

Title (en)

Air conditioner comprising heat exchanger and means for switching cooling cycle

Title (de)

Klimaanlage mit Wärmeüberträger und Vorrichtung zur Kühlkreisschaltung

Title (fr)

Climatiseur contenant échangeur de chaleur et dispositif pour commuter le cycle de refroidissement

Publication

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Application

**EP 04077404 A 20040825**

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- KR 20030077857 A 20031105

Abstract (en)

The present invention relates to an air conditioner capable of performing heat exchange of refrigerant and cooling and heating operations. According to the invention, a dual-tube heat exchanger is disposed at the entrance of a compressor and a means for switching a cooling cycle is installed between an outdoor heat exchanger including a condenser and an indoor heat exchanger including an evaporator so that in an air conditioning mode, heat change between mid-temperature, high-pressure liquid refrigerant at the exit of the condenser and low-temperature, low-pressure superheated refrigerant at the exit of the evaporator is performed more effectively and as a result of this, super heating of the liquid refrigerant at the exit of the condenser is increased, refrigerant flow characteristics of an expansion unit are improved, and enthalpy at the entrance side of the evaporator is reduced, causing a greater enthalpy difference at the entrance and exit of the evaporator and improving air conditioning capacity overall. Moreover, the heat exchanger of the present invention has a dual tube structure and uses a counter flow or parallel flow for performing heat exchange. In the dual tube structure, a tube and a core of the heat exchanger form a line or surface contact and heating capacity is therefore enhanced.

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Cited by

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