

Title (en)
AIR CONDITIONER

Title (de)
KLIMAANLAGE

Title (fr)
CONDITIONNEUR D'AIR

Publication
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Application
EP 06798039 A 20060915

Priority
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Abstract (en)
[origin: EP1944562A1] In a supercooling heat exchanger of an air conditioning apparatus for exchanging heat between a high-pressure refrigerant and a low-pressure refrigerant, the refrigerants flow in opposite directions during cooling and heating. Therefore, the high-pressure refrigerant and low-pressure refrigerant flow parallel to each other in either of the operating modes, and heat exchange is less efficient. This problem is resolved by this invention. In an air conditioning apparatus having a supercooling heat exchanger (13) for exchanging heat between a low-pressure refrigerant and a high-pressure refrigerant, the supercooling heat exchanger (13) is divided into two first and second heat exchangers (13A), (13B); either the first heat exchanger (13A) or the second heat exchanger (13B) is disposed so that the high-pressure refrigerant and the low-pressure refrigerant flow countercurrent to each other; and the other heat exchanger, i.e., either the second heat exchanger (13B) or the first heat exchanger (13A), is disposed so that the high-pressure refrigerant and the low-pressure refrigerant flow parallel to each other. The heat exchangers (13A, 13B) both have a configuration in which, e.g., a high-pressure liquid refrigerant pipe (15) is wound around the external periphery of a suction pipe (14) for suctioning a low-pressure refrigerant. The heat exchangers are thereby reduced in size.

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