



(11) EP 1 672 221 A3

(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

(30) Priority: 15.12.2004 DE 202004019366 U

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

(72) Inventors:

- Krines, Jürgen
97645 Oberwaldbehrungen (DE)
- Rjabchenko, Evgenij
97616 Bad Neustadt (DE)
- Seufert, Robert
97654 Bastheln (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.

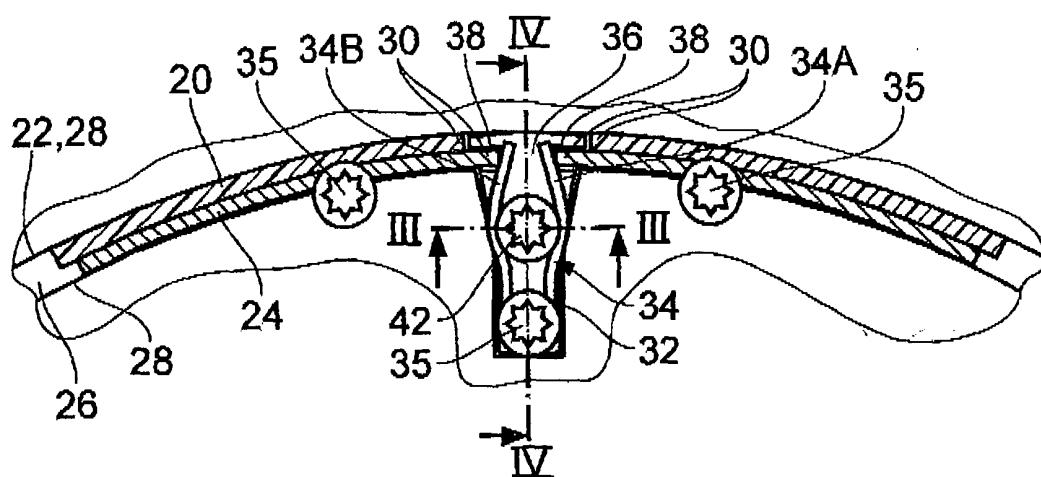


Fig. 2



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
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 PUMPFABRIK GMBH [DE]) 9 November 1995 (1995-11-09) * column 2, line 68 - column 3, line 15; figure 4a *	1,12	
A	* column 3, line 23 - line 27; figure 4e *	2-5	
X	-----	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	-----	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	-----	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	TECHNICAL FIELDS SEARCHED (IPC)
	-----		F04D
2 The present search report has been drawn up for all claims			
2	Place of search	Date of completion of the search	Examiner
	Munich	16 February 2007	DI GIORGIO, 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 D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**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 FR IT	560326 A5 2199340 A5 993191 B		27-03-1975 05-04-1974 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