

Title (en)  
DISPOSITION OF HEAT PUMPS

Publication  
**EP 0056780 A3 19820825 (DE)**

Application  
**EP 82730005 A 19820119**

Priority  
• DE 3102247 A 19810119  
• DE 3106152 A 19810216

Abstract (en)  
[origin: EP0056780A2] In the circulation circuit of the working fluid of a first heat pump (1, 5, 6, 8, 10) there is arranged a second heat pump (11 to 14) so that it produces directly a cooling of the fluid. With this arrangement, owing to the second heat pump, the over cooling enthalpy is used and the heat thus obtained, brought to a higher temperature level, may be dissipated as useful heat in addition to the heat provided by the first heat pump.

IPC 1-7  
**F25B 29/00**; **F25B 7/00**

IPC 8 full level  
**F24J 3/00** (2006.01); **F25B 7/00** (2006.01); **F25B 29/00** (2006.01); **F25B 1/04** (2006.01); **F25B 9/00** (2006.01); **F25B 40/02** (2006.01); **F25B 41/04** (2006.01); **F25B 49/02** (2006.01)

CPC (source: EP US)  
**F25B 7/00** (2013.01 - EP US); **F25B 29/003** (2013.01 - EP); **F25B 1/04** (2013.01 - EP); **F25B 9/006** (2013.01 - EP); **F25B 40/02** (2013.01 - EP); **F25B 41/20** (2021.01 - EP US); **F25B 49/022** (2013.01 - EP); **F25B 2400/061** (2013.01 - EP); **F25B 2400/075** (2013.01 - EP); **F25B 2400/0751** (2013.01 - EP); **F25B 2400/13** (2013.01 - EP)

Citation (search report)  
• DE 2516560 A1 19751030 - PROJECTUS IND PRODUKTER AB  
• FR 2268232 A1 19751114 - PROJECTUS IND PRODUKTER AB [SE]  
• CH 225518 A 19430215 - ESCHER WYSS MASCHF AG [CH]  
• DE 2922119 A1 19801211 - KMN BERATUNG BERATUNGSBUERO FU  
• DE 2520226 A1 19761125 - HEEREN GERHARD  
• CH 234315 A 19440930 - ESCHER WYSS MASCHF AG [CH]  
• US 3733845 A 19730522 - LIEBERMAN D  
• DE 330378 C 19201213 - EDMUND ALTENKIRCH  
• GB 494996 A 19381104 - TEVES KG ALFRED  
• US 2919558 A 19600105 - LAUER RODNEY F  
• US 3852974 A 19741210 - BROWN T  
• US 2717765 A 19550913 - LAWLER JR PAUL  
• US 4028079 A 19770607 - SCHEIBEL EDWARD G  
• US 4000626 A 19770104 - WEBBER ROBERT C  
• US 4227380 A 19801014 - LAUCKS F MICHAEL, et al  
• DE 2907982 A1 19800911 - LUSH LAWRENCE E  
• US 2782350 A 19570219 - CLARK ADNA R

Cited by  
EP2211125A1; CN105229380A; CN106524539A; US10274207B2; US7908881B2; WO2014184184A1; WO2006099378A1; WO2013088356A1; US8904815B2; WO2006057594A1

Designated contracting state (EPC)  
IT

DOCDB simple family (publication)  
**EP 0056780 A2 19820728**; **EP 0056780 A3 19820825**; DE 3106152 A1 19820826; DE 3264958 D1 19850905; DK 410582 A 19820914; EP 0069756 A1 19830119; EP 0069756 B1 19850731; WO 8202588 A1 19820805

DOCDB simple family (application)  
**EP 82730005 A 19820119**; DE 3106152 A 19810216; DE 3264958 T 19820119; DE 8200014 W 19820119; DK 410582 A 19820914; EP 82900346 A 19820119