

Title (en)
Space saving heat exchanger

Title (de)
Raumsparender Wärmetauscher

Title (fr)
Echangeur de chaleur à encombrement réduit

Publication
EP 0867680 B1 20021016 (FR)

Application
EP 98400667 A 19980323

Priority
FR 9703540 A 19970324

Abstract (en)
[origin: EP0867680A1] The heat exchanger consists of first and second tube panels (3A, 3B) suspended inside a housing, set opposite one another in a vertical plane and connected to external inlet manifolds (4A, 4B) and a common internal outlet manifold (5). Each of the panels has a first series of tubes (31) which extend horizontally in the lower part of the housing from the inlet manifolds, and a second series (32) extending vertically upwards from the first, and a third series (34) of angled tubes which are connected to the second and extend upwards from the middle of the housing to the top, where the outlet manifold (5) is located.

IPC 1-7
F28D 13/00; **F22B 31/00**

IPC 8 full level
F28F 1/00 (2006.01); **F22B 31/00** (2006.01); **F28D 13/00** (2006.01)

CPC (source: EP US)
F22B 31/0023 (2013.01 - EP US); **F22B 31/0084** (2013.01 - EP US); **F28D 13/00** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH DE DK ES FI GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)
EP 0867680 A1 19980930; **EP 0867680 B1 20021016**; AT E226309 T1 20021115; CA 2230891 A1 19980924; CN 1112564 C 20030625; CN 1196474 A 19981021; DE 69808686 D1 20021121; DE 69808686 T2 20030612; DK 0867680 T3 20030127; ES 2186103 T3 20030501; FR 2761147 A1 19980925; FR 2761147 B1 19990514; JP H10318690 A 19981204; PT 867680 E 20030228; US 5855241 A 19990105; ZA 982402 B 19990106

DOCDB simple family (application)
EP 98400667 A 19980323; AT 98400667 T 19980323; CA 2230891 A 19980323; CN 98105683 A 19980323; DE 69808686 T 19980323; DK 98400667 T 19980323; ES 98400667 T 19980323; FR 9703540 A 19970324; JP 7620298 A 19980324; PT 98400667 T 19980323; US 4553498 A 19980323; ZA 982402 A 19980320