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(72) Inventors:
• **KIM, Woo Hyun**
Seoul (KR)
• **JUNG, Gyoo Ha**
Suwon-Si, Gyeonggi-do (KR)
• **PARK, Moon Soo**
Dongan-Gu, Anyang-Si, Gyeonggi-do (KR)

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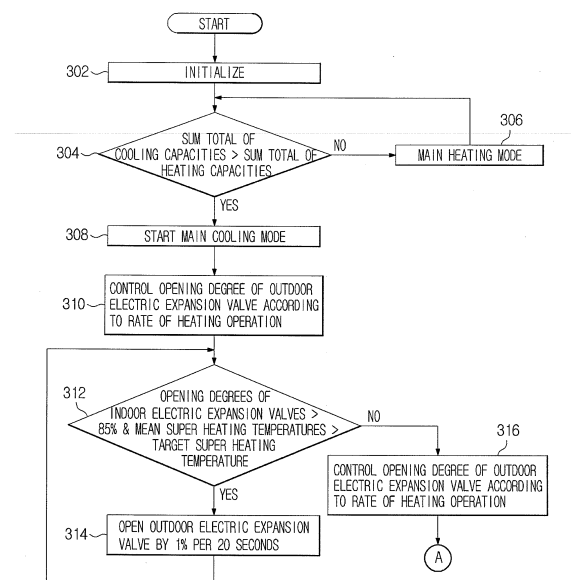
(71) Applicant: **Samsung Electronics Co., Ltd.**
Suwon-si, Gyeonggi-do, 443-742 (KR)

(74) Representative: **Grey, Ian Michael et al**
Venner Shipley LLP
200 Aldersgate
London EC1A 4HD (GB)

(54) **Air conditioner**

(57) An air conditioner and a method for controlling the same, in which the quantity of a refrigerant supplied to indoor heat exchangers (evaporators) is controlled according to the opening degrees of indoor electric expansion valves and super heating temperatures of the indoor heat exchangers (evaporators), thereby increasing cooling efficiency of the air conditioner. The method includes operating a compressor to compress the refrigerant, supplying the compressed refrigerant, condensed by an outdoor heat exchanger, to indoor units through an outdoor expansion valve, and controlling an opening degree of the outdoor expansion valve according to opening degrees of indoor expansion valves of the indoor units, performing cooling operation, and super heating temperatures of the indoor units to control the quantity of the refrigerant supplied to the indoor units.

FIG.3A



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PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 05 10 2202

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	JP H09 210491 A (MATSUSHITA ELECTRIC IND CO LTD; MATSUSHITA REFRIGERATION) 12 August 1997 (1997-08-12) * abstract; figures 1-5 * * paragraph [0083] * -----	7-13	INV. F25B13/00
A	JP 2000 146263 A (SANYO ELECTRIC CO) 26 May 2000 (2000-05-26) * abstract; figures 1-3 * -----	7-13	
A	US 2004/182101 A1 (SHIMODA JUNICHI [JP] ET AL) 23 September 2004 (2004-09-23) * abstract; figures 1-4 * -----	7-13	
			TECHNICAL FIELDS SEARCHED (IPC)
			F25B F24F
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search: see sheet C			
Place of search		Date of completion of the search	Examiner
The Hague		26 September 2013	Yousufi, Stefanie
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		& : member of the same patent family, corresponding document	

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**INCOMPLETE SEARCH
SHEET C**

Application Number
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Claim(s) completely searchable:
7-13

Claim(s) not searched:
1-6

Reason for the limitation of the search:

See clarification request.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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26-09-2013

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP H09210491	A	12-08-1997	NONE	

JP 2000146263	A	26-05-2000	NONE	

US 2004182101	A1	23-09-2004	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82