

Title (en)  
Heat exchanger

Title (de)  
Wärmeübertrager

Title (fr)  
Echangeur de chaleur

Publication  
**EP 2161514 B1 20170412 (DE)**

Application  
**EP 08290829 A 20080904**

Priority  
EP 08290829 A 20080904

Abstract (en)  
[origin: EP2161514A1] The exchanger has a heating element including a set of positive temperature coefficient heat coils in which a frame (2) i.e. plastic frame, is arranged, where the frame includes a front side (3) and a rear side (4). The heat coils are arranged at the front side and rear side of the frame relative to each other, and a set of rib elements is arranged between the heat coils. One of the rib elements on the front side lies opposite to one of the heat coils on the rear side, where another rib element on the rear side lies opposite to another heat coil on the front side.

IPC 8 full level  
**F24H 3/04** (2006.01); **F24H 9/18** (2006.01)

CPC (source: EP)  
**F24H 3/0405** (2013.01); **F24H 3/0429** (2013.01); **F24H 3/0435** (2013.01); **F24H 3/0458** (2013.01); **F24H 9/1863** (2013.01); **F24H 9/1872** (2013.01)

Citation (opposition)  
Opponent : Eberspacher catem GmbH & Co. KG  
• EP 1780061 A1 20070502 - BEHR FRANCE ROUFFACH S A R L [FR]  
• DE 4404345 A1 19940825 - VALEO THERMIQUE HABITACLE [FR]  
• EP 1621378 A1 20060201 - BEHR FRANCE ROUFFACH SAS [FR]  
• EP 1340638 A2 20030903 - BEHR FRANCE SARL [FR]  
• DE 4104521 A1 19920820 - CHANG CHUNG TAI [TW]  
• DE 102006018784 A1 20070621 - BERU AG [DE], et al  
• EP 1452357 A1 20040901 - CATEM GMBH & CO KG [DE]  
• DE 102005026238 A1 20061214 - CATEM GMBH & CO KG [DE]  
• WO 03086018 A1 20031016 - VALEO CLIMATISATION [FR], et al

Cited by  
DE102018221281A1; CN102434950A; EP2806707A1; EP2806708A1; EP2466222A1; US2012152931A1; CN102548058A; EP2608632A1; DE102012025445A1; EP3079442A1

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DE FR GB

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