

Title (en)

Heat exchange module, more especially for automotive vehicle

Title (de)

Wärmeaustauschmodul, insbesondere für Kraftfahrzeuge

Title (fr)

Module d'échange de chaleur, en particulier pour véhicule automobile

Publication

EP 1120620 B1 20040317 (FR)

Application

EP 01100874 A 20010116

Priority

- FR 0001137 A 20000128
- FR 0010347 A 20000804

Abstract (en)

[origin: US6382312B2] A heat-exchange module has a main exchanger and at least one secondary exchanger, each including a body with fluid-circulation tubes and with a clipping device for fixing the secondary exchanger onto the main exchanger so that the same airflow can pass through the bodies of the exchangers. The clipping device has at least one comb-shaped component including a fitting device for fitting onto a first of the exchangers, and at least one first row of teeth having between them, pair by pair, a gap of a shape corresponding to the cross section of the fluid-circulation tubes of the second of the exchangers, so as to clip the body of this second exchanger onto the comb-shaped component.

IPC 1-7

F28D 1/04; **F28F 9/00**; **F28F 9/013**

IPC 8 full level

B60K 11/04 (2006.01); **B60H 1/32** (2006.01); **F28D 1/04** (2006.01); **F28D 1/053** (2006.01); **F28F 9/00** (2006.01); **F28F 9/013** (2006.01); **F28F 9/26** (2006.01)

CPC (source: EP US)

F28D 1/0435 (2013.01 - EP US); **F28F 9/002** (2013.01 - EP US); **F28F 9/0131** (2013.01 - EP US); **F28D 2021/0084** (2013.01 - EP US); **F28D 2021/0094** (2013.01 - EP US); **F28F 2275/085** (2013.01 - EP US); **Y10T 29/4935** (2015.01 - EP US)

Cited by

EP2146169A1; US2022018604A1; FR3090508A1; CN113453932A; WO2020128395A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 01100874 A 20010116; AT 01100874 T 20010116; BR 0100175 A 20010126; DE 60102309 T 20010116; FR 0010347 A 20000804; JP 2001015442 A 20010124; US 77068301 A 20010129