

Title (en)
REFRIGERATION CYCLE DEVICE

Title (de)
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication
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Application
EP 23217474 A 20231218

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Abstract (en)
[Object] It is an object of the present invention to provide a refrigeration cycle device capable of sufficiently securing discharge superheat degree (discharge SH) even if injection is carried out using R290 refrigerant, capable of efficiently operating a device, and capable of enhancing reliability of the device.[Solving Means] A refrigeration cycle device including: a main refrigerant circuit 10 formed by sequentially connecting, to one another through a refrigerant pipe 18, a compressor 11, a four-way valve 12, a use-side heat exchanger 13, an economizer 14, an internal heat exchanger 15, a first expansion device 16 and a heat source-side heat exchanger 17; and a bypass refrigerant circuit 20 in which refrigerant branches off from the refrigerant pipe 18 between the use-side heat exchanger 13 and the economizer 14, the branched refrigerant is decompressed by a second expansion device 21 and then, the refrigerant exchanges heat with refrigerant which flows through the main refrigerant circuit 10 in the economizer 14, and the former refrigerant joins up with the refrigerant which is in the middle of compression stroke of the compressor 11, wherein when the use-side heat exchanger 13 is used as a condenser, in the internal heat exchanger 15, high pressure refrigerant which flows through the main refrigerant circuit 10 and low pressure refrigerant which flows out from the heat source-side heat exchanger 17 and which flows through the main refrigerant circuit 10 exchange heat with each other.

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Citation (applicant)
JP 2019148394 A 20190905 - FUJITSU GENERAL LTD

Citation (search report)
• [I] EP 4089345 A1 20221116 - PANASONIC IP MAN CO LTD [JP]
• [A] WO 2022208727 A1 20221006 - MITSUBISHI ELECTRIC CORP [JP]
• [A] EP 3671049 A1 20200624 - PANASONIC IP MAN CO LTD [JP]

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