

Title (en)  
HEAT PUMP

Publication  
**EP 0095439 B1 19880810 (DE)**

Application  
**EP 83730048 A 19830513**

Priority  
DE 3219680 A 19820521

Abstract (en)  
[origin: US4580720A] For operating a heat pump installation with water as the refrigerant, a vacuum pump is employed as the compressor. If a liquid ring pump is used, its dissipation heat is fed into the heating loop. To this end, the heat output side of the heat exchanger associated with the loop of the sealing liquid is connected to the primary or secondary heat carrier loop of the heat consumer associated with the refrigerant loop.

IPC 1-7  
**F24J 3/00**

IPC 8 full level  
**F22B 3/04** (2006.01); **F24J 3/00** (2006.01); **F25B 30/00** (2006.01); **F25B 9/00** (2006.01)

CPC (source: EP US)  
**F22B 3/045** (2013.01 - EP US); **F25B 30/00** (2013.01 - EP US); **F25B 9/002** (2013.01 - EP US)

Cited by  
US5169502A; EP1762785A3; EP0150014A3; WO8912201A1; EP1762785A2; US7861548B2; US7966840B2

Designated contracting state (EPC)  
AT CH DE FR GB IT LI

DOCDB simple family (publication)  
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DE 3377665 D1 19880915; US 4580720 A 19860408

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**EP 83730048 A 19830513**; AT 83730048 T 19830513; DE 3219680 A 19820521; DE 3377665 T 19830513; US 65599784 A 19840928