

Title (en)  
Automotive heat exchanger

Title (de)  
Wärmetauscher für Kraftfahrzeug

Title (fr)  
Echangeur de chaleur pour véhicule automobile

Publication  
**EP 1331462 A2 20030730 (EN)**

Application  
**EP 03250318 A 20030117**

Priority  
GB 0201309 A 20020122

Abstract (en)  
An automotive heat exchanger (1) has respective flowpath arrays (2,3) for a first fluid medium and a second fluid medium (air). A series of tubes (2) for the first fluid medium are formed of joined mating plates (4,5), the tubes (2) having open ends and a flowpath extending between the open ends, adjacent tubes (2) having spaced external surface portions defining the flowpath array (3) for the air fluid medium. The tubes (2) advantageously have relatively wide open mouth portions (4a) leading to a narrower tube width (h) extending between the open ends.

IPC 1-7  
**F28D 1/03**; **F28F 3/04**

IPC 8 full level  
**F28F 3/04** (2006.01); **F28F 9/02** (2006.01); **F28D 1/04** (2006.01)

CPC (source: EP GB)  
**F25B 39/04** (2013.01 - GB); **F28B 1/06** (2013.01 - GB); **F28D 1/053** (2013.01 - GB); **F28F 1/06** (2013.01 - GB); **F28F 1/22** (2013.01 - GB); **F28F 3/02** (2013.01 - GB); **F28F 3/04** (2013.01 - EP GB); **F28F 9/0221** (2013.01 - EP); **F28F 13/08** (2013.01 - GB); **F28D 1/0408** (2013.01 - EP); **F28D 2021/0082** (2013.01 - EP); **F28F 2001/027** (2013.01 - EP); **F28F 2240/00** (2013.01 - EP)

Citation (examination)  
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• JP H11153389 A 19990608 - SHOWA ALUMINUM CORP  
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**EP 1331462 A2 20030730**; **EP 1331462 A3 20070117**; GB 0201309 D0 20020306; GB 2384299 A 20030723; GB 2384299 B 20060322

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