

Title (en)
REFRIGERANT COMPRESSOR

Title (de)
KÄLTEMITTELVERDICHTER

Title (fr)
COMPRESSEUR DE RÉFRIGÉRANT

Publication
EP 4170164 A3 20230510 (EN)

Application
EP 22203373 A 20221024

Priority
EP 21204555 A 20211025

Abstract (en)
The invention relates to an encapsulated refrigerant compressor (1) having- a compressor shell (100);- a pump unit (10) located within the compressor shell (100), said pump unit (10) comprising:-- a cranktrain (200) with a crankshaft (210), a counterweight (225), a crankpin (220), a connecting rod (230) and a piston (240);-- a crankcase (300) with a cylinder housing (310), wherein a cylinder (320) for reciprocating movement of the piston (240) is located, and wherein the crankshaft (210) is rotatably mounted inside a main bearing section (302),-- an electric drive unit (400) with a stator (420) and a rotor (410), the rotor (410) being fixed to the crankshaft (210) ;-- wherein the crankshaft (210) is axially supported by a ball bearing (201) on the crankcase (300).The crankshaft (210) comprises an upper bearing section (215) and a lower bearing section (217) to form an upper sliding bearing (215b) and a lower sliding bearing (217b), wherein an upper bearing seat (305) as the part of the main bearing section (302) forming the upper sliding bearing (215b) is arranged at an upper end section of the main bearing section (302) of the crankcase (300), and wherein said upper bearing seat (305) is configured to be flexibly bendable in a radial direction (212) of the crankshaft (210).

IPC 8 full level
F04B 35/04 (2006.01); **F04B 39/00** (2006.01); **F04B 39/02** (2006.01); **F04B 39/12** (2006.01); **F04B 53/10** (2006.01); **F04B 53/14** (2006.01); **F04B 53/00** (2006.01)

CPC (source: EP)
F04B 35/04 (2013.01); **F04B 39/0022** (2013.01); **F04B 39/0044** (2013.01); **F04B 39/0061** (2013.01); **F04B 39/0094** (2013.01); **F04B 39/02** (2013.01); **F04B 39/0246** (2013.01); **F04B 39/0253** (2013.01); **F04B 39/0284** (2013.01); **F04B 39/0292** (2013.01); **F04B 39/128** (2013.01); **F04B 53/1047** (2013.01); **F04B 53/144** (2013.01); **F04B 53/006** (2013.01); **F04B 53/145** (2013.01)

Citation (search report)
• [IY] US 2017184085 A1 20170629 - MANKE ADILSON LUIZ [BR], et al
• [A] US 2016201661 A1 20160714 - INAGAKI KO [JP], et al
• [A] US 2014308141 A1 20141016 - HARAKI YU [JP], et al
• [A] CN 107542646 A 20180105 - HITACHI HITACHI AIR CONDITIONING SYSTEM & APPLIANCES INC
• [A] US 2019010938 A1 20190110 - KIM JONG HYUK [KR]
• [A] US 2017227046 A1 20170810 - MANKE ADILSON LUIZ [BR]
• [YA] US 2006153710 A1 20060713 - KAKIUCHI TAKASHI [JP], et al
• [YA] US 2014102247 A1 20140417 - SILVA FABIANO DOMINGOS [BR], et al
• [YA] US 2010236401 A1 20100923 - NOMMENSEN MARTEN [DE], et al
• [A] US 2011232416 A1 20110929 - KIM JIN-KOOK [KR], et al
• [A] CN 105570278 A 20160511 - ZHUHAI GREE REFRIGERATION TECHNOLOGY CT ENERGY SAVING & ENVIRONMENTAL PROT CO LTD
• [A] US 2019032647 A1 20190131 - BREDBECK KLAUS [DE], et al
• [YA] EP 2657524 B1 20200212 - SAMSUNG ELECTRONICS CO LTD [KR]
• [A] CN 106979140 A 20170725 - WHIRLPOOL SA
• [A] US 2005115771 A1 20050602 - SHIN KYU S [KR]
• [A] US 2011129371 A1 20110602 - WATANABE KIWAMU [JP]
• [A] US 8739933 B2 20140603 - WAGNER NILSON [BR], et al

Cited by
CN116517840A

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4170164 A2 20230426; EP 4170164 A3 20230510; CN 217652875 U 20221025

DOCDB simple family (application)
EP 22203373 A 20221024; CN 202220247999 U 20220126