

Title (en)
CHARGE-AIR/COOLANT RADIATOR

Title (de)
LADELUFT-/KÜHLMITTEL-KÜHLER

Title (fr)
REFROIDISSEUR D'AIR DE SURALIMENTATION/DE REFRIGERANT

Publication
EP 1687580 B1 20170802 (DE)

Application
EP 04818135 A 20041110

Priority

- EP 2004012719 W 20041110
- DE 10352881 A 20031110

Abstract (en)
[origin: WO2005045344A1] Disclosed is a heat exchanger, particularly a charge-air/coolant radiator (1), having a disk-type structure. Said heat exchanger comprises a plurality of disks (2) which are penetrated by a coolant and a fluid that is to be cooled. The inlet zone and/or outlet zone for the fluid that is to be cooled is/are expanded at least at the discharge end or delivery end.

IPC 8 full level
F28D 9/00 (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP US)
F28D 9/005 (2013.01 - EP US); **F28F 9/026** (2013.01 - EP US); **F28D 2021/0082** (2013.01 - EP US); **F28D 2021/0089** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005045344 A1 20050519; BR PI0416363 A 20070313; BR PI0416363 B1 20181030; CN 1875235 A 20061206; CN 1875235 B 20101013;
DE 10352881 A1 20050609; EP 1687580 A1 20060809; EP 1687580 B1 20170802; JP 2007510883 A 20070426; JP 4653756 B2 20110316;
US 2007084592 A1 20070419; US 7717165 B2 20100518

DOCDB simple family (application)
EP 2004012719 W 20041110; BR PI0416363 A 20041110; CN 200480032669 A 20041110; DE 10352881 A 20031110;
EP 04818135 A 20041110; JP 2006538782 A 20041110; US 57903904 A 20041110