



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.03.2007 Bulletin 2007/13

(51) Int Cl.:
F04D 23/00 (2006.01) F04D 29/08 (2006.01)

(43) Date of publication A2:
21.06.2006 Bulletin 2006/25

(21) Application number: **05026935.6**

(22) Date of filing: **09.12.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(72) Inventors:
• **Krines, Jürgen**
97645 Oberwaldbehrungen (DE)
• **Rjabchenko, Evgenij**
97616 Bad Neustadt (DE)
• **Seufert, Robert**
97654 Basthelm (DE)

(30) Priority: **15.12.2004 DE 202004019366 U**

(71) Applicant: **Gardner Denver Elmo Technology GmbH**
97616 Bad Neustadt a.d. Saale (DE)

(74) Representative: **Rau, Albrecht et al**
Patentanwälte
Rau, Schneck & Hübner
Königstrasse 2
90402 Nürnberg (DE)

(54) **Compressor, in particular lateral channel compressor**

(57) The compressor, in particular lateral channel compressor, comprises a casing member (2, 4) and an impeller (6) which is disposed therein rotatably about an axial axis of rotation and which is spaced from the casing member (2, 4) by a sealing gap (18). The sealing gap is sealed by means of a sealing arrangement which com-

prises an encircling sealing ring (20) and a spring element (34, 44, 46, 48) that forces the sealing ring (20) against a contact surface (22). The spring load that is applied by the spring element (34, 44, 46, 48) helps obtain automatic, dynamic adaptation to alternating spatial geometries during operation, for example upon temperature fluctuations, which ensures constantly good sealing effects.

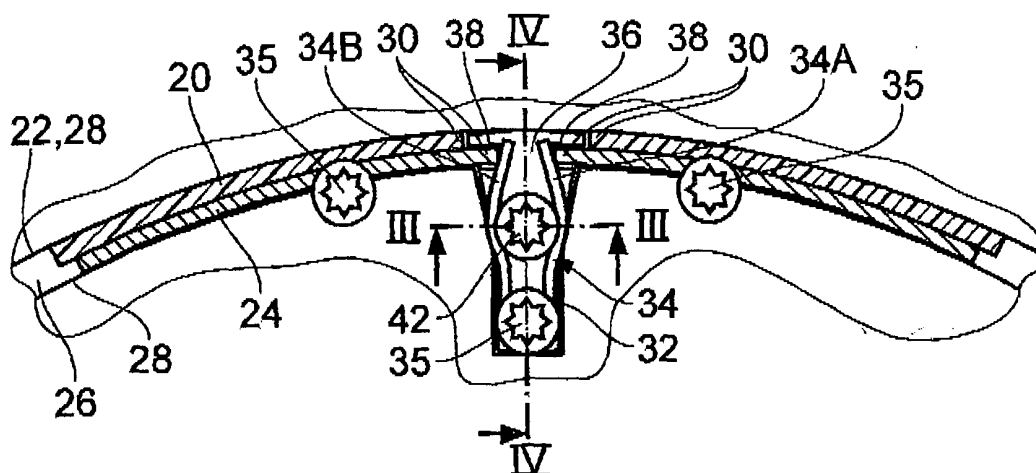


Fig. 2



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 05 02 6935

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	GB 1 448 578 A (SIEMENS AG) 8 September 1976 (1976-09-08) * page 1, line 49 - line 65 * * page 1, line 85 - line 91; figure 4 * -----	1,12	INV. F04D23/00 F04D29/08
X	DE 44 15 566 A1 (SERO PUMPENFABRIK GMBH [DE]) 9 November 1995 (1995-11-09) * column 2, line 68 - column 3, line 15; figure 4a *	1,12	
A		2-5	
X	* column 3, line 23 - line 27; figure 4e * -----	1,12	
X	DE 103 17 010 A1 (SCHMITT KREISELPUMPEN GMBH & C [DE]) 4 November 2004 (2004-11-04) * paragraphs [0037], [0047]; figure 9 *	1,12	
X	* paragraph [0048]; figure 10 * -----	1,12	
X	FR 2 185 155 A (DIOSGYOERI GEPGYAR [HU]) 28 December 1973 (1973-12-28) * page 5, line 35 - page 6, line 11; figure 10 *	1,12	

X	DE 42 44 458 A1 (MITSUBISHI ELECTRIC CORP [JP]) 1 July 1993 (1993-07-01) * column 11, line 10 - line 26; figures 14,15 * -----	1,12	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) F04D
Place of search Munich		Date of completion of the search 16 February 2007	Examiner DI GIORGIO, F
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

2
EPO FORM 1503 03.82 (P04C01)

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

EP 05 02 6935

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.

16-02-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 1448578	A	08-09-1976	CH 560326 A5 27-03-1975
			FR 2199340 A5 05-04-1974
			IT 993191 B 30-09-1975
DE 4415566	A1	09-11-1995	NONE
DE 10317010	A1	04-11-2004	NONE
FR 2185155	A	28-12-1973	NONE
DE 4244458	A1	01-07-1993	IT 1256815 B 21-12-1995