

Title (en)  
A REINFORCEMENT INSERT

Title (de)  
VERSTÄRKUNGSEINSATZ

Title (fr)  
INSERT DE RENFORCEMENT

Publication  
**EP 4407268 A1 20240731 (EN)**

Application  
**EP 23153261 A 20230125**

Priority  
EP 23153261 A 20230125

Abstract (en)  
A reinforcement insert (100) includes at least two reinforcement members (10a) and (10b) for reinforcing corresponding adjacent tubular elements (20) and (40) of a heat exchanger (200) disposed in same plane. The first reinforcement member (10a) includes a first connector portion (12a) and two spaced apart first legs (14a) and (14b) depending from the first connector portion (12a) and received and held in a corresponding open end of the first tubular element (20). The first legs (14a) and (14b) are urged against inner side of first tubular element (20). The second reinforcement member (10b) includes a second connector (12a) and two spaced apart second legs (14c) and (14d) depending from the second connector (12b) and received and held in a corresponding open end of the second tubular element (40). The second extreme legs (14c) and (14d) are urged against inner side of the second tubular element (40).

IPC 8 full level  
**F28D 1/053** (2006.01); **F28F 9/18** (2006.01)

CPC (source: EP)  
**F28D 1/05383** (2013.01); **F28D 1/05391** (2013.01); **F28F 9/0224** (2013.01); **F28F 9/185** (2013.01); **F28F 2225/04** (2013.01); **F28F 2225/08** (2013.01)

Citation (applicant)  
US 11143463 B2 20211012 - SINGH GURIQBAL [US], et al

Citation (search report)  
• [XYI] EP 3825634 A1 20210526 - VALEO AUTOSYSTEMY SP ZOO [PL]  
• [XYI] EP 3825635 A1 20210526 - VALEO AUTOSYSTEMY SP ZOO [PL]  
• [Y] US 2005199379 A1 20050915 - KIMURA SATOSHI [JP], et al  
• [Y] CN 205940258 U 20170208 - YUXIN AUTOMOTIVE AIR CONDITIONER CO LTD  
• [A] DE 19935688 A1 20010201 - BEHR GMBH & CO [DE]  
• [A] JP 5706666 B2 20150422  
• [A] US 7461685 B2 20081209 - OVERBURY ALASTAIR [GB], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
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DOCDB simple family (application)  
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