

Title (en)  
HEAT EXCHANGER WITH WELDED PLATES

Title (de)  
WÄRMETAUSCHER MIT GESCHWEISSTEN PLATTEN

Title (fr)  
ECHANGEUR DE CHALEUR A PLAQUES SOUDEES

Publication  
**EP 0639258 B1 19970416 (FR)**

Application  
**EP 93910087 A 19930505**

Priority  
• FR 9300434 W 19930505  
• FR 9205828 A 19920505

Abstract (en)  
[origin: WO9322608A1] Heat exchanger comprising two independent free flowing fluid circuits, delimited by press-formed metal plates (18, 19) and assembled in pairs by welding to form modular circuit elements (17). The circuit elements (17) are stacked, and fitted by welding to vertical angle channels (16) to form an exchange block. The angle channels (16) partially enclose the vertical members (36), made from one or several parts and belonging to the heat exchanger frame which further comprises lower and upper bases, receiving, as for the vertical members (36), screwed doors. Sliding of the vertical members (36) in relation to the angle channels (16) eliminates differential expansion induced stresses.

IPC 1-7  
**F28D 9/00**; **F28F 9/00**

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

CPC (source: EP)  
**F28D 9/0037** (2013.01); **F28F 9/001** (2013.01); **F28D 9/02** (2013.01); **F28F 2240/00** (2013.01)

Cited by  
EP2597412A1; WO2012136432A1; WO2013079332A1; FR2901016A1; CN102282437A; WO2007132083A1; EP3418665A1; WO2018234048A1; US8236070B2; EP3418664A1; WO2018234049A1; WO2007122493A3

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

DOCDB simple family (publication)  
**WO 9322608 A1 19931111**; AT E151863 T1 19970515; DE 69309921 D1 19970522; DE 69309921 T2 19971023; EP 0639258 A1 19950222; EP 0639258 B1 19970416; ES 2102030 T3 19970716; FR 2690986 A1 19931112; FR 2690986 B1 19980612

DOCDB simple family (application)  
**FR 9300434 W 19930505**; AT 93910087 T 19930505; DE 69309921 T 19930505; EP 93910087 A 19930505; ES 93910087 T 19930505; FR 9205828 A 19920505