

Title (en)
SCROLL COMPRESSOR

Title (de)
SPIRALVERDICHTER

Title (fr)
COMPRESSEUR À SPIRALE

Publication
EP 4242460 A1 20230913 (EN)

Application
EP 20960851 A 20201109

Priority
JP 2020041730 W 20201109

Abstract (en)
A scroll compressor includes a fixed scroll including a fixed scroll wrap, an orbiting scroll including an orbiting scroll wrap, a main shaft including an eccentric shaft portion that is located at a first end of the main shaft and to which the orbiting scroll is attached, a rotary drive unit that rotates the main shaft to cause the orbiting scroll to orbit, a slider provided between the eccentric shaft portion of the main shaft and the orbiting scroll and included in a variable crank mechanism that adjusts a radius of orbital motion of the orbiting scroll, a frame fixed to the fixed scroll and supporting the fixed scroll and the orbiting scroll, and an Oldham ring that is provided between the frame and the orbiting scroll, prevents the orbiting scroll from rotating on an axis of the orbiting scroll, and converts rotational motion of the main shaft into orbital motion of the orbiting scroll. The fixed scroll wrap has a side portion that supports an orbiting-scroll centrifugal force that is a centrifugal force generated by the orbital motion of the orbiting scroll. The Oldham ring performs simple harmonic motion during the orbit of the orbiting scroll. The orbiting scroll orbits in an elliptical orbit having a minor axis and a major axis, and the direction along the minor axis of the orbit of the orbiting scroll coincides with the direction of the simple harmonic motion of the Oldham ring.

IPC 8 full level
F04C 18/02 (2006.01)

CPC (source: EP)
F01C 17/066 (2013.01); **F04C 18/0215** (2013.01); **F04C 18/0269** (2013.01); **F04C 29/0057** (2013.01); **F04C 23/008** (2013.01); **F04C 2230/605** (2013.01)

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)
EP 4242460 A1 20230913; **EP 4242460 A4 20240110**; JP WO2022097299 A1 20220512; WO 2022097299 A1 20220512

DOCDB simple family (application)
EP 20960851 A 20201109; JP 2020041730 W 20201109; JP 2022560622 A 20201109