

Title (en)

Cooler for vehicles and method of manufacture

Title (de)

Kühler für Kraftfahrzeuge sowie Herstellungsverfahren

Title (fr)

Refroidisseur pour véhicules et procédé de fabrication

Publication

EP 1139052 B1 20060802 (DE)

Application

EP 01103729 A 20010215

Priority

- DE 10016113 A 20000331
- DE 10033070 A 20000707

Abstract (en)

[origin: EP1139052A2] The radiator (1) for a motor vehicle comprises a block of flat tubes (2), between which are ribs. The ends of the tubes are bent around to issue into opposing collection boxes (5). The ends (4) of the flat tubes are in contact with the connecting edges (7) of the collection boxes and are connected by soldering. The flat tubes comprise two halves, at least one of which at its ends is bent crossways to the longitudinal direction, the bend forming a long side of the flat tube. The collection boxes with their connecting edges extend over the bend and are connected with the longitudinal edges (10) of the pipe halves.

IPC 8 full level

F28D 1/03 (2006.01); **B21D 53/08** (2006.01); **F28F 9/02** (2006.01); **F28F 9/18** (2006.01)

CPC (source: EP US)

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Cited by

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EP 1139052 A2 20011004; **EP 1139052 A3 20050119**; **EP 1139052 B1 20060802**; AT E335181 T1 20060815; DE 10033070 A1 20020117; DE 50110580 D1 20060914; US 2001047863 A1 20011206; US 6513585 B2 20030204

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