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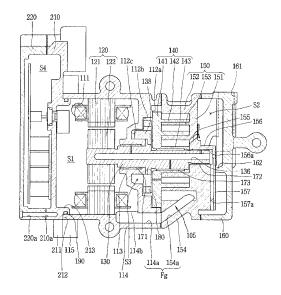
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## (54) MOTOR-OPERATED COMPRESSOR

(57)A motor-operated compressor according to the present disclosure includes a first scroll performing an orbiting motion, a second scroll coupled to the first scroll to form a compression chamber with the first scroll and radially supporting a rotation shaft, a main housing coupled to the second scroll outside the second scroll, and coupled with a driving motor to form a motor chamber, the main housing including an opened end at one side of the motor chamber, a frame portion formed at another side of the motor chamber to axially support the second scroll, and a first bearing portion formed through the frame portion so that the rotation shaft is inserted therethrough to be radially supported, and an inverter housing coupled to the opened end of the main housing to seal the motor chamber, whereby a main frame can be easily formed and a compressor fabrication process can be simplified.

FIG. 2



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Category

#### **EUROPEAN SEARCH REPORT**

**DOCUMENTS CONSIDERED TO BE RELEVANT** Citation of document with indication, where appropriate,

of relevant passages

**Application Number** EP 19 18 9778

CLASSIFICATION OF THE APPLICATION (IPC)

INV.

Relevant

1,3,9-13

to claim

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The present search report has	been drawn up for all claims			
Place of search	Date of completion of the search	Examiner		
Munich	17 April 2020	Sbresny, Hei		
CATEGORY OF CITED DOCUMENTS  X: particularly relevant if taken alone Y: particularly relevant if combined with anot document of the same category A: technological background	E : earlier patent docume after the filing date her D : document cited in the	T: theory or principle underlying the invention     E: earlier patent document, but published on, or after the filling date     D: document oited in the application     L: document oited for other reasons		
O: non-written disclosure P: intermediate document	& : member of the same document	& : member of the same patent family, corresponding document		

WO 2012/156010 A1 (VALEO JAPAN CO LTD [JP]; GUITARI IMED [FR] ET AL.) 22 November 2012 (2012-11-22) F01C19/00 F01C21/00 \* the whole document \* 2 F01C21/02 \* figures 1,3,5 \* F04C18/02 \* page 5, line 12 - line 39 \*
\* page 7, line 15 - page 8, line 3 \* F04C27/00 F04C29/02 F04C29/04 DE 11 2016 004778 T5 (MITSUBISHI HEAVY IND 1,3,9-13 Χ THERMAL SYSTEMS LTD [JP]) 28 June 2018 (2018-06-28) \* the whole document \* \* figure 1 \* \* paragraph [0021] - paragraph [0027] \* Χ US 2011/200466 A1 (VANBRITSON TIMOTHY 1,3,9-13 RAYMOND [US] ET AL) 18 August 2011 (2011-08-18) \* the whole document \* \* figures 3,5 \* \* column 17 - column 25 \* TECHNICAL FIELDS SEARCHED (IPC) \* claim 1 \* F01C KR 2013 0011646 A (HALLA CLIMATE CONTROL 1,3,9-13 F04C Χ CORP [KR]) 30 January 2013 (2013-01-30) \* abstract \* \* figure 3 \* US 5 152 682 A (MOROZUMI NAOYA [JP] ET AL) 1,4-8 6 October 1992 (1992-10-06) \* the whole document \* \* figure 3 \* \* column 5, line 59 - column 6, line 20 \* -/--4 Examiner 1503 03.82 (P04C01) Sbresny, Heiko the invention published on, or

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## **EUROPEAN SEARCH REPORT**

Application Number EP 19 18 9778

CLASSIFICATION OF THE APPLICATION (IPC)

TECHNICAL FIELDS SEARCHED (IPC)

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4	The present search report has been drawn up for all claims				
3	Place of search		Date of completion of the search		CL
P04CC	<u> </u>	Munich	1/ /	April 2020	Sbr
50 83 83 83 84 HOH	CATEGORY OF CITED DOCUMENTS  T: theory or principle t E: earlier patent docul A: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background D: non-written disclosure  A: member of the sam E: member of the sam C: member of the sam		cument, but publice n the application or other reasons		
EPO	P : inte	rmediate document		document	

ril 2020 Sbresny, Heiko

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

Examiner

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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.					
10	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):					
15	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.					
20	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:					
25						
	see sheet B					
30						
	All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.					
35	As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.					
40	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:					
45						
	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:					
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55	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** EP 19 18 9778

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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: 2, 3(completely); 1, 9-13(partially)

Motor-operated compressor with a main housing and an inverter housing coupled to each other and a suction passage.

2. claims: 4-8(completely); 1(partially)

Motor-operated compressor with a main housing and an inverter housing coupled to each other and a hollow shaft for providing lubricant.

3. claims: 14, 15(completely); 1, 9-13(partially)

Motor-operated compressor with a main housing and an inverter housing coupled to each other and a a sealing member.

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

EP 19 18 9778

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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