

Title (en)  
PLATE-TYPE HEAT EXCHANGER AND REFRIGERATING AIR-CONDITIONING DEVICE

Title (de)  
PLATTENWÄRMETAUSCHER UND KÄLTE-KLIMATISIERUNGSVORRICHTUNG

Title (fr)  
ÉCHANGEUR THERMIQUE DE TYPE À PLAQUES ET DISPOSITIF DE CONDITIONNEMENT D'AIR ET DE RÉFRIGÉRATION

Publication  
**EP 2410278 A1 20120125 (EN)**

Application  
**EP 09841919 A 20091221**

Priority  
• JP 2009071230 W 20091221  
• JP 2009065826 A 20090318

Abstract (en)  
It is aimed to enhance the strength of a plate heat exchanger while maintaining the heat exchange capability of the plate heat exchanger. A plate heat exchanger 20 is configured with a plurality of stacked plates 2 and 3. Each of the plates 2 and 3 includes at four corners thereof a first inlet hole 5 which acts as an inlet for a first fluid, a first outlet hole 6 which acts as an outlet for the first fluid, a second inlet hole 7 which acts as an inlet for a second fluid, and a second outlet hole 8 which acts as an outlet for the second fluid. Each of the plates 2 and 3 and an adjacent plate define therebetween a first flow path for passing the first fluid and a second flow path for passing the second fluid, so as to exchange heat between the first fluid and the second fluid. In each of the plates 2 and 3, a longitudinal length L1 is 4 or more times a lateral length L2.

IPC 8 full level  
**F28D 9/02** (2006.01); **F28F 3/00** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP US)  
**F28D 9/005** (2013.01 - EP US); **F28F 3/046** (2013.01 - EP US); **F28F 9/026** (2013.01 - EP US); **F25B 39/00** (2013.01 - EP US)

Cited by  
CN104748592A; EP3575726A1; EP4365532A1; US9903663B2; WO2014095594A1; WO2024094432A1

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 SM TR

DOCDB simple family (publication)  
**EP 2410278 A1 20120125; EP 2410278 A4 20130109; EP 2410278 B1 20141210**; CN 102356295 A 20120215; CN 102356295 B 20151014; JP 2010216754 A 20100930; JP 5106453 B2 20121226; US 2012012291 A1 20120119; WO 2010106717 A1 20100923

DOCDB simple family (application)  
**EP 09841919 A 20091221**; CN 200980158110 A 20091221; JP 2009065826 A 20090318; JP 2009071230 W 20091221; US 200913256494 A 20091221