (2006.01); **F01L 25/04** (2006.01); **F02B 29/00** (2006.01); **F02B 75/06** (2006.01); **F02B 75/32** (2006.01); **F02D 9/04** (2006.01); **F02D 29/04** (2006.01); **F02F 3/00** (2006.01); **F04B 39/00** (2006.01)

CPC (source: EP KR)
F01B 9/02 (2013.01 - KR); **F01L 3/205** (2013.01 - EP); **F01L 21/04** (2013.01 - EP); **F01L 25/04** (2013.01 - EP); **F02B 75/065** (2013.01 - EP); **F02B 75/32** (2013.01 - KR); **F02D 9/04** (2013.01 - EP); **F02D 29/04** (2013.01 - EP); **F02F 3/00** (2013.01 - EP); **F04B 39/0016** (2013.01 - EP); **F04B 39/0022** (2013.01 - EP); **F04B 39/0094** (2013.01 - EP)

Cited by
FR2940668A1; WO2017063751A1; WO2023020798A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1710394 A1 20061011; **EP 1710394 A4 20071205**; CN 100489274 C 20090520; CN 1910340 A 20070207; EA 007478 B1 20061027; EA 200600371 A1 20060630; JP 2007518919 A 20070712; JP 4592708 B2 20101208; KR 100782704 B1 20071207; KR 20060109499 A 20061020; RU 2004101033 A 20050620; RU 2262602 C1 20051020; UA 91003 C2 20100625; WO 2005068780 A1 20050728

DOCDB simple family (application)
EP 05710990 A 20050111; CN 200580002748 A 20050111; EA 200600371 A 20050111; JP 2006549177 A 20050111; KR 20067012779 A 20060626; RU 2004101033 A 20040120; RU 2005000003 W 20050111; UA A200603748 A 20050111