CRN1

Parts List & Kits

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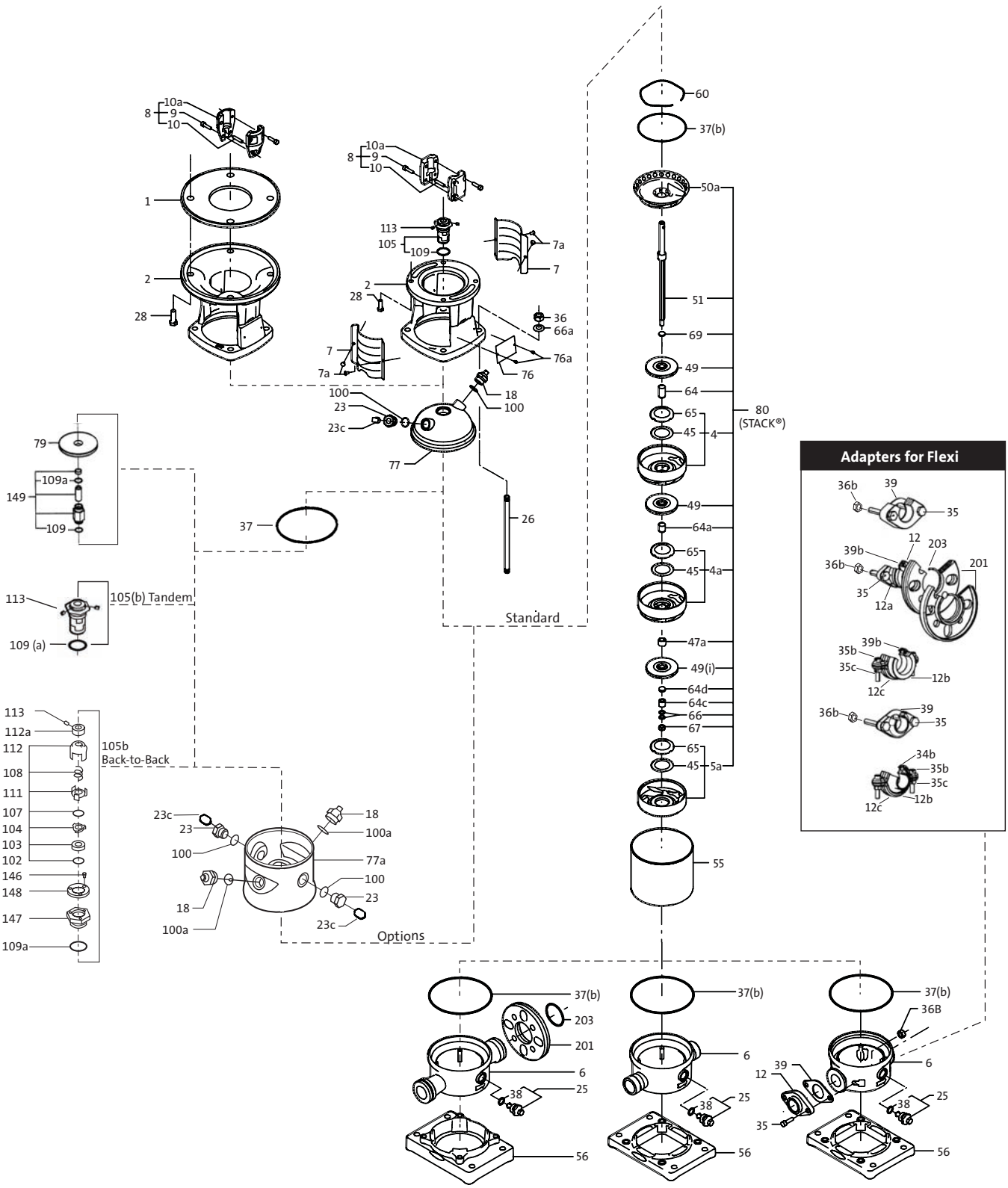

PARTS LIST

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
1	Adapter for Motor Stool				For NEMA, 213/215TC, 7.5 - 10HP	96476208		No
2	Motor Stool		3/2-19	1	NEMA, 56C, 1/3 - 2HP	96436510		No
			21-27		NEMA, 182/184TC, 3 - 5HP	96436511		No
					Add Pos. 1, NEMA, 213TC, 7.5 - 10HP	96436511		No
			3/2-11	1	IEC, F85, MG 71, .37 - .55kW	96436506		No
			12-23	1	IEC, F100, MG 80, .75 - 1.1kW	96436507		No
			24-36		IEC, F115, MG 90, 1.5 - 2.2kW	96436508		No
					IEC, F130, MG 100/112, 3.0 - 4.0 kW	96436509		No
					IEC, F265, MG132, 5.5 - 7.5kW	96436514		No
4	Chamber, Complete with Pos. 45 & 65		3/2-36	^^^	PTFE Pos.45	96439481		No
4a	Chamber Cpl. w/Pos. 45 & 65 & Bearing		3/2-36	^^^^	Silicon Carbide Bearing, PTFE Pos. 45	96439476		**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	96439485		No
6	Base		3/2-17	1	Flexi -Clamp / Oval, Stainless (max 232 PSI)	96438394		No
			3/2-36	1	For Flanges JIS, FGJ, ANSI, Stainless (max 362 PSI)	96438328		No
			3/2-36	1	Victualic (PJE) 1.25", Stainless (max 362 PSI)	96436851		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		3/2-19	4	M6 x 20mm, Delta Seal	00ID7899		**YES**
			21-27	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		3/2-19	2	NEMA, 56C, 1/3 - 2HP. ø15.8 / ø12	410108		**YES**
			21-27	2	NEMA, 182/184TC, 3-5HP. ø28.5/ø12	410109		**YES**
					NEMA, 213TC, 7.5-10HP. ø34.9/ø12	96472175		**YES**
			3/2-11	2	IEC, F85, MG71, .37-.55kW. ø14/ø12	410041		**YES**
			12-23	2	IEC, F100, MG80,.75-1.1kW. ø19/ø12	410043		**YES**
			24-36	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 for Flexi Base		3/2-17	2	Stainless, 1" -11.5 NPT (max 232 PSI)	96468336		**YES**
			3/2-23	2	Stainless, RP 1" BSP DIN (max 232 PSI)	96437814		No
12a	Adapter Flg. for ANSI Pos. 201/Flexi Base (option)		3/2-17	2	Stainless, (max 232 PSI)	96437818		**YES**
12b	Pipe Stub for Clamp/Flexi Base (option)		3/2-17	2	Stainless, Internal 1" -11.5 NPT (max 232 PSI)	400182		**YES**
			3/2-17	2	Stainless, Internal 1.25" -11.5 NPT (max 232 PSI)	410279		**YES**
			3/2-17	2	Stainless, External 2" -11.5 NPT (max 232 PSI)	96468338		**YES**
12c	Clamp for Flexi Base & Pos. 12b (option)		3/2-17	4	Stainless, (max 232 PSI)	00ID7194		**YES**
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	96440611		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FKM	96446891		No
	Drain/Priming Plug Cpl. with O-rings (option)		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FXM	96460009		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FFKM	96475474		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	96527050		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FKM	96527051		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FXM	96549174		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FFKM	96527052		No
26	Staybolt		3/2-3	4	M12 x 151mm	96487020		No
			4	4	M12 x 169mm	96442055		No
			5	4	M12 x 187mm	414103		No
			6	4	M12 x 209mm	404135		No
			7	4	M12 x 227mm	414134		No
			8	4	M12 x 241mm	414105		No
			9	4	M12 x 259mm	96459210		No
			10	4	M12 x 281mm	414136		No
			11	4	M12 x 295mm	414107		No
			12	4	M12 x 313mm	96463414		No
			13	4	M12 x 335mm	414138		No
			15	4	M12 x 367mm	96459214		No
			17	4	M12 x 403mm	414111		No
			19	4	M12 x 439mm	96442118		No
			21	4	M12 x 475mm	414143		No
			23	4	M12 x 511mm	414115		No
			25	4	M12 x 547mm	96442119		No
			27	4	M12 x 587mm	404156		No
			30	4	M12 x 637mm (50 Hz.)	96461557		No
			33	4	M12 x 691mm (50 Hz.)	96442122		No
			36	4	M12 x 745mm (50 Hz.)	96442123		No

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26	Staybolt (Cool Top®, Back-to-Back & Tandem		3/2-3	4	M12 x 263mm	404138		No
	Seal option)		4	4	M12 x 281mm	414136		No
			5	4	M12 x 295mm	414107		No
			6	4	M12 x 317mm	404141		No
	Staybolt (Cool Top®, Back-to-Back & Tandem		7	4	M12 x 335mm	414138		No
	Seal option)		8	4	M12 x 349mm	414109		No
			9	4	M12 x 367mm	96459214		No
			10	4	M12 x 385mm	96458503		No
			11	4	M12 x 403mm	414111		No
			12	4	M12 x 425mm	404147		No
			13	4	M12 x 439mm	96442118		No
			15	4	M12 x 475mm	414143		No
			17	4	M12 x 511mm	414115		No
			19	4	M12 x 547mm	96442119		No
			21	4	M12 x 587mm	404156		No
			23	4	M12 x 619mm	414119		No
			25	4	M12 x 659mm	414160		No
			27	4	M12 x 691mm	96442122		No
			30	4	M12 x 745mm (50 Hz.)	96442123		No
			33	4	M12 x 799mm (50 Hz.)	414155		No
			36	4	M12 x 853mm (50 Hz.)	96458507		No
28	Motor Bolt		3/2-19	4	NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm	00ID1839		No
			21-27		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		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	Hex. Head Screw for Oval "CI" Flange (Flexi option)		3/2-17	4	M10 x70mm, 8.8, A4, DIN931	96447227		**YES**
	Hex. Head Screw for Oval "N" Flange (Flexi option)		3/2-17	4	M10 x 60mm, A4, DIN931	96447228		**YES**
35b	Screw for Clamp Pos. 12c (Flexi option)		3/2-17	4	M8 x 40mm - A2, RR DIN933	00ID7188		**YES**
35c	Nut for Screw Pos. 35b for Clamp Pos. 12c (Flexi option)		3/2-17	4	M8, 304SS	00ID7187		**YES**
36	Staybolt Nut		3/2-36	4	19mm x M12, 316SS	00ID0876		No
36b	Nut for Screw Pos. 35 Oval Flange (Flexi option)		3/2-17	4	M10, 316SS w/Delta Seal	96438757		**YES**
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**
	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**
39b	O-ring for Clamp,Thread stub-Union-& FGJ Flange,		3/2-17	2	EPDM, ø44.45 x 3.53mm	96407726		**YES**
	(option)		3/2-17	2	FKM, ø44.45 x 3.53mm	96411713		**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**
	Brg. Ring/Spacer (option for Graflon Pos. 4a)		3/2-36	^^^^	TC, ø15.92 x ø13.10 x ø10.9 x 9.7mm	400041		**YES**
49	Impeller		3/2-36	# stgs	ø73.6 x ø30.6 x 9.1mm (back-plate .5mm)	96440326		No
50a	Top Guide Vane		3-36	1		96457638		No
	Top Guide Vane Plate (option for destaging)		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

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Pos. No.	Part Description	Model Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
51	Shaft, Cpl. (Cool Top®, Back-to-Back & Tandem	3/2-3	1	ø12 x 265.5mm	96457560		No
	Seal option)	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
		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	96439996		No
		4	1	ø138 x 62.6mm	96440025		No
		5	1	ø138 x 80.6mm	96441528		No
		6	1	ø138 x 98.6mm	96440014		No
		7	1	ø138 x 116.6mm	96441529		No
		8	1	ø138 x 134.6mm	96441531		No
		9	1	ø138 x 152.6mm	96440015		No
		10	1	ø138 x 170.6mm	96441532		No
		11	1	ø138 x 188.6mm	96441534		No
		12	1	ø138 x 206.6mm	96440016		No
		13	1	ø138 x 224.6mm	96441535		No
		15	1	ø138 x 260.6mm	96440017		No
		17	1	ø138 x 296.6mm	96441538		No
		19	1	ø138 x 332.6mm	96441539		No
		21	1	ø138 x 368.6mm	96440019		No
		23	1	ø138 x 404.6mm	96441542		No
		25	1	ø138 x 440.6mm	96441543		No
		27	1	ø138 x 476.6mm	96440021		No
		30	1	ø138 x 530.6mm (50 Hz.)	96440022		No
		33	1	ø138 x 584.6mm (50 Hz.)	96440023		No
		36	1	ø138 x 638.6mm (50 Hz.)	96439997		No
56	Base Plate (Low) for PJE / Flexi-clamp Pos. 6	2-36	1	Cast Iron	96438133		No
	B. P. (High) for Flexi-clamp w/ANSI/DIN/JIS Pos. 6	2-36	1	Cast Iron	96438132		No
	Base Plate N (Low) for PJE / Flexi-clamp Pos.6	2-36	1	Cast Stainless	96437870		No
	B. P. N (High) for Flexi-clamp w/ANSI/DIN/JIS Pos. 6	2-36	1	Cast Stainless	96437868		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 Pos. 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	00ID3103		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	304SS, 60 x 45mm	96439820		No
76a	Rivet for Nameplate	3/2-36	2	304SS, ø3 x 5mm	96022882		No
77	Pump Head Cov. for Motor Stool Pos. 2	3/2-36	1	Cast Stainless	96436340		No
77a	Pump Head Cov. for Back-to-Back & Tandem Seal	3/2-36	1	Cast Stainless	96456293		No
	Pump Head Cov. for Cool Top® (option)	3/2-36	1	Cast Stainless	96456294		No
79	Disc / Plate for Cool Top®	3/2-36	■	Stainless	96456296		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**
		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
		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
	Stationare Seal Ring for 105b Back-to-Back (option)	3/2-36	1	SiC,12mm	980746		**YES**

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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**
105(b)	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**
	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
			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**
	O-ring for Shaft Seal Pos. 106		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**
			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**
117	Pipe for Air Vent (option)		3/2-36	1	R 1/2", 316 Stainless	330272		**YES**
118	Automatic Air Vent (option)		3/2-36	1	Type AE50S 1/2" BSP, Stainless	96498508		**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
149	Connecting Pipe for Cool Top®		3/2-36	1	NV36, 316SS, FXM & EPDM	96460414		No
			3/2-36	1	NV36, 316SS, FXM & FKM	96460415		No
201	Flange		3/2-36	1	ANSI, DIN, JIS PN40/30K, Cast Iron	96439203		**YES**
			3/2-36	1	ANSI, DIN, JIS PN40/30K, Stainless	96439492		**YES**
203	Lock Ring for Flange		3/2-36	1	Stainless	96439718		**YES**

Due to part changes over time, 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.

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= use2
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

Cool Top® is a registered trademark of Grundfos Pumps

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)1S, 1, & 3 SiC Bearing						
WEAR PARTS KIT 2-9	**Kit No.**	**96455095**				
WEAR PARTS KIT 10-19	**Kit No.**		**96455092**			
WEAR PARTS KIT 20-27	**Kit No.**			**96455093**		
WEAR PARTS KIT 28-36	**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

CR(I, N)1S, 1, & 3 Graflon Bearing						
WEAR PARTS KIT 2-9	**Kit No.**	**96460140**				
WEAR PARTS KIT 10-19	**Kit No.**		**96455110**			
WEAR PARTS KIT 20-27	**Kit No.**			**96455111**		
WEAR PARTS KIT 28-36	**Kit No.**				**96455112**	
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

STACK KITS	
Model	**Material No.**
CRN1-3/2	96453507
CRN1-3	96453508
CRN1-4	96453509
CRN1-5	96453510
CRN1-6	96453511
CRN1-7	96453512
CRN1-8	96453513
CRN1-9	96453514
CRN1-10	96453515
CRN1-11	96453516
CRN1-12	96453517
CRN1-13	96453518
CRN1-15	96453519
CRN1-17	96453520
CRN1-19	96453521
CRN1-21	96453522
CRN1-23	96453523
CRN1-25	96453524
CRN1-27	96453525
*** CRN1-30	96453526
*** CRN1-33	96453527
*** CRN1-36	96453528

***For 50 Hz operation only.

GASKET KIT (EPDM)	Kit No.	96455090							
GASKET KIT (FKM)	**Kit No.**		**96455091**						
GASKET KIT (FXM)	**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**	
GASKET KIT (FXM, & EPDM)- Cool-Top option	**Kit No.**								**96533329**
Pos. No.	**Description**	**Material No.**	**Qty. Included in each Kit**						
37	Sleeve O-ring, EPDM, ø137.5 x 3.3mm	96438743	2				3			1
	Sleeve O-ring, FKM, ø137.5 x 3.3mm	96438744		2				3		
37b	Sleeve O-ring, FXM, ø137.5 x 3.3mm	96458109			2					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			4
	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					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					2
	O-ring for Pos.105(b) &149, FFKM, Ø23.47 x 2.62mm	96464384				1			2	

STANDARD SHAFT SEAL KIT, BALANCED CARTRIDGE	**Kit No.**	**96455088**							
(Maximum allowed working PSI is 435)	**Kit No.**		**96455089**						
(Tandem Seal option Pumps require 2 of each Seal Kit)	**Kit No.**			**96455086**					
	Kit No.				**96455087**				
	Kit No.					**96455082**			
	Kit No.						**96455083**		
	Kit No.							**96455084**	
	Kit No.								**96455085**
	Kit No.								
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

Spare Part Kits *(continued)*

OPTIONAL SHAFT SEAL KIT, BALANCED CARTRIDGE	**Kit No.**	**96491375**						
(Maximum allowed working PSI is 435)	**Kit No.**		**96533327**					
(Tandem Seal option Pumps require 2 of each Seal Kit)	**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
N/A	Emery Cloth	370712	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, ø137.5 x 3.3mm	96438743	3	
	Sleeve O-ring, FKM, ø137.5 x 3.3mm	96438744		3
38, 100(a)	Drain Plug O-ring, EPDM, Ø16.3 x 2.4mm	00ID1288	7	
	Drain Plug O-ring, FKM, Ø16.3 x 2.4mm	00ID2231		7
102	O-ring, EPDM, ø18 x 2.5mm	00ID2041	1	
	O-ring, FKM, ø17.86 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, ø11.5 x 4.3mm	00ID2040	1	
	O-ring, FKM, ø11.5 x 4.3mm	00ID2186		1
108	Spring, 12mm	980195	1	1
109a	O-ring, EPDM, ø21.3 x 3.0mm	00ID1798	1	
	O-ring, FKM, ø21.2 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							
	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	4	
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901					4
10	Shaft Pin, ø5 x 26mm, Stainless	310192	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					
	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
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

Spare Part Kits *(continued)*

FLEXI FLANGE KIT FOR SMALL CRI1S, 1, & 3
1" Threaded Stainless (232 PSI Max.)

Pos. No.	Description	Material No.	Kit No. 964680850 Qty. Included in each Kit
12	Flange, Stainless, 1" - 11.5 NPT	96468336	2
35	Hex Head Bolt, M10 x 60mm, A4, DIN931	96447228	4
35a	Nut, M10, 316SS w/Delta Seal	96438757	4
39	Gasket , 95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189	2

FLEXI FLANGE KIT FOR SMALL CRI1S, 1, 3, & 5
1-1/4" Threaded Stainless (232 PSI Max.)

Pos. No.	Description	Material No.	Kit No. 96480851 Qty. Included in each Kit
12	Flange, Stainless, 1" - 11.5 NPT	96468337	2
35	Hex Head Bolt, M10 x 60mm, A4, DIN931	96447228	4
36b	Nut, M10, 316SS w/Delta Seal	96438757	4
39	Gasket , 95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189	2

FLEXI CLAMP FLANGE KIT FOR SMALL CRI(N)1S, 1, 3, & 5
1-1/4" Stainless Flange EPDM Kit No. 96480858
(Conversion max. allowable operating pressure 232) FKM Kit No. 96480859

Pos. No.	Description	Material No.	Qty. Included in each Kit	
12a	Adapter Flg. for ANSI pos.201/Flexi Base (232 PSI)	96437818	2	2
35	Hex Head Bolt, M10 x 60mm, A4, DIN931	96447228	4	4
36b	Nut, M10, 316SS w/Delta Seal	96438757	4	4
39b	O-ring, EPDM, ø44.45 x 3.53mm	96407726	2	
	O-ring, FKM, ø44.45 x 3.53mm	96411713		2
201	Flange, ANSI, DIN, JIS PN40/30K, Stainless	96439492	2	2
203	Lock Ring, Stainless	96439718	2	2

FLEXI CLAMP KIT FOR SMALL CRI1S, 1, & 3
1" Internal Threaded SS Pipe Stub (232 PSI Max.) EPDM Kit No. 96480854
FKM Kit No. 96480855

Pos. No.	Description	Material No.	Qty. Included in each Kit	
12b	Stainless, Internal 1" -11.5 NPT	400182	2	2
12c	Clamp for Flexi Base & pos.12b	00ID7194	4	4
35b	Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933	00ID7188	4	4
35c	Nut for Pos. 35b, M8, 304SS	00ID7187	4	4
39b	O-ring, EPDM, ø44.45 x 3.53mm	96407726	2	
	O-ring, FKM, ø44.45 x 3.53mm	96411713		2

FLEXI CLAMP KIT FOR SMALL CRI1S, 1, 3, & 5
1-1/4" Internal Threaded SS Pipe Stub (232 PSI Max.) EPDM Kit No. 96480856
FKM Kit No. 96480857

Pos. No.	Description	Material No.	Qty. Included in each Kit	
12b	Stainless, Internal 1-1/4" -11.5 NPT	410279	2	2
12c	Clamp for Flexi Base & pos.12b	00ID7194	4	4
35b	Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933	00ID7188	4	4
35c	Nut for Pos. 35b, M8, 304SS	00ID7187	4	4
39b	O-ring, EPDM, ø44.45 x 3.53mm	96407726	2	
	O-ring, FKM, ø44.45 x 3.53mm	96411713		2

FLEXI CLAMP KIT FOR SMALL CRI1S, 1, 3, & 5
2" External Threaded SS Pipe Stub (232 PSI Max.) EPDM Kit No. 96480852
FKM Kit No. 96480853

Pos. No.	Description	Material No.	Qty. Included in each Kit	
12b	Stainless, Internal 2" -11.5 NPT	96468338	2	2
12c	Clamp for Flexi Base & pos.12b	00ID7194	4	4
35b	Screw for Pos. 12c, M8 x 40mm - A2, RR DIN933	00ID7188	4	4
35c	Nut for Pos. 35b, M8, 304SS	00ID7187	4	4
39b	O-ring, EPDM, ø44.45 x 3.53mm	96407726	2	
	O-ring, FKM, ø44.45 x 3.53mm	96411713		2

AIR VENT FOR SMALL CR

Pos. No.	Description	Material No.	Kit No. 91128708 Qty. Included in each Kit
117	Pipe for Air Vent, R1/2" , 316SS	330272	1
118	Automatic Air Vent, Type AE50S 1/2" BSP, SS.	96498508	1

Accessories

ANSI COMPANION FLANGES FOR SMALL CR
1-1/4" Threaded Stainless, 300 Lb. Class

Pos. No.	Description	Material No.	Kit No. 91129013 Qty. Included in each Kit
N/A	Nut, HEX 5/8"-11 UNC, 18-8SS	0ID00164	8
N/A	Bolt, HEX 5/8" x 2-3/4", UNC 18-8SS	00ID7241	8
N/A	Flange 1-1/4" Stainless, ANSI, DIN, JIS PN40/30K,	00ID7239	2
N/A	Gasket Full Face Flange, 1-1/4", 300#, Cut Ring	400201	2

VICTAULIC TYPE COMPANION CONNECTIONS FOR SMALL CRI(N)
EPDM Kit No. 4013010
FKM Kit No. 0ID00118

Pos. No.	Description	Material No.	Qty. Included in each Kit	
N/A	Victaulic Type Coupling, 1-1/4", EPDM	0ID17810	2	
N/A	Victaulic Type Coupling, 1-1/4", 77 FKM	0ID00112		2
N/A	1-1/4" Stainless NPT Nipple	4000011	2	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
	Wrenches Used to tighten various nuts.
00SV0083	NV 10 mm for M6
00SV0055	NV 13 mm for M8
00SV0056	NV 17 mm for M10
00SV0054	NV 19 mm for M12
00SV0122	NV 24 mm for M16
	Torque Wrench Used to torque various screws.
00SV0292	4-20 Nm, 9 x 12
00SV0269	20-100 Nm, 9 x 12
00SV0400	40-200 Nm, 14x18
	Torque Screwdriver Used to tighten various nuts.
00SV0438	1-6 Nm, 1/4"
	Ratchet Spanner for all Adapters
00SV0295	9 mm x 12 mm, 1/2"
	Socket Spanner with Inside Hex
00SV0296	NV 5 mm for M6, 1/2" x 1/2"
00SV0297	NV 6 mm for M8, 1/2" x 1/2"
00SV0298	NV 8 mm for M10, 1/2" x 1/2"
	Ring Spanner
00SV0310	NV 10 mm for M6
00SV0294	NV 13 mm for M8
00SV0270	NV 17 mm for M10
00SV0271	NV 19 mm for M12
00SV0524	NV 24 mm for M16
	Socket Spanner
00SV2013	NV 13 mm for M8, 9 x 12

L-CR-SM-028 0504

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