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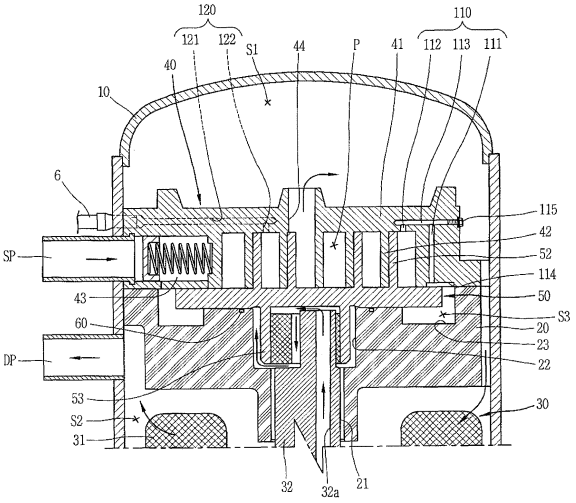
(54) Compressor and refrigerating apparatus having the same

(57) A scroll compressor and a refrigerating apparatus having the same are provided. In the scroll compressor, an angle formed between an injection passage that guides refrigerant from a condenser back into an intermediate compression chamber and a back pressure passage that guides refrigerant from the intermediate compression chamber into a back pressure chamber may be designed so as to prevent leakage of refrigerant from the intermediate compression chamber into the back pressure chamber. This allows an appropriate pressure to be maintained the back pressure chamber, and increases an amount of refrigerant supplied into the compression chambers, thereby improving performance of the scroll compressor and a refrigerating apparatus in which such a scroll compressor is installed.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 10 15 4576

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	WO 2007/050292 A1 (EMERSON CLIMATE TECHNOLOGIES [US]; IGNATIEV KIRILL M [US]; FOGT JAMES) 3 May 2007 (2007-05-03) * the whole document *	1-3,7,8, 11-13	INV. F04C18/02 F04C27/00 F04C29/04
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Y	EP 0 725 255 A2 (HITACHI LTD [JP]) 7 August 1996 (1996-08-07) * the whole document *	1-11,13	

Y	US 5 277 563 A (WEN-JEN KUO [TW] ET AL) 11 January 1994 (1994-01-11) * the whole document *	1-11,13	

TECHNICAL FIELDS SEARCHED (IPC)

F04C
F01C

~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
Munich	5 August 2010	Sbresny, Heiko

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.

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see additional sheet(s)

☐ 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).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 10 15 4576

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: 1-13

A scroll compressor with an arrangement of first passages, for guiding refrigerant out of a compression chamber, and of second passages, for guiding refrigerant into a compression chamber, in one of the scrolls.

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2. claims: 14, 15

A refrigerating apparatus with a bypass pipe and a heat exchanger for re-heating the refrigerant.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 10 15 4576

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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05-08-2010

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