

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

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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)
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