

Title (en)  
PARALLEL FLOW HEAT EXCHANGER WITH CONNECTORS

Title (de)  
PARALLELSTROMWÄRMETAUSCHER MIT VERBINDERN

Title (fr)  
ÉCHANGEUR DE CHALEUR À ÉCOULEMENT PARALLÈLE AVEC CONNECTEURS

Publication  
**EP 2165141 A4 20131113 (EN)**

Application  
**EP 07795595 A 20070601**

Priority  
US 2007012929 W 20070601

Abstract (en)  
[origin: WO2008147361A1] A parallel flow heat exchanger includes a plurality of connector tubes which fluidly interconnect the individual flat heat exchange tubes to a refrigerant delivery member such that the refrigerant flows along the lengths of the connector tubes and then flows in a direction orthogonal thereto to enter the flat heat exchange tubes to thereby provide improved refrigerant distribution thereto. The refrigerant distribution member may be an inlet manifold or an entrance port or a refrigerant distributor. The connector tubes may be connected so as to conduct the flow in parallel or in series, and an orifice may be placed at the entrance end thereof to improve refrigerant distribution.

IPC 8 full level  
**F28D 1/04** (2006.01)

CPC (source: EP US)  
**F28D 1/05391** (2013.01 - EP US); **F28F 9/02** (2013.01 - EP US); **F28D 2021/0071** (2013.01 - EP US); **F28F 1/126** (2013.01 - EP US)

Citation (search report)

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- [X] JP 2003166791 A 20030613 - MITSUBISHI HEAVY IND LTD
- [Y] US 5069277 A 19911203 - NAKAMURA MIKI [JP], et al
- [Y] WO 0161263 A1 20010823 - BOSCH AUTOMOTIVE SYSTEMS CORP [JP], et al
- [Y] US 2005016716 A1 20050127 - HU ZAIQIAN [US], et al
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Citation (examination)

- US 2006101849 A1 20060518 - TARAS MICHAEL F [US], et al
- JP 2001304775 A 20011031 - MITSUBISHI HEAVY IND LTD

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2008147361 A1 20081204**; CN 101772687 A 20100707; CN 101772687 B 20111116; EP 2165141 A1 20100324; EP 2165141 A4 20131113; HK 1145870 A1 20110506; US 2010170664 A1 20100708

DOCDB simple family (application)  
**US 2007012929 W 20070601**; CN 200780100124 A 20070601; EP 07795595 A 20070601; HK 11100100 A 20110106; US 60232907 A 20070601