

Title (en)  
MODULAR HEAT EXCHANGER

Title (de)  
MODULARER WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR MODULAIRE

Publication  
**EP 2291599 A4 20140514 (EN)**

Application  
**EP 09739562 A 20090428**

Priority  
• US 2009041920 W 20090428  
• US 4868608 P 20080429

Abstract (en)  
[origin: WO2009134760A2] A modular multi-channel tube heat exchanger includes a plurality of aluminum heat exchanger modules selectively connected in fluid communication by interconnecting tubing. Each heat exchanger module includes an aluminum inlet header, an aluminum outlet header and a plurality of aluminum heat exchange tubes extending longitudinally therebetween. Each of the plurality of heat exchange tubes may have a plurality of flow paths extending longitudinally in parallel relationship from an inlet end thereof in fluid communication with the inlet header to an outlet end thereof in fluid communication with the outlet header.

IPC 8 full level  
**F28F 9/00** (2006.01); **F28D 1/04** (2006.01); **F28D 1/053** (2006.01); **F28F 1/02** (2006.01); **F28F 9/02** (2006.01); **F28F 9/26** (2006.01); **F28F 21/00** (2006.01); **F28F 21/08** (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP US)  
**F28D 1/0478** (2013.01 - EP US); **F28D 1/05391** (2013.01 - EP US); **F28F 1/022** (2013.01 - EP US); **F28F 9/262** (2013.01 - EP US); **F28F 27/02** (2013.01 - EP US); **F28F 1/126** (2013.01 - EP US); **F28F 1/32** (2013.01 - EP US)

Citation (search report)  
• [XAI] EP 1640683 A1 20060329 - SAMSUNG ELECTRONICS CO LTD [KR]  
• [XII] WO 2005100895 A1 20051027 - BEHR GMBH & CO KG [DE], et al  
• [XII] US 2003141046 A1 20030731 - IKEDA TORU [JP], et al  
• [I] JP 2002181487 A 20020626 - DAIKIN IND LTD  
• [I] US 5086835 A 19920211 - SHINMURA TOSHIHARU [JP]  
• See references of WO 2009134760A2

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 MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2009134760 A2 20091105**; **WO 2009134760 A3 20100218**; CN 102016483 A 20110413; EP 2291599 A2 20110309; EP 2291599 A4 20140514; US 2011056668 A1 20110310

DOCDB simple family (application)  
**US 2009041920 W 20090428**; CN 200980115381 A 20090428; EP 09739562 A 20090428; US 92127809 A 20090428