

Title (en)
REFRIGERATION MACHINE

Title (de)
KÄLTEMASCHINE

Title (fr)
MACHINE FRIGORIFIQUE

Publication
EP 4198416 A1 20230621 (EN)

Application
EP 21875130 A 20210909

Priority
• JP 2021033176 W 20210909
• JP 2020163122 A 20200929

Abstract (en)
This refrigeration machine comprises: a low temperature cycle having an evaporator which performs heat exchange between air inside a refrigeration chamber and a first refrigerant, a first compressor which compresses the first refrigerant and supplies the compressed first refrigerant to the evaporator, and a low temperature-side expansion valve which lowers the pressure of the first refrigerant that has passed through the first compressor; a high temperature cycle having a heat dissipator which performs heat exchange between outside air and a second refrigerant, a second compressor which compresses a second refrigerant and supplies the compressed second refrigerant to the heat dissipator, and a high temperature-side expansion valve which lowers the pressure of the second refrigerant that has passed through the heat sink; an intermediate heat exchanger which performs heat exchange between the first refrigerant flowing from the first compressor and the second refrigerant flowing from the high-temperature side expansion valve; and a gas injection circuit which is provided to at least one of the low temperature cycle and the high temperature cycle, and which supplies the refrigerant before compression to at least one of the first compressor and the second compressor, wherein the first refrigerant is a mixed refrigerant containing carbon dioxide and R32 refrigerant, and the second refrigerant is carbon dioxide.

IPC 8 full level
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