

Title (en)  
Reinforced end plate for heat exchanger

Title (de)  
Verstärkte Endplatte für Wärmetauscher

Title (fr)  
Plaque collectrice renforcée pour échangeur de chaleur

Publication  
**EP 0684441 B1 19980812 (FR)**

Application  
**EP 95107767 A 19950522**

Priority  
FR 9406398 A 19940526

Abstract (en)  
[origin: EP0684441A1] The collector plate (1) has apertures (5) for fluid circulation tubes in a flat section (2) of the plate, and adjoining curved sections (6, 7). The inner surfaces of the curves are reinforced by ribs (8) made e.g. from folds in the plate material, which is aluminium. In a variant of the design the ribs can extend across the plate from one curved section to the other, and the apertures can be elongated in shape and situated between adjacent ribs.

IPC 1-7  
**F28F 9/02**

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

CPC (source: EP KR US)  
**F28F 9/0224** (2013.01 - EP KR US); **F28F 2225/08** (2013.01 - EP KR US); **Y10S 165/906** (2013.01 - EP US); **Y10T 29/49389** (2015.01 - EP US)

Cited by  
FR2789169A1; FR2742533A1; FR2742528A1; FR2791764A1; FR2952711A1; WO2004090454A1; WO2011061085A1

Designated contracting state (EPC)  
DE ES GB IT SE

DOCDB simple family (publication)  
**EP 0684441 A1 19951129; EP 0684441 B1 19980812**; BR 9502551 A 19951226; DE 69503972 D1 19980917; DE 69503972 T2 19981210; ES 2122392 T3 19981216; FR 2720490 A1 19951201; FR 2720490 B1 19960712; KR 950033405 A 19951226; US 5492172 A 19960220

DOCDB simple family (application)  
**EP 95107767 A 19950522**; BR 9502551 A 19950505; DE 69503972 T 19950522; ES 95107767 T 19950522; FR 9406398 A 19940526; KR 19950013112 A 19950525; US 44761995 A 19950523