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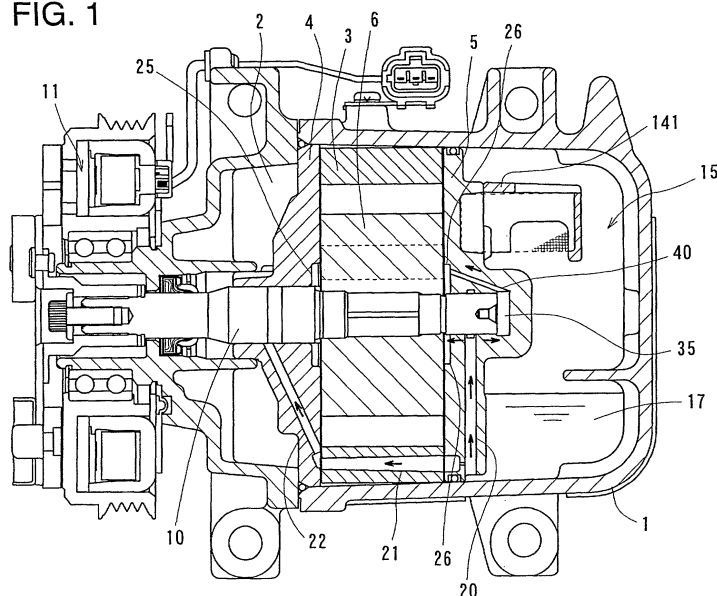
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(54) **Vane compressor**

(57) To abolish the O-ring for sealing the space on the rotor shaft rear end surface side. There are provided at the ends of a tubular cylinder (3) a front side block (4) and a rear side block (5), and a rotor rotatable by a rotor shaft is arranged in a cylinder, there being formed in the rotor (6) vane grooves in which vanes are accommodated there being further provided a high pressure chamber (15) and an oil sump portion (17), a lubricant oil space (35) being provided in the rear side block and on the rear end surface side of the rotor shaft, there being pro-

vided an oil supply passage for supplying oil to the lubricant oil space from the oil sump portion, there being provided in the rear side block or in the rotor shaft a vane back pressure chamber oil passage (40) whose one end communicates with the oil accommodating space (35) and whose other end communicates with the vane back chambers. The space on the rotor shaft rear end surface side can be formed solely by the rear side block, and the O-ring for sealing the high pressure chamber is abolished.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 653 991 A (TAKAO KUNIHICO ET AL) 31 March 1987 (1987-03-31) * figures 1,3,5 * * column 3, line 37 - column 4, line 45 * * column 5, line 23 - line 28 *	1,2	F04C18/344 F04C29/00 F01C21/08 F04C29/02 F01C21/10
X	PATENT ABSTRACTS OF JAPAN vol. 009, no. 294 (M-431), 20 November 1985 (1985-11-20) -& JP 60 132086 A (TOYODA JIDO SHOKKI SEISAKUSHO KK), 13 July 1985 (1985-07-13) * abstract * * figures 1,2 *	1	
A	EP 0 761 972 A (SEIKO SEIKI KK) 12 March 1997 (1997-03-12) * figures 1-3 * * column 3, line 31 - column 4, line 8 * * column 5, line 35 - line 42 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F04C F01C
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		8 January 2003	Lequeux, F
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 O : document cited in the application C : document cited for other reasons & : member of the same patent family, corresponding document			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims 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 the first ten claims.

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:

1,2



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**LACK OF UNITY OF INVENTION
SHEET B**

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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

Vane compressor with groove in the front end surface of the rear side block

2. Claims: 1,3

Vane compressor with throttle valve into an oil passage going through the shaft

**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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08-01-2003

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