

Title (en)  
RADIAL PISTON ROTARY MACHINE

Title (de)  
RADIALKOLBEN-ROTATIONSMASCHINE

Title (fr)  
MACHINE ROTATIVE À PISTONS RADIAUX

Publication  
**EP 4384708 A1 20240619 (EN)**

Application  
**EP 22789353 A 20220812**

Priority  
• SK 500412021 A 20210813  
• SK 2022050008 W 20220812

Abstract (en)  
[origin: WO2023018382A1] A radial piston rotary machine comprising a housing, at least one opening (13) for inlet of a medium to the machine and at least one opening (14) for outlet of the medium from the machine, where the housing comprises end caps (11) between which a rotor (2) is rotatably mounted. The rotor (2) is composed of at least two plates (23), where a chamber (22) for a reciprocating piston (4) is provided in the rotor plate (23). The rotor plates (23) are separated by a partition plate (24) with an opening (21) for a shaft (5) of the machine. The shaft (5) is mounted in rotary bearings in the end caps (5) of the housing and circular cams (51) are arranged on the shaft (5). The shaft (5) is mounted eccentrically to the rotor (2), where the eccentricity of the axis of rotation of the shaft (5) from the axis of the rotor (2) is equal to the eccentricity of the axis of the circular cam (51) from the axis of rotation of the shaft (5). Each piston (4) is placed movably in reciprocation motion in the chamber (22) for the piston (4) in the rotor plate (23) and rotatably on the circular cam (51) on the shaft (5). The inlet and outlet of the medium to and from the piston chamber are opened and closed by valve means. The chamber (22) for the piston (4) is formed as a hole in the rotor plate (23), where at least two opposite walls of the hole are parallel for sliding arrangement of the piston (4). The piston (4) is closed axially in the chamber (22) at one side by the partition plate (24) of the rotor plates (23) and at the other side by an end plate (7) of the rotor (2). The end plate (7) comprises an opening (21) for the shaft (5) and apertures (71) for the inlet and outlet of the medium to and from the chamber (22). The apertures (71) lead in the axial direction to the end cap (11) of the housing, and are opened and closed by valve means in the form of separate arcuate slots (61).

IPC 8 full level  
**F04B 1/0408** (2020.01); **F04B 1/0421** (2020.01); **F04B 1/1133** (2020.01); **F04B 1/1136** (2020.01); **F04B 27/04** (2006.01); **F04B 27/06** (2006.01)

CPC (source: EP US)  
**C10G 45/00** (2013.01 - EP); **F04B 1/0408** (2013.01 - EP); **F04B 1/0421** (2013.01 - EP); **F04B 1/1133** (2013.01 - EP); **F04B 1/1136** (2013.01 - EP); **F04B 27/0409** (2013.01 - EP); **F04B 27/0423** (2013.01 - EP); **F04B 27/0657** (2013.01 - EP); **F04B 27/0663** (2013.01 - EP); **F04C 18/22** (2013.01 - US); **F04C 29/12** (2013.01 - US); **F04C 2240/30** (2013.01 - US)

Designated contracting state (EPC)  
AL 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 RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2023018382 A1 20230216**; EP 4384708 A1 20240619; SK 500412021 A3 20230315; US 2024271624 A1 20240815

DOCDB simple family (application)  
**SK 2022050008 W 20220812**; EP 22789353 A 20220812; SK 500412021 A 20210813; US 202218682050 A 20220812