

Title (en)  
Heat exchanger and fin for the same

Title (de)  
Wärmetauscher und Lamelle dafür

Title (fr)  
Échangeur de chaleur et ailette correspondante

Publication  
**EP 2447659 A2 20120502 (EN)**

Application  
**EP 11187109 A 20111028**

Priority  
KR 20100106368 A 20101028

Abstract (en)  
A heat exchanger having a structure in which micro-channel tubes are respectively fitted into both sides of corresponding flat fins for heat exchange, thereby achieving enhancements in drainage and heat transfer performance. The heat exchanger includes a first header connected with an inflow tube and an outflow tube, a second header spaced apart from the first header by a desired distance and arranged parallel to the first header, a plurality of flat micro-channel tubes arranged in a front row and a rear row between the first header and the second header, and a plurality of plate type fins. Each of the micro-channel tubes includes micro-channels. Each of the fins includes slots arranged in a front row and a rear row to respectively fit the front row and rear row micro-channel tubes into the slots.

IPC 8 full level  
**F28F 1/32** (2006.01); **F28D 1/053** (2006.01)

CPC (source: EP US)  
**F28D 1/05391** (2013.01 - EP US); **F28F 1/325** (2013.01 - EP US); **F28F 2215/12** (2013.01 - EP US)

Cited by  
FR3038977A1; CN108369076A; CN109000488A; US10914530B2; WO2017012867A1

Designated contracting state (EPC)  
AL 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 RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2447659 A2 20120502**; **EP 2447659 A3 20150408**; CN 102706040 A 20121003; KR 20120044847 A 20120508; US 2012103583 A1 20120503

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**EP 11187109 A 20111028**; CN 201110341848 A 20111028; KR 20100106368 A 20101028; US 201113317740 A 20111027