



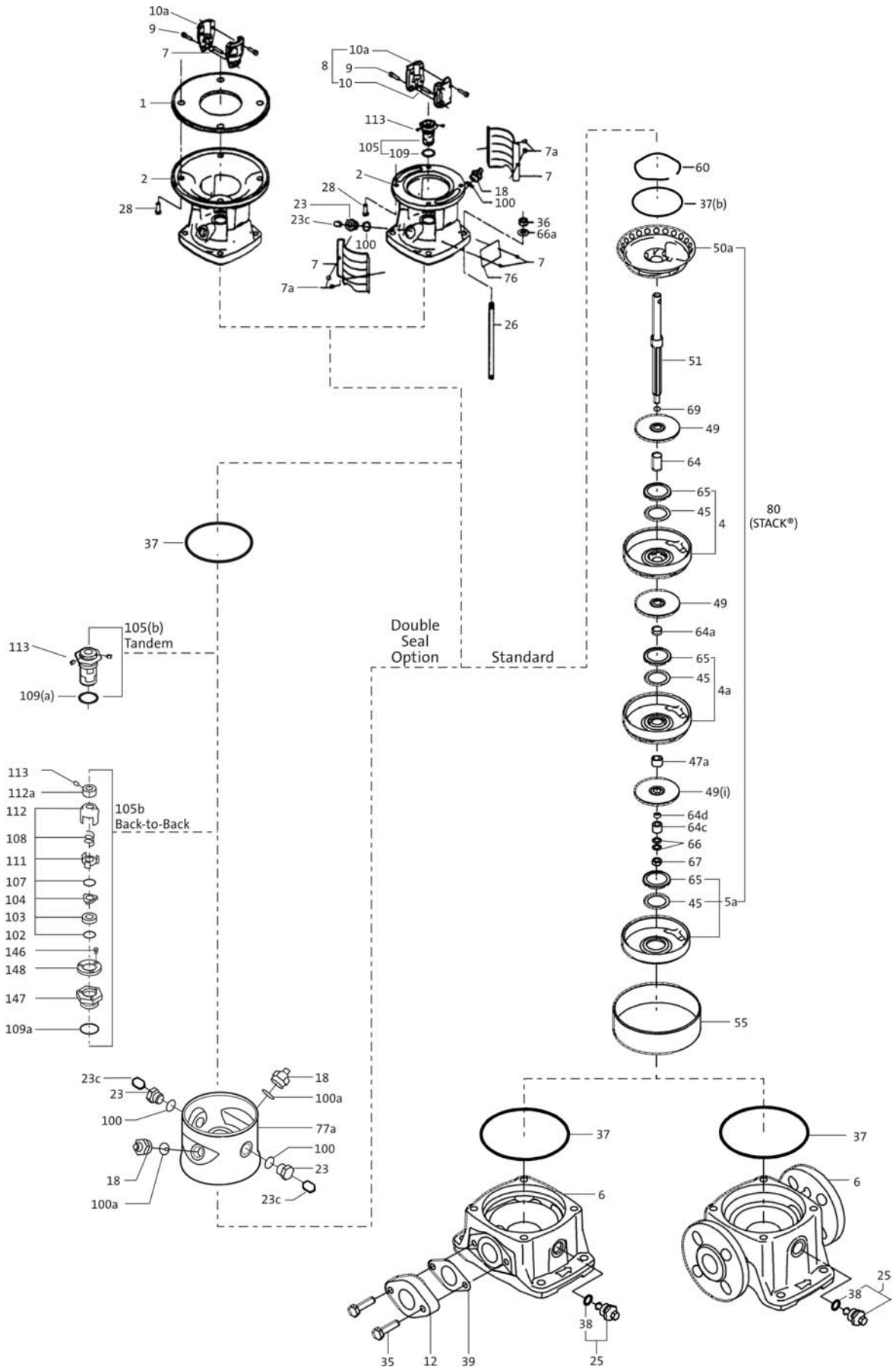
CR1

Parts List & Kits

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Exploded View CR1



Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
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PARTS LIST

1	Adapter for Motor Stool				For NEMA, 213/215TC, 7.5 - 10HP	96476208	NEW	No				
2	Motor Stool		3/2-19	1	NEMA, 56C, 1/3 - 2HP	96436501		No				
				1	NEMA, 182/184TC, 3 - 5HP	96436502		No				
					Add Pos. 1, NEMA, 213TC, 7.5 - 10HP	96436502		No				
				1	IEC, F85, MG 71, .37 - .55kW	96436495		No				
				1	IEC, F100, MG 80, .75 - 1.1kW	96436496		No				
				1	IEC, F115, MG 90, 1.5 - 2.2kW	96436499		No				
4	Chamber, Complete with Pos. 45 & 65		3/2-36	1	IEC, F130, MG 100/112, 3.0 - 4.0 kW	96436500		No				
				1	IEC, F265, MG132, 5.5 - 7.5kW	96436505		No				
				^^^	PTFE Pos.45	96439480		No				
				^^^^	Silicon Carbide Brg, PTFE Pos. 45	96439475		YES				
4a	Chamber Cpl. w/Pos. 45 & 65 & Bearing		3/2-36	^^^^	Bronze Bearing, PTFE Pos. 45	96440612		YES				
				^^^^	Graflon Bearing, PTFE Pos. 45	96440615		YES				
5a	Chamber, Bottom Complete with Pos. 45 & 65		3/2-36	1	PTFE Pos. 45	96439484		No				
6	Base		3/2-17	1	Oval (max 232 PSI)	96436516		No				
				1	JIS, FGJ, ANSI (Max 362 PSI)	96442012		No				
7	Coupling Guard			2	IEC, F85-F100	96438136		YES				
				2	NEMA-56C, IEC-F115,130, & 265	96438137		YES				
				2	NEMA, 182-215TC	96438138		YES				
7a	Screw for Coupling Guard		3/2-36	4	M4 x 8mm	96488481		YES				
9	Allen Screw		3/2-19	4	M6 x 20mm, Delta Tone/Seal	001D7899		YES				
				4	M8 x 25mm, Delta Tone/Seal	001D7900		YES				
10	Shaft Pin		3/2-36	1	M10 x 25mm, Delta Tone/Seal	001D7901		YES				
				1	ø5 x 26mm	310192		YES				
10a	Coupling Half		3/2-19	2	NEMA, 56C, 1/3 - 2HP. ø15.8 / ø12	410108		YES				
				2	NEMA, 182/184TC, 3-5HP. ø28.5/ø12	410109		YES				
				2	NEMA, 213TC, 7.5-10HP. ø34.9/ø12	96472175		YES				
				3/2-11	2	IEC, F85, MG71, .37-.55kW. ø14/ø12	410041		YES			
					2	IEC, F100, MG80,.75-1.1kW. ø19/ø12	410043		YES			
				3/2-36	2	IEC, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045		YES			
2	IEC, F130, MG100/112, 3-4 kW.ø28/ø12	410047			YES							
12	Oval Flange		3/2-17	2	IEC, F265, MG132, 5.5-7.5kW. ø38/ø12	410115		YES				
				2	Painted CI, 1" -11.5 NPT (max 232 PSI)	96468333		YES				
18	Priming/Vent Plug		3/2-36	*	Painted CI, RP 1" BSP DIN (max 232 PSI)	400173		No				
				**	G 1/2A, NV24 with NV9 x M8 stem	405150		No				
23	Plug (option)		3/2-36	**	G 1/2A, Solid no port, NV24	370025		No				
23a	Plug		3/2-36	**	G 1/2A, w/1/4"port, NV24	91120659		No				
23b	Pipe Plug for Pos. 23 & 25 with hollow stem		3/2-36	**	1/4" NPT,SS SQHDD	001D7216		No				
25	Drain/Priming Plug Cpl. with O-rings		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, EPDM	96440608		No				
				1	G 1/2A, NV24 w/NV9 x M8 stem, FKM	96440609		No				
				1	G 1/2A, NV24 w/NV9 x M8 stem, FFKM	96486530		No				
				1	G 1/2A, NV24 w/NV9 x M8 hollow stem, EPDM	96527046		No				
				1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FKM	96527047		No				
				1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FFKM	96527049		No				
26	Staybolt		3/2-3	4	M12 x 79mm	404002		No				
				4	M12 x 97mm	414002		No				
				4	M12 x 115mm	404004		No				
				4	M12 x 133mm	404005		No				
				4	M12 x 151mm	414004		No				
				4	M12 x 169mm	404007		No				
				4	M12 x 187mm	404008		No				
				4	M12 x 205mm	414006		No				
				4	M12 x 223mm	404010		No				
				4	M12 x 241mm	404011		No				
				4	M12 x 259mm	414008		No				
				4	M12 x 294mm	96442754		No				
				4	M12 x 330mm	96442760		No				
				4	M12 x 367mm	414012		No				
				4	M12 x 402mm	96442762		No				
				4	M12 x 439mm	404022		No				
				4	M12 x 475mm	414016		No				
				4	M12 x 511mm	404026		No				
				Staybolt (Back-to-Back & Tandem Seal option)			3/2-3	4	M12 x 562mm (50 Hz.)	96442766		No
								4	M12 x 618mm (50 Hz.)	96442767		No
4	M12 x 670mm (50 Hz.)	96442768						No				
4	M12 x 187mm	404008						No				
4	M12 x 205mm	414006						No				
4	M12 x 223mm	404010						No				
4	M12 x 241mm	404011						No				
4	M12 x 259mm	414008						No				
4	M12 x 277mm	404013						No				
4	M12 x 294mm	96442754						No				
4	M12 x 313mm	414010		No								

Due to part changes overtime, all position numbers (1-203) may not be used.

These columns indicates which model uses the spare part. If blank, the part is used in all models.

Parts List & Kits CR1

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
PARTS LIST								
26	Staybolt (Back-to-Back & Tandem Seal option) (continued)		11	4	M12 x 330mm	96442760		No
			12	4	M12 x 340mm	414011		No
			13	4	M12 x 367mm	414012		No
			15	4	M12 x 402mm	96442762		No
			17	4	M12 x 436mm	96458181		No
			19	4	M12 x 475mm	414016		No
			21	4	M12 x 511mm	404026		No
			23	4	M12 x 546mm	96442765		No
			25	4	M12 x 583mm	404030		No
			27	4	M12 x 618mm	96442767		No
			30	4	M12 x 670mm (50 Hz.)	96442768		No
			33	4	M12 x 724mm (50 Hz.)	96442769		No
36	4	M12 x 778mm (50 Hz.)	96458444		No			
28	Motor Bolt		3/2-19	4	NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm	00ID1839		No
			21-27	4	NEMA, 182/184TC, 3 - 5HP.UNC1/2" x 25mm	00ID1840		No
					NEMA, 213TC, 7.5 -10HP. UNC 1/2" x 1.25"	91128631		No
			3/2-11	4	IEC, F85, MG71, .37- .55kW. M6 x 20mm	00ID8022		No
			12-23	4	IEC, F100, MG80,.75-1.1kW. M6 x 25mm	00ID8023		No
			24-36	4	IEC, F115, MG 90, 1.5-2.2kW. M8 x 20mm	00ID8024		No
				IEC, F130, MG100/112, 3-4 kW. M8 x 25mm	00ID8025		No	
				IEC, F265, MG132, 5.5-7.5kW. M12 x 45mm	00ID7914		No	
35	Hexagon Head Screw for Oval Flange		3/2-17	4	M10 x 40mm, Delta Tone/Seal	00ID8027		YES
36	Staybolt Nut		3/2-36	4	19mm x M12, Delta Tone/Seal	00ID7917		No
37	Sleeve O-ring		3/2-36	◆◆	EPDM, ø137.5 x 3.3mm	96438743		YES
37b	Sleeve O-ring (option)		3/2-36	◆◆	FKM, ø137.5 x 3.3mm	96438744		YES
			3/2-36	◆◆	FXM, ø137.5 x 3.3mm	96458109		YES
			3/2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
38	Drain Plug O-ring		3/2-36	1	EPDM, ø16.3 x 2.4mm	00ID1288		YES
			3/2-36	1	FKM, ø16.3 x 2.4mm	00ID2231		YES
	Drain Plug O-ring (option)		3/2-36	1	FFKM, ø16.3 x 2.4mm	96428162		YES
			3/2-36	1	FXM, ø16.3 x 2.4mm	96442869		YES
39	Gasket for Oval Flange		3/2-17	2	95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189		YES
45	Neck Ring		3/2-36	# stgs	ø41.3 x ø30.6 x .75mm, PTFE	400003		YES
47a	Bearing Ring/Spacer Brg. Ring/Spacer (option for Grafon / Brz. 4a)		3/2-36	^^^^	SiC 150, ø17.37 x ø13.10 x ø10.9 x 13mm	96437488		YES
			3/2-36	^^^^	TC, ø15.92 x ø13.10 x ø10.9 x 9.7mm	400041		YES
49	Impeller		3/2-36	# stgs		96440325		No
50a	Top Guide Vane Top Guide Vane Plate (option for destaging)		3-36	1		96457637		No
			3/2	1		96478562		No
51	Shaft, Complete		3/2-3	1	ø12 x 160.5mm	96439607		No
			4	1	ø12 x 180.5mm	96440386		No
			5	1	ø12 x 196.5mm	96440387		No
			6	1	ø12 x 214.5mm	96440388		No
			7	1	ø12 x 234.5mm	96440389		No
			8	1	ø12 x 250.5mm	96440390		No
			9	1	ø12 x 268.5mm	96440391		No
			10	1	ø12 x 288.5mm	96440392		No
			11	1	ø12 x 304.5mm	96440393		No
			12	1	ø12 x 322.5mm	96440394		No
			13	1	ø12 x 342.5mm	96440395		No
			15	1	ø12 x 376.5mm	96440396		No
			17	1	ø12 x 412.5mm	96440398		No
			19	1	ø12 x 450.5mm	96440400		No
			21	1	ø12 x 484.5mm	96440401		No
			23	1	ø12 x 520.5mm	96440403		No
			25	1	ø12 x 556.5mm	96440405		No
			27	1	ø12 x 592.5mm	96440406		No
			30	1	ø12 x 646.5mm (50 Hz.)	96440408		No
			33	1	ø12 x 700.5mm (50 Hz.)	96440410		No
36	1	ø12 x 754.5mm (50 Hz.)	96440411		No			
Shaft, Cpl. (Back-to-Back & Tandem Seal opt.)			3/2-3	1	ø12 x 265.5mm	96457560		No
			4	1	ø12 x 285.5mm	96457561		No
			5	1	ø12 x 301.5mm	96457562		No
			6	1	ø12 x 319.5mm	96457563		No
			7	1	ø12 x 339.5mm	96457564		No
			8	1	ø12 x 355.5mm	96457565		No
			9	1	ø12 x 373.5mm	96457566		No
			10	1	ø12 x 393.5mm	96457567		No
			11	1	ø12 x 409.5mm	96457568		No
			12	1	ø12 x 427.5mm	96457569		No
			13	1	ø12 x 447.5mm	96457570		No
			15	1	ø12 x 481.5mm	96457571		No
17	1	ø12 x 517.5mm	96457573		No			
19	1	ø12 x 555.5mm	96457575		No			

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PARTS LIST

51	Shaft, Cpl. (Back-to-Back & Tandem Seal option) (Continued)		21	1	ø12 x 589.5mm	96457576		No
			23	1	ø12 x 625.5mm	96457578		No
			25	1	ø12 x 661.5mm	96457580		No
			27	1	ø12 x 697.5mm	96457581		No
			30	1	ø12 x 751.5mm (50 Hz.)	96457583		No
			33	1	ø12 x 805.5mm (50 Hz.)	96457585		No
	36	1	ø12 x 859.5mm (50 Hz.)	96457586		No		
55	Outer Sleeve		3/2-3	1	ø138 x 44.6mm	96437865		No
			4	1	ø138 x 62.6mm	96440010		No
			5	1	ø138 x 80.6mm	96441510		No
			6	1	ø138 x 98.6mm	96439999		No
			7	1	ø138 x 116.6mm	96441511		No
			8	1	ø138 x 134.6mm	96441513		No
			9	1	ø138 x 152.6mm	96440000		No
			10	1	ø138 x 170.6mm	96441514		No
			11	1	ø138 x 188.6mm	96441516		No
			12	1	ø138 x 206.6mm	96440001		No
			13	1	ø138 x 224.6mm	96441517		No
			15	1	ø138 x 260.6mm	96440002		No
			17	1	ø138 x 296.6mm	96441520		No
			19	1	ø138 x 332.6mm	96441521		No
			21	1	ø138 x 368.6mm	96440004		No
			23	1	ø138 x 404.6mm	96441524		No
			25	1	ø138 x 440.6mm	96441525		No
			27	1	ø138 x 476.6mm	96440006		No
	30	1	ø138 x 530.6mm (50 Hz.)	96440007		No		
	33	1	ø138 x 584.6mm (50 Hz.)	96440008		No		
	36	1	ø138 x 638.6mm (50 Hz.)	96439652		No		
60	Stack Compression Spring		3/2-36	1	ø136 x 3.5mm	96439662		No
64	Spacing Pipe		2-36	^^^	ø15.85 x ø12.85 x 17.52mm	400035		No
64a			3/2-36	^^^^	ø15.85 x ø12.85 x 4.5mm	96440292		YES
	Spacing Pipe (option for Graflon / Brz. 4a)		3/2-36	^^^^	Use with TC Pos. 47a, ø15 x ø12.7 x 7.8mm	400016		YES
64c	Clamp, Splined		3/2-36	1	ø15 x ø13.10 x ø10.9 x 13mm	96439668		YES
65	Neck Ring Retainer		3/2-36	# stgs	ø43.5 x ø34.0 x 3.6mm	96438746		YES
66	Lock Washer Set for Shaft		3/2-36	1	ø13.5 x ø8.2 x 2.6mm	96417297		YES
66a	Washer for Staybolt		3/2-36	4	DIN 125A, ø24 x ø13 x 2.5mm, Delta Tone/Seal	96430377		No
67	Lock Nut for Shaft		3/2-36	1	13mm x M8	001D2061		YES
69	Spacing Pipe		3/2	1	ø15.85 x 12.85 x 18.0mm	400125		No
76	Nameplate		3/2-36	1	304SS, 60 x 45mm	96439820		No
76a	Rivet for Nameplate		3/2-36	2	304SS, ø3 x 5mm	96022882		No
77a	Pump Head Cover for Back-to-Back, Tandem Seal		3/2-36	1	Cast Stainless	96456293		No
100	Priming/Vent Plug O-ring		3/2-36	■	EPDM, ø16.3 x 2.4mm	001D1288		YES
			3/2-36	■	FKM, ø16.3 x 2.4mm	001D2231		YES
			3/2-36	■	FFKM, ø16.3 x 2.4mm	96428162		YES
100a	Priming/Vent Plug O-ring (option)		3/2-36	■	FXM, ø16.3 x 2.4mm	96442869		YES
102	O-ring for Pos. 105b Back-to-Back		3/2-36	1	EPDM, ø18 x 2.5mm	001D2041		YES
			3/2-36	1	FKM, ø17.86 x 2.62mm	001D2187		YES
			3/2-36	1	FFKM, ø17.86 x 2.62mm	96440281		No
			3/2-36	1	FXM, ø17.86 x 2.62mm	96472584		No
103	Stationary Seal Ring for Pos. 105b Back-to-Back		3/2-36	1	TC, 12mm	980190		No
			3/2-36	1	SiC, 12mm	980746		YES
104	Rotating Seal Ring for Pos. 105b Back-to-Back		3/2-36	1	TC, 12mm	980163		No
			3/2-36	1	SiC, 12mm	980733		YES
105 (b)	Shaft Seal HQBE Shaft Seal HQBV Shaft Seal HQBK (option) Shaft Seal HQQE Shaft Seal HQQV Shaft Seal HQQF (option) Shaft Seal HQQK (option) Shaft Seal HUBE Shaft Seal HUBV Shaft Seal HUBF (option) Shaft Seal HUBK (option) Shaft Seal HUUE Shaft Seal HUUV Shaft Seal HUUF (option) Shaft Seal HUUK (option)		3/2-36	***	SiC, Carbon with resin-impregnated, EPDM	96441879		YES
			3/2-36	***	SiC, Carbon with resin-impregnated, FKM	96441880		YES
			3/2-36	***	SiC, Carbon with resin-impregnated, FFKM	96489537		YES
			3/2-36	***	SiC, SiC, EPDM	96441877		YES
			3/2-36	***	SiC, SiC, FKM	96441878		YES
			3/2-36	***	SiC, SiC, FXM	96472620		YES
			3/2-36	***	SiC, SiC, FFKM	96464381		YES
			3/2-36	***	TC, Carbon with resin-impregnated, EPDM	96441873		YES
			3/2-36	***	TC, Carbon with resin-impregnated, FKM	96441874		YES
			3/2-36	***	TC, Carbon with resin-impregnated, FXM	96481464		YES
			3/2-36	***	TC, Carbon with resin-impregnated, FFKM	96481463		YES
			3/2-36	***	TC, TC, EPDM	96441875		YES
			3/2-36	***	TC, TC, FKM	96441876		YES
			3/2-36	***	TC, TC, FXM	96475542		YES
			3/2-36	***	TC, TC, FFKM	96467885		YES
		105 b	Shaft Seal/inboard for Back-to-Back OQQE Shaft Seal/inboard for Back-to-Back OQQV Shaft Seal/inboard for Back-to-Back OUUE Shaft Seal/inboard for Back-to-Back OUUV		3/2-36	1	SiC, SiC, EPDM	985200
	3/2-36			1	SiC, SiC, FKM	985760		YES
	3/2-36			1	TC, TC, EPDM	985189		No
	3/2-36			1	TC, TC, FKM	985190		No

Due to part changes over time, all position numbers (1-203) may not be used.

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Parts List & Kits CR1

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
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PARTS LIST

107	O-ring for Pos. 105b Back-to-Back		3/2-36	1	EPDM, $\phi 11.5 \times 4.3\text{mm}$	00ID2040		YES
	O-ring for Pos. 105b Back-to-Back (option)		3/2-36	1	FKM, $\phi 11.5 \times 4.3\text{mm}$	00ID2186		YES
			3/2-36	1	FFKM, $\phi 11.5 \times 4.3\text{mm}$	96440282		No
			3/2-36	1	FXM, $\phi 11.5 \times 3.18\text{mm}$	96472618		No
108	Spring for Pos. 105b Back-to-Back		3/2-36	1	12mm	980195		YES
109(a)	O-ring for Shaft Seal Pos. 105		3/2-36	1	EPDM, $\phi 21.3 \times 3.0\text{mm}$	00ID1798		YES
			3/2-36	1	FKM, $\phi 21.2 \times 3.0\text{mm}$	00ID2339		YES
109b	O-ring for Shaft Seal Pos. 105 (option)		3/2-36	1	FXM, $\phi 22 \times 2.75\text{mm}$	96458111		YES
			3/2-36	1	FFKM, $\phi 23.47 \times 2.62\text{mm}$	96464384		YES
111	Seal Drv. (small) for Pos. 105b Back-to-Back		3/2-36	1		980192		YES
112	Seal Drv. (large) for Pos. 105b Back-to-Back		3/2-36	1		980191		YES
112a	Seal Drv. thread. for 112, Pos. 105b Back-to-Back		3/2-36	1		400203		YES
113	Set Screw for 112a, for Pos. 105b Back-to-Back		3/2-36	1	3mm x M5 x 6mm	00ID7392		YES
146	Alln. Blt. for 147/148, for Pos. 105b Back-to-Back		3/2-36	1	2.5mm x M3 x 5mm	96462639		YES
147	Stationary Seal Retainer- Pos. 105b Back-to-Back		3/2-36	1	NV36, 316SS	96457354		No
148	Seal Retainer Washer - Pos. 105b Back-to-Back		3/2-36	1	316SS, $\phi 36.0 \times \phi 21.6 \times 5.0\text{mm}$	96457355		No

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Notes:

- ^^^ 3/2 to 9 stage= # of Stages less 2
10 to 19 stage= # of stages less 3
21 to 27 stage = # of stages less 4
29 to 36 stage = # of stages less 5
- ^^^ 3/2 to 9 stage= use 1
10 to 19 stage= use 2
21 to 27 stage = use 3
29 to 36 stage = use 4
- * Standard use 1. Back-to-Back or Tandem pump version use 3
- ** Standard use 1. Back-to-Back or Tandem pump version use 3
- *** 1 used in Hxxx (Standard), 2 used in Pxxx (Tandem) pump version
- ◆◆ Standard use 2. Back-to-Back or Tandem pump version use 3
- Standard use 2. Back-to-Back or Tandem pump version use 6

Key to Symbols:

- KITS (YES) Recommended spare part**
- Ø Diameter
 - ANSI American National Standards Institute
 - CPL Complete Assembly – these parts consist of more than one component
 - EPDM Ethylene Propylene (also known as EPR and EPT) – an elastic substance similar to rubber
 - FFKM Kalrez Elastomer made by DuPont
 - FKM Fluoro Elastomer (generic for Viton)
 - FXM Fluoraz Elastomer made by Greene Tweed
 - M International standard thread size designation (thread diameter in mm)
 - mm Millimeter
 - MG Identifies Grundfos motor type/size
 - N Stainless
 - NBR Buna - N (also known as Nitrile) – an elastic substance similar to rubber
 - NEMA National Electrical Manufacturers Association
 - PTFE Teflon
 - SiC Silicon Carbide
 - TC Tungsten Carbide
 - UNC Unified National Coarse – a standard for threads on bolts

Spare Part Kits

Since certain pump parts can be expected to exhibit wear at the same time as related pump parts, they have been grouped into the following kits for your convenience. The numbers indicate the quantity of the part within each kit. Please order these kits using the kit material number at the top of the columns.

CR(I, N)15, 1, & 3 SiC Bearing		Kit No.	96455095			
WEAR PARTS KIT 2-9		Kit No.	96455092			
WEAR PARTS KIT 10-19		Kit No.	96455093			
WEAR PARTS KIT 20-27		Kit No.	96455094			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber N Cpl. w/Pos.45 & 65 & SiC Bearing	96439476	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2
45	Neck Ring, ø41.3 x ø30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, SiC 150, 13mm	96437488	1	2	3	4
64a	Spacing Pipe, ø15.85 x ø12.85 x 4.5mm	96440292	1	2	3	4
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, ø43.5 x ø34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

STACK KITS	
Model	Material Number
CR(I)1-3/2	96453485
CR(I)1-3	96453486
CR(I)1-4	96453487
CR(I)1-5	96453488
CR(I)1-6	96453489
CR(I)1-7	96453490
CR(I)1-8	96453491
CR(I)1-9	96453492
CR(I)1-10	96453493
CR(I)1-11	96453494
CR(I)1-12	96453495
CR(I)1-13	96453496
CR(I)1-15	96453497
CR(I)1-17	96453498
CR(I)1-19	96453499
CR(I)1-21	96453500
CR(I)1-23	96453501
CR(I)1-25	96453502
CR(I)1-27	96453503
CR(I)1-30	96453504
CR(I)1-33	96453505
CR(I)1-36	96453506

CR(I, N)15, 1, & 3 Graflon Bearing		Kit No.	96460140			
WEAR PARTS KIT 2-9		Kit No.	96455110			
WEAR PARTS KIT 10-19		Kit No.	96455111			
WEAR PARTS KIT 20-27		Kit No.	96455112			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber N Cpl. w/Pos.45 & 65 & Graflon Brg.	96440615	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2
45	Neck Ring, ø41.3 x ø30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, TC, 9.7mm	400041	1	2	3	4
64a	Spacing Pipe, ø15.85 x ø12.85 x 7.8mm	400016	1	2	3	4
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, ø43.5 x ø34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

CR(I)15, 1, & 3 Bronze Bearing		Kit No.	96455102			
WEAR PARTS KIT 2-9		Kit No.	96455104			
WEAR PARTS KIT 10-19		Kit No.	96455105			
WEAR PARTS KIT 20-27		Kit No.	96455106			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber Cpl. w/Pos.45 & 65 & Bronze Bearing	96440612	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2
45	Neck Ring, ø41.3 x ø30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, TC, 9.7mm	400041	1	2	3	4
64a	Spacing Pipe, ø15.85 x ø12.85 x 7.8mm	400016	1	2	3	4
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, ø43.5 x ø34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

GASKET KIT (EPDM)		Kit No.	96455090			
GASKET KIT (FKM)		Kit No.	96455091			
GASKET KIT (FKM)		Kit No.	96463944			
GASKET KIT (FFKM)		Kit No.	96533328			
GASKET KIT (EPDM)-Double Seal option.		Kit No.	96533362			
GASKET KIT (FKM)-Double Seal option.		Kit No.	96533363			
GASKET KIT (FFKM)-Double Seal option.		Kit No.	96533364			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
37	Sleeve O-ring, EPDM, ø137.5 x 3.3mm	96438743	2		3	
	Sleeve O-ring, FKM, ø137.5 x 3.3mm	96438744		2		3
37b	Sleeve O-ring, FXM, ø137.5 x 3.3mm	96458109		2		
	Sleeve O-ring, FFKM, ø136.12 x 3.53mm	96466718		2		3
38, 100(a)	Drain Plug O-ring, EPDM, Ø16.3 x 2.4mm	00ID1288	3		7	
	Drain Plug O-ring, FKM, Ø16.3 x 2.4mm	00ID2231		3		7
38, 100a	Drain Plug O-ring, FXM, ø16.3 x 2.4mm	96442869		3		
	Drain Plug O-ring, FFKM, ø16.3 x 2.4mm	96428162		3		7
109(a)	O-ring for Pos.105(b) &149, EPDM, Ø21.3 x 3.0mm	00ID1798	1		1	
	O-ring for Pos.105(b) &149, FKM, Ø21.2 x 3.0mm	00ID2339		1		1
109b	O-ring for Pos.105(b) &149, FXM, Ø22.0 x 2.75mm	96458111		1		
	O-ring for Pos.105(b) &149, FFKM, Ø23.47 x 2.62mm	96464384		1		2

Spare Part Kits (continued)

STANDARD SHAFT SEAL KIT, BALANCED CARTRIDGE (Maximum allowed working PSI is 435) (Tandem Seal option Pumps require 2 of each Seal Kit)		Kit No.	96455088							
		Kit No.	96455089							
		Kit No.	96455086							
		Kit No.	96455087							
		Kit No.	96455082							
		Kit No.	96455083							
		Kit No.	96455084							
		Kit No.	96455085							
Pos. No.	Description	Material No.	Qty. Included in each Kit							
105	HQBE	96441879	1							
	HQBV	96441880		1						
	HQQE	96441877			1					
	HQQV	96441878				1				
	HUBE	96441873					1			
	HUBV	96441874						1		
	HUUE	96441875							1	
	HUUV	96441876								1
N/A	Grinding Device Tool for Emery Cloth	370711	1	1	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1

OPTIONAL SHAFT SEAL KIT, BALANCED CARTRIDGE (Maximum allowed working PSI is 435) (Tandem Seal option Pumps require 2 of each Seal Kit)		Kit No.	96491375							
		Kit No.	96533327							
		Kit No.	96533326							
		Kit No.	96533323							
		Kit No.	96533322							
		Kit No.	96533325							
		Kit No.	96533324							
Pos. No.	Description	Material No.	Qty. Included in each Kit							
105	HQBK	96489537	1							
	HQQF	96472620		1						
	HQQK	96498109			1					
	HUBF	96481464				1				
	HUBK	96481463					1			
	HUUF	96475542						1		
	HUUK	96498108							1	
N/A	Grinding Device Tool for Emery Cloth	370711	1	1	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1

INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQE		Kit No.	96533360	
INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQV		Kit No.	96533361	
(An HQQx seal kit must also be used for a seal repair)				
Pos. No.	Description	Material No.	Qty. Included in each Kit	
37	Sleeve O-ring, EPDM, ϕ 137.5 x 3.3mm	96438743	3	
	Sleeve O-ring, FKM, ϕ 137.5 x 3.3mm	96438744		3
38, 100(a)	Drain Plug O-ring, EPDM, ϕ 16.3 x 2.4mm	00ID1288	7	
	Drain Plug O-ring, FKM, ϕ 16.3 x 2.4mm	00ID2231		7
102	O-ring, EPDM, ϕ 18 x 2.5mm	00ID2041	1	
	O-ring, FKM, ϕ 17.86 x 2.62mm	00ID2187		1
103	Stationary Seal Ring, SiC, 12mm	980746	1	
104	Rotating Seal Ring, SiC, 12mm	980733	1	1
107	O-ring, EPDM, ϕ 11.5 x 4.3mm	00ID2040	1	
	O-ring, FKM, ϕ 11.5 x 4.3mm	00ID2186		1
108	Spring, 12mm	980195	1	1
109a	O-ring, EPDM, ϕ 21.3 x 3.0mm	00ID1798	1	
	O-ring, FKM, ϕ 21.2 x 3.0mm	00ID2339		1
111	Driver for pos.104	980192	1	1
112	Driver for pos.111	980191	1	1
112a	Driver for pos.112	400203	1	1
113	Set Screw for pos.112a	00ID7392	2	2
146	Allen Bolt for pos.147 & 148, 2.5mm x M3 x 5mm	96462639	3	3

Spare Part Kits (continued)

IEC COUPLING KIT		Kit No. 415060		415061		415062		415063		415065	
		ø14/ø12	Kit No.	415060							
		ø19/ø12	Kit No.	415061							
		ø24/ø12	Kit No.	415062							
		ø28/ø12	Kit No.	415063							
		ø38/ø12	Kit No.	415065							
Pos. No.	Description	Material No.	Qty. Included in each Kit								
9	Allen Screw, M6 x 20mm, Delta Seal	00ID7899	4								
	Allen Screw, M8 x 25mm, Delta Seal	00ID7900		4	4						
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901								4	
10	Shaft Pin, ø5 x 26mm, Stainless	310192	1	1	1	1	1	1	1	1	
10a	Coupling Half, F85, MG71, .37-.55kW. ø14/ø12	410041	2								
	Coupling Half, F100, MG80, .75-1.1kW. ø19/ø12	410043		2							
	Coupling Half, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045			2						
	Coupling Half, F130, MG100/112, 3-4 kW. ø28/ø12	410047					2				
	Coupling Half, F265, MG132, 5.5-7.5kW. ø38/ø12	410115							2		

NEMA COUPLING KIT		Kit No. 415314		415315		96478700	
		ø15.8/ø12	Kit No.	415314			
		ø28.5/ø12	Kit No.	415315			
		ø34.9/ø12	Kit No.	96478700			
Pos. No.	Description	Material No.	Qty. Included in each Kit				
9	Allen Screw, M6 x 20mm, Delta Seal	00ID7899	4				
	Allen Screw, M8 x 25mm, Delta Seal	00ID7900		4	4		
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901					
10	Shaft Pin, ø5 x 26mm, Stainless	310192	1	1	1	1	
10a	Coupling Half, 56C, 1/3 - 2HP. ø15.8 / ø12	410108	2				
	Coupling Half, 182/184TC, 3-5HP. ø28.5/ø12	410109		2			
	Coupling Half, 213TC, 7.5-10HP. ø34.9/ø12	96472175				2	

COUPLING GUARD KIT		Kit No. 96505130		96505131		96505132	
IEC, F85-F100, .37 to 1.1 kW		Kit No.		96505130			
NEMA 56C, 1/3-2HP; IEC-F115-130 &		Kit No.		96505131			
NEMA 182-215TC, 3-10HP		Kit No.		96505132			
Pos. No.	Description	Material No.	Qty. Included in each Kit				
7	Coupling Guard, W=127mm x H=66mm	96438136	2				
	Coupling Guard, W=127mm x H=90.5mm	96438137		2			
	Coupling Guard, W=157mm x H=171mm	96438138				2	
7a	Screw comb.slot torx/straight slot 4x8mm	96488481	4	4	4	4	

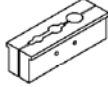



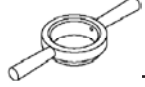



OVAL FLANGE KIT FOR SMALL CR1S, 1, & 3		Kit No. 96474336	
1" Threaded Cast Iron (232 PSI Max.)		Kit No.	
		96474336	
Pos. No.	Description	Material No.	Qty. Included in each Kit
12	Flange, Cast Iron, 1" - 11.5 NPT	96468333	2
35	Hex Head Bolt, M10 x 40mm, Delta Seal	00ID8027	4
39	Gasket, 95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189	2

Accessories

ANSI COMPANION FLANGES FOR SMALL CR		Kit No. 91122260	
1-1/4" Threaded Cast Iron, 250 Lb. Class		Kit No.	
		91122260	
Pos. No.	Description	Material No.	Qty. Included in each Kit
N/A	Nut, HEX 5/8"-11 UNC, Grade 2	00ID1510	8
N/A	Plain Bolt, 5/8" x 2-1/2", Grade 2	00ID1920	8
N/A	Flange, Cast Iron, 1-1/4"	00ID3650	2
N/A	Gasket Full Face Flange, 1-1/4", 300#, Cut Ring	400201	2

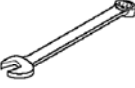






Special Tools

Tools not generally available from normal sources.

Mat. No.	Description and Use	
00SV0040	Shaft Holder for Dismantling/Assembly Used to hold and protect the shaft during dismantling and assembly.	
00SV2007	Tubular Box Spanner for Shaft Seal 36.1 mm Used to install and remove the shaft seal. Fits a 1/2" drive ratchet.	
00SV0239	Puller for Neck Ring Used to remove the Neck Ring from Chamber.	
00SV2014	Circlip Pliers for Flange Lock Ring Used to remove the Lock Ring for the Flange.	
00SV2066	Tool for Outer Sleeve Used to press sleeve into base. (optional)	
00SV2011	Bit Holder Used with Bits Kit, 1/4"	
00SV2010	Bits Kit NV 5 mm for M6, 1/4" NV 6 mm for M8, 1/4" NV 8 mm for M10, 1/4"	
00SV2012	Hexagon Socket Bit Used for Shaft Seal NV 2.5 mm for M5, 1/4"	

Standard Tools

In addition to being available from Grundfos, comparable tools can be purchased through normal sources.

Mat. No.	Description and Use	
00SV0083 00SV0055 00SV0056 00SV0054 00SV0122	Wrenches Used to tighten various nuts. NV 10 mm for M6 NV 13 mm for M8 NV 17 mm for M10 NV 19 mm for M12 NV 24 mm for M16	
00SV0292 00SV0269 00SV0400	Torque Wrench Used to torque various screws. 4-20 Nm, 9 x 12 20-100 Nm, 9 x 12 40-200 Nm, 14x18	
00SV0438	Torque Screwdriver Used to tighten various nuts. 1-6 Nm, 1/4"	
00SV0295	Ratchet Spanner for all Adapters 9 mm x 12 mm, 1/2"	
00SV0296 00SV0297 00SV0298	Socket Spanner with Inside Hex NV 5 mm for M6, 1/2" x 1/2" NV 6 mm for M8, 1/2" x 1/2" NV 8 mm for M10, 1/2" x 1/2"	
00SV0310 00SV0294 00SV0270 00SV0271 00SV0524	Ring Spanner NV 10 mm for M6 NV 13 mm for M8 NV 17 mm for M10 NV 19 mm for M12 NV 24 mm for M16	
00SV2013	Socket Spanner NV 13 mm for M8, 9 x 12	

L-CR-SM-024 0504

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