

Title (en)
MULTIPLE-STAGE COMPRESSOR

Title (de)
MEHRSTUFIGER VERDICHTER

Title (fr)
COMPRESSEUR À ÉTAGES MULTIPLES

Publication
EP 3842640 A4 20211027 (EN)

Application
EP 19863099 A 20190911

Priority
• JP 2018034517 W 20180918
• JP 2019035772 W 20190911

Abstract (en)
[origin: EP3842640A1] Such a multi-stage compressor is provided that a number of valves, openings, and tubes, which are specific to two-stage compression, are arranged in an integrated manner so as to improve maintainability and compactness of the device. The compressor therefore includes a plurality of compression chambers in a housing, a medium-pressure refrigerant discharge port 123 that discharges medium-pressure refrigerant RM3 from a low-stage compression chamber of the compression chambers, a medium-pressure refrigerant suction port 122 that is open in the same direction as the medium-pressure refrigerant discharge port 123 and induces the medium-pressure refrigerant RM3 to a high-stage compression chamber of the compression chambers, a high-pressure refrigerant discharge port 124 that is open in the same direction as the medium-pressure refrigerant discharge port 123 and discharges high-pressure refrigerant discharged from the high-stage compression chamber of the compression chambers, and a refrigerant connection cover that is detachably mounted on the housing, and forms a medium-pressure refrigerant chamber 116 communicating with the medium-pressure refrigerant suction port 122 and the medium-pressure refrigerant discharge port 123 and having an external medium-pressure refrigerant connection induction port 126 that is open toward the outside, and forms a high-pressure refrigerant chamber 117 communicating with the high-pressure refrigerant discharge port 124 and has a high-pressure refrigerant ejection port 125 that is open toward the outside.

IPC 8 full level
F04C 18/02 (2006.01); **F04C 23/00** (2006.01); **F04C 28/26** (2006.01)

CPC (source: EP)
F04C 18/0215 (2013.01); **F04C 18/0276** (2013.01); **F04C 23/001** (2013.01); **F04C 27/005** (2013.01)

Citation (search report)
• [XYI] JP 2017031887 A 20170209 - FUJI ELECTRIC CO LTD
• [XI] JP 2018028313 A 20180222 - FUJI ELECTRIC CO LTD
• [Y] US 2003161747 A1 20030828 - SATOH TOHRU [JP]
• See references of WO 2020059608A1

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

DOCDB simple family (publication)
EP 3842640 A1 20210630; **EP 3842640 A4 20211027**; **EP 3842640 B1 20240320**; CN 111868384 A 20201030; CN 111868384 B 20220603; JP 6943345 B2 20210929; JP WO2020059608 A1 20210215; WO 2020059608 A1 20200326

DOCDB simple family (application)
EP 19863099 A 20190911; CN 201980016332 A 20190911; JP 2019035772 W 20190911; JP 2020548408 A 20190911