



# CR1s

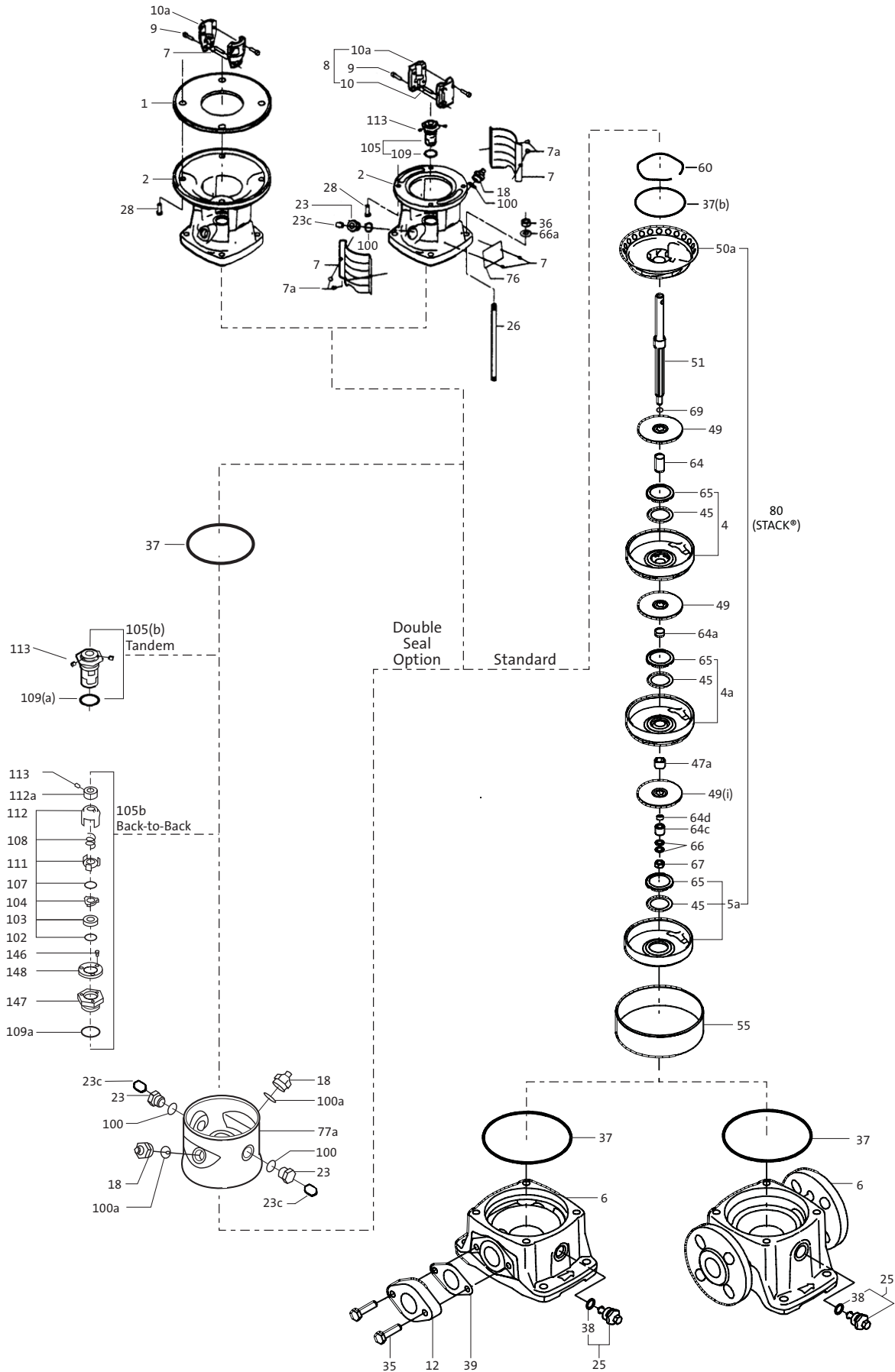
## Parts List & Kits

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### Contents

Parts List  
Spare Part Kits  
Accessories  
Special Tools  
Standard Tools  
Tools for Torques

# Exploded View CR1s



# Parts List & Kits CR1s

## Parts List

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	Material Number	Included in Kits?
1	Adapter for Motor Stool				For NEMA, 213/215TC, 7.5 - 10HP	96476208	NO
2	Motor Stool		3/2-27	1	NEMA, 56C, 1/3 - 2HP	96436501	NO
					NEMA, 182/184TC, 3 - 5HP	96436502	NO
					Add Pos. 1, NEMA, 213TC, 7.5 - 10HP	96436502	NO
			3/2-19	1	IEC, F85, MG 71, .37 - .55kW	96436495	NO
			21-36	1	IEC, F100, MG 80, .75 - 1.1kW	96436496	NO
					IEC, F115, MG 90, 1.5 - 2.2kW	96436499	NO
					IEC, F130, MG 100/112, 3.0 - 4.0 kW	96436500	NO
					IEC, F265, MG132, 5.5 - 7.5kW	96436505	NO
4	Chamber, Complete with Pos.45 & 65		3/2-36	^^^	PTFE Pos.45	96439480	NO
4a	Chamber Cpl. w/Pos.45 & 65 & Bearing		3/2-36	^^^^	Silicon Carbide Brg, PTFE Pos.45	96439475	Yes
	Chamber Cpl. w/Pos.45 & 65 & Brg. (option)		3/2-36	^^^^	Bronze Bearing, PTFE Pos.45	96440612	Yes
	Chamber Cpl. w/Pos.45 & 65 & Brg. (option)		3/2-36	^^^^	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
			3/2-36	1	JIS, FGJ, ANSI (Max 362 PSI)	96442012	NO
7	Coupling Guard			2	IEC, F85-F100	96438136	NO
				2	NEMA-56C, IEC-F115,130, & 265	96438137	NO
					NEMA, 182-215TC	96438138	NO
7a	Screw for Coupling Guard		3/2-36	4	M4 x 8mm	96488481	NO
9	Allen Screw		3/2-27	4	M6 x 20mm, Delta Seal	00ID7899	Yes
				4	M8 x 25mm, Delta Seal	00ID7900	Yes
					M10 x 25mm, Delta Seal	00ID7901	Yes
10	Shaft Pin		3/2-36	1	ø5 x 26mm	310192	Yes
10a	Coupling Half		3/2-27	2	NEMA, 56C, 1/3 - 2HP. ø15.8 / ø12	410108	Yes
				2	NEMA, 182/184TC, 3-5HP. ø28.5/ø12	410109	Yes
					NEMA, 213TC, 7.5-10HP. ø34.9/ø12	96472175	Yes
			3/2-19	2	IEC, F85, MG71, .37-.55kW. ø14/ø12	410041	Yes
			21-36	2	IEC, F100, MG80,.75-1.1kW. ø19/ø12	410043	Yes
				2	IEC, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045	Yes
					IEC, F130, MG100/112, 3-4 kW.ø28/ø12	410047	Yes
					IEC, F265, MG132, 5.5-7.5kW. ø38/ø12	410115	Yes
12	Oval Flange		3/2-17	2	Painted CI, 1" -11.5 NPT (max 232 PSI)	96468333	Yes
			3/2-23	2	Painted CI, RP 1" BSP DIN (max 232 PSI)	400173	NO
18	Priming/Vent Plug		3/2-36	*	G 1/2A, NV24 with NV9 x M8 stem	405150	NO
23	Plug		3/2-36	**	G 1/2A, w/1/4"port, NV24	91120659	NO
	Plug (option)		3/2-36	**	G 1/2A, Solid no port, NV24	370025	NO
23c	Pipe Plug for Pos.23 & 25 with hollow stem		3/2-36	**	1/4" NPT,SS SQHD	00ID7216	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
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FKM	96440609	NO
	Drain/Priming Plug Cpl. with O-rings (option)		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FFKM	96486530	NO
	Dr./Pr. Plug Cpl. for gauge, w/O-rings (option)		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, EPDM	96527046	NO
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FKM	96527047	NO
			3/2-36	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	4	M12 x 97mm	414002	NO
			5	4	M12 x 115mm	404004	NO
			6	4	M12 x 133mm	404005	NO
			7	4	M12 x 151mm	414004	NO
			8	4	M12 x 169mm	404007	NO
			9	4	M12 x 187mm	404008	NO
			10	4	M12 x 205mm	414006	NO
			11	4	M12 x 223mm	404010	NO
			12	4	M12 x 241mm	404011	NO
			13	4	M12 x 259mm	414008	NO
			15	4	M12 x 294mm	96442754	NO
			17	4	M12 x 330mm	96442760	NO
			19	4	M12 x 367mm	414012	NO
			21	4	M12 x 402mm	96442762	NO
			23	4	M12 x 439mm	404022	NO
			25	4	M12 x 475mm	414016	NO
			27	4	M12 x 511mm	404026	NO
			30	4	M12 x 562mm (50Hz.)	96442766	NO
			33	4	M12 x 618mm (50Hz.)	96442767	NO
			36	4	M12 x 670mm (50Hz.)	96442768	NO
26	Staybolt (Back-to-Back & Tandem Seal option)		3/2-3	4	M12 x 187mm	404008	NO
			4	4	M12 x 205mm	414006	NO
			5	4	M12 x 223mm	404010	NO
			6	4	M12 x 241mm	404011	NO
			7	4	M12 x 259mm	414008	NO
			8	4	M12 x 277mm	404013	NO
			9	4	M12 x 294mm	96442754	NO

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

This column indicates which pump model uses the spare part. If blank, the part is used in all models.

# Parts List & Kits CR1s

## Parts List

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	Material Number	Included in Kits?		
26	Staybolt (Back-to-Back & Tandem Seal option)		10	4	M12 x 313mm	414010	NO		
			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 (50Hz.)	96442768	NO		
			33	4	M12 x 724mm (50Hz.)	96442769	NO		
			36	4	M12 x 778mm (50Hz.)	96458444	NO		
		28	Motor Bolt		3/2-27	4	NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm	00ID1839	NO
							NEMA, 182/184TC, 3 - 5HP.UNC1/2" x 25mm	00ID1840	NO
					NEMA, 213TC, 7.5 -10HP. UNC 1/2" x 1.25"	91128631	NO		
	3/2-19			4	IEC, F85, MG71, .37-55kW. M6 x 20mm	00ID8022	NO		
	21-36			4	IEC, F100, MG80,75-1.1kW. M6 x 25mm	00ID8023	NO		
					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 Seal	00ID8027	Yes		
36	Staybolt Nut		3/2-36	4	19mm x M12, Delta Seal	00ID7917	NO		
37	Sleeve O-ring		3/2-36	◆◆	EPDM, ø137.5 x 3.3mm	96438743	Yes		
			3/2-36	◆◆	FKM, ø137.5 x 3.3mm	96438744	Yes		
37b	Sleeve O-ring (option)		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		
			3/2-36	1	FFKM, ø16.3 x 2.4mm	96428162	Yes		
	Drain Plug O-ring (option)		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		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	ø73.0 x ø30.6 x 9.0mm (back-plate .5mm)	96433134	NO		
50a	Top Guide Vane		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 (50Hz.)	96440408	NO		
			33	1	ø12 x 700.5mm (50Hz.)	96440410	NO		
			36	1	ø12 x 754.5mm (50Hz.)	96440411	NO		
51	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		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		

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## Parts List

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	Material Number	Included in Kits?		
51	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		17	1	Ø12 x 517.5mm	96457573	NO		
			19	1	Ø12 x 555.5mm	96457575	NO		
			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 (50Hz.)	96457583	NO		
			33	1	Ø12 x 805.5mm (50Hz.)	96457585	NO		
			36	1	Ø12 x 859.5mm (50Hz.)	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 (50Hz.)	96440007	NO		
	33			1	Ø138 x 584.6mm (50Hz.)	96440008	NO		
	36	1	Ø138 x 638.6mm (50Hz.)	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	Spacing Pipe	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 Seal	96430377	NO			
67	Lock Nut for Shaft	3/2-36	1	13mm x M8	00ID2061	Yes			
69	Spacing Pipe	3/2	1	Ø15.85 x 12.85 x 18.0mm	400125	NO			
76	Nameplate	3/2-36	1	3045S, 60 x 45mm	96439820	NO			
76a	Rivet for Nameplate	3/2-36	2	3045S, 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	00ID1288	Yes		
			3/2-36	■	FKM, Ø16.3 x 2.4mm	00ID2231	Yes		
100a	Priming/Vent Plug O-ring (option)	3/2-36	■	FFKM, Ø16.3 x 2.4mm	96428162	Yes			
	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	00ID2041	Yes		
			3/2-36	1	FKM, Ø17.86 x 2.62mm	00ID2187	Yes		
	O-ring for Pos.105b Back-to-Back (option)	3/2-36	1	FFKM, Ø17.86 x 2.62mm	96440281	NO			
	O-ring for Pos.105b Back-to-Back (option)	3/2-36	1	FXM, Ø17.86 x 2.62mm	96472584	NO			
103	Stationary Seal Ring for 105b Back-to-Back	3/2-36	1	TC, 12mm	980190	NO			
	Stationary Seal Ring for 105b Back-to-Back (option)	3/2-36	1	SIC, 12mm	980746	Yes			
104	Rotating Seal Ring for 105b Back-to-Back	3/2-36	1	TC, 12mm	980163	NO			
	Rotating Seal Ring for 105b Back-to-Back (option)	3/2-36	1	SIC, 12mm	980733	Yes			
105(b)	Shaft Seal HQBE	3/2-36	***	SIC, Carbon with resin-impregnated, EPDM	96441879	Yes			
	Shaft Seal HQBV	3/2-36	***	SIC, Carbon with resin-impregnated, FKM	96441880	Yes			
	Shaft Seal HQBK (option)	3/2-36	***	SIC, Carbon with resin-impregnated, FFKM	96489537	Yes			
	Shaft Seal HQQE	3/2-36	***	SIC, SIC, EPDM	96441877	Yes			
	Shaft Seal HQQV	3/2-36	***	SIC, SIC, FKM	96441878	Yes			
	Shaft Seal HQQF (option)	3/2-36	***	SIC, SIC, FXM	96472620	Yes			
	Shaft Seal HQQK (option)	3/2-36	***	SIC, SIC, FFKM	96464381	Yes			
	Shaft Seal HUBE	3/2-36	***	TC, Carbon with resin-impregnated, EPDM	96441873	Yes			
	Shaft Seal HUBV	3/2-36	***	TC, Carbon with resin-impregnated, FKM	96441874	Yes			
	Shaft Seal HUBF (option)	3/2-36	***	TC, Carbon with resin-impregnated, FXM	96481464	Yes			
	Shaft Seal HUBK (option)	3/2-36	***	TC, Carbon with resin-impregnated, FFKM	96481463	Yes			
	Shaft Seal HUUE	3/2-36	***	TC, TC, EPDM	96441875	Yes			
	Shaft Seal HUUV	3/2-36	***	TC, TC, FKM	96441876	Yes			
	Shaft Seal HUUF (option)	3/2-36	***	TC, TC, FXM	96475542	Yes			
	Shaft Seal HUUK (option)	3/2-36	***	TC, TC, FFKM	96467885	Yes			
	105b	Shaft Seal/inboard for Back-to-Back OQQE	3/2-36	1	SIC, SIC, EPDM	985200	Yes		

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# Parts List & Kits CR1s

## Parts List

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	Material Number	Included in Kits?
105b	Shaft Seal/inboard for Back-to-Back OQQV		3/2-36	1	SIC, SIC, FKM	985760	Yes
	Shaft Seal/inboard for Back-to-Back OUUE		3/2-36	1	TC, TC, EPDM	985189	NO
	Shaft Seal/inboard for Back-to-Back OUUV		3/2-36	1	TC, TC, FKM	985190	NO
107	O-ring for Pos.105b Back-to-Back		3/2-36	1	EPDM, ø11.5 x 4.3mm	00ID2040	Yes
			3/2-36	1	FKM, ø11.5 x 4.3mm	00ID2186	Yes
	O-ring for Pos.105b Back-to-Back (option)		3/2-36	1	FFKM, ø11.5 x 4.3mm	96440282	NO
	O-ring for Pos.105b Back-to-Back (option)		3/2-36	1	FXM, ø11.5 x 3.18mm	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, ø21.3 x 3.0mm	00ID1798	Yes
			3/2-36	1	FKM, ø21.2 x 3.0mm	00ID2339	Yes
109b	O-ring for Shaft Seal Pos.105 (option)		3/2-36	1	FXM, ø22 x 2.75mm	96458111	Yes
	O-ring for Shaft Seal Pos.105 (option)		3/2-36	1	FFKM, ø23.47 x 2.62mm	96464384	Yes
111	Seal Driver (small) for Pos.105b Back-to-Back		3/2-36	1		980192	Yes
112	Seal Driver (large) for Pos.105b Back-to-Back		3/2-36	1		980191	Yes
112a	Seal Drv threaded 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	Allen Bolt 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, ø36.0 x ø21.6 x 5.0mm	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** ..... Recommended spare part
- ∅ ..... 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)1S, 1, & 3 SiC Bearing						
WEAR PARTS KIT 2-9						
WEAR PARTS KIT 10-19						
WEAR PARTS KIT 20-27						
WEAR PARTS KIT 28-36						
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 No.
CR, CR1 1S-3/2	96479046
CR, CR1 1S-3	96479047
CR, CR1 1S-4	96479048
CR, CR1 1S-5	96479049
CR, CR1 1S-6	96479060
CR, CR1 1S-7	96479061
CR, CR1 1S-8	96479062
CR, CR1 1S-9	96479063
CR, CR1 1S-10	96479064
CR, CR1 1S-11	96479065
CR, CR1 1S-12	96479066
CR, CR1 1S-13	96479067
CR, CR1 1S-15	96479068
CR, CR1 1S-17	96479069
CR, CR1 1S-19	96479070
CR, CR1 1S-21	96479071
CR, CR1 1S-23	96479072
CR, CR1 1S-25	96479073
CR, CR1 1S-27	96479074
*** CR, CR1 1S-30	96479075
*** CR, CR1 1S-33	96479076
*** CR, CR1 1S-36	96479077

\*\*\*For 50 Hz operation only.

CR(I, N)1S, 1, & 3 Graflon Bearing						
WEAR PARTS KIT 2-9						
WEAR PARTS KIT 10-19						
WEAR PARTS KIT 20-27						
WEAR PARTS KIT 28-36						
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber N Cpl. w/Pos.45 & 65 & Graflon Bearing	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)1S, 1, & 3 Bronze Bearing						
WEAR PARTS KIT 2-9						
WEAR PARTS KIT 10-19						
WEAR PARTS KIT 20-27						
WEAR PARTS KIT 28-36						
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)						
GASKET KIT (FKM)						
GASKET KIT (FKM)						
GASKET KIT (FFKM)						
GASKET KIT (EPDM)-Double Seal option.						
GASKET KIT (FKM)-Double Seal option.						
GASKET KIT (FFKM)-Double Seal option.						
Pos. No.	Description	Material No.	Qty. Included in each Kit			
37	Sleeve O-ring, EPDM, ø137.5 x 3.3mm, EPDM	96438743	2		3	
	Sleeve O-ring, FKM, ø137.5 x 3.3mm, FKM	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, EPDM	00ID1288	3			7
	Drain Plug O-ring, FKM, Ø16.3 x 2.4mm, FKM	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 CR1s

## 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								1
N/A	Grinding Device Tool for Emery Cloth	370711	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1	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	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1	1	1	1	1	1	1

INBOARD SHAFT SEAL & Gasket KIT, Back-to-Back OQQE INBOARD SHAFT SEAL & Gasket KIT, Back-to-Back OQQV (An HQQx seal kit must also be used for a seal repair)			Kit No.	96533360	Kit No.	96533361
Pos. No.	Description	Material No.	Qty. Included in each Kit			
37	Sleeve O-ring, EPDM, $\phi$ 137.5 x 3.3mm	96438743	3			
	Sleeve O-ring, FKM, $\phi$ 137.5 x 3.3mm	96438744		3		
38, 100(a)	Drain Plug O-ring, EPDM, $\phi$ 16.3 x 2.4mm	00ID1288	7			
	Drain Plug O-ring, FKM, $\phi$ 16.3 x 2.4mm	00ID2231		7		
102	O-ring, EPDM, $\phi$ 18 x 2.5mm	00ID2041	1			
	O-ring, FKM, $\phi$ 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, $\phi$ 11.5 x 4.3mm	00ID2040	1			
	O-ring, FKM, $\phi$ 11.5 x 4.3mm	00ID2186		1		
108	Spring, 12mm	980195	1	1		
109a	O-ring, EPDM, $\phi$ 21.3 x 3.0mm	00ID1798	1			
	O-ring, FKM, $\phi$ 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		

IEC COUPLING KIT			Kit No.	415060	Kit No.	415061	Kit No.	415062	Kit No.	415063	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	4						
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901									4	
10	Shaft Pin, $\phi$ 5 x 26mm, Stainless	310192	1	1	1	1	1	1	1	1	1	
10a	Coupling Half, F85, MG71, .37- .55kW. $\phi$ 14/ $\phi$ 12	410041	2									
	Coupling Half, F100, MG80, .75-1.1kW. $\phi$ 19/ $\phi$ 12	410043		2								
	Coupling Half, F115, MG 90, 1.5-2.2kW. $\phi$ 24/ $\phi$ 12	410045			2							
	Coupling Half, F130, MG100/112, 3-4 kW. $\phi$ 28/ $\phi$ 12	410047				2						
	Coupling Half, F265, MG132, 5.5-7.5kW. $\phi$ 38/ $\phi$ 12	410115									2	

**Spare Part Kits** (continued)

NEMA COUPLING KIT		Kit No. 415314	
ø15.8/ø12		Kit No. 415315	
ø28.5/ø12		Kit No. 96478700	
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
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901	4
10	Shaft Pin, ø5 x 26mm, Stainless	310192	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

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

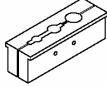
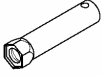
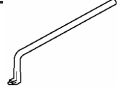
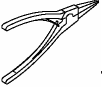
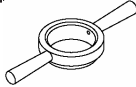
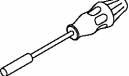
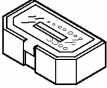

**Accessories**

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

# Spare Part Kits • Special Tools **CR1s**

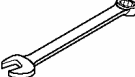
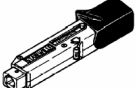
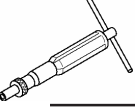




## Special Tools

Tools not generally available from normal sources.

Mat. No.	Description and Use	
00SV0040	<b>Shaft Holder for Dismantling/Assembly</b> Used to hold and protect the shaft during dismantling and assembly.	
00SV2007	<b>Tubular Box Spanner for Shaft Seal 36.1 mm</b> Used to install and remove the shaft seal. Fits a 1/2" drive ratchet.	
00SV0239	<b>Puller for Neck Ring</b> Used to remove the Neck Ring from Chamber.	
00SV2014	<b>Circlip Pliers for Flange Lock Ring</b> Used to remove the Lock Ring for the Flange.	
00SV2066	<b>Tool for Outer Sleeve</b> Used to press sleeve into base. (optional)	
00SV2011	<b>Bit Holder</b> Used with Bits Kit, 1/4"	
00SV2010	<b>Bits Kit</b> NV 5 mm for M6, 1/4" NV 6 mm for M8, 1/4" NV 8 mm for M10, 1/4"	
00SV2012	<b>Hexagon Socket Bit</b> 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	<b>Wrenches</b> 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	<b>Torque Wrench</b> Used to torque various screws. 4-20 Nm, 9 x 12 20-100 Nm, 9 x 12 40-200 Nm, 14x18	
00SV0438	<b>Torque Screwdriver</b> Used to tighten various nuts. 1-6 Nm, 1/4"	
00SV0295	<b>Ratchet Spanner for all Adapters</b> 9 mm x 12 mm, 1/2"	
00SV0296 00SV0297 00SV0298	<b>Socket Spanner with Inside Hex</b> 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	<b>Ring Spanner</b> 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	<b>Socket Spanner</b> NV 13 mm for M8, 9 x 12	





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