

Title (en)
HEAT EXCHANGER, AND OUTDOOR UNIT COMPRISING SAID HEAT EXCHANGER

Title (de)
WÄRMETAUSCHER UND AUSSENEINHEIT MIT DIESEM WÄRMETAUSCHER

Title (fr)
ÉCHANGEUR DE CHALEUR ET UNITÉ EXTÉRIEURE COMPRENANT LEDIT ÉCHANGEUR DE CHALEUR

Publication
EP 4317812 A1 20240207 (EN)

Application
EP 22780139 A 20220316

Priority
• JP 2021056043 A 20210329
• JP 2022012064 W 20220316

Abstract (en)
There is provided a heat exchanger capable of suppressing a decrease in the amount of heat exchange due to the nonuniform air velocity distribution. The heat exchanger includes an inlet header (20), an outlet header (21), a plurality of rooms (31) partitioned by partition plates (30) inside the inlet header (20), a plurality of flat tubes (22) arranged in parallel and connected to each room (31) and the outlet header (21), a distributor (25) provided in a refrigerant pipe (10), and a plurality of branch pipes (24) connected to each room (31) and the distributor (25), in which depending on an air velocity distribution, the branch pipe (24) has a branch portion (27) provided between the room (31) and the distributor (25), and the number of the branch portions (27) of the branch pipe (24) connected to the room (31), to which the flat tubes (22) located in a part having a high air velocity are connected, is less than the number of the branch portions (27) of the branch pipe (24) connected to the room (31), to which the flat tubes (22) passing through a part having a low air velocity, are connected.

IPC 8 full level
F24F 1/18 (2011.01); **F24F 1/50** (2011.01)

CPC (source: EP US)
F24F 1/18 (2013.01 - EP); **F24F 1/50** (2013.01 - EP); **F25B 13/00** (2013.01 - EP); **F25B 39/02** (2013.01 - EP); **F25B 39/04** (2013.01 - EP); **F25B 41/42** (2021.01 - EP); **F28D 1/05366** (2013.01 - US); **F28F 1/022** (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)
EP 4317812 A1 20240207; AU 2022249485 A1 20231012; CN 117063021 A 20231114; JP 2022153026 A 20221012; JP 7279730 B2 20230523; US 2024175643 A1 20240530; WO 2022209919 A1 20221006

DOCDB simple family (application)
EP 22780139 A 20220316; AU 2022249485 A 20220316; CN 202280024997 A 20220316; JP 2021056043 A 20210329; JP 2022012064 W 20220316; US 202218284099 A 20220316