

Title (en)
REFRIGERATION CYCLE DEVICE AND LIQUID HEATING DEVICE HAVING THE SAME

Title (de)
KÄLTEKREISLAUFVORRICHTUNG UND FLÜSSIGKEITSHEIZVORRICHTUNG DAMIT

Title (fr)
DISPOSITIF À CYCLE DE RÉFRIGÉRATION ET DISPOSITIF DE CHAUFFAGE DE LIQUIDE LE COMPRENANT

Publication
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Application
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JP 2019006714 A 20190118

Abstract (en)
[origin: EP3683520A1] The present invention provides a refrigeration cycle device and a liquid heating device having the refrigeration cycle device. The refrigeration cycle device includes: a main refrigerant circuit 10 formed by sequentially connecting, to one another through a pipe 16, a compressing mechanism 11, a utilization-side heat exchanger 12, an intermediate heat exchanger 13, a first expansion device 14 and a heat source-side heat exchanger 15; a bypass refrigerant circuit 20 in which the refrigerant branches off from the pipe 16 between the utilization-side heat exchanger 12 and the first expansion device 14, the branched refrigerant is decompressed by a second expansion device 21 and thereafter, the refrigerant heat-exchanges, in the intermediate heat exchanger 13, with the former refrigerant which flows through the main refrigerant circuit 10, and the refrigerant joins up with the refrigerant which is on an intermediate stage of compression of a compression rotary element; and a control device 60. The control device 60 controls a valve opening of the second expansion device 21 such that a state where pressure of refrigerant after it is decompressed by the second expansion device 21 exceeds critical pressure is maintained. Therefore, even when high pressure is further increased, COP is not deteriorated by appropriately performing control.

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