

Title (en)  
MODULAR CROSS-FLOW HEAT EXCHANGER AND METHOD OF MANUFACTURING IT

Publication  
**EP 0054796 B1 19840711 (FR)**

Application  
**EP 81110157 A 19811204**

Priority  
FR 8027098 A 19801219

Abstract (en)  
[origin: EP0054796A1] 1. A countercurrent-flow exchanger module of the type consisting of alternating planar exchange plates and corrugated spacer plates disposed so that their corrugations alternately extend in two orthogonal directions, the edges of two succeeding exchange plates which extend in a direction parallel to the corrugations of the spacer plate therebetween being sealingly joined to each other at each level, characterized by the fact that each exchange plate (6) is rectangularly shaped and is provided in each corner thereof with an unsymmetrical notched portion (3, 4) in such a manner that after folding two end flanges (2b) along fold lines (5) parallel to the shorter sides the assembly defined by the two opposite fold lines (5) and the two edges (1) perpendicular there to is substantially inscribed in a square area and the remaining portion of the corner notched portions is symmetrical ; and that the spacer plates (7) are rectangularly shaped, having a width greater than the distance between two notch edges (3 or 4) by twice an offsetting amount (d), and a length equal to the width plus twice said distance (d) ; the width of the flanges (2b) of the exchange plates (6) beyond the fold lines (5) being at most equal to the length of the side (3 or 4) of the remaining symmetrical notched portion minus twice said distance (d) whereby each of these flanges (2b) can be turned down over the edge (1b) of the overlying exchange plate and pressed both against it and against the underlying plate without crushing therebetween the spacer plate (7) located between these two exchange plates, while remaining spaced from the corrugation ends of the next upper spacer plate (7).

IPC 1-7  
**F28D 9/02**; **F28F 3/08**

IPC 8 full level  
**F28D 9/00** (2006.01)

CPC (source: EP)  
**F28D 9/0037** (2013.01); **F28F 2230/00** (2013.01); **F28F 2240/00** (2013.01); **F28F 2275/025** (2013.01); **F28F 2275/16** (2013.01); **F28F 2280/04** (2013.01)

Cited by  
US2018051941A1; EP0449783A3; US5183106A; WO9322608A1

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DOCDB simple family (publication)  
**EP 0054796 A1 19820630**; **EP 0054796 B1 19840711**; CA 1176625 A 19841023; DE 3164771 D1 19840816; FR 2496863 A1 19820625; FR 2496863 B1 19860110; JP S57105683 A 19820701

DOCDB simple family (application)  
**EP 81110157 A 19811204**; CA 387196 A 19811002; DE 3164771 T 19811204; FR 8027098 A 19801219; JP 15823981 A 19811006