

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ECHANGEUR DE CHALEUR

Publication  
**EP 2246655 A4 20170705 (EN)**

Application  
**EP 08872595 A 20080908**

Priority  
• JP 2008066165 W 20080908  
• JP 2008036932 A 20080219

Abstract (en)  
[origin: EP2246655A1] A parallel flow type heat exchanger (1) in which flow rates of refrigerant are equalized for respective flat tubes (4). The heat exchanger (1) comprises a lower header pipe (2) becoming the refrigerant inflow side, an upper header pipe (3) becoming the refrigerant outflow side, and a plurality of vertical flat tubes (4) arranged at a predetermined pitch, between both the header pipes (2, 3), and each having a vertical refrigerant passage (5) provided therein and communicating with the inside of both the header pipes. An inlet pipe (7) for making the refrigerant (R) flow into the lower header pipe (2) is arranged between a pair of flat tubes (4) out of a plurality of flat tubes (4), spaced apart from an outlet pipe (8) for making the refrigerant flow out from the upper header pipe (3) and connected with the lower header pipe (2) from the above. The outlet pipes (8) are provided at the both ends of the upper header pipe (3), and the inlet pipe (7) is arranged between the pair of flat tubes (4) located in the center of the lower header pipe (2).

IPC 8 full level  
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CPC (source: EP)  
**F28D 1/05375** (2013.01); **F28F 9/0246** (2013.01); **F28D 2001/028** (2013.01)

Citation (search report)  
• [XAI] US 5095972 A 19920317 - NAKAGURO KAZUHIRO [JP]  
• [XAI] EP 0855567 A2 19980729 - MODINE MFG CO [US]  
• [XAI] JP H0379994 A 19910404 - NIPPON DENSO CO  
• [XAI] JP H06273088 A 19940930 - ZEXEL CORP  
• See references of WO 2009104295A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

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**EP 2246655 A1 20101103**; **EP 2246655 A4 20170705**; CN 101932900 A 20101229; CN 101932900 B 20120919; JP 2009198016 A 20090903; JP 4357571 B2 20091104; WO 2009104295 A1 20090827

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