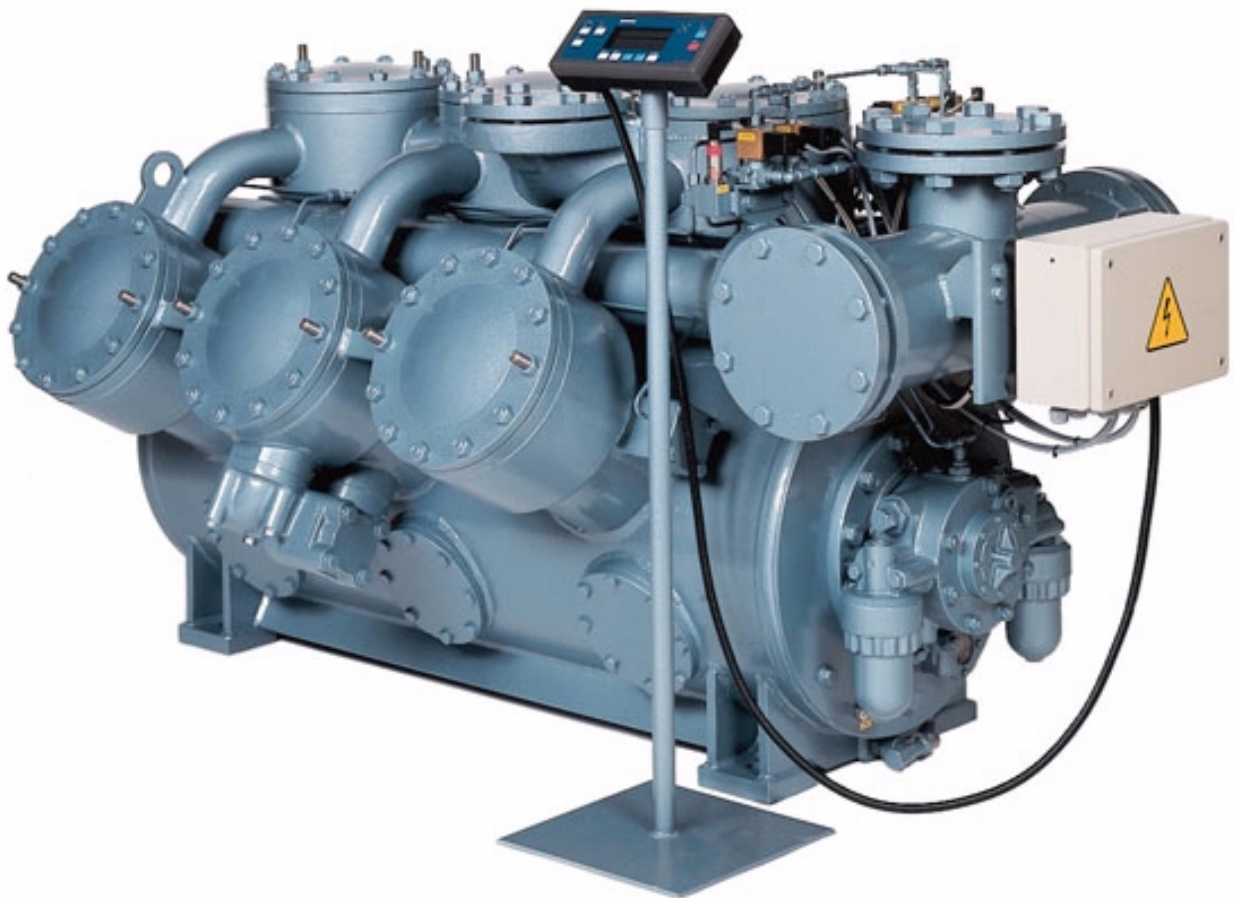


Reciprocating Compressors for industrial refrigeration Series RC12

Parts List (PL)



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This manual must be carefully read and understood prior to installing and servicing the compressor (package)

General Safety

All service operations described in this servicemanual are only to be carried out by well-trained/qualified personnel and even then only after this service manual has been read carefully and is fully understood.

Personal safety

Observe all (inter)national and/or local safety standards, measures and regulations during reinstalling, repairing and connecting the compressor (package).

Mechanical safety

If the compressor does not have to be removed from its base, it is advisable to put warning labels on vital parts of the compressor saying that the plant is out-of-operation and must not be started up.

If the compressor has to be opened for service, the frigerant has to be pumped down and the electric supply has to be cut off.

After having run the initial 100 operating hours, it is essential (in both new and modified plants) to replace the red running-in filter element with the permanent filter element supplied.

On reinstalling a compressor, it should be checked whether the direction of rotation of the compressor has remained the same.

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Preface

This preface gives a survey of the types of documentation and software available for this Grasso compressor series.



All Grasso documentation and Grasso selection software is available on CD-Roms (Consult Grasso).

1) Grasso Refrigeration Equipment Catalogue (REC)

Contents

This catalogue contains all Product Information (engineering data) and all brochures of the reciprocating compressors, screw compressors, air purgers, chillers, packages, etc. This catalogue also includes the CD-Rom 'Grasso Software' and the CD-ROM 'Documentation Navigator'.

User group

Project engineers, applications engineers, sales managers and product managers for both end-users and contractors.

Distribution

Sales Department of Grasso.

2) Grasso CD-ROM 'Grasso Software'

Contents

COMSEL programme (the Grasso COMPRESSOR SELECTION programme), PURGER programme (to calculate energy savings and pay-back time) and REVALCO software (to select Revalco valves, check valves, Revalco parts etc.).

User group

Project engineers, application engineers, sales managers, product managers for both end-users and contractors.

Distribution

Sales Department of Grasso.

3) Grasso CD-ROM 'Documentation Navigator'

Contents

All Grasso documentation including a user friendly navigation system.



With this CD-rom it is possible to re-use all text, graphics, tables, etc. for various purposes (presentations, reports, ...)

User group

Project engineers, application engineers, sales managers, product managers for both end-users and contractors.

Distribution

Sales Department of Grasso.

4) Product Information (Engineering Data Sheets; ED)

Contents

All product information (engineering data) for this series compressor and the corresponding recommended accessories. It is meant to be a guide to the selection of these components.

User group

Project engineers, application engineers, sales managers, product managers for both end-users and contractors.

Distribution

Sales Department of Grasso.

5) Installation and maintenance manual (IMM)

Contents

This manual will provide information on how to transport, install, start-up and maintain the compressor (package). It also contains a number of "Product Information Sheets" and the current "Parts List"

User group

To be used in the field by qualified personnel for both end-user and contractor.

Distribution

Supplied together with the compressor.

6) Instructions for Accessories (IFA)

Contents

All the relevant mounting and installation instructions and spare parts information for those accessories supplied with the compressor.

User group

To be used in the field by qualified personnel for both end-user and contractor.

Distribution

Supplied together with the compressor.

7) Parts list (PL)

Contents

All current parts of the compressor and accessories together with the design changes applicable to previous supplied components ("History").

User group

Service and parts department for both end-user and contractor.

Distribution

Service and Parts Department of Grasso.

8) Service & Maintenance Schedules (SMS)

Contents

Complete set of service and maintenance schedules for 100 operating hours up to 48000 operating hours (inspection, renewal, measuring, cleaning, ...) of the bare shaft compressor.

User group

Service and parts department and in the field by qualified personnel for both end-user and contractor.

Distribution

Service and Parts Department of Grasso.

9) Service and Maintenance Manual (SIM)

Contents

Description of (re)assembling, inspection, repair and part or total overhaul of the bare shaft compressor. This manual should be used together with the 'Installation and Maintenance Manual'.

User group

To be used in the field by qualified personnel of refrigeration installers or contractors.

Distribution

Service and Parts Department of Grasso.

10) Miscellaneous

Typographic signs:

Indicates a caution, note or procedure to which you should pay special attention.
READ IT CAREFULLY!



Indicates a WARNING. READ IT CAREFULLY!



Indicates an IMPORTANT note or procedure to which you should pay special attention.



Indicates a HINT.

Values between []

Values between [] are read-outs of Grasso's electronic control device Monitron CR.

Release Notes Parts List (PL) RC12

	Description	Date M-YY	Ref.
1	Previous version 00.89.276-v010.00.01	03-01	KK

Cylinder numbering of Grasso reciprocating compressors

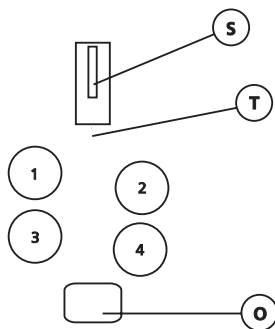


Fig. 1 Cylinder numbering Grasso reciprocating compressors

Legend	
1, 2, 3, ...	Cylinder numbers
T	Top view of compressor
S	Shaft-end of compressor
O	Oil pump of compressor

Booster or single-stage operation

Booster operation applies if condensing temperature $< 5^{\circ}\text{C}$.

Single stage operation applies if condensing temperature $\Rightarrow 5^{\circ}\text{C}$.

1. PARTS COMPRESSOR

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Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-01 COMPRESSOR HOUSING					
1	HEXAGON NUT	M16	0115810	-	
2	FLAT WASHER	M16	1113801	-	on item 5 only
3A	CYLINDER COVER	298.5P	0531997	-	without temp. sensor plug only
3B	CYLINDER COVER	298.5P-13G	0531999	-	with temp. sensor plug hole
4	GASKET	225X242X1.5	0903226	-	
5	STUD	M16x60	0151860	-	
6	STUD	M16x35	0151835	-	
7	RESTRICTION	NPTF13x0.5	0123020	-	only in HP-cylinders of two-stage compressors
8	NON-RETURN VALVE	NPTF -18-Lx1.5	0123138	-	in all cylinders of single stage compressors and LP-cylinders of two-stage compressors
9A	STUD	M16x35	0151835	23	
9B	STUD	M16x55	0151856	3	
10	O-RING	3.53x145	0955257	-	
11	SERVICE COVER	195X16	0530196	-	
12	HEXAGON HEAD BOLT	M12x35	0110635	8	
13	OIL CONNECTING LINE		*	-	refer to figure RC12-10
14	OIL SUCTION LINE		*	-	refer to figure RC12-10
15	ALU SEALING RING	21x27x2	0914023	1	
16	PLUG	G21	0136216	1	
17A	POCKET		0385333	-	for 2, 3, 4 and 6 cylinders
17B	POCKET		0385335	-	for 9 and 12 cylinders
18	ALU SEALING RING	33x39x2	0914033	1	
19	HEXAGON NUT	G33	0148331	1	
20	HEXAGON HEAD BOLT	M6x20	0110320	4	
21	O-RING	2.5X52	0952256	1	
22	SIGHT GLASS	46X80	1224046	1	
23A	SUCTION GAS STRAINER	2000	*	-	refer to figure rc12-11
23B	SUCTION GAS STRAINER	3000	*	-	refer to figure RC12-11
24	ALU SEALING RING	13.5x20x1	0912014	2	
25	PLUG	G13S	0136134	2	
26	STOP VALVE	TAH8-12	0607011	1	
27	NIPPLE COUPLING	12G21	0338211	1	
28	CONNECTION LINE	12X150	0412120	1	
29	NIPPLE COUPLING	12	0336012	1	
99	SWIVEL COUPLING	12G21	0339212	1	Oil return line

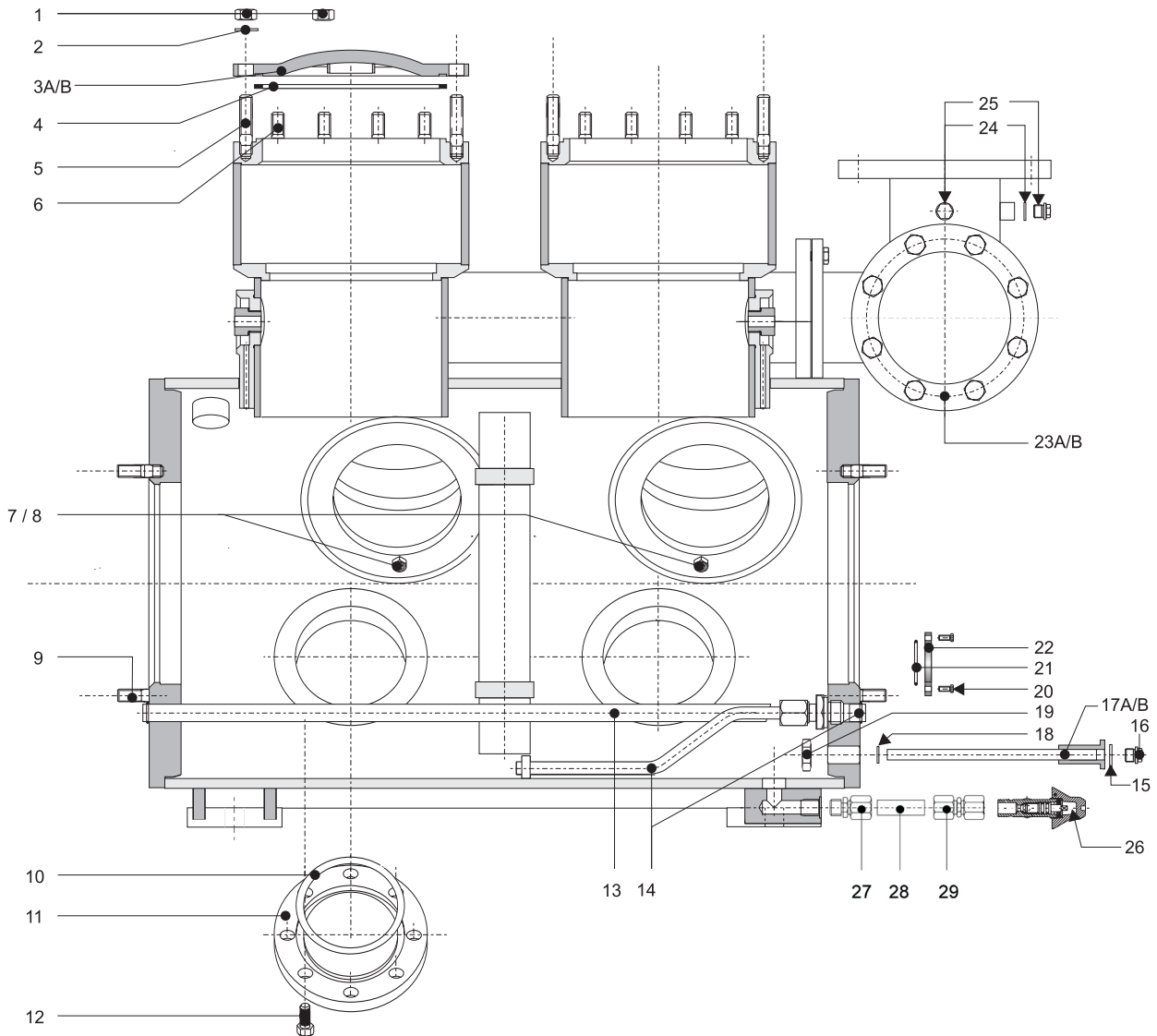


Fig. 1-1 RC12-01

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-02 BEARING COVERS AND INTERMEDIATE BEARINGS					
1	BEARING COVER ASSY RC12 (DRIVE SIDE)		*	1	(oil groove pointing at 12 o'clock)
1.1	BEARING COVER	RC12	2138812	1	
1.2	BEARING BUSH	90X96X103	1146291	1	
1.3	ALU SEALING RING	21x27x2	0914023	1	
1.4	PLUG	G21-BZK	0365821	1	
1.5	O-RING	3.53x21.8	0955212	1	
2	BEARING COVER ASSY RC12 (OIL PUMP SIDE)		*	1	(oil groove pointing at 12 o'clock)
2.1	BEARING COVER	RC12	2138822	1	
2.2	BEARING BUSH SET		2038006	1	contains pos. 2.2A and 2.2B
2.2A	BEARING BUSH	90x96x107A	*	1	
2.2B	THRUST RING	RC12	*	1	
2.03	NIPPLE COUPLING	6G13	0338136	1	
2.04	STUD	M12x110	0151610	7	
2.05	DOWEL PIN	4x8	1106408	1	
2.06	OIL BAFFLE		1926200	1	
2.07	TOOTHED SPRING WASHER	M6	1113303	3	
2.08	HEXAGON HEAD BOLT	M6x16	0110316	3	
2.09	ALU SEALING RING	21x27x2	0914023	2	
2.10	PLUG	G21-BZK	0365821	2	
2.11	DOWEL PIN	6x12	1106612	1	
2.12	O-RING	3.53x21.8	0955212	1	
3	BEARING BLOCK	90M	1169901	-	
3.1	BEARING BLOCK HALVES	90M	*	1	in 4-6-9-12 cyl. compressors only
3.2	BEARING SHELL	90x81	1144900	-	in two pieces
3.3	HEXAGON HEAD BOLT	M16x80	0110880	4	in two pieces
3.4	FLAT WASHER	M16	1113801	4	
3.5	DOWEL PIN	12x26	1106226	2	
4	O-RING	5.33X240.67	0955375	2	
5	LOCKING RING	M20	1139100	2	for each intermediate bearing
6	HEXAGON HEAD BOLT	M20X40	0110140	2	for each intermediate bearing
7	FLAT WASHER	M16	1113801	24	
8	HEXAGON NUT	M16	0115810	24	
10	HOLD DOWN DISC	149S	*	-	
10.1	DOWEL PIN	8x28	1106829	2	
10.2	DOWEL PIN	5x20	1106520	1	
10.3	CARRIER DISC	149M10	1125149	1	
11	SOCKET HEAD SCREW	M10X40	0104540	4	

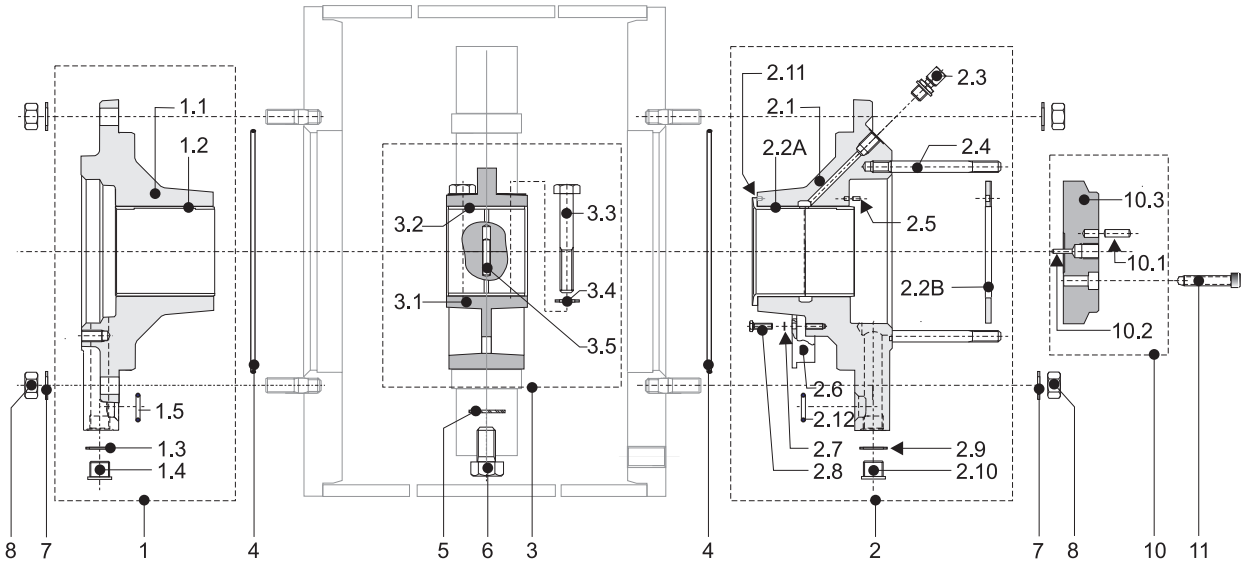


Fig. 1-2 RC12-02

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-03 CRANKSHAFT					
1A.a	CRANKSHAFT	E-RC212S	2239200	1	2-cyl compressor
1A.b	CRANKSHAFT	K-RC211S	2239210	1	ditto, with approval
1B.a	CRANKSHAFT	E-RC312S	2239300	1	3-cyl. compressor
1B.b	CRANKSHAFT	K-RC311S	2239310	1	ditto, with approval
1C.a	CRANKSHAFT	E-RC412S	2239400	1	4-cyl. compressor
1C.b	CRANKSHAFT	K-RC411S	2239410	1	ditto, with approval
1D.a	CRANKSHAFT	E-RC612S	2239600	1	6-cyl. compressor
1D.b	CRANKSHAFT	K-RC611S	2239610	1	ditto, with approval
1E.a	CRANKSHAFT	E-RC912S	2239900	1	9-cyl. compressor
1E.b	CRANKSHAFT	E-RC912S	2239910	1	ditto, with approval
1F.a	CRANKSHAFT	E-RC1212S	2239000	1	12-cyl. compressor
1F.b	CRANKSHAFT	K-RC1212S	2239010	1	ditto, with approval
1.1	CRANKSHAFT	E/K-RC12	*	1	
1.2	COUNTERBALANCE WEIGHT		*	-	
1.3	LOCKING RING SET	M16 / 13-ST-G.V.	1139800	-	
1.4	HEXAGON HEAD BOLT	M16x80	0110880	-	2-, 3-, 4- and 6-cyl. compressor
1.5	SPACER ASSY	90X116X60S M	1112990	1	in 2-cyl. compressor only
1.5.1	FITTED BOLT	M8X10X10	0124410	2	
1.5.2	SPACER	90x116x60E	*	1	
1.5.3	LOCKING NUT	M8	0145400	2	
2	KEY	22X14X120	1102012	1	
3	HUB FIXING	M24X108	1915211	1	
4	LOCKING PLATE	M24xM12	1114248	1	
5	FLAT WASHER	M12	1113601	1	
6	HEXAGON HEAD BOLT	M12x35	0110635	4	

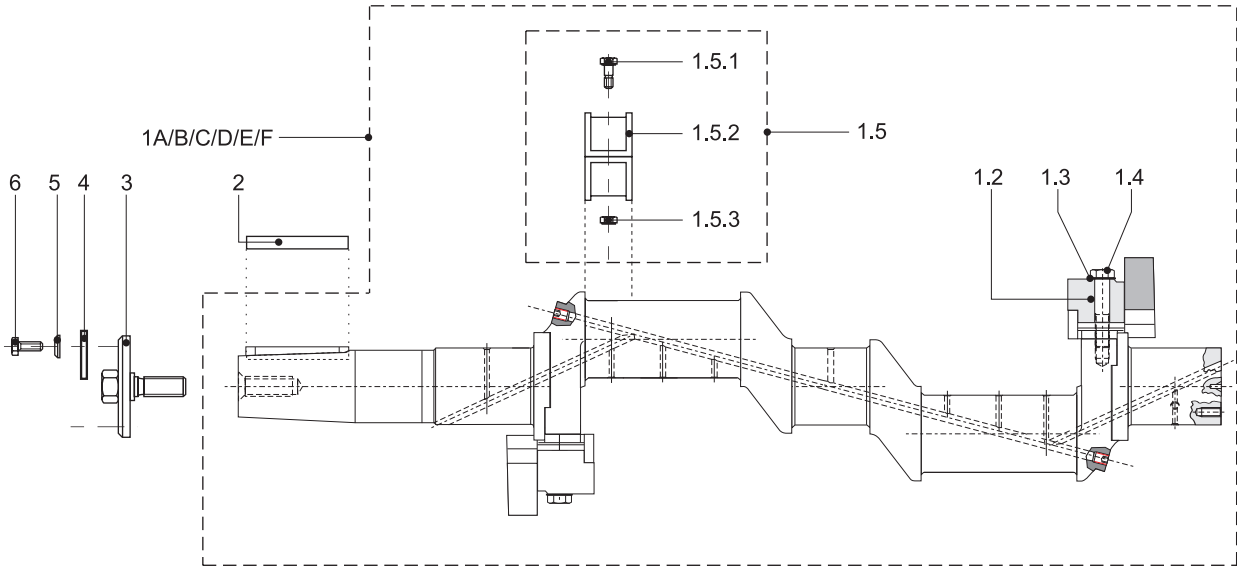


Fig. 1-3 RC12-03

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-04 PISTON AND CONNECTING ROD					
1	PISTON ASSY	S160x50x160 K110M	2417011	1	
1.1	GUDGEON PIN	36x50x148RC 11	2418320	1	
1.2	PISTON		*	1	
1.3	LOCKING PLATE	M125	1114642	1	
1.4	LOCKING BOLT	M12x35	0144635	1	
1.5	SET OF PISTON RINGS		0974160	1	
2A	CONNECTING ROD	S275RC11LD	2419510	-	only in single-stage compressors and in LP-cylinders of two-stage compressors
2A.1a	CON ROD (ALUMINIUM ALLOY)		*	1	
2A.2a	BEARING BUSH	50x62x60	1146652	1	
2B	CONNECTING ROD	S275RC11HD	2419520	-	only in HP-cylinders of two-stage compressors
2B.1b	CON ROD (ALUMINIUM ALLOY)		*	1	
2B.2b	NEEDLE BEARING	NK50/25	1163451	2	
2B.3b	DISTANCE BUSH	52x62x10	1116562	1	
2C.4	BEARING SHELL	90x53	1144590	1	
2C.5	CONNECTING ROD BOLT	MF16	0111810	2	
2C.6	LOCKING RING SET	M16 / 13-ST-G.V.	1139800	2	in two pieces
2C.7	HEXAGON NUT	MF16	0147805	2	

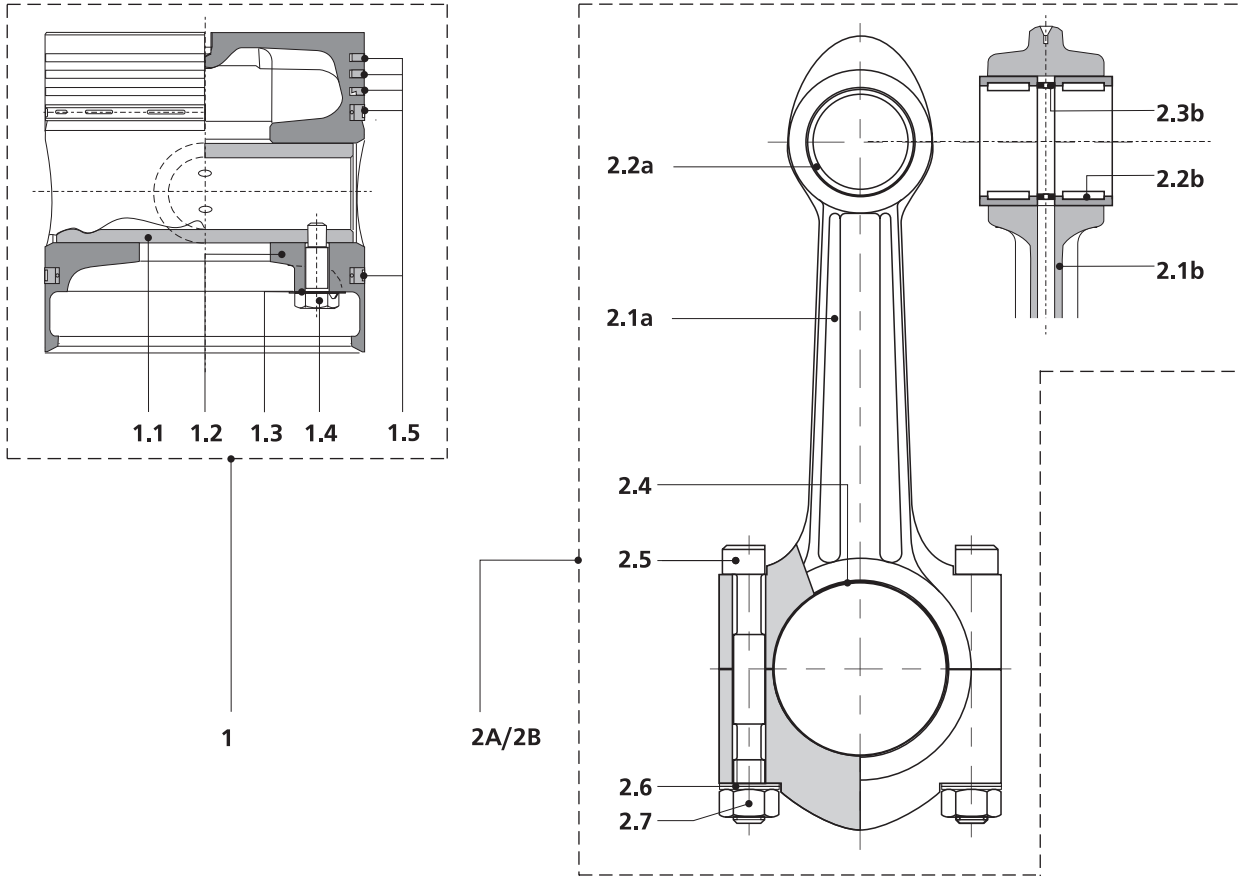


Fig. 1-4 RC12-04

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-05 CYLINDER AND VALVE-LIFTING MECHANISM					
1	CYLINDER LINER ASSY	160RC12S	2339110	1	
1.1	CYLINDER LINER	160RC11	2318010	-	
1.2	HEXAGON NUT	M6	0115310	4	
1.3	PRESSURE RING	RC12S	2738515	1	
1.4	PRESSURE SPRING	2x10x23x95	1131295	2	
1.5	SUPPORTING RING	160K110	2716570	1	
1.6	SPRING WIRE	0.75x3.1	1132081	1	
1.7	CYLINDER HEAD SCREW	M6x133	0168313	2	
1.8	SEMI CIRCULAR LEVER	K110	2716610	1	
1.9	SPLIT PIN	1.5x10	1107355	1	
1.10	LOCKING PIN	6x55	1108010	1	
1.11	WASHER	M6	1113301	1	
2.A	OILIT SEALING RING	207x216x1	0902206	1	1 mm thick
2.B	OILIT SEALING RING	207x216x1.25	0901206	1	1.25 mm thick
2.C	OILIT SEALING RING	207x216x1.5	0903206	1	1.5 mm thick
3	CONTROL PISTON SET	RC12E	2038134	-	
3.1	CYLINDRICAL PIN	14x50	*	1	
3.2	O-RING	3.53x59	0952376	1	
3.3	O-RING	3.5x44	0952350	1	
3.4	CONTROL PISTON		*	1	
4	FLAT WASHER	M10	1113501	4	
5	HEXAGON HEAD BOLT	M10x75	0110575	4	
6	PISTON HOUSING	RC12	2738650	1	
7	NIPPLE COUPLING	6G10	0338106	1	
8	ALU.SEALING RING	27x34x1	0912027	1	
9	NIPPLE	G27x14	0304514	1	

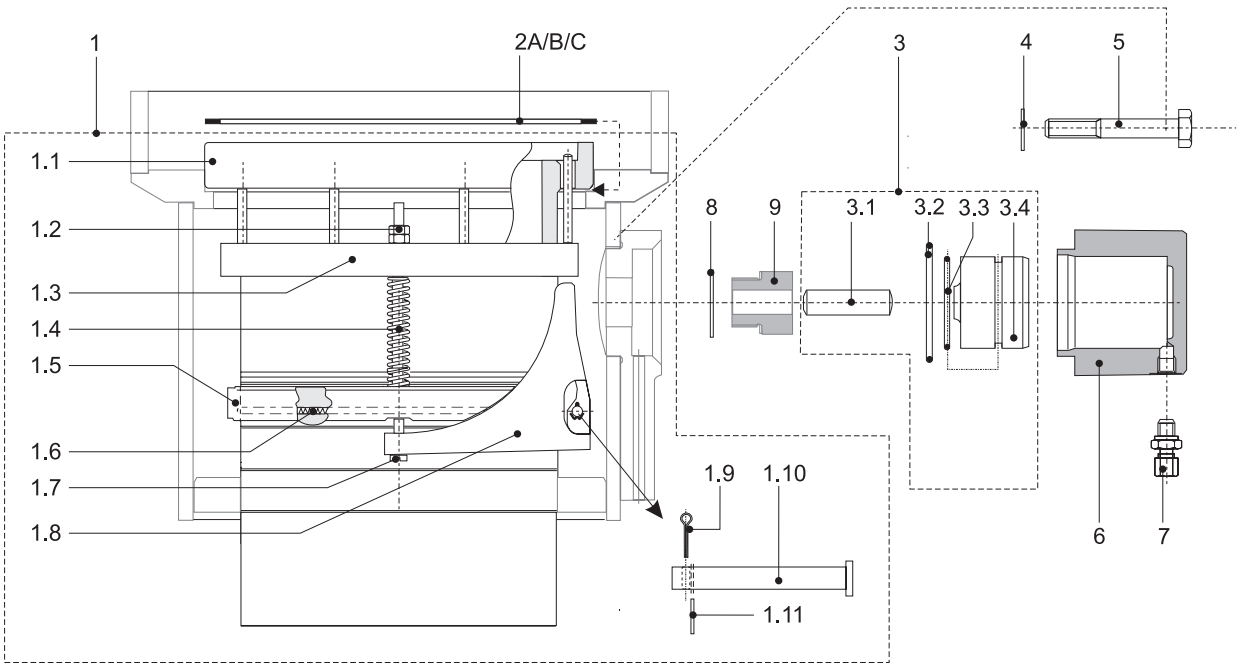


Fig. 1-5 RC12-05

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-06 SUCTION AND DISCHARGE VALVE					
1	PRESSURE SPRING	18x88x2.4x11 5	1131181	1	
2	RETAINER SPRING	160RC12-1	2738410	1	
3	DISCHARGE VALVE ASSY	160RC11E	2719111	1	
3.1	LOCKING NUT	M16	0145800	1	
3.3	STROKE LIMITOR	160RC11A	2718360	1	
3.4	DISCHARGE RING & SPRING SET		2038031	-	per cylinder
3.4.a	SINUSOIDAL SPRING	58x69	*	2	
3.4.b	SINUSOIDAL SPRING	76x87	*	2	
3.4.c	SINUSOIDAL SPRING	94x105	*	2	
3.4.d	VALVE RING	58x69x1	*	1	
3.4.e	VALVE RING	76x87x1	*	1	
3.4.f	VALVE RING	94x105x1	*	1	
3.5	VALVE PLATE	160RC11	2718265	1	
3.6	FITTED BOLT	M16x62-15	0124863	1	
4	SUCTION RING & SPRING SET		2038032	-	per cylinder
4.1	SINUSOIDAL SPRING	171x200	*	2	
4.2	VALVE RING	171x200x1	*	1	

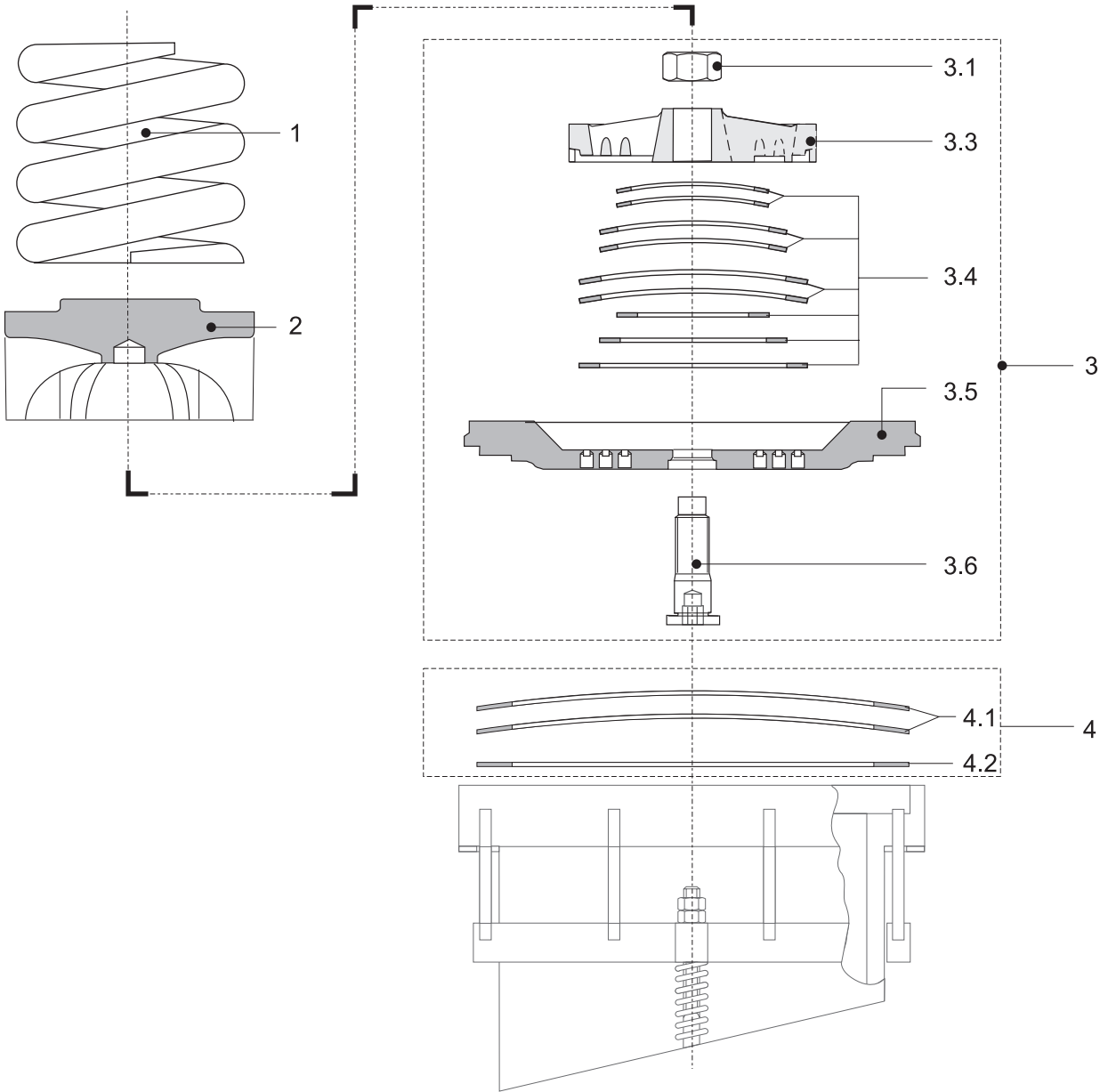


Fig. 1-6 RC12-06

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-07 ROTARY SHAFT SEAL					
1	SHAFT SEAL HOUSING	RC12	2638012	1	
2	HEXAGON HEAD BOLT	M12x35	0110635	8	
3	FLAT WASHER	M12	1113601	8	
4	ALU SEALING RING	13.5x20x1	0912014	1	
5	PLUG	G13S	0136134	1	
6	SHAFT SEAL SET	085B	2038100	1	
6.1	COUNTER-SLIP RING ASSEMBLY		*	1	
6.1.1	O-RING	101.1x3.53	0952390	1	
6.2	SLIP RING ASSEMBLY		*	1	
6.2.1	O-RING	84.95x4.0	0952340	1	
6.3	O-RING	3.53x145	0955257	1	
7	NIPPLE COUPLING	12G13	0338131	1	
8	BENT STEEL PRECISION TUBE	12x530	4405012	1	

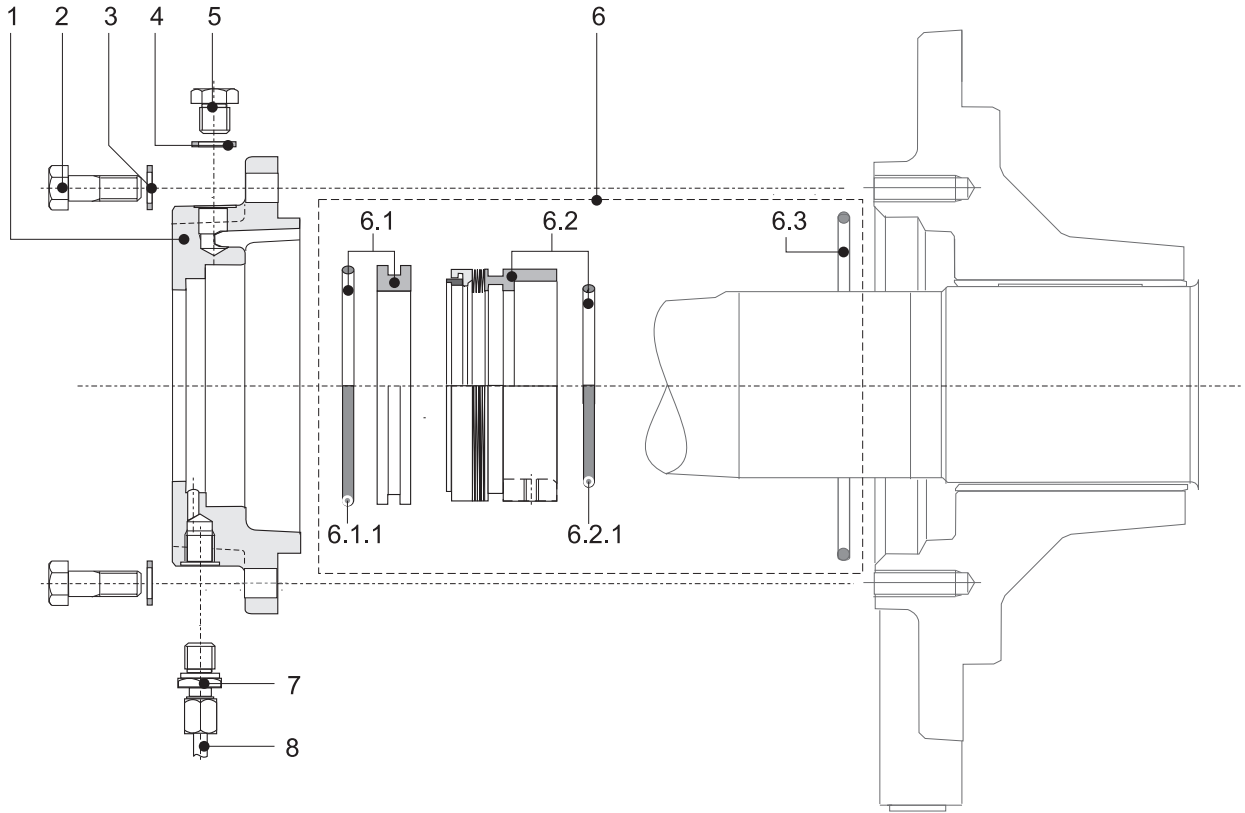


Fig. 1-7 RC12-07

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-08 OIL PUMP					
1	OIL PUMP SET	RC12	2038116	1	Important: In case the direction of rotation of the oil pump is counter clockwise, when facing the (mounted) oil pump housing, the non-standard oil pump assembly 2028117 is required.
1.1	OIL PUMP HOUSING	RC12	2638520	1	
1.2	PUMP ELEMENT		2638130	1	
1.3	HEXAGON HEAD BOLT	M6x20	0110320	8	
1.4	WASHER	M6	1113301	8	
1.5	CARRIER DISC	55x8	1125006	1	
1.6	DOWEL PIN	6x18x3	1106617	1	
1.7	GASKET	83x115x0.5	0903083	1	
2	CONTROL OIL PRESSURE REGULATOR SET		2038120	1	
2.1	ALU SEALING RING	10x18x1	0912010	1	
2.2	ALU SEALING RING	33x39x2	0914033	1	
2.3	O-RING	3.53x21.8	0955212	1	
3	CONTROL OIL PRESSURE REGULATOR SET		2038118	1	
3.1	ALU SEALING RING	10x18x1	0912010	1	
3.2	ALU SEALING RING	33x39x2	0914033	1	
3.3	O-RING	3.53x21.8	0955212	1	
4	ALU SEALING RING	21x27x2	0914023	5	
5	PLUG	G21-BZK	0365821	5	
6	T-COUPLING	6x6x6	0340406	1	
7	NIPPLE COUPLING	6G13	0338136	1	
8	SOCKET NIPPLE	G13xG21	0302213	1	
9	ADAPTOR FOR MEASUREMENT		0645606	1	
10	O-RING	3.53x21.8	0955212	2	
11	O-RING	3.53x145	0955257	1	
12	FLAT WASHER	M12	1113601	7	
13	HEXAGON NUT	M12	0115610	7	

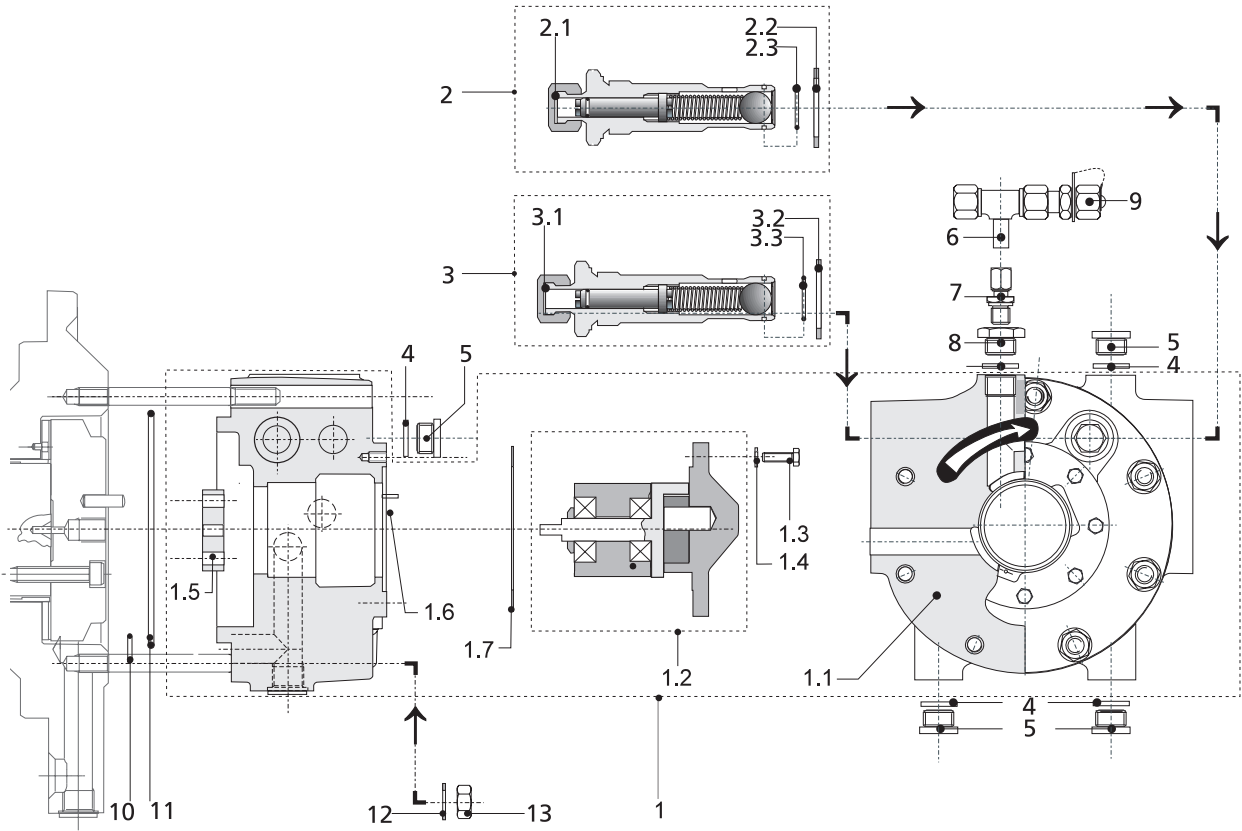


Fig. 1-8 RC12-08

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-09 OIL FILTERS					
1A/B	OIL FILTER HOUSING	24	*	1	for both suction and discharge side and without filter element
1A	SUCTION OIL FILTER ASSY	24	*	1	
1B	DISCHARGE OIL FILTER ASSY	24	*	1	
1.1	FILTER UPPER HOUSING		*	-	
1.2	SET OF SEALS		0990030	1	
1.3	FILTER CUP		*	1	
1.4	RING NUT		*	1	
1.5	SUCTION OIL FILTER SET (BLUE MARKED)	24	2038128	1	
1.6a	DISCHARGE OIL FILTER SET (GREY MARKED)	24	2038124	1	
1.6b	HIGH CAPACITY OIL FILTER SET (GREY MARKED)		2038125	1	longer (high capacity) filter
2	HEXAGON HEAD BOLT	M10x80	0110581	4	
3	FLAT WASHER	M10	1113501	4	
4	PLUG	G21-BZK	0365821	2	
5	ALU SEALING RING	21x27x2	0914023	2	
6.a	O-RING	2.65x25	0952281	2	up to serial number 00089999
6.b	O-RING	2.5x10	0952252	2	from serial number 00091000

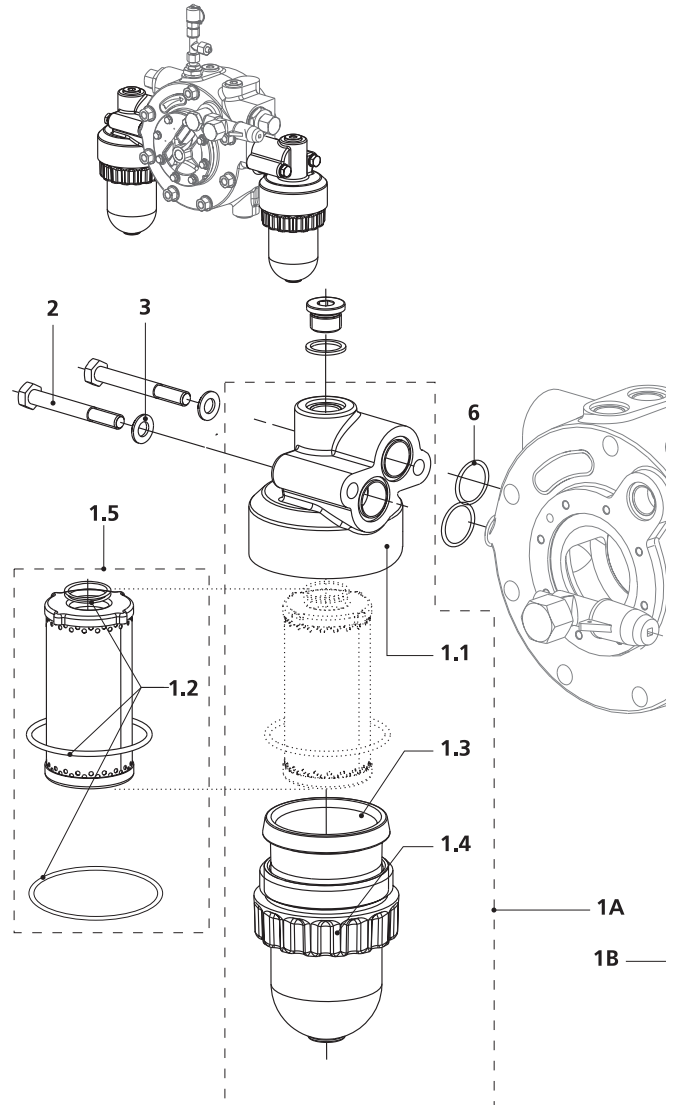


Fig. 1-9 RC12-09

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-10 LUBRICATING OIL LINES					
13.a	OIL CONNECTING LINE	22x2x535	0412253	1	for 2 and 3-cyl. compressors
13.b	OIL CONNECTING LINE	22x2x865	0412286	1	for 4-cyl. compressors
13.c	OIL CONNECTING LINE	22x2x925	0412292	1	for 6-cyl. compressors
13.d	OIL CONNECTING LINE	22x2x1315	0412213	1	for 9-cyl. compressors
13.e	OIL CONNECTING LINE	22x2x1705	0412217	1	for 12-cyl. compressors
14	OIL INTAKE LINE		*	1	
14.1	BENDED STEEL PRECISION PIPE	22x2x35x320	0438290	1	
14.2	NIPPLE COUPLING	22G22x1	0338273	1	
14.3	O-RING	3.53x21.8	0955212	1	
14.4	CONNECTION LINE	22x2x32	0412232	1	
15	O-RING	3.53x21.8	0955212	1	

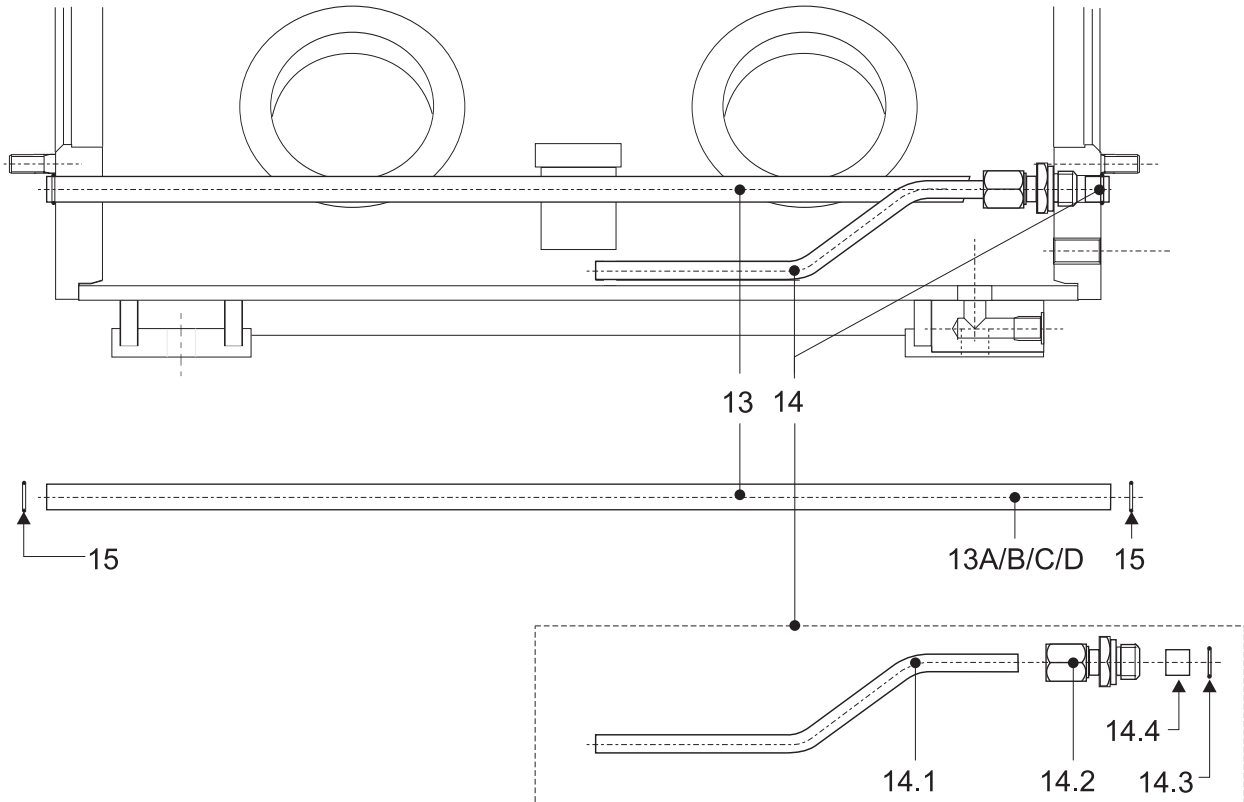


Fig. 1-10 RC12-10

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-11 SUCTION GAS STRAINER					
1A	SUCTION GAS FILTER SET	RC12-2000	2038130	-	1 piece for RC2112 / 4212 - 2 for RC212 / 312 / 412 / 3112 / 5112 / 612
1A.1	OILIT SEALING RING	170x230x1.5	0903168	1	compr. from 1-1-1997
1A.2	GAUZE FILTER ELEMENT	2000	*	1	
1B	SUCTION GAS FILTER SET	RC12-3000	2038131	-	1 piece for RC6312 / 8412 - 2 for RC912 / 7212 / 1212 / 9312 / 10212
1B.1	OILIT SEALING RING	195x255x1.5	0903195	1	compr. from 1-1-1997
1B.2	GAUZE FILTER ELEMENT	3000	*	1	
1.3	O-RING	2.65x13.95	0952269	1	
1.4	CIRCLIP RING	14	1103014	1	
2A.1	SUCTION HOUSING COVER	236x118	0530240	2	2 pieces for RC312 / 612 / 5112 and 1 for RC2112 / 4212
2A.2	SUCTION HOUSING COVER	236x74.5	0530239	2	for RC212 / 412 / 3112
2A.3	SUCTION HOUSING COVER	236	0530241	1	for RC2112 / 4212 - refer to history chapter for compr. before 1-1-1997
2B.1	SUCTION HOUSING COVER	260x118	0530263	-	1 piece for RC6312 / 8412 - 2 for RC912 / 7212 / 1212 / 9312 / 10212
2B.2	SUCTION HOUSING COVER	260	0530262	1	refer to history chapter for compr. before 1-1-1997
3	SPRING RETAINER	14.5x45	4836015	-	1 piece for RC2112 / 4212 - 2 for RC212 / 312 / 412 / 3112 / 5112 / 612
4	PRESSURE SPRING	6x40x2.7x42	1131601	-	1 piece for RC2112 / 4212 - 2 for RC212 / 312 / 412 / 3112 / 5112 / 612
5A	HEXAGON HEAD BOLT	M16x40	0185840	8	
5B	HEXAGON HEAD BOLT	M16x45	0185845	8	

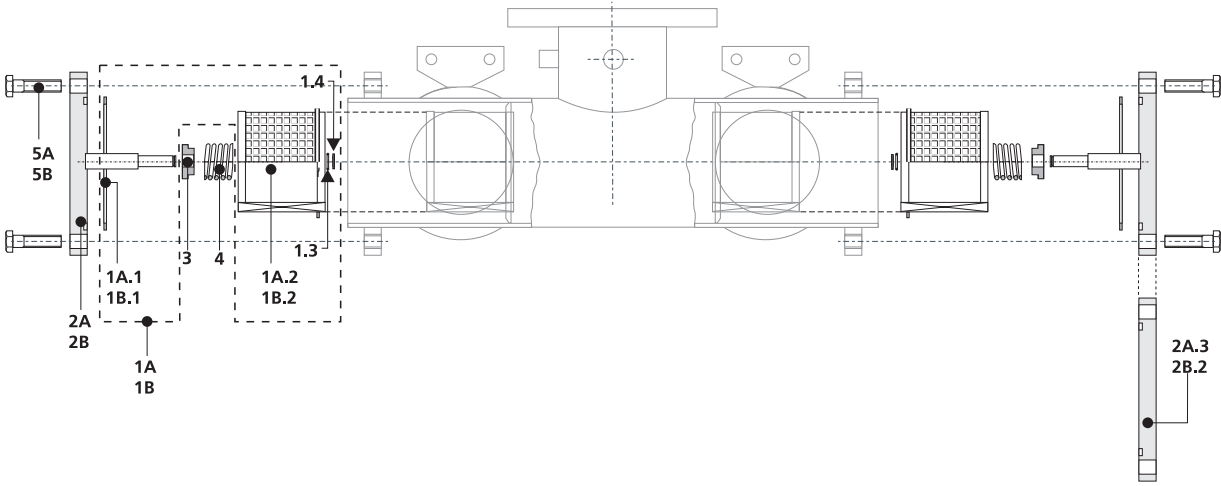


Fig. 1-11 RC12-11

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-12 High / Low PRESSURE RELIEF VALVES					
1.1	VALVE GROUP	48	4827048	-	
1A	(14.0 BAR) RELIEF VALVE - PRESSURE DEPENDENT	RC12-14	2839814	-	On LP-side of two-stage compr. RC2112/3112/4212/5112/6312/7212/8412/9312/10212
1B	(22 BAR) RELIEF VALVE - PRESSURE DEPENDENT	RC12E-22	2839822	-	For single stage compr./booster compr. RC212/312/412/612/912/1212
2	(23.0 BAR) RELIEF VALVE - PRESSURE INDEPENDENT	RC12-23	2839823	-	On HP-side of two-stage compr. /single stage compr./booster compr. acc. to DIN 8975 (whole range)
2.1	RELIEF VALVE HOUSING	48	1249212	1	
2.2	O-RING	3.53x66.27	0955231	1	
2.3	RELIEF VALVE ASSY		4827423	1	
3	HEXAGON HEAD BOLT	M12x45	0110645	4	on item 2 only
4	FLAT WASHER	M12	1113601	4	on item 2 only
5	HEXAGON HEAD BOLT	M12X95	0110696	2	
6	HEXAGON HEAD BOLT	M12X110	0110609	2	
7	HEXAGON HEAD BOLT	M12X120	0110612	2	
8	FLAT WASHER	M12	1113601	6	three bolts per blind flange
9	O-RING	3.53x59	0952376	2	when no relief valve is installed
10	HEX. HEAD BOLT	M12X40B	0110641	3	
11	BLIND FLANGE	90X102	0504890	2	

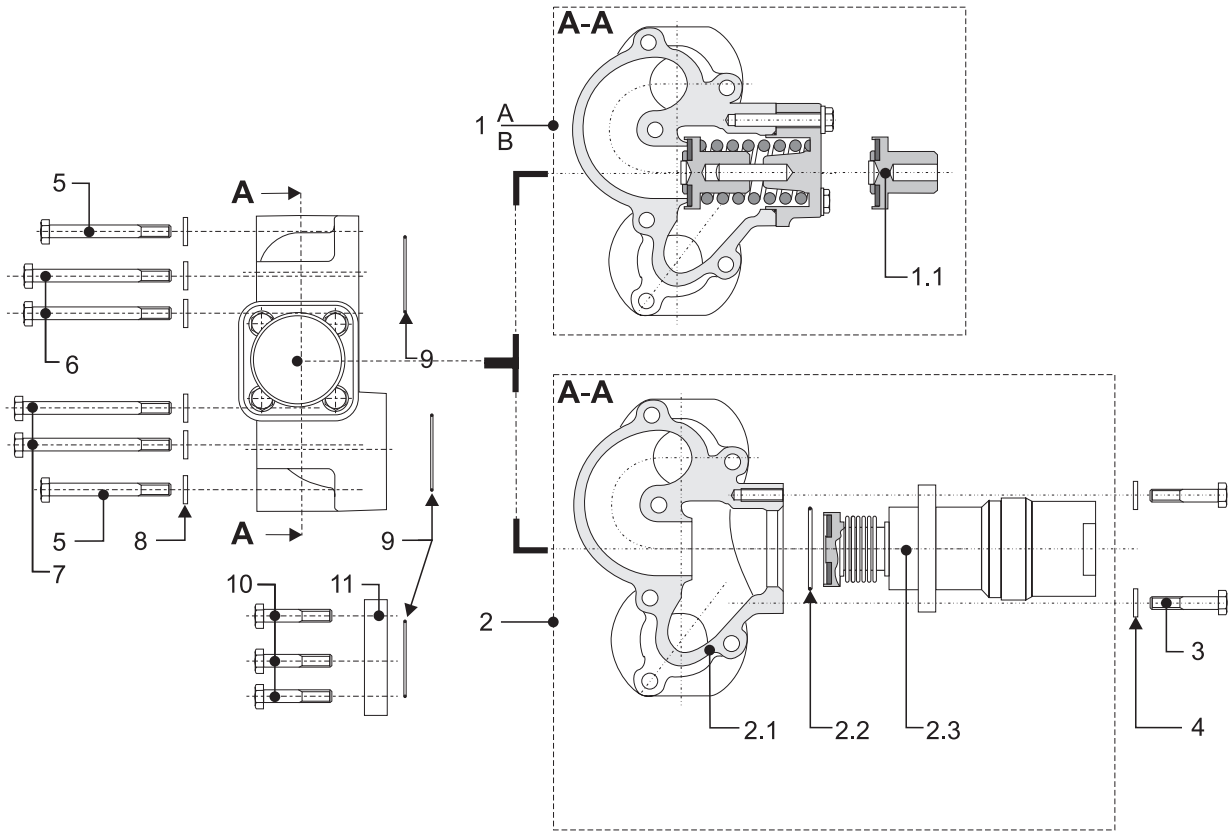
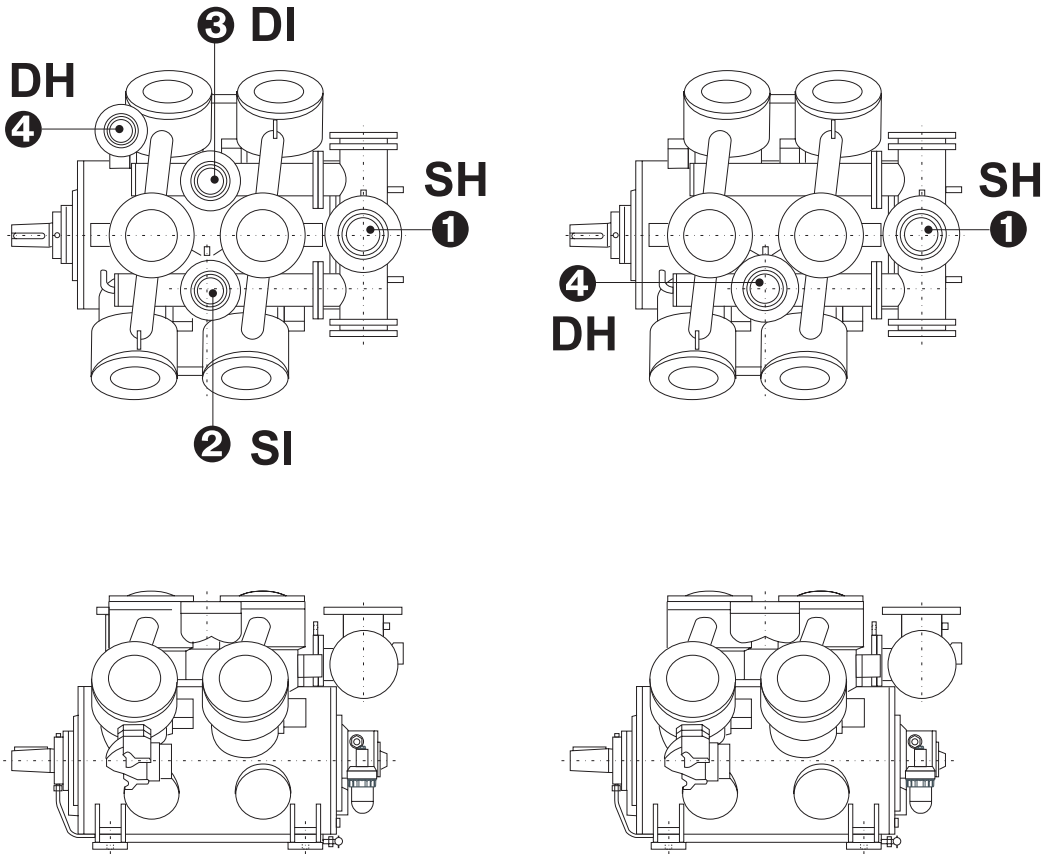


Fig. 1-12 RC12-12

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-13 MAIN FLANGE SEALING RINGS					
1.a	GASKET	106x120x2	0904106	1	RC212/312
1.b	GASKET	129x149x2	0904129	1	RC412/4212/6312/7212/8412/9312/10212
1.c	GASKET	155x175x2	0904155	1	RC612/912/1212/5112
1.d	GASKET	95x109x2	0904095	1	RC2112/3112
2.a	GASKET	61x75x2	0904061	1	RC2112/3112
2.b	GASKET	95x109x2	0904095	1	RC4212/5112/6312/7212/8412/9312//10212
3.a	GASKET	73x87x2	0904073	1	RC2112/3112
3.b	GASKET	106x120x2	0904106	1	RC4212/5112/6312/7212/8412/9312/10212
4.a	GASKET	95x109x2	0904095	1	RC212/312
4.b	GASKET	106x120x2	0904106	1	RC412/4212/5112/6312/7212/8412/9312/10212
4.c	GASKET	129x149x2	0904129	1	RC612/912/1212
4.d	GASKET	73x87x2	0904073	1	RC2112/3112



RC2112
RC3112
RC4212
RC5112
RC6312
RC7212
RC8412
RC9312
RC10212

RC212
RC312
RC412
RC612
RC912
RC1212

Fig. 1-13 RC12-13

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-14 STANDARD SETS OF PARTS, SEALS AND TOOLS					
A	BASIC GASKET / O-RING SET		2038017	1	
B	ADDITIONAL GASKET / O-RING SET	RC12(E)	2038018	-	for every two cylinders 1 set / for three cyl. compr. 2 sets, for nine cyl. compr. 5 sets
C	SET OF SPARE PARTS		2038021	1	for whole range
D	SUCTION RING & SPRING SET		2038032	-	for each cylinder of a 2-3-4-6-9-12 cylinder group
E	DISCHARGE RING & SPRING SET		2038031	-	for each cylinder of a 2-3-4-6-9-12 cylinder group
F	SHAFT SEAL SET	085B	2038100	1	
G	SET OF TOOLS		2038010	1	

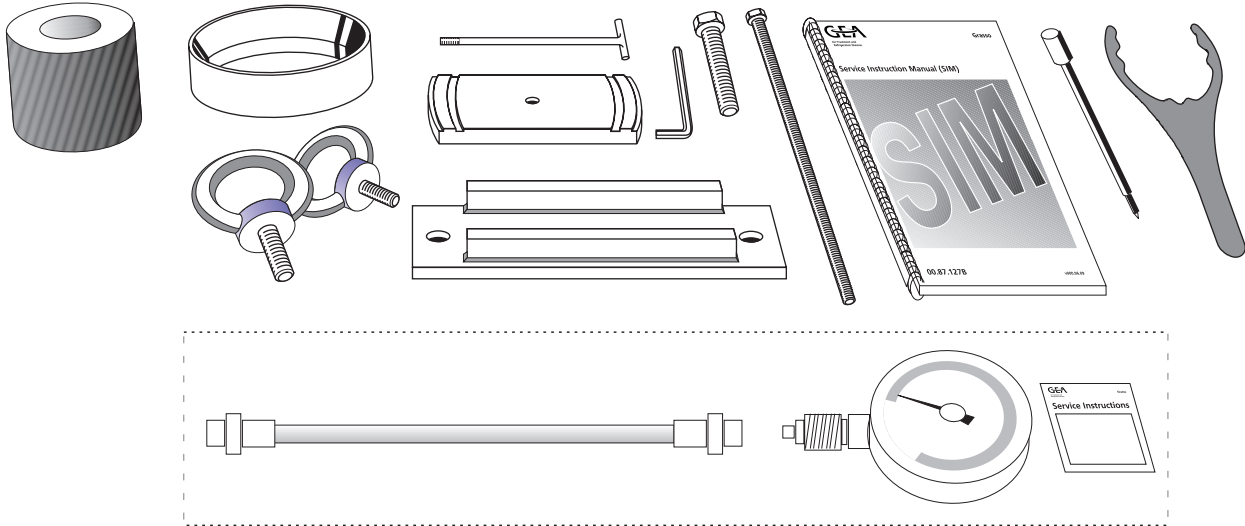


Fig. 1-14 RC12-14

2. PARTS ACCESSORIES

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Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A1 MANUALLY OPERATED CAPACITY CONTROL					
1	MANUAL CAPACITY CONTROL	110x12	1273212	1	
1.1	DISTRIBUTOR HOUSING	R6x613	*	1	
1.2	PLUG	G13	0136136	1	
1.3	ALU SEALING RING	13.5x20x1	0912014	-	
1.4	PRESSURE SPRING	0.75x5.2x7.5x 18	1131083	1	
1.5	BEAMING BALL	W6	1119004	1	
1.6	BALL BEARING	6004	*	2	
1.7	DISTRIBUTOR SPINDLE	42x106	*	1	
1.8	O-RING	2.5x10	0952252	2	
1.9	O-RING	3.5x44	0952350	1	
1.10	COVER	90x15	*	1	
1.11	INDICATION PLATE	088	1176088	1	
1.12	BUSH	8x8	4846108	1	
1.13	SOCKET HEAD SCREW	M10x20	0104520	3	
1.14	HAND GRIP	040	0249040	1	
1.15	CYLINDER HEAD SCREW	M4x20	0168220	1	
1.16A	SWIVEL COUPLING	6G13	0339136	-	total quantity 5
1.16B	PLUG	G13	0136136	-	total quantity 5
1.17	NIPPLE COUPLING	6G13	0338136	1	
1.18	COUNTERSUNK HEAD SCREW	M5x10	0169910	4	
2	CYLINDER HEAD SCREW	M5x10	0168910	4	
3	FLAT WASHER	M5	1113003	4	
4	HEXAGON HEAD BOLT	M10x20	0110520	2	
5	HEXAGON NUT (ZINC PLATED)	M10	0115510	2	
6	SUPPORT	U130x15x270	0243133	1	

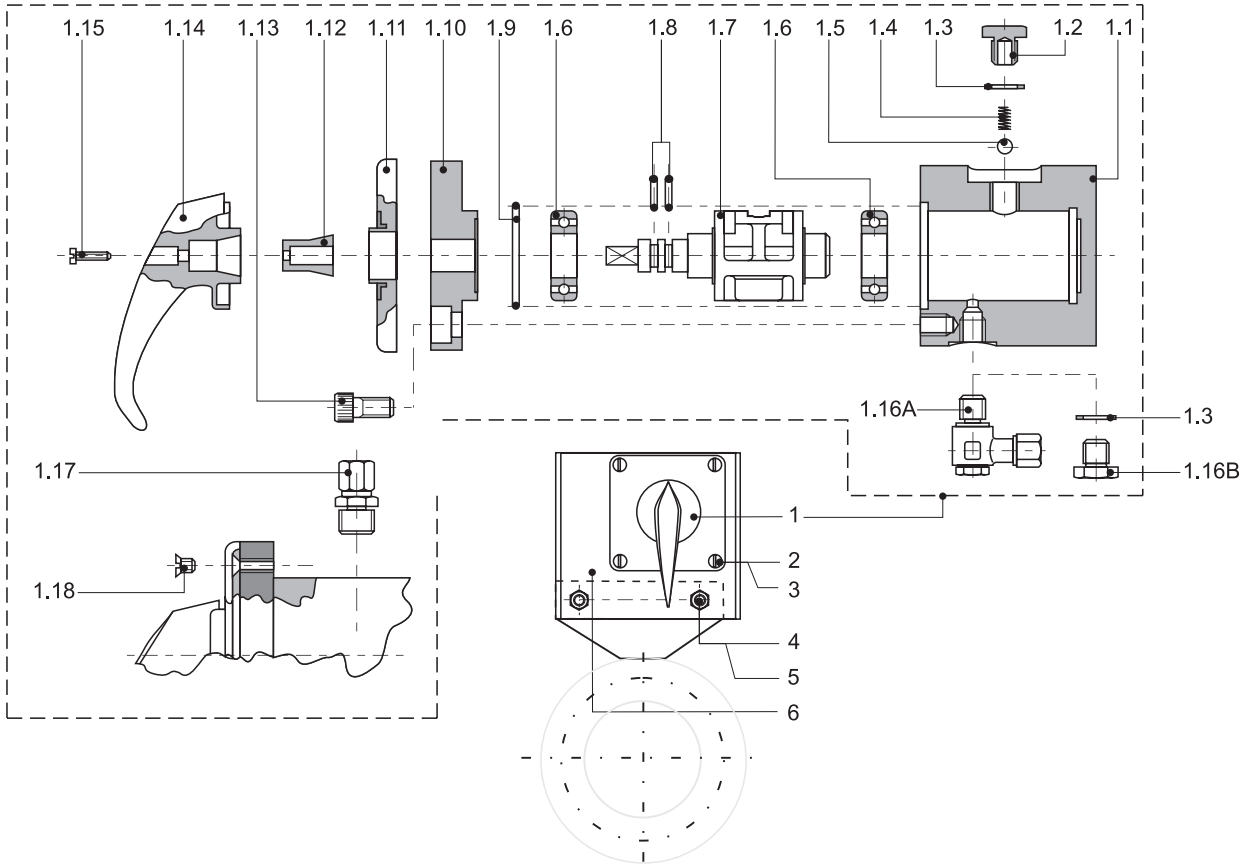


Fig. 2-1 RC12-A1

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A2 ELECTRICALLY OPERATED CAPACITY CONTROL					
3	HEXAGON HEAD BOLT	M10x30	0110530	2	
4	HEXAGON NUT (ZINC PLATED)	M10	0115510	2	
5	SOCKET HEAD SCREW	M5x8	0104208	4	
6	NIPPLE COUPLING	6G10	0338106	1	
7A	THREE-WAY SOLENOID VALVE	220HB	0680410	-	normally closed (capacity control)
7B	THREE-WAY SOLENOID VALVE	220HB	0680420	1	normally open (unloaded starting)
7.1a	VALVE COIL	110-120/50-60	1316311	-	
7.1b	VALVE COIL	220-240/50-60	1316322	-	
12.a	CONNECTOR	220/240 V AC, DIN incl. LED	1316611	1	with 220V-AC/DC LED quantities per valve
12.b	CONNECTOR	24/48 V AC/DC, DIN incl. LED	1316615		with 48V-AC/DC LED quantities per valve
13	SOCKET COUPLING	6G10	0337106	1	
14	ANGLE COUPLING	EV6X6	0352006	1	
15	TEE-COUPLING	EV6X6X6	0354006	1	
16	STEEL PRECISION PIPE	DN 6x1	*	-	
17	ANGLE COUPLING	EV6X6	0352006	1	quantities per valve
18	T-COUPLING	E6x6x6	0340306	1	quantities per valve

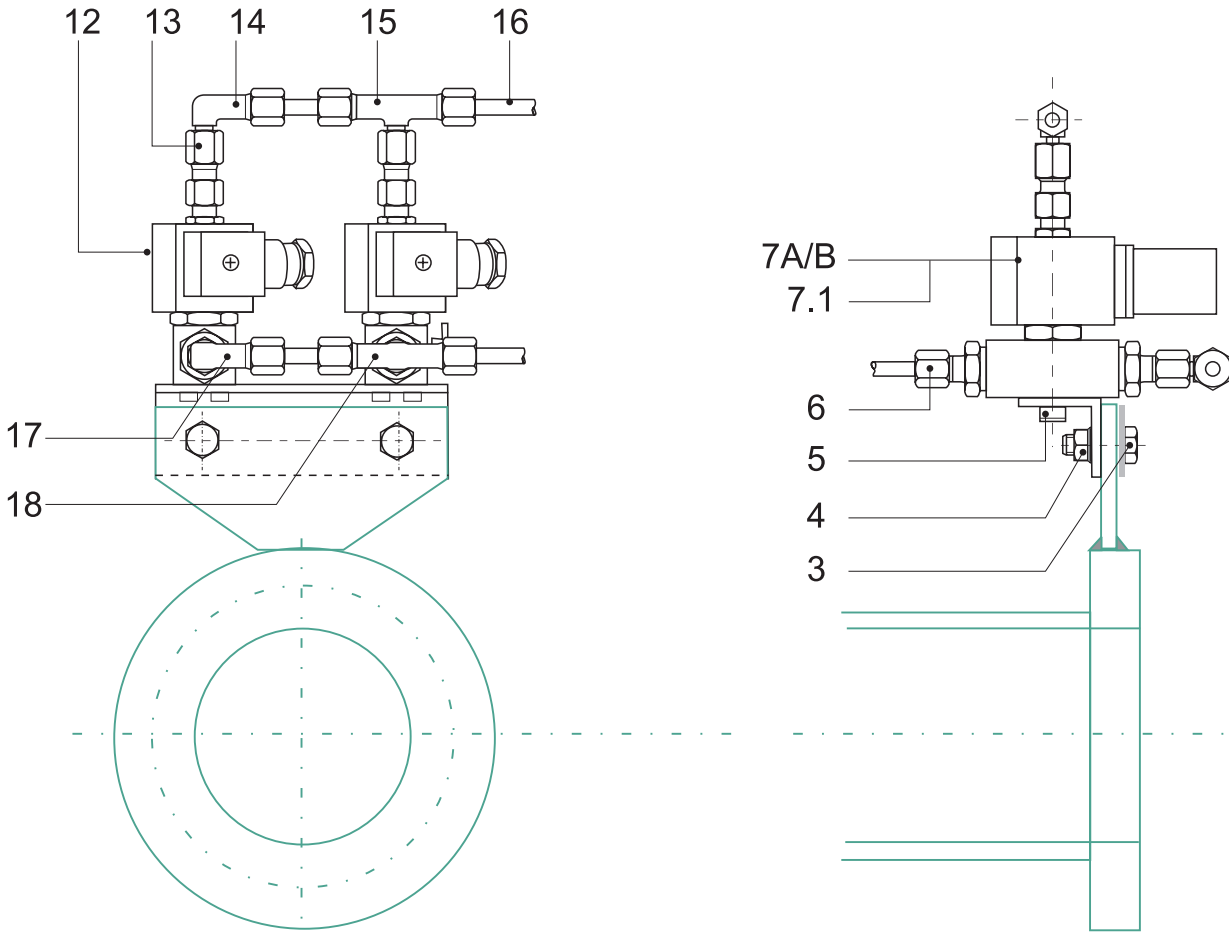


Fig. 2-2 RC12-A2

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A3 PRESSURE GAUGE PANEL					
1.A	PRESSURE GAUGE	NH3-P-100	1210113	1	NH3
1.B	PRESSURE GAUGE	R-P-100	1212113	1	R22
1.C	PRESSURE GAUGE	R-P-100	1212114	1	R134a R134a
1.D	PRESSURE GAUGE	R-P-100	1212115	1	R404A
1.E	PRESSURE GAUGE	NH3-Z-100	1210114	-	1 for single-stage NH3 and 2 for two-stage NH3
1.F	PRESSURE GAUGE	R-Z-100	1212116	1	single-stage R22
1.G	PRESSURE GAUGE	R-Z-100	1212117	1	single-stage R134a
1.H	PRESSURE GAUGE	R-Z-100	1212118	-	2 for two-stage/booster halocarbons and 1 for single-stage R404A
1.K	PRESSURE GAUGE	R-O-100	1215114	1	NH3/Halocarbons
2	STOP VALVE	TAH4C	0607007	1	per gauge
4	ALU.SEALING RING	6.5x11x1	0912007	1	per gauge
5	UNION SOCKET	G21RxG21L	0329921	1	per gauge
6	HEXAGON NUT	MF12	0147605	1	per gauge
7	CLAMPING SLEEVE	S6	0334106	2	per gauge
8	UNION NUT	MF12x1.5	0351006	2	per gauge
9	SPACER	30x20x18	1112318	2	
10	MOUNTING STRIP		*	1	
11	HEXAGON HEAD BOLT	M10x40	0110540	1	
12	HEXAGON HEAD BOLT	M6x45	0110345	2	
14	FRONT PANEL		*	1	
15	SPACER	DIA 13.7x2.2x31	*	2	
16	HEXAGON NUT	M6	0115310	2	

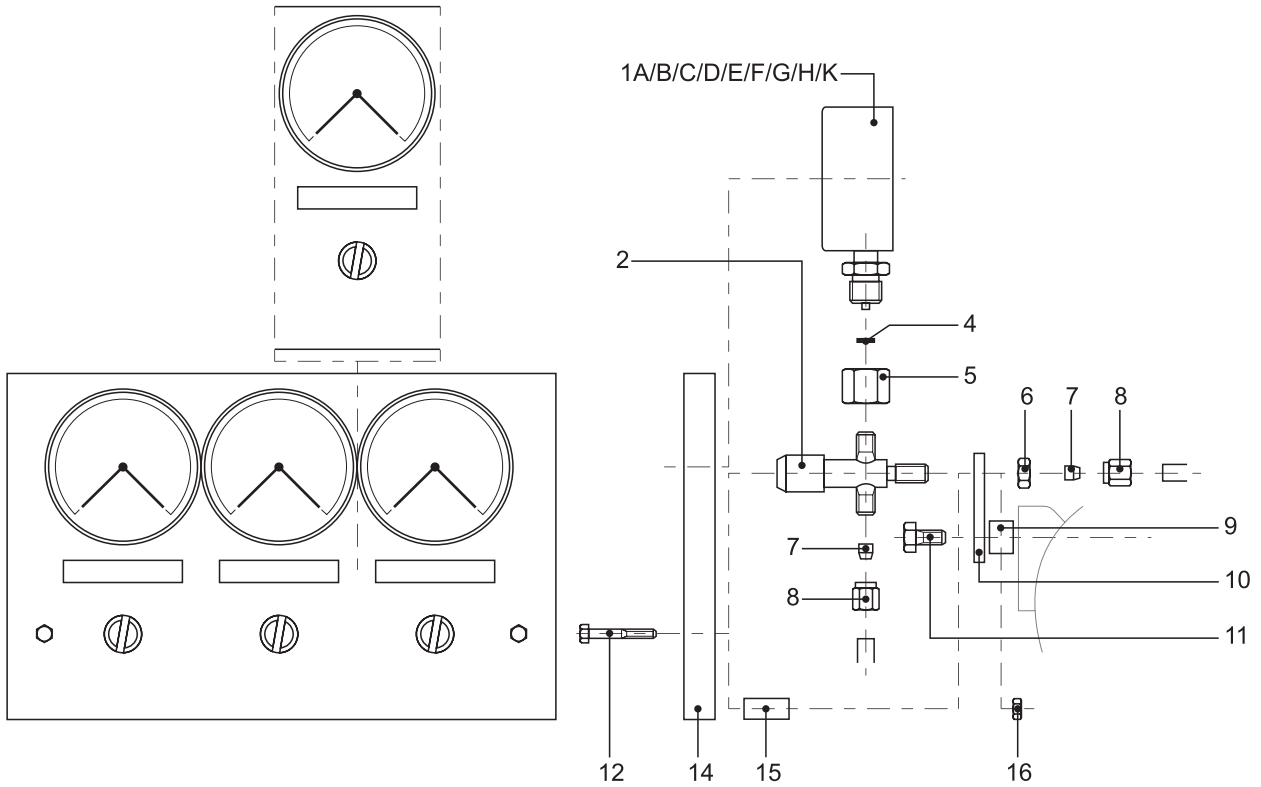


Fig. 2-3 RC12-A3

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A4 STANDARD SAFETY SWITCH PANEL					
1	FRONT PANEL		*	1	
2	HEXAGON HEAD BOLT	M10x70	0110570	2	
3	SPACER	DIA 17.2x2.3	*	2	
4	GROMMET	2x13	0924213	3	
5	CYLINDER HEAD SCREW	M4x50	0168250	6	
6	HEXAGON NUT	M4	0115211	6	
7	LOCK WASHER	M4	1113203	6	
8	PRESSOSTAT	RT6AB	1260152	1	
9	PRESSURE SAFETY SWITCH	RT1A	1260121	1	
10.a	PRESSURE SAFETY SWITCH	MP55A	1260232	1	
10.b	PRESSURE SAFETY SWITCH	RT260A	1260240	1	NH3
11	ALU.SEALING RING	8x14.5x1	0912008	4	for NH3-compressor
12	SOCKET COUPLING	6G17	0337176	4	for NH3-compressor
13	SOCKET NIPPLE	6F6	0337906	4	
14	UNION NUT		*	4	for "halocarbon"-compressor
15	CLAMPING SLEEVE	S6	0334106	4	for "halocarbon"-compressor
16	T-COUPLING	S6x6x6	0340006	1	

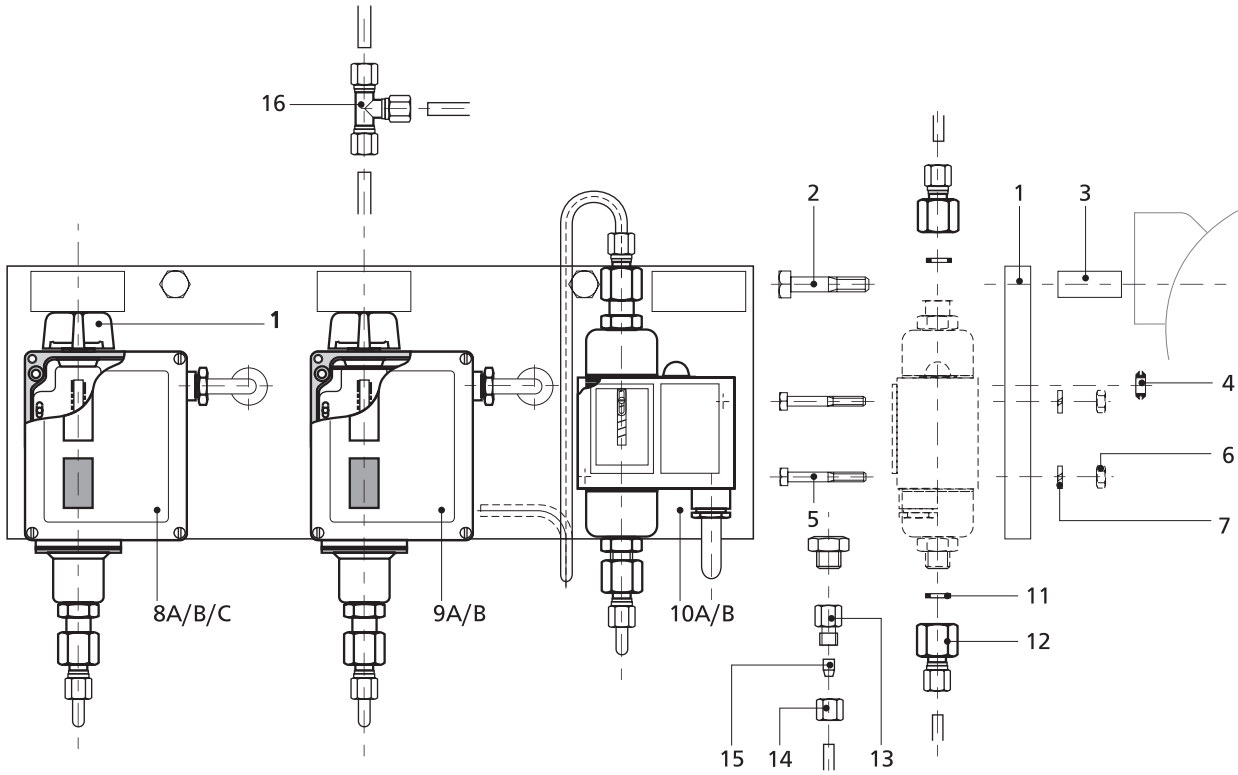


Fig. 2-4 RC12-A4

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A5 TORSIONALL STIFF COUPLING					
8.a	PLATE PACK FOR COUPLING	195-250	1918970	2	
8.b	PLATE PACK FOR COUPLING	210-250	1918971	2	
8.c	PLATE PACK FOR COUPLING	240-250	1918972	2	
8.d	PLATE PACK FOR COUPLING	255-200	1918973	2	
8.e	PLATE PACK FOR COUPLING	280-200/250	1918974	2	
8.f	PLATE PACK FOR COUPLING	305-250	1918975	2	
8.g	PLATE PACK FOR COUPLING	335-266	1918976	2	
8.h	PLATE PACK FOR COUPLING	372-280	1918977	2	
8.k	PLATE PACK FOR COUPLING	407-306	1918978	2	
9	HEXAGON HEAD BOLT	M24x65	0110265	1	
10	LOCKING PLATE	M24x43	1114243	1	
11	LOCKING DISC	M24x85	1113785	1	

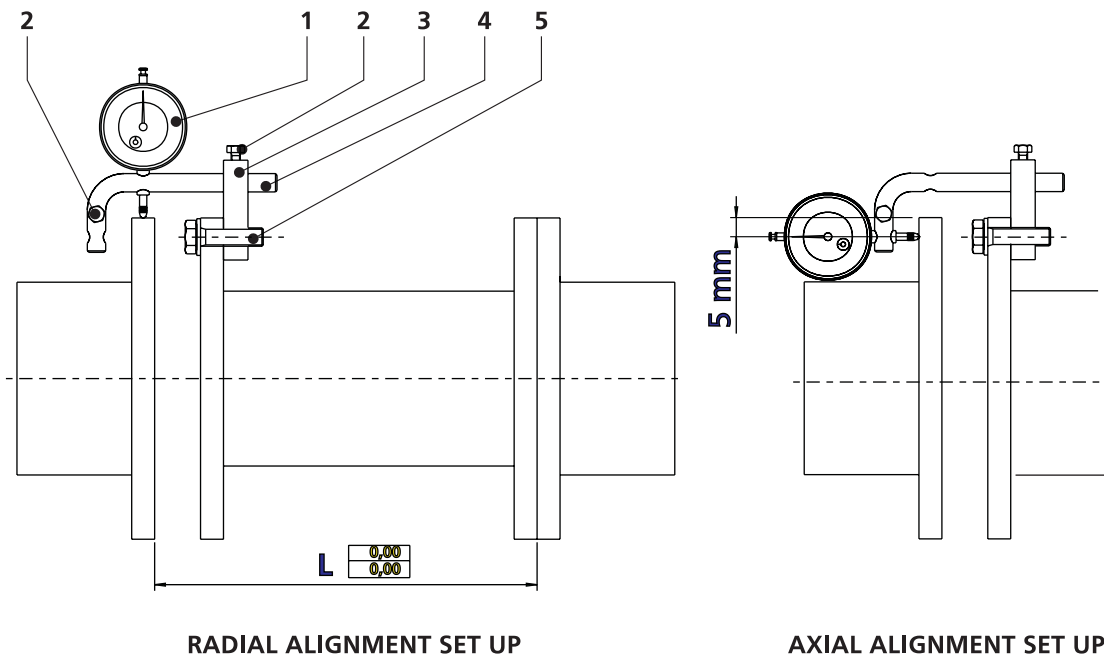
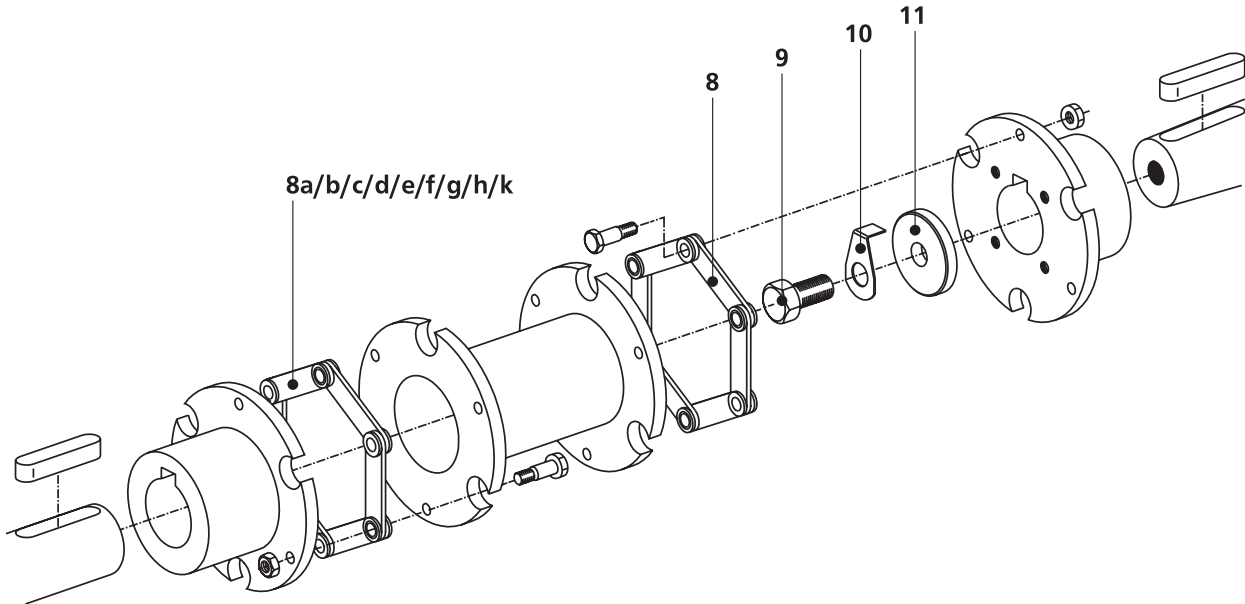


Fig. 2-5 RC12-A5

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-A6 SPARE PARTS FOR COUPLINGS					
1A	CLAMPING SLEEVE	P6	0334506	-	for couplings: 0336006/012/906 - 0337106/176/216 - 0338106/131/136 - 0339136 - 0340006/306 - 0335006
1B	CLAMPING SLEEVE	P16	0334516	-	0335016 - 0338212 - 0339216
1C	CLAMPING SLEEVE	P22	0334522	-	0338272
2A.a	UNION NUT	MF12x1.5	0351006	-	for couplings: 0336006/012/906 - 0337106/176 - 0338106/131/136 - 0339136 - 0340006/306
2A.b	UNION NUT	M14x1.5 (DIN 2353)	*	-	0335006 - 0337216
2B	UNION NUT	M24x1.5 (DIN 2353)	*	-	0335016 - 0338212 - 0339216
2C	UNION NUT	M30x2 (DIN 2353)	*	-	0338272

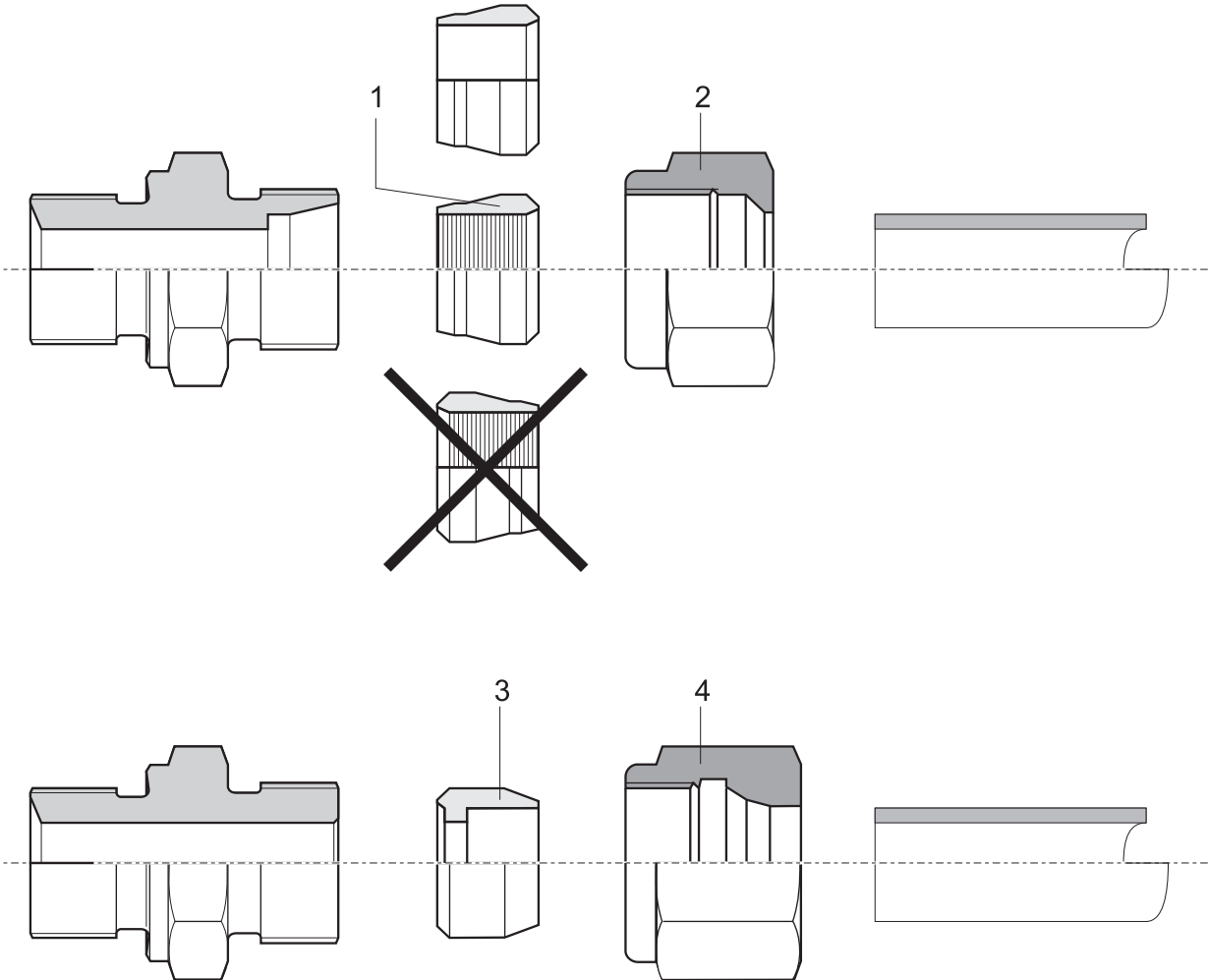


Fig. 2-6 RC12-A6

3. HISTORY PARTS

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Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-H1 COUPLING WAVED BAND					
6.1A	WAVED BAND	225X	1918938	1	for coupling type 25-1
6.1B	WAVED BAND	426X	1918939	1	for coupling type 26-1
6.1C	WAVED BAND	828X	1918955	1	for coupling type 28-1

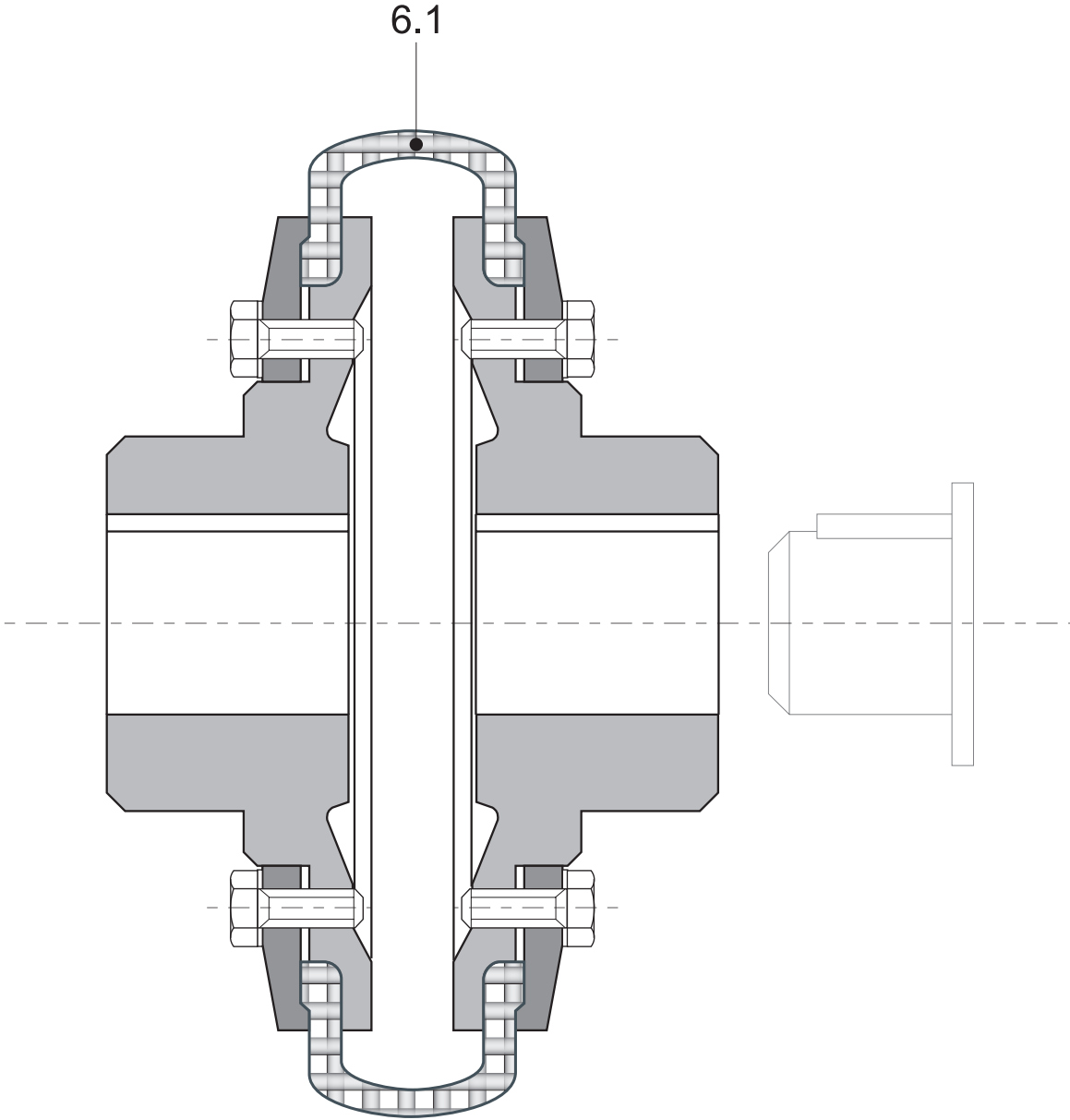


Fig. 3-1 RC12-H1

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-H2 SUCTION GAS STRAINER (for compressors before januari 1997)					
1A.2	GASKET	156x174x1.5	0903156	2	
1B.2	GASKET	180x196x1.5	0903180	2	
2A.1	SUCTION HOUSING COVER	236x118	0530238	1	1 piece for RC2112 / 4212 and 2 for RC312 / 612 / 5112
2A.2	SUCTION HOUSING COVER	236x74.5	0530237	2	for RC212 / 412 / 3112
2A.3	SUCTION HOUSING COVER	236	0530236	1	for RC2112 / 4212
2B.1	SUCTION HOUSING COVER	260x118	0530261	1	1 piece for RC6312 / 8412 and 2 for RC912 / 7212 / 1212 / 9312 / 10212
2B.2	SUCTION HOUSING COVER	260	0530260	1	for RC6312 / 8412

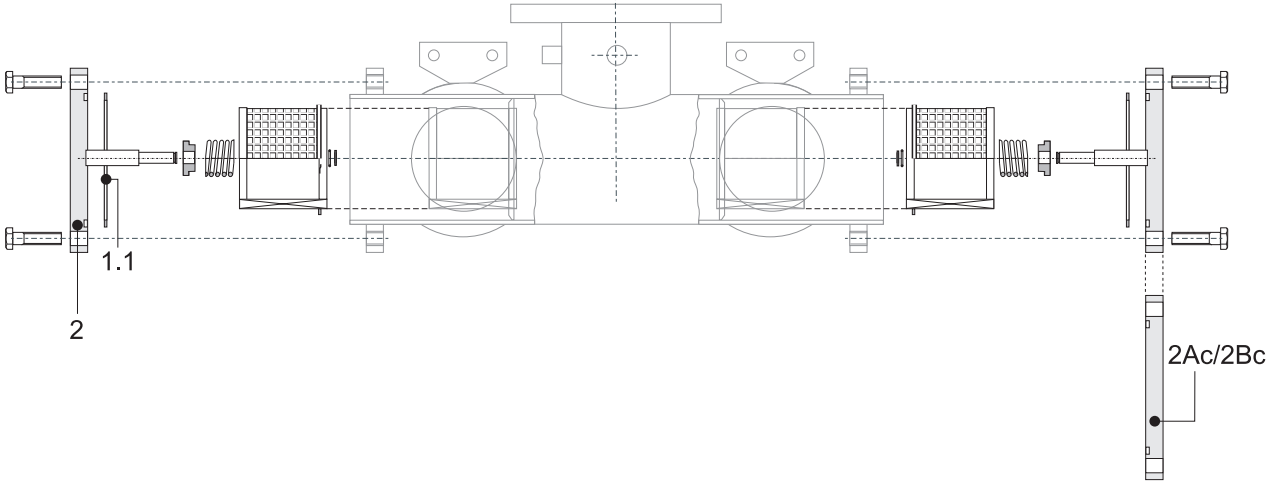


Fig. 3-2 RC12-H2

Item	Description	Dims.	Ref. No.	Qty	Remarks
Fig. RC12-H3 ELECTRICALLY OPERATED CAPACITY CONTROL					
11.1a	LAMP, BAJONET FITTING	24V	1308624	-	
11.1b	LAMP, BAJONET FITTING	48V	1308648		
11.1c	LAMP, BAJONET FITTING	110V	1308610	-	
11.1d	LAMP, BAJONET FITTING	230V	1308620	-	

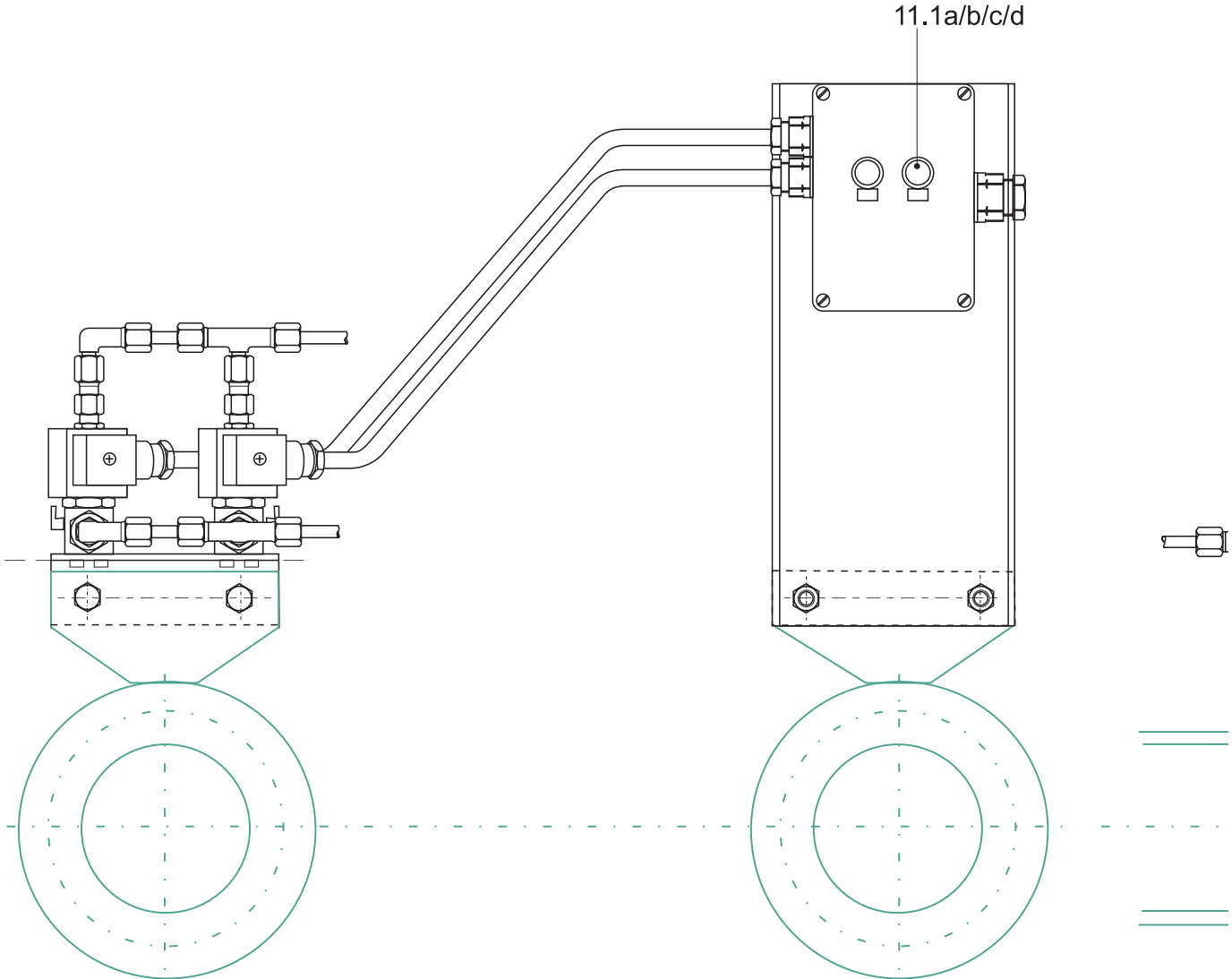


Fig. 3-3 RC12-H3

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English	0089276

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