

Title (en)  
Expansion valve for an air conditioning system

Title (de)  
Expansionsventil für ein Klimagerät

Title (fr)  
Vanne d'expansion pour climatiseur

Publication  
**EP 1712853 A3 20090225 (DE)**

Application  
**EP 06005276 A 20060315**

Priority  
DE 102005017623 A 20050415

Abstract (en)  
[origin: EP1712853A2] The new unit is used in an air conditioning circuit operating with R774 refrigerant (alternatively R23, R116 or R123a). The expansion develops mechanical work, at least part of which is dissipated as losses. The drive unit (2) in which the flowing refrigerant (A, B) develops mechanical work, is constructed as a conventional piston engine, a rotary piston engine, an axial turbine and/or a radial turbine (2). Work losses are dissipated in the form of thermal energy. An adjustable braking unit (6) is included. An independent claim is included for the corresponding expansion method.

IPC 8 full level  
**F25B 41/06** (2006.01)

CPC (source: EP US)  
**F25B 9/06** (2013.01 - EP US); **F25B 41/31** (2021.01 - EP US); **F25B 2309/061** (2013.01 - EP); **F25B 2400/141** (2013.01 - EP)

Citation (search report)

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- [X] EP 0176149 A2 19860402 - PHILIPS NV [NL]
- [X] WO 0142035 A1 20010614 - BOSCH GMBH ROBERT [DE], et al
- [X] DE 1024534 B 19580220 - SULZER AG
- [X] JP H06123509 A 19940506 - KOBE STEEL LTD
- [A] DE 19813220 A1 19990930 - UNIV DRESDEN TECH [DE]
- [A] CH 430854 A 19670228 - BRITISH OXYGEN CO LTD [GB]
- [A] DE 60101375 T2 20041209 - ZEXEL VALEO CLIMATE CONTR CORP [JP]

Cited by  
CN106837431A

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

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1712853 A2 20061018; EP 1712853 A3 20090225; DE 102005017623 A1 20061019**

DOCDB simple family (application)  
**EP 06005276 A 20060315; DE 102005017623 A 20050415**