

Title (en)

PLATE-TYPE HEAT EXCHANGER, ESPECIALLY OIL/COOLANT COOLER IN VEHICLES

Title (de)

PLATTENWÄRMETAUSCHER, INSbesondere ÖL/KÜHLMITTEL-KÜHLER FÜR KRAFTFAHRZEUGE

Title (fr)

ECHANGEUR THERMIQUE A PLAQUES, NOTAMMENT REFROIDISSEUR D'HUILE/REFRIGERANT POUR VÉHICULES

Publication

EP 0928405 A2 19990714 (DE)

Application

EP 98933510 A 19980512

Priority

- DE 9801317 W 19980512
- DE 19722074 A 19970527

Abstract (en)

[origin: DE19722074A1] Disclosed is a heat exchanger comprising superimposed heat exchanger plates (2, 2'), a collar (4), fluid connectors (12), connecting holes (5) and fastening means which present at least one passage (15) comprised of holes (6, 27) in alignment towards each other in the plates (2, 2'), through which a tension rod (16) can be passed. One end of said rod (16) rests upon the connecting plate (26) or the plate (2, 2') adjacent thereto. In the hole (6, 27) alignment area, each thermal plate is tight relative to the adjacent plate (2, 2').

IPC 1-7

F28D 9/00

IPC 8 full level

F28F 3/08 (2006.01); **F28D 9/00** (2006.01); **F28F 9/00** (2006.01)

CPC (source: EP US)

F28D 9/005 (2013.01 - EP US); **F28F 9/002** (2013.01 - EP US); **F28F 2275/205** (2013.01 - EP US); **Y10S 165/916** (2013.01 - EP US)

Citation (search report)

See references of WO 9854527A2

Designated contracting state (EPC)

DE ES FR GB

DOCDB simple family (publication)

DE 19722074 A1 19981203; DE 59800230 D1 20000914; EP 0928405 A2 19990714; EP 0928405 B1 20000809; ES 2150815 T3 20001201; JP 2001526765 A 20011218; JP 3898768 B2 20070328; US 6161615 A 20001219; WO 9854527 A2 19981203; WO 9854527 A3 19990506

DOCDB simple family (application)

DE 19722074 A 19970527; DE 59800230 T 19980512; DE 9801317 W 19980512; EP 98933510 A 19980512; ES 98933510 T 19980512; JP 50008399 A 19980512; US 35582399 A 19990805