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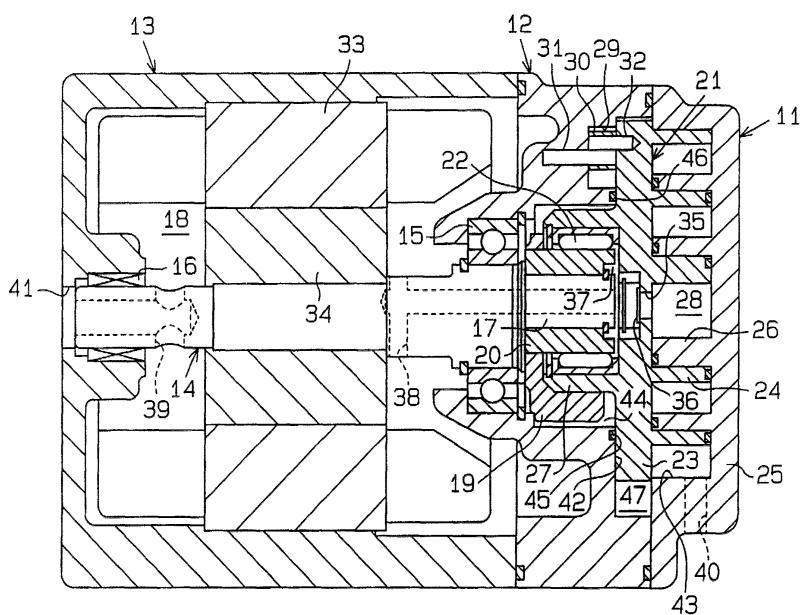
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(54) Scroll-type compressor

(57) A scroll-type compressor having an improved seal structure includes a stationary scroll (11) and a movable scroll (21). Gas is discharged to an inner zone (44) through a discharge port (35) in accordance with orbital movement of the movable scroll (21). The seal

structure includes a seal member (46), which is located between a movable base plate (23) and a radial projection (42). The seal member (46) substantially prevents gas that is discharged from the discharge port (35) from flowing radially from the zone (44). The seal member (46) is moved axially by the force of gas pressure.

Fig.1





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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US 4 928 503 A (RIFFE DELMAR R) 29 May 1990 (1990-05-29)	1-7	F04C18/02 F04C27/00
Y	* column 5, line 19 - column 6, line 20; figures 1,3,4 *	8	
Y	US 4 992 032 A (BARITO THOMAS R ET AL) 12 February 1991 (1991-02-12) * claim 1; figure 2 *	8	
X	US 4 552 518 A (UTTER ROBERT E) 12 November 1985 (1985-11-12) * column 3, line 18 - line 37; figure 1 *	1-7	
X	PATENT ABSTRACTS OF JAPAN vol. 017, no. 263 (M-1415), 24 May 1993 (1993-05-24) -& JP 05 001682 A (DAIKIN IND LTD), 8 January 1993 (1993-01-08) * abstract *	1-7	
A	US 5 645 408 A (FUJIO KATSUHARU ET AL) 8 July 1997 (1997-07-08) * column 8, line 44 - line 64; figure 3 *	4,5	TECHNICAL FIELDS SEARCHED (Int.Cl.7) F04C
A	US 5 593 295 A (HILL JOE T) 14 January 1997 (1997-01-14) * claim 1; figure 1 *	9	
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search		Examiner
THE HAGUE	12 February 2002		Dimitroulas, P
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
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ON EUROPEAN PATENT APPLICATION NO.

EP 00 12 0916

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.

12-02-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4928503	A	29-05-1990	CA DE FR GB HK IT JP SG	1311730 A1 3923304 A1 2636100 A1 2220708 A ,B 45293 A 1231480 B 2067483 A 18393 G	22-12-1992 25-01-1990 09-03-1990 17-01-1990 21-05-1993 07-12-1991 07-03-1990 16-04-1993
US 4992032	A	12-02-1991	BR DK EP JP MX	9004861 A 421910 T3 0421910 A1 3138474 A 163943 B	10-09-1991 30-05-1994 10-04-1991 12-06-1991 02-07-1992
US 4552518	A	12-11-1985	CA DE FR GB HK JP JP JP	1222733 A1 3506375 A1 2559847 A1 2154664 A ,B 93992 A 1937046 C 6065880 B 60190690 A	09-06-1987 22-08-1985 23-08-1985 11-09-1985 04-12-1992 09-06-1995 24-08-1994 28-09-1985
JP 05001682	A	08-01-1993	JP	3028642 B2	04-04-2000
US 5645408	A	08-07-1997	JP JP CN KR	2956509 B2 8193583 A 1137100 A 162917 B1	04-10-1999 30-07-1996 04-12-1996 15-01-1999
US 5593295	A	14-01-1997	NONE		