

Title (en)  
Expansion valve

Title (de)  
Entspannungsventil

Title (fr)  
Vanne de détente

Publication  
**EP 1380801 A2 20040114 (EN)**

Application  
**EP 03015469 A 20030709**

Priority  
• JP 2002202013 A 20020711  
• JP 2003133266 A 20030512

Abstract (en)  
The stroke of a valve element 8 of an expansion valve is set such that refrigerant flows at a flow rate 1.0 to 1.4 times the flow rate corresponding to the set tonnage. This means a limit of the valve lift to fully open state during start-up and prevents an unnecessary and excessive refrigerant flow and reduces flow noise of refrigerant during start-up and allows to save driving force for the compressor. <IMAGE>

IPC 1-7  
**F25B 41/06**; F16K 31/68

IPC 8 full level  
**B60H 1/32** (2006.01); **F16K 31/68** (2006.01); **F25B 41/06** (2006.01)

CPC (source: EP KR US)  
**F25B 41/335** (2021.01 - EP KR US); **F25B 2341/0683** (2013.01 - EP KR US); **F25B 2500/12** (2013.01 - EP KR US)

Citation (applicant)  
JP 2002310539 A 20021023 - TGK CO LTD

Cited by  
US2016195318A1

Designated contracting state (EPC)  
DE FR IT

DOCDB simple family (publication)  
**EP 1380801 A2 20040114**; **EP 1380801 A3 20050504**; **EP 1380801 B1 20080528**; CN 1260537 C 20060621; CN 1470822 A 20040128; DE 60321274 D1 20080710; JP 2004093106 A 20040325; JP 4118740 B2 20080716; KR 20040007290 A 20040124; US 2004007015 A1 20040115

DOCDB simple family (application)  
**EP 03015469 A 20030709**; CN 03145902 A 20030710; DE 60321274 T 20030709; JP 2003133266 A 20030512; KR 20030046588 A 20030710; US 61583803 A 20030710