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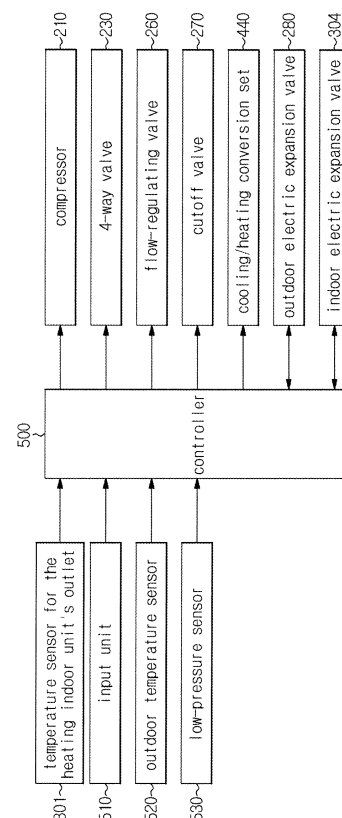
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(54) **Multi air-conditioner for simultaneously cooling/heating room air and method for controlling the same**

(57) A multi air-conditioner (100) for simultaneously cooling/heating room air and a method for controlling the same are disclosed. The multi air-conditioner for simultaneously cooling/heating room air includes: a high-pressure gas pipe (410), a low-pressure gas pipe (430), and a liquid line (420), which are connected between at least one outdoor unit (200) and a plurality of cooling/heating switching sets (300); a flow-regulating valve (260) mounted to a bypass pipe (250) connected between the high-pressure gas pipe (410) and the liquid pipe (420); and a controller (500) for increasing an opening degree of the flow-regulating valve, if a heating rate is not below a reference rate during a heating-biased operation and is equal to or less than a required cooling capacity of an indoor cooling unit during the heating-biased operation.

FIG. 2



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EUROPEAN SEARCH REPORT

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EP 08 15 0592

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A	EP 1 635 129 A2 (HITACHI AIR CONDITIONING SYS [JP]) 15 March 2006 (2006-03-15) * paragraphs [0001], [0023]; claim 1; figures 1, 2 *	1,2,6-8	
A	US 2003/010047 A1 (SHIMODA JUNICHI [JP]) 16 January 2003 (2003-01-16) * paragraphs [0002], [0080]; figure 1 *	3-5,9-11	
A	US 5 388 422 A (HAYASHIDA NORIAKI [JP] ET AL) 14 February 1995 (1995-02-14) * column 29, line 14 - column 30, line 12; figure 1 *	3-5,9-11	
			TECHNICAL FIELDS SEARCHED (IPC)
			F25B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 2 April 2015	Examiner Melo Sousa, Filipe
CATEGORY OF CITED DOCUMENTS 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 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 & : member of the same patent family, corresponding document			

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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1, 2, 6-8

A multi air-conditioner with a flow-regulating valve

2. claims: 3-5, 9-11

A multi air-conditioner with a controller that calculates the saturation pressure and stagnation pressure

**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.
The members are as contained in the European Patent Office EDP file on
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02-04-2015

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