

Title (en)  
Air conditioner

Title (de)  
Klimaanlage

Title (fr)  
Climatiseur

Publication  
**EP 2587177 A3 20171206 (EN)**

Application  
**EP 12161716 A 20120328**

Priority  
KR 20110110386 A 20111027

Abstract (en)  
[origin: EP2587177A2] Provided is an air conditioner. The air conditioner includes an indoor unit and an outdoor unit. The outdoor unit includes a compressor, an outdoor heat exchanger, a supercooling unit for supercooling a refrigerant, a first refrigerant pipe allowing the supercooling unit to communicate with a suction side of the compressor, a first valve disposed in the first refrigerant pipe, a second refrigerant pipe connecting the compressor to the first refrigerant pipe, and a second valve disposed in the second refrigerant pipe. In a first refrigerant flow mode, a refrigerant flowing into the supercooling unit is introduced into the compressor through the second refrigerant pipe. In a second refrigerant flow mode, a refrigerant compressed by the compressor is discharged into the second refrigerant pipe.

IPC 8 full level  
**F25B 1/10** (2006.01); **F24F 1/30** (2011.01); **F24F 11/06** (2006.01); **F25B 49/02** (2006.01); **F25B 13/00** (2006.01)

CPC (source: EP KR US)  
**F24F 1/30** (2013.01 - EP US); **F24F 11/83** (2017.12 - EP US); **F24F 11/84** (2017.12 - EP KR US); **F25B 1/10** (2013.01 - EP KR US); **F25B 40/02** (2013.01 - KR); **F25B 41/00** (2013.01 - KR); **F25B 49/02** (2013.01 - KR); **F25B 49/027** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 2313/0233** (2013.01 - EP US); **F25B 2313/0253** (2013.01 - EP US); **F25B 2313/02741** (2013.01 - EP US); **F25B 2400/075** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2600/0261** (2013.01 - EP US); **F25B 2600/2509** (2013.01 - EP US)

Citation (search report)  
• [XII] WO 2009082367 A1 20090702 - CARRIER CORP [US], et al  
• [XI] WO 2006062860 A2 20060615 - CARRIER CORP [US], et al

Cited by  
CN115419966A; EP2886977A1; EP3034962A1; US9982925B2; US10041705B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2587177 A2 20130501**; **EP 2587177 A3 20171206**; CN 103090470 A 20130508; CN 103090470 B 20150722; KR 101319778 B1 20131017; KR 20130046055 A 20130507; US 2013104594 A1 20130502

DOCDB simple family (application)  
**EP 12161716 A 20120328**; CN 201210094252 A 20120329; KR 20110110386 A 20111027; US 201213438045 A 20120403