

Title (en)  
HEAT TRANSFER DEVICE

Title (de)  
WÄRMEÜBERTRAGUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE TRANSFERT DE CHALEUR

Publication  
**EP 2056041 A4 20140618 (EN)**

Application  
**EP 08721283 A 20080304**

Priority  
• JP 2008053863 W 20080304  
• JP 2007053874 A 20070305

Abstract (en)  
[origin: EP2056041A1] The present invention has an object to provide a heat transfer device that can adjust a difference between an amount of refrigerant in heating operation and that in cooling operation when CO<sub>2</sub> is used as a refrigerant, without separately providing a heater and a cooler. The heat transfer device (20) includes a third channel (L31, L32) provided in parallel with a second channel (L2), a refrigerant tank (3) provided on the third channel (L31, L32), and a fourth channel (L4) having one end communicating with a first channel (L1) and the other end communicating with the refrigerant tank (3). In the heat transfer device (20), in cooling operation, the refrigerant discharged from the liquid pump (1) passes through a use side heat exchanger (4), the refrigerant tank (3), and a heat source side heat exchanger (2) in this order and is returned to the liquid pump (1), and a part of the liquid refrigerant discharged from the liquid pump (1) is stored in the refrigerant tank (3) through the fourth channel (L4). In heating operation, the refrigerant discharged from the liquid pump (1) passes through the heat source side heat exchanger (2) and the use side heat exchanger (4) in this order and is returned to the liquid pump (1).

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Citation (search report)  
• [I] US 4562700 A 19860107 - ATSUMI AKIRA [JP], et al  
• See references of WO 2008111431A1

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