

Title (en)
Refrigerant circuit

Title (de)
Kältemittelkreislauf

Title (fr)
Circuit de réfrigérant

Publication
EP 1293735 A3 20030528 (EN)

Application
EP 02020405 A 20020910

Priority
JP 2001276040 A 20010912

Abstract (en)
[origin: EP1293735A2] In a refrigerant circuit, an expansion valve 4 is connected to a heat exchanger 5 by a refrigerant pipe, and a bypass pipe 7/9 is provided. By way of a bypass pipe 9 having a check valve 10, a refrigerant is returned to a refrigerant circuit from a refrigerant amount control tank 8 that is installed in the bypass pipe 7/9. <IMAGE>

IPC 1-7
F25B 13/00; **F25B 9/00**

IPC 8 full level
F25B 1/00 (2006.01); **F25B 9/00** (2006.01); **F25B 13/00** (2006.01); **F25B 43/00** (2006.01); **F25B 45/00** (2006.01)

CPC (source: EP)
F25B 9/006 (2013.01); **F25B 13/00** (2013.01); **F25B 45/00** (2013.01); **F25B 2400/0415** (2013.01); **F25B 2400/16** (2013.01)

Citation (search report)

- [A] EP 0631095 A2 19941228 - HITACHI LTD [JP]
- [A] EP 0301503 A2 19890201 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] US 5186012 A 19930216 - CZACHORSKI MAREK [US], et al
- [A] US 4961323 A 19901009 - KATSUNA KIYOHARU [JP], et al
- [AD] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 08 29 September 1995 (1995-09-29)

Cited by
CN112714849A; AT513637A1; AT513637B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)
EP 1293735 A2 20030319; **EP 1293735 A3 20030528**; **EP 1293735 B1 20070314**; AT E356962 T1 20070415; CN 1173139 C 20041027; CN 1405515 A 20030326; DE 60218793 D1 20070426; DE 60218793 T2 20071206; ES 2284756 T3 20071116; JP 2003083644 A 20030319; JP 4848608 B2 20111228; PT 1293735 E 20070531

DOCDB simple family (application)
EP 02020405 A 20020910; AT 02020405 T 20020910; CN 02131544 A 20020911; DE 60218793 T 20020910; ES 02020405 T 20020910; JP 2001276040 A 20010912; PT 02020405 T 20020910