

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR

Publication  
**EP 2031334 A1 20090304 (EN)**

Application  
**EP 07744382 A 20070530**

Priority  
• JP 2007060968 W 20070530  
• JP 2006152488 A 20060531

Abstract (en)  
A heat exchanger with improved heat exchange performance is provided. An indoor heat exchanger (6) is a heat exchanger that allows supercritical CO<sub>2</sub> refrigerant to radiate heat to the air, and includes a plurality of plate fins (11) and a plurality of heat transfer tubes (12). Four or more rows (61 to 72) of heat transfer tubes (12) arranged in the direction crossing the airflow are formed in the upstream-to-downstream direction of the airflow. Each plate fin (11) is divided between at least one pair of adjacent rows (61, 62). The refrigerant flows from the heat transfer tubes (12) in the row (72) on the downstream side of the airflow to the heat transfer tubes (12) in the row (61) on the upstream side of the airflow.

IPC 8 full level  
**F28F 1/32** (2006.01); **F25B 1/00** (2006.01); **F25B 39/00** (2006.01); **F28D 1/053** (2006.01); **F28F 1/00** (2006.01); **F28F 9/02** (2006.01); **F25B 9/00** (2006.01); **F28D 1/047** (2006.01); **F28D 7/08** (2006.01)

CPC (source: EP)  
**F25B 39/00** (2013.01); **F28D 1/0477** (2013.01); **F28D 1/05308** (2013.01); **F28D 7/085** (2013.01); **F28F 1/32** (2013.01); **F28F 9/0229** (2013.01); **F25B 9/008** (2013.01); **F25B 2309/061** (2013.01); **F28F 2265/26** (2013.01); **F28F 2270/00** (2013.01)

Cited by  
US2013240177A1; EP3040671A4; CN103392109A; EP2674717A4; AU2012221582B2; US10048018B2; US10670311B2; US10319482B2; US11289217B2; US11289218B2

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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

Designated extension state (EPC)  
AL BA HR MK RS

DOCDB simple family (publication)  
**EP 2031334 A1 20090304**; **EP 2031334 A4 20140115**; **EP 2031334 B1 20200708**; JP 2007322060 A 20071213; JP 4760542 B2 20110831; WO 2007139137 A1 20071206

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