

Title (en)
HEAT PUMP AND DEHUMIDIFIER

Title (de)
WÄRMEPUMPE UND ENTFEUCHTER

Title (fr)
POMPE A CHALEUR ET DESHUMIDIFICATEUR

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Application
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Abstract (en)
There are provided a heat pump having a high COP and a dehumidifying apparatus arranged in a compact size. The heat pump has a pressurizer 260 for raising a pressure of a refrigerant 260, an evaporator 210 for cooling a low-temperature heat source fluid A with heat of evaporation of the refrigerant to be pressurized, a condenser 220 for heating a high-temperature heat source fluid B with heat of condensation of the pressurized refrigerant, and a first heat exchanger 300a for exchanging heat between the low-temperature heat source fluid A upstream of the evaporator 210 and a cooling fluid. The first heat exchanger 300a has a first compartment 310 through which the low-temperature heat source fluid A flows, a second compartment 320 through which the cooling fluid flows, and refrigerant passages 251A1 - A9, 252A1 - A9 extending through the first compartment and the second compartment. The refrigerant passages 251A1 - A9, 252A1 - A9 are connected to the condenser 220 through a first restriction 330, extend alternately through the first compartment and the second compartment repeatedly, and then are connected to the evaporator 210 through a second restriction 250. Since the refrigerant passes through the first and second compartments a plurality of times, the refrigerant will not completely be dried out in the refrigerant passage extending through the first compartment. <IMAGE>

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