

Title (en)
AIR CONDITIONER

Title (de)
KLIMAAANLAGE

Title (fr)
CLIMATISEUR

Publication
EP 4008973 A1 20220608 (EN)

Application
EP 20882824 A 20200313

Priority
• CN 201911034323 A 20191028
• CN 201921830849 U 20191028
• CN 2020079187 W 20200313

Abstract (en)
An air conditioner, comprising an outdoor unit (100) and an indoor unit (200). The outdoor unit (100) comprises a compressor (110) and an outdoor side heat exchanger (141). The indoor unit (200) comprises a first heat exchanger (220) and a first throttling adjusting device (240). The air conditioner further comprises: a discharge pipe (111), a low-pressure suction pipe (113), a first piping (140) and a second piping (150). The outdoor unit (100) further comprises a first switching device (131). The air conditioner further comprises an economizer (143), the economizer (143) being provided on the first piping (140) between the outdoor side heat exchanger (141) and the first throttling adjusting device (240); a first refrigerant flow passage (143a) and a second refrigerant flow passage (143b) are provided in the economizer(143), and the first refrigerant flow passage (143a) is connected in the first piping (140) by means of a refrigerant bridge (600); the second refrigerant flow passage (143b) has one end in communication with the first piping (140) by means of a liquid taking pipe (145), and the other end simultaneously in communication with a medium-pressure suction inlet (M) and the low-pressure suction pipe (113) of the compressor (110) by means of a return pipe (146), such that flow directions of a refrigerant in the first refrigerant flow passage (143a) and the second refrigerant flow passage (143b) are opposite. The air conditioner ensures the heat exchange effect of the first refrigerant flow passage and the second refrigerant flow passage, and is advantageous in ensuring, in a heating mode, a gas supplement effect of the economizer to the compressor, thereby ensuring heating capacity of the air conditioner in a low-temperature environment.

IPC 8 full level
F24F 3/06 (2006.01); **F25B 40/02** (2006.01)

CPC (source: EP US)
F24F 3/06 (2013.01 - US); **F25B 13/00** (2013.01 - EP US); **F25B 41/20** (2021.01 - EP US); **F25B 41/40** (2021.01 - US); **F25B 2313/0233** (2013.01 - EP US); **F25B 2313/0272** (2013.01 - EP); **F25B 2400/13** (2013.01 - EP US); **F25B 2500/12** (2013.01 - EP US); **F25B 2600/2509** (2013.01 - EP); **F25B 2600/2515** (2013.01 - EP 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

DOCDB simple family (publication)
EP 4008973 A1 20220608; **EP 4008973 A4 20220914**; US 2022325924 A1 20221013; WO 2021082331 A1 20210506

DOCDB simple family (application)
EP 20882824 A 20200313; CN 2020079187 W 20200313; US 202017764832 A 20200313