

Title (en)  
Heat exchanger for vehicles

Title (de)  
Wärmeaustauscher für Kraftfahrzeuge

Title (fr)  
Echangeur de chaleur pour véhicules

Publication  
**EP 1500892 A3 20071205 (DE)**

Application  
**EP 04013323 A 20040605**

Priority  
DE 10333150 A 20030722

Abstract (en)  
[origin: EP1500892A2] An automotive heat exchanger unit is fabricated of aluminium and assembled by soldering. The component parts consist of thin tubes, corrugated ribs and pipe base with apertures for the pipe ends, and side covers (9) with a cross-piece link to the head tank side cover (13). The component parts of the heat exchanger e.g. radiator are held together in a jig during the soldering process. Some separate component parts e.g. side covers (9, 10) are linked during assembly by a narrow cross piece (20) that is either removed following soldering, or remains in situ. The width of the cross-piece is less than half the width of the respective aluminium component.

IPC 8 full level  
**F28D 1/053** (2006.01); **F28F 9/00** (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP US)  
**F28F 9/001** (2013.01 - EP US); **F28F 9/0202** (2013.01 - EP US); **F28F 2220/00** (2013.01 - EP US); **F28F 2265/26** (2013.01 - EP US)

Citation (search report)

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- [A] EP 1001241 A2 20000517 - VALEO INC [US]
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Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL HR LT LV MK

DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 04013323 A 20040605**; DE 10333150 A 20030722; US 88596104 A 20040707