

Title (en)  
Heat exchanger

Title (de)  
Wärmetauscher

Title (fr)  
Échangeur thermique

Publication  
**EP 2372286 A2 20111005 (DE)**

Application  
**EP 11160576 A 20110331**

Priority  
DE 102010003514 A 20100331

Abstract (en)  
The heat exchanger (1) has multiple housing parts (2,3), a base (4), multiple fluid-conducting fins and multiple fluid-conducting pipes (R). The fluid-conducting pipes are provided on an outer side with a knob-like elevated structure (9). One of the fluid-conducting pipes is formed as flat pipe with two narrow sides (5,6) and two broadsides (7,8).

Abstract (de)  
Wärmetauscher (1) für ein Kraftfahrzeug, umfassend mehrere Gehäuseteile (2, 3), zumindest einen Boden (4), mehrere fluidführende Rippen (GS) und mehrere fluidführende Rohre (R, R'), wobei die fluidführenden Rohre (R, R') auf zumindest einer Außenseite mit einer noppenartigen erhabenen Strukturierung (9, 9') versehen sind.

IPC 8 full level  
**F28D 7/16** (2006.01); **F28D 1/053** (2006.01); **F28F 1/06** (2006.01); **F28F 1/42** (2006.01); **F28F 3/04** (2006.01); **F28F 13/06** (2006.01)

CPC (source: EP)  
**F28D 1/05375** (2013.01); **F28D 7/1692** (2013.01); **F28F 1/06** (2013.01); **F28F 1/42** (2013.01); **F28F 3/044** (2013.01); **F28F 13/06** (2013.01); **F28D 2021/008** (2013.01); **F28D 2021/0082** (2013.01); **F28F 2001/027** (2013.01)

Cited by  
CN104981678A; CN103411362A; WO2014082931A1; WO2014048688A1; US10520261B2

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 2372286 A2 20111005; EP 2372286 A3 20140618**; CN 102213555 A 20111012; DE 102010003514 A1 20111006

DOCDB simple family (application)  
**EP 11160576 A 20110331**; CN 201110078743 A 20110330; DE 102010003514 A 20100331