

Title (en)  
MULTI-SPLIT AIR CONDITIONER CAPABLE OF REFRIGERATING AND HEATING SIMULTANEOUSLY

Title (de)  
MULTISPLIT-KLIMAANLAGE FÜR GLEICHZEITIGE KÜHL- UND HEIZOPERATIONEN

Title (fr)  
CLIMATISEUR À DIVISIONS MULTIPLES APTE À RÉFRIGÉRER ET À CHAUFFER SIMULTANÉMENT

Publication  
**EP 2589889 A1 20130508 (EN)**

Application  
**EP 11800068 A 20110310**

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Abstract (en)  
Disclosed is a multi-split air conditioner capable of refrigerating and heating simultaneously. A heating circuit consists of a compressor(1), an oil-gas separator(2), a four-way valve(3), indoor heat exchanging systems(12,16,21,22), an outdoor heat exchanger(7), a four-way valve(3), and a gas-liquid separator(26) connected in series along the refrigerant flow direction. A refrigerating circuit consist of a compressor(1), an oil-gas separator(2), a four-way valve(3), an outdoor heat exchanger(7), indoor heat exchanging systems(12,16,21,22), and a gas-liquid separator(26) connected in series along the refrigerant flow direction. A parallel pipeline is arranged at a pipeline between the outdoor heat exchanger(7) and the indoor heat exchanging systems(12,16,21,22), and is utilized for connecting an second electronic expansion valve(8) with a second one-way valve(9) in parallel. A series pipeline is arranged with a third control valve(5) and a third one-way valve(6). An end of the series pipeline is connected to the pipeline between the four-way valve(3) and the outdoor heat exchanger(7), and another end of the series pipeline is connected to the pipeline between a first one-way valve(4) and the indoor exchanging systems(12,16,21,22). Five operation modes, i.e. single refrigerating, single heating, mainly refrigerating, mainly heating, simultaneous refrigerating and heating, can be realized in the multi-split air conditioner capable of refrigerating and heating simultaneously.

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