

Title (en)  
TWO-PASS EVAPORATOR

Title (de)  
ZWEIFLUTIGER VERDAMPFER

Title (fr)  
ÉVAPORATEUR À DEUX PASSES

Publication  
**EP 2990752 A1 20160302 (EN)**

Application  
**EP 15180761 A 20150812**

Priority  
US 201414469000 A 20140826

Abstract (en)  
A two-pass evaporator suitable for use in an automobile includes various pressure drop devices to aliquot refrigerant into tubes that make up the two-pass evaporator. The two-pass evaporator includes a first pressure-drop device configured to receive and expand a liquid phase refrigerant into a first mixture of two-phase refrigerant; and a second pressure-drop device configured to receive and expand the first mixture of two-phase refrigerant into a second mixture of two-phase refrigerant and aliquot the second mixture of two-phase refrigerant to the first end of the first plurality of tubes. The two-pass evaporator includes a transition manifold that may house a flow-modulation plate disposed therein and configured to segregate the transition manifold into an upstream portion and a downstream portion. The flow-modulation device works in conjunction with the upstream pressure drop devices to aliquot refrigerant from the first plurality of tubes to the second plurality of tubes.

IPC 8 full level  
**F28F 9/02** (2006.01); **B60H 1/00** (2006.01); **F25B 39/02** (2006.01); **F28D 1/053** (2006.01)

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**F25B 39/00** (2013.01 - US); **F25B 39/028** (2013.01 - EP US); **F25B 41/39** (2021.01 - EP US); **F28D 1/05391** (2013.01 - EP US);  
**F28F 9/0273** (2013.01 - EP US); **F25B 39/02** (2013.01 - US); **F25B 2500/18** (2013.01 - EP US); **F28D 2021/0085** (2013.01 - EP US);  
**F28F 9/0278** (2013.01 - EP US); **F28F 2265/28** (2013.01 - EP)

Citation (search report)  
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Designated contracting state (EPC)  
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**EP 2990752 A1 20160302**; CN 105387650 A 20160309; CN 111486621 A 20200804; KR 20160024800 A 20160307;  
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DOCDB simple family (application)  
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