

Title (en)

Heat exchanger and endplate for heat exchanger

Title (de)

Wärmetauscher und Endplatte für einen Wärmetauscher

Title (fr)

Echangeur de chaleur et plaque collectrice pour échangeur de chaleur

Publication

EP 0779489 B2 20100120 (FR)

Application

EP 96119705 A 19961209

Priority

FR 9514785 A 19951213

Abstract (en)

[origin: EP0779489A1] The collector plate is designed to be assembled and sealed on the one hand to a fluid chamber cover (7) and on the other to a series of tubes (11). The collector plate consists of a central section (16) and a periphery forming an annular channel (3) to receive the edge (6) of the fluid chamber cover and a seal (8). Series of inclined collars (14) with apertures (13) for tubes (11) pass through the plate. In certain zones of the plate the channel edge adjoins directly with the collars without passing through a transitional plane. Each of the collars has two flat lengthwise sides which are inclined upwards to meet the tubes and have vertical inner surfaces.

IPC 8 full level

F28F 9/02 (2006.01)

CPC (source: EP US)

F28F 9/02 (2013.01 - EP US); **F28F 9/0226** (2013.01 - EP US); **Y10S 165/471** (2013.01 - EP US); **Y10S 165/474** (2013.01 - EP US)

Citation (opposition)

Opponent :

- EP 0505243 A1 19920923 - VALEO THERMIQUE MOTEUR SA [FR]
- DE 1277282 B 19680912 - BORG WARNER
- DE 9400687 U1 19950518 - THERMAL WAERME KAELTE KLIMA [DE]

Cited by

AU2003202463B1; FR2800451A1; CZ306611B6; FR2789169A1

Designated contracting state (EPC)

DE ES GB IT SE

DOCDB simple family (publication)

EP 0779489 A1 19970618; EP 0779489 B1 20030416; EP 0779489 B2 20100120; AR 005014 A1 19990407; BR 9605970 A 19980818; DE 69627461 D1 20030522; DE 69627461 T2 20040226; DE 69627461 T3 20100812; FR 2742532 A1 19970620; FR 2742532 B1 19980130; MX 9606342 A 19971031; US 5664625 A 19970909

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EP 96119705 A 19961209; AR P960105576 A 19961210; BR 9605970 A 19961211; DE 69627461 T 19961209; FR 9514785 A 19951213; MX 9606342 A 19961211; US 76445796 A 19961212