

Title (en)  
PLATE HEAT EXCHANGER AND HEAT PUMP HOT WATER SUPPLY SYSTEM

Title (de)  
PLATTENWÄRMETAUSCHER UND HEISSWASSERVERSORGUNGSSYSTEM MIT WÄRMEPUMPE

Title (fr)  
ÉCHANGEUR DE CHALEUR À PLAQUES ET SYSTÈME D'ALIMENTATION EN EAU CHAUDE DE POMPE À CHALEUR

Publication  
**EP 3633301 A4 20200527 (EN)**

Application  
**EP 17910801 A 20171117**

Priority  
• JP 2017101390 A 20170523  
• JP 2017041468 W 20171117

Abstract (en)  
[origin: US2020072561A1] A plate heat exchanger has first heat transfer plates and second heat transfer plates laminated atop one another, and each including a plate portion in which an inflow/outflow hole is formed, a first outer circumferential wall portion or second outer circumferential wall portion that extends on one surface side of the plate portion and that defines a channel together with a plate portion adjacent to the one surface side, and a first inner fin or a second inner fin that is attached to an inside portion of the channel. The first inner fin is mounted at a position, spaced part from a first fluid inflow/outflow hole, inside the channel, on the one surface of the plate portion and the second inner fin is mounted at a position, spaced apart from a second fluid inflow/outflow hole inside the channel, on the one surface of the plate portion.

IPC 8 full level  
**F28D 9/02** (2006.01); **F28F 3/06** (2006.01); **F28F 3/08** (2006.01)

CPC (source: EP US)  
**F28D 9/0037** (2013.01 - EP); **F28D 9/005** (2013.01 - EP); **F28F 3/025** (2013.01 - EP); **F28F 3/044** (2013.01 - EP); **F28F 3/046** (2013.01 - EP); **F28F 3/08** (2013.01 - US); **F28F 9/0075** (2013.01 - EP); **F28F 2225/04** (2013.01 - EP)

Citation (search report)  
• [X1] EP 1998132 A1 20081203 - MIAO ZHIXIAN [CN], et al  
• [X1] CA 2298009 A1 20000805 - LONG MFG LTD [CA]  
• [X1] DE 102006048305 A1 20080417 - MODINE MFG CO [US]  
• [X1] WO 2016057856 A1 20160414 - MODINE MFG CO [US]  
• See references of WO 2018216245A1

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)  
**US 2020072561 A1 20200305**; CN 110651164 A 20200103; CN 110651164 B 20210420; EP 3633301 A1 20200408; EP 3633301 A4 20200527; JP 6735918 B2 20200805; JP WO2018216245 A1 20200109; WO 2018216245 A1 20181129

DOCDB simple family (application)  
**US 201716614275 A 20171117**; CN 201780090742 A 20171117; EP 17910801 A 20171117; JP 2017041468 W 20171117; JP 2019519451 A 20171117