

Title (en)

Heat exchangers and air conditioning systems including such heat exchangers

Title (de)

Wärmetauscher und Klimaanlage mit solchen Wärmetauschern

Title (fr)

Echangeurs de chaleur et systèmes de conditionnement d'air utilisant de tels échangeurs

Publication

**EP 1596146 A2 20051116 (EN)**

Application

**EP 05252699 A 20050429**

Priority

JP 2004139608 A 20040510

Abstract (en)

A heat exchanger (1) including a pair of header pipes (2,3) and a plurality of heat transfer tubes (4) extending between and placing the header pipes (2,3) in communication and extending in parallel to each other to form a parallel-flow type heat exchanger core (13). The heat exchanger core (13) is bent, so that relative to a center portion of the core, at least one header pipe (3) is offset in the direction of air flow across the heat exchanger (1). The offset disposition of a larger header pipe may be achieved without increasing a tube insertion length into the header pipe or the reduction or elimination of liquid storing and moisture reducing unit contained in the header pipe.

IPC 1-7

**F28D 1/053**; F28D 1/04; F25B 39/04

IPC 8 full level

**B60H 1/32** (2006.01); **F28D 1/053** (2006.01); **F25B 39/04** (2006.01); **F28D 1/04** (2006.01); **F28D 1/047** (2006.01); **F28F 9/02** (2006.01); **F25B 40/02** (2006.01)

CPC (source: EP US)

**F25B 39/04** (2013.01 - EP US); **F28D 1/0435** (2013.01 - EP US); **F28D 1/0471** (2013.01 - EP US); **F28D 1/0535** (2013.01 - EP US); **F28F 9/0243** (2013.01 - EP US); **F25B 40/02** (2013.01 - EP US); **F25B 2500/01** (2013.01 - EP US)

Cited by

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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 MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

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DOCDB simple family (application)

**EP 05252699 A 20050429**; JP 2004139608 A 20040510; US 12200005 A 20050505