

Title (en)
PISTON ENGINE

Title (de)
KOLBENMASCHINE

Title (fr)
MOTEUR À PISTON

Publication
EP 2318662 A2 20110511 (DE)

Application
EP 09780892 A 20090721

Priority
• EP 2009059374 W 20090721
• DE 102008040574 A 20080721

Abstract (en)
[origin: WO2010010094A2] The invention relates to a piston engine the piston of which is designed as a dual piston swivel plate (15) having effective working surfaces on both sides which swivel plate can be swiveled about a swivel axis (14) between two lateral walls (5, 6) of a working chamber (2) that substantially has the shape of a segment of a circle, said lateral walls being arranged at an angle to each other and having respective inlet and outlet valves (22, 23; 24, 25). The swivel plate is further connected to a crank mechanism which is arranged in a crankcase that is sealingly separated from the working chamber (2). The dual piston swivel plate (15) is connected to a connecting rod (16) which is designed as a connecting loop and has a guide groove (17), via a rotating cylinder (9) connected to the swivel plate. Two or more working chambers can be arranged on the periphery or one after the other on one and the same rotating cylinder which is actuated via the connecting rod. When the crankshaft is rotated about 180°, the respective dual piston swivel plate performs a swivel motion and at the same time the working strokes intake/work and compression/exhaustion. The efficiently working and versatile piston engine has a simple and compact design.

IPC 8 full level
F01C 9/00 (2006.01)

CPC (source: EP)
F01C 1/067 (2013.01); **F01C 9/002** (2013.01); **F01C 17/04** (2013.01); **F01C 20/20** (2013.01); **F01C 21/102** (2013.01); **F01C 11/002** (2013.01); **F01C 20/06** (2013.01); **F01C 21/02** (2013.01); **F02B 55/14** (2013.01); **F02B 2730/03** (2013.01); **F04C 21/002** (2013.01); **F04C 2240/30** (2013.01)

Citation (search report)
See references of WO 2010010094A2

Citation (examination)
• DE 3511001 A1 19851205 - SCHMIDT ERNST LUDWIG DIPL ING
• FR 615243 A 19261231
• US 3315648 A 19670425 - CASTILLO JACQUES MARC GEORGES
• DE 3914042 A1 19901031 - PFEIFFER VAKUUMTECHNIK [DE]

Citation (third parties)
Third party :
• WO 2010010094 A2 20100128 - RAPP MANFRED MAX [DE]
• DE 3914042 A1 19901031 - PFEIFFER VAKUUMTECHNIK [DE]
• DE 2256776 A1 19740606 - LOEHR WALTER

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
DE 102008040574 A1 20100128; **DE 102008040574 B4 20130814**; EP 2318662 A2 20110511; WO 2010010094 A2 20100128;
WO 2010010094 A3 20100910

DOCDB simple family (application)
DE 102008040574 A 20080721; EP 09780892 A 20090721; EP 2009059374 W 20090721