

Title (en)  
CONDENSER

Title (de)  
VERFLÜSSIGER

Title (fr)  
CONDENSEUR

Publication  
**EP 1531309 A2 20050518 (EN)**

Application  
**EP 04257015 A 20041112**

Priority  
GB 0326443 A 20031113

Abstract (en)  
A condenser (1) primarily for use in an automotive air conditioning system has a first and second heat transfer tube arrangements (4a,4b) in upstream and downstream portions of the condenser of different hydraulic diameters. The hydraulic diameters of the downstream tube arrangement is typically of larger value. The arrangement provides amelioration of reduced flow 'choking' effects, particularly for sub-cooled liquid refrigerant passes. <IMAGE>

IPC 1-7  
**F25B 39/04**; **F28D 1/053**

IPC 8 full level  
**F25B 39/04** (2006.01); **F25B 40/02** (2006.01); **F28D 1/04** (2006.01); **F28D 1/053** (2006.01); **F28F 1/02** (2006.01)

CPC (source: EP)  
**F25B 39/04** (2013.01); **F25B 40/02** (2013.01); **F28D 1/0443** (2013.01); **F28D 1/05383** (2013.01); **F28F 1/022** (2013.01); **F25B 2339/044** (2013.01); **F25B 2500/01** (2013.01); **F28D 2021/0084** (2013.01)

Citation (applicant)  
• EP 0219974 A2 19870429 - MODINE MFG CO [US]  
• US 2001029748 A1 20011018 - BURK ROLAND [DE], et al  
• JP H09178299 A 19970711 - SHOWA ALUMINUM CORP

Cited by  
US2018038661A1; DE102006035993A1; EP1816424A1; EP2667134A4; DE102011005177A1; JPWO2016092655A1; FR2910121A1; EP4166871A4; US9970694B2; US7757753B2; WO2008064238A1; WO2012022806A1; WO2012022807A1; WO2008071511A1; WO2016092655A1; WO2019006887A1

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 1531309 A2 20050518**; **EP 1531309 A3 20050720**; GB 0326443 D0 20031217

DOCDB simple family (application)  
**EP 04257015 A 20041112**; GB 0326443 A 20031113