

Title (en)
REFRIGERATION DEVICE

Title (de)
KÜHLVORRICHTUNG

Title (fr)
DISPOSITIF DE RÉFRIGÉRATION

Publication
EP 4224093 A1 20230809 (EN)

Application
EP 22155366 A 20220207

Priority
EP 22155366 A 20220207

Abstract (en)
A refrigeration device comprises a compressor (1), a plurality of utilization side heat exchangers, an expansion mechanism (4) and a heat source side heat exchanger (5), which are fluidly connected in series to constitute a refrigeration circuit. The refrigeration device further comprises a first refrigerant pipe (6), which extends from the compressor (1) to a first utilization side heat exchanger (2) of the plurality of utilization side heat exchangers. The first refrigerant pipe (6) comprises a first valve (7) configured to at least fully open and fully close the first refrigerant pipe (6). The refrigeration device also comprises a second refrigerant pipe (8), which extends from the compressor (1) to a second utilization side heat exchanger (3.1, 3.2, 3.3) of the plurality of utilization side heat exchangers. The second refrigerant pipe (8) comprises a second valve (9) configured to at least fully open and fully close the second refrigerant pipe (8). The refrigeration device also comprises a controller, which is configured to fully close the first valve (7) when the operation of the first utilization side heat exchanger (2) is stopped and/or which is configured to fully close the second valve (9) when the operation of the second utilization side heat exchanger (3.1, 3.2, 3.3) is stopped. In addition, the refrigeration device comprises a first bypass pipe (10) extending from a downstream side (6.2) of the first valve (7) when the refrigeration device is used in a heating mode to a suction side of the compressor (1) and a second bypass pipe (11) extending from a downstream side (8.2) of the second valve (9) when the refrigeration device is used in a heating mode to a suction side of the compressor (1). The first and second bypass pipes (10, 11) each comprise pressure-reducing means (12) that are configured to reduce the pressure of a refrigerant in the first and second bypass pipes (10, 11) .

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Citation (applicant)
• EP 2653805 A1 20131023 - MITSUBISHI ELECTRIC CORP [JP]
• EP 2653805 A1 20131023 - MITSUBISHI ELECTRIC CORP [JP]

Citation (search report)
• [X] EP 2402687 A1 20120104 - DAIKIN IND LTD [JP]
• [A] JP H10141796 A 19980529 - DAIKIN IND LTD
• [A] US 2013213072 A1 20130822 - KAWAGOE TOMOKAZU [JP], et al
• [A] EP 3299734 A1 20180328 - DAIKIN IND LTD [JP], et al

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