

Title (en)  
HEAT EXCHANGER AND HEATING SYSTEM EQUIPPED THEREWITH

Title (de)  
WÄRMETAUSCHER UND DAMIT AUSGERÜSTETES HEIZSYSTEM

Title (fr)  
ECHANGEUR THERMIQUE ET SYSTEME DE CHAUFFAGE EQUIPE DE CET ECHANGEUR

Publication  
**EP 1317648 B1 20060503 (EN)**

Application  
**EP 01976933 A 20010905**

Priority  
• NL 0100658 W 20010905  
• NL 1016104 A 20000905

Abstract (en)  
[origin: WO0221063A2] The invention relates to a heat exchanger with a number of first ducts for a first medium and a number of second ducts for a second medium in heat-exchanging contact therewith via partition walls. The dimensions of the first ducts in the flow direction of the first medium and perpendicularly thereof are herein chosen such that boundary layers formed along the walls of the duct and developing in the flow direction meet each other in each case close to the downstream ends of the ducts. A very compact heat exchanger is thus obtained. The heat exchanger can be provided with a plurality of first ducts placed in series as seen in the flow direction, wherein means are in each case present between successive ducts for enhancing the heat transfer inside the first medium, for instance in the form of a space, such as a bend, with an enlarged cross-section compared to the first ducts. The invention also relates to a heating system provided with a heat source, one or more heating elements and a heat exchanger as described above arranged therebetween.  
[origin: WO0221063A2] The invention relates to a heat exchanger (1) with a number of first ducts (2) for a first medium and a number of second ducts (4) for a second medium in heat-exchanging contact therewith via partition walls (5). The dimensions of the first ducts (2) in the flow direction of the first medium and perpendicularly thereof are herein chosen such that boundary layers (11) formed along the walls of the duct and developing in the flow direction meet each other in each case close to the downstream ends of the ducts (2). A very compact heat exchanger (1) is thus obtained.

IPC 8 full level  
**F28F 13/02** (2006.01); **F15D 1/06** (2006.01); **F28D 7/16** (2006.01); **F28D 21/00** (2006.01); **F28F 1/04** (2006.01)

CPC (source: EP)  
**F28D 7/1684** (2013.01); **F28D 21/0007** (2013.01); **F28F 1/04** (2013.01); **F28F 13/02** (2013.01)

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

DOCDB simple family (publication)  
**WO 0221063 A2 20020314**; **WO 0221063 A3 20020627**; AT E325324 T1 20060615; AU 9608801 A 20020322; DE 60119348 D1 20060608; DE 60119348 T2 20070510; EP 1317648 A2 20030611; EP 1317648 B1 20060503; NL 1016104 C1 20020307

DOCDB simple family (application)  
**NL 0100658 W 20010905**; AT 01976933 T 20010905; AU 9608801 A 20010905; DE 60119348 T 20010905; EP 01976933 A 20010905; NL 1016104 A 20000905