



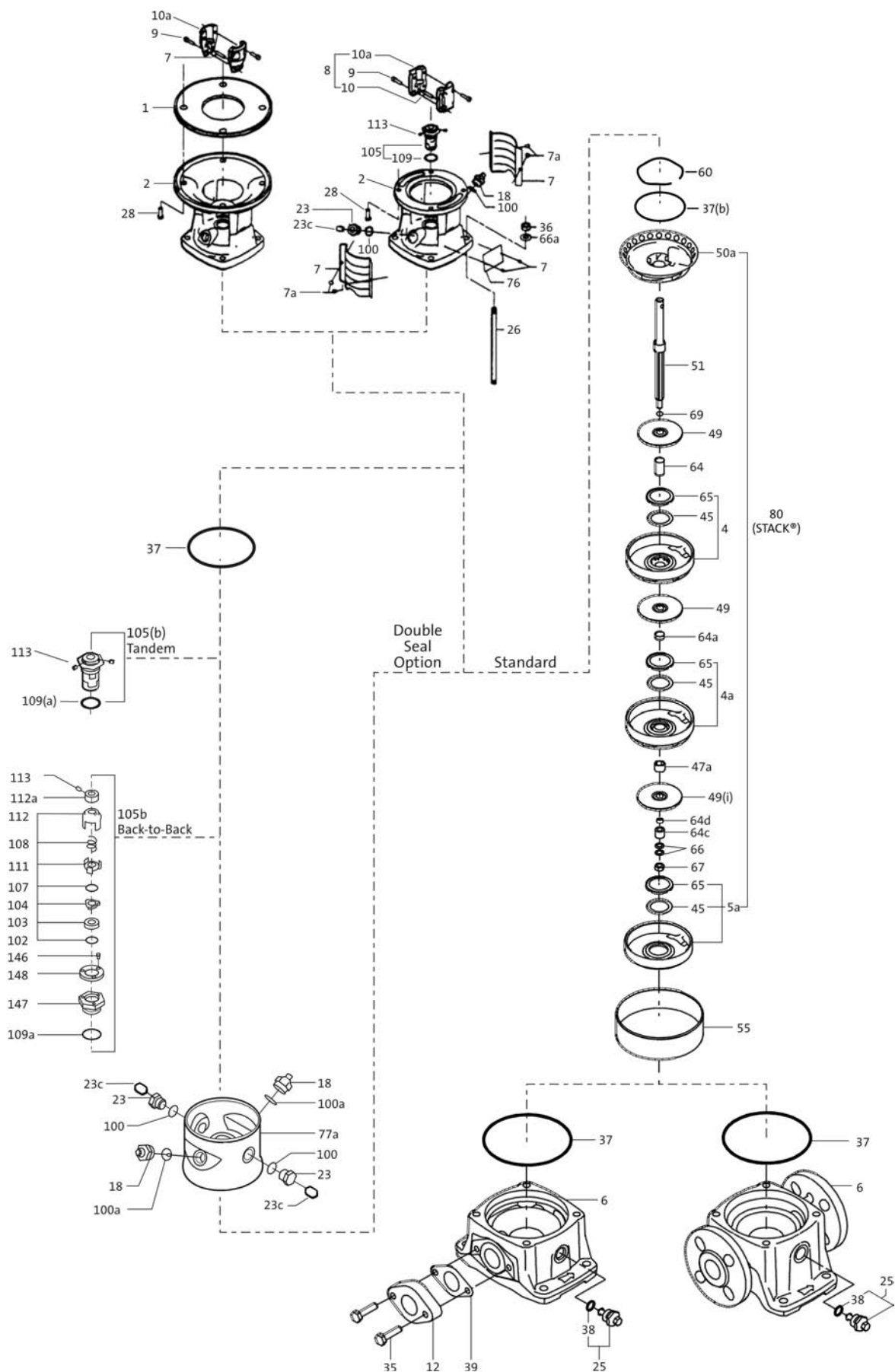
CR5

Parts List & Kits

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Parts List
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Accessories
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Exploded View CR5



Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
PARTS LIST								
1	Adapter for Motor Stool		18-24	1	For NEMA, 213/215TC, 7.5 - 10HP	96476208		No
2	Motor Stool		2-8	1	NEMA, 56C, 1/3 - 2HP	96436501		No
			9-16	1	NEMA, 182/184TC, 3 - 5HP	96436502		No
			18-24	1	Add Pos. 1, NEMA, 213TC, 7.5 - 10HP	96436502		No
			2-4	1	IEC, F85, MG 71, .37 - .55kW	96436495		No
			5-8	1	IEC, F100, MG 80, .75 - 1.1kW	96436496		No
			9-16	1	IEC, F115, MG 90, 1.5 - 2.2kW	96436499		No
			18-29	1	IEC, F130, MG 100/112, 3.0 - 4.0 kW	96436500		No
			32-36	1	IEC, F265, MG132, 5.5 - 7.5kW	96436505		No
4	Chamber, Complete with Pos. 45 & 65		2-36	^^^	PTFE Pos.45	96437517		No
4a	Chamber Cpl. w/Pos. 45 & 65 & Bearing		2-36	^^^^	Silicon Carbide Brg, PTFE Pos.45	96437636		YES
	Chamber Cpl. w/Pos. 45 & 65 & Brg. (option)		2-36	^^^^	Bronze Bearing, PTFE Pos.45	96440616		YES
			2-36	^^^^	Graflon Bearing, PTFE Pos.45	96440619		YES
5a	Chamber, Bottom Complete with Pos. 45 & 65		2-36	1	PTFE Pos.45	96437737		No
	Cmb. Btm. Cpl. w/Pos. 45 & 65, (Low NPSH opt.)		2-36	2	PTFE Pos.45	96462144		No
6	Base		2-17	1	Oval (max 232 PSI)	96436516		No
			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
				2	NEMA, 182-215TC	96438138		No
7a	Screw for Coupling Guard		2-36	4	M4 x 8mm	96488481		No
9	Allen Screw		2-8	4	M6 x 20mm, Delta Seal	00ID7899		YES
			9-16	4	M8 x 25mm, Delta Seal	00ID7900		YES
			18-24	4	M10 x 25mm, Delta Seal	00ID7901		YES
10	Shaft Pin		2-36	1	ø5 x 26mm	310192		YES
10a	Coupling Half		2-8	2	NEMA, 56C, 1/3 - 2HP, ø15.8 / ø12	410108		YES
			9-16	2	NEMA, 182/184TC, 3-5HP. ø28.5/ø12	410109		YES
			18-24	2	NEMA, 213TC, 7.5-10HP. ø34.9/ø12	96472175		YES
			2-4	2	IEC, F85, MG71, .37-.55kW. ø14/ø12	410041		YES
			5-8	2	IEC, F100, MG80, .75-1.1kW. ø19/ø12	410043		YES
			9-16	2	IEC, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045		YES
			18-29	2	IEC, F130, MG100/112, 3-4 kW.ø28/ø12	410047		YES
			32-36	2	IEC, F265, MG132, 5.5-7.5kW. ø38/ø12	410115		YES
12	Oval Flange		2-16	2	Painted CI, 1.25" -11.5 NPT (max 232 PSI)	96488335		YES
			2-22	2	Painted CI, RP 1.25" BSP DIN (max 232 PSI)	400174		No
18	Priming/Vent Plug		2-36	*	G 1/2A, NV24 with NV9 x M8 stem	405150		No
23	Plug		2-36	**	G 1/2A, w/1/4"port, NV24	91120659		No
	Plug (option)		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		2	4	M12 x 79mm	404002		No
			3	4	M12 x 103mm	96442750		No
			4	4	M12 x 133mm	404005		No
			5	4	M12 x 157mm	96442751		No
			6	4	M12 x 187mm	404008		No
			7	4	M12 x 211mm	96442752		No
			8	4	M12 x 241mm	404011		No
			9	4	M12 x 265mm	96442753		No
			10	4	M12 x 294mm	96442754		No
			11	4	M12 x 319mm	96442756		No
			12	4	M12 x 349mm	404017		No
			13	4	M12 x 373mm	96442761		No
			14	4	M12 x 402mm	96442762		No
			15	4	M12 x 427mm	96442763		No
			16	4	M12 x 454mm	96442764		No
			18	4	M12 x 511mm	404026		No
			20	4	M12 x 562mm	96442766		No
			22	4	M12 x 618mm	96442767		No
			24	4	M12 x 670mm	96442768		No
			26	4	M12 x 724mm (50 Hz.)	96442769		No
			29	4	M12 x 805mm (50 Hz.)	96442770		No
			32	4	M12 x 886mm (50 Hz.)	96442771		No
			36	4	M12 x 994mm (50 Hz.)	96442772		No
	Staybolt (Back-to-Back & Tandem Seal option)		2	4	M12 x 187mm	404008		No
			3	4	M12 x 211mm	96442752		No
			4	4	M12 x 241mm	404011		No
			5	4	M12 x 265mm	96442753		No

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.

Parts List & Kits CR5

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

26	Staybolt (Back-to-Back & Tandem Seal option)		6	4	M12 x 294mm	96442754		No
			7	4	M12 x 319mm	96442756		No
			8	4	M12 x 340mm	414011		No
			9	4	M12 x 373mm	96442761		No
			10	4	M12 x 402mm	96442762		No
			11	4	M12 x 427mm	96442763		No
			12	4	M12 x 454mm	96442764		No
			13	4	M12 x 481mm	96458439		No
			14	4	M12 x 511mm	404026		No
			15	4	M12 x 535mm	96458440		No
			16	4	M12 x 562mm	96442766		No
			18	4	M12 x 618mm	96442767		No
			20	4	M12 x 670mm	96442768		No
			23	4	M12 x 724mm	96442769		No
			24	4	M12 x 778mm	96458444		No
			26	4	M12 x 832mm (50 Hz.)	96458445		No
			29	4	M12 x 913mm (50 Hz.)	96458449		No
			32	4	M12 x 994mm (50 Hz.)	96442772		No
			36	4	M12 x 1102mm (50 Hz.)	96458454		No
28	Motor Bolt		2-8	4	NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm	00ID1839		No
			9-16	4	NEMA, 182/184TC, 3 - 5HP. UNC 1/2" x 25mm	00ID1840		No
			18-24	4	NEMA, 213TC, 7.5 -10HP. UNC 1/2" x 1.25"	91128631		No
			2-4	4	IEC, F85, MG71, .37-.55kW. M6 x 20mm	00ID8022		No
			5-8	4	IEC, F100, MG80, .75-1.1kW. M6 x 25mm	00ID8023		No
			9-16	4	IEC, F115, MG 90, 1.5-2.2kW. M8 x 20mm	00ID8024		No
			18-29	4	IEC, F130, MG100/112, 3-4 kW. M8 x 25mm	00ID8025		No
35	Hexagon Head Screw for Oval Flange		2-17	4	M10 x 40mm, Delta Seal	00ID8027		YES
			2-36	4	19mm x M12, Delta Seal	00ID7917		No
			2-36	◆◆	EPDM, ø137.5 x 3.3mm	96438743		YES
			2-36	◆◆	FKM, ø137.5 x 3.3mm	96438744		YES
			2-36	◆◆	FXM, ø137.5 x 3.3mm	96458109		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
37	Sleeve O-ring		2-36	◆◆	EPDM, ø16.3 x 2.4mm	00ID1288		YES
			2-36	◆◆	FKM, ø16.3 x 2.4mm	00ID2231		YES
			2-36	◆◆	FFKM, ø16.3 x 2.4mm	96428162		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
37b	Sleeve O-ring (option)		2-36	◆◆	EPDM, ø137.5 x 3.3mm	96438743		YES
			2-36	◆◆	FKM, ø137.5 x 3.3mm	96438744		YES
			2-36	◆◆	FXM, ø137.5 x 3.3mm	96458109		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
			2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
38	Drain Plug O-ring		2-36	◆◆	EPDM, ø16.3 x 2.4mm	00ID1288		YES
			2-36	◆◆	FKM, ø16.3 x 2.4mm	00ID2231		YES
			2-36	◆◆	FFKM, ø16.3 x 2.4mm	96428162		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
			2-36	◆◆	FXM, ø16.3 x 2.4mm	96442869		YES
39	Gasket for Oval Flange		2-17	2	95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189		YES
			2-36	# stgs	ø50.45 x ø35 x .7mm, PTFE	96436720		YES
			2-36	^ ^ ^ ^	SiC 150, ø17.37 x ø13.10 x ø10.9 x 13mm	96437488		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
45	Neck Ring		2-36	# stgs	ø73.0 x ø35.0 x 13.2mm (back-plate 1.0mm)	96437414		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
47a	Bearing Ring/Spacer		2-36	^ ^ ^ ^	SiC 150, ø17.37 x ø13.10 x ø10.9 x 13mm	96437488		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
			2-36	^ ^ ^ ^	TC, ø15.92 x ø13.10 x ø10.9 x 11mm	410121		YES
49	Impeller		2-36	# stgs	ø73.0 x ø35.0 x 13.2mm (back-plate 1.0mm)	96437414		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
49i	Impeller (Low NPSH option)		2-36	# stgs	ø73.0 x ø35.0 x 13.2mm (back-plate 1.0mm)	96437414		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
			2-36	# stgs	ø98.0 x ø52.8 x 17.3mm (back-plate 1.0mm)	96462490		No
50a	Top Guide Vane		2-36	1	ø12 x 160.5mm	96439170		No
			2-36	1	ø12 x 180.5mm	96478562		No
			2-36	1	ø12 x 214.5mm	96439170		No
			2-36	1	ø12 x 234.5mm	96478562		No
			2-36	1	ø12 x 268.5mm	96439170		No
			2-36	1	ø12 x 288.5mm	96478562		No
			2-36	1	ø12 x 322.5mm	96439170		No
51	Shaft, Complete		2	1	ø12 x 342.5mm	96440395		No
			3	1	ø12 x 376.5mm	96440396		No
			4	1	ø12 x 396.5mm	96440397		No
			5	1	ø12 x 430.5mm	96440399		No
			6	1	ø12 x 450.5mm	96440400		No
			7	1	ø12 x 484.5mm	96440401		No
			8	1	ø12 x 504.5mm	96440402		No
	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		9	1	ø12 x 538.5mm	96440404		No
			10	1	ø12 x 592.5mm	96440406		No
			11	1	ø12 x 646.5mm	96440408		No
			12	1	ø12 x 700.5mm	96440410		No
			13	1	ø12 x 754.5mm	96440411		No
			14	1	ø12 x 801.5mm (50 Hz.)	96440412		No
			15	1	ø12 x 882.5mm (50 Hz.)	96440413		No
	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		16	1	ø12 x 963.5mm (50 Hz.)	96440414		No
			17	1	ø12 x 1071.5mm (50 Hz.)	96440415		No
			18	1	ø12 x 1265.5mm	96457560		No
			19	1	ø12 x 1285.5mm	96457561		No
			20	1	ø12 x 1319.5mm	96457563		No
			21	1	ø12 x 1339.5mm	96457564		No
			22	1	ø12 x 1339.5mm	96457564		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 ?
PARTS LIST								
51	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		6	1	Ø12 x 373.5mm	96457566		No
			7	1	Ø12 x 393.5mm	96457567		No
			8	1	Ø12 x 427.5mm	96457569		No
			9	1	Ø12 x 447.5mm	96457570		No
			10	1	Ø12 x 481.5mm	96457571		No
			11	1	Ø12 x 501.5mm	96457572		No
			12	1	Ø12 x 535.5mm	96457574		No
			13	1	Ø12 x 555.5mm	96457575		No
			14	1	Ø12 x 589.5mm	96457576		No
			15	1	Ø12 x 609.5mm	96457577		No
			16	1	Ø12 x 643.5mm	96457579		No
			18	1	Ø12 x 697.5mm	96457581		No
			20	1	Ø12 x 751.5mm	96457583		No
			22	1	Ø12 x 805.5mm	96457585		No
			24	1	Ø12 x 859.5mm	96457586		No
			26	1	Ø12 x 906.5mm (50 Hz.)	96457587		No
			29	1	Ø12 x 987.5mm (50 Hz.)	96457588		No
55	Outer Sleeve		32	1	Ø12 x 1068.5mm (50 Hz.)	96457589		No
			36	1	Ø12 x 1176.5mm (50 Hz.)	96457590		No
			2	1	Ø138 x 44.6mm	96437865		No
			3	1	Ø138 x 71.6mm	96440013		No
			4	1	Ø138 x 98.6mm	96439999		No
			5	1	Ø138 x 125.6mm	96441512		No
			6	1	Ø138 x 152.6mm	96440000		No
			7	1	Ø138 x 179.6mm	96441515		No
			8	1	Ø138 x 206.6mm	96440001		No
			9	1	Ø138 x 233.6mm	96441518		No
			10	1	Ø138 x 260.6mm	96440002		No
			11	1	Ø138 x 287.6mm	96441519		No
			12	1	Ø138 x 314.6mm	96440003		No
			13	1	Ø138 x 341.6mm	96441522		No
			14	1	Ø138 x 368.6mm	96440004		No
			15	1	Ø138 x 395.6mm	96441523		No
			16	1	Ø138 x 422.6mm	96440005		No
60	Stack Compression Spring		18	1	Ø138 x 476.6mm	96440006		No
			20	1	Ø138 x 530.6mm	96440007		No
			22	1	Ø138 x 584.6mm	96440008		No
			24	1	Ø138 x 638.6mm	96439652		No
			26	1	Ø138 x 692.6mm (50 Hz.)	96440009		No
			29	1	Ø138 x 773.6mm (50 Hz.)	96440011		No
			32	1	Ø138 x 854.6mm (50 Hz.)	96440012		No
			36	1	Ø138 x 962.6mm (50 Hz.)	96439653		No
64	Spacing Pipe		2-36	1	Ø136 x 3.5mm	96439662		No
64a	Spacing Pipe (option for Graflon / Brz. 4a)		2-36	^^^	Ø15.85 x Ø12.85 x 26.03mm	410143		No
			2-36	^^^^	Ø15.85 x Ø12.85 x 13.0mm	96443611		YES
64c	Clamp, Splined		2-36	^^^^	Use with TC Pos.47a, Ø15 x Ø12.7 x 15.0mm	410142		YES
64d	Spacing Pipe		2-36	1	Ø15 x Ø13.10 x Ø10.9 x 13mm	96439668		YES
64e	Spacing Pipe (Low NPSH option only)		2-36	^^^^^	Ø15 x Ø13.10 x Ø10.9 x 4.5mm	96440292		YES
64f	Spacing Pipe (Low NPSH option only)		2-36	2	Ø15 x Ø13.10 x Ø10.9 x 10.0mm	430022		No
64g	Spacing Pipe (de-staging option only)		2-36	1	Ø15 x Ø13.10 x Ø10.9 x 7.3mm	400233		No
			2-36	1	Ø15 x Ø13.10 x Ø10.9 x 27.0mm	410062		No
65	Neck Ring Retainer		2-36	# stgs	Ø52.5 x Ø36.7 x 5.3mm	96436722		YES
66	Lock Washer Set for Shaft		2-36	1	Ø13.5 x Ø8.2 x 2.6mm	96417297		YES
66a	Washer for Staybolt		2-36	4	DIN 125A, Ø24 x Ø13 x 2.5mm, Delta Seal	96430377		No
67	Lock Nut for Shaft		2-36	1	13mm x M8	00ID2061		YES
69	Spacing Pipe		2-36	⊖	Ø15.85 x 12.85 x 2.0mm	96440295		No
69a	Spacing Pipe (de-staging option only)		2/1	1	Ø15.85 x 12.85 x 18.0mm	400258		No
76	Nameplate		2-36	1	304SS, 60 x 45mm	96439820		No
76a	Rivet for Nameplate		2-36	2	304SS, Ø3 x 5mm	96022882		No
77a	Pump Head Cover for Back-to-Back, Tandem Seal		2-36	1	Cast Stainless	96456293		No
100	Priming/Vent Plug O-ring		2-36	■	EPDM, Ø16.3 x 2.4mm	00ID1288		YES
			2-36	■	FKM, Ø16.3 x 2.4mm	00ID2231		YES
100a	Priming/Vent Plug O-ring (option)		2-36	■	FFKM, Ø16.3 x 2.4mm	96428162		YES
			2-36	■	FXM, Ø16.3 x 2.4mm	96442869		YES
102	O-ring for Pos. 105b Back-to-Back		2-36	1	EPDM, Ø18 x 2.54mm	00ID2041		YES
			2-36	1	FKM, Ø17.86 x 2.62mm	00ID2187		YES
			2-36	1	FFKM, Ø17.86 x 2.62mm	96440281		No
			2-36	1	FXM, Ø17.86 x 2.62mm	96472584		No
103	Stationary Seal Ring for 105b Back-to-Back		2-36	1	TC, 12mm	980190		No
			2-36	1	SiC, 12mm	980746		YES
104	Rotating Seal Ring for 105b Back-to-Back		2-36	1	TC, 12mm	980163		No
			2-36	1	SiC, 12mm	980733		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.

Parts List & Kits
CR5

Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
PARTS LIST								
102	O-ring for Pos. 105b Back-to-Back		2-36	1	EPDM, ø18 x 2.5mm	00ID2041		YES
	O-ring for Pos. 105b Back-to-Back (option)		2-36	1	FKM, ø17.86 x 2.62mm	00ID2187		YES
			2-36	1	FFKM, ø17.86 x 2.62mm	96440281		No
			2-36	1	FXM, ø17.86 x 2.62mm	96472584		No
103	Stationary Seal Ring for 105b Back-to-Back		2-36	1	TC, 12mm	980190		No
	Station. Seal Ring for 105b Back-to-Back (option)		2-36	1	SiC, 12mm	980746		YES
104	Rotating Seal Ring for 105b Back-to-Back		2-36	1	TC, 12mm	980163		No
	Rotating Seal Ring for 105b Back-to-Back (option)		2-36	1	SiC, 12mm	980733		YES
105(b)	Shaft Seal HQBE		2-36	***	SiC, Carbon with resin-impregnated, EPDM	96441879		YES
	Shaft Seal HQBV		2-36	***	SiC, Carbon with resin-impregnated, FKM	96441880		YES
	Shaft Seal HQBK (option)		2-36	***	SiC, Carbon with resin-impregnated, FFKM	96489537		YES
	Shaft Seal HQQE		2-36	***	SiC, SiC, EPDM	96441877		YES
	Shaft Seal HQQV		2-36	***	SiC, SiC, FKM	96441878		YES
	Shaft Seal HQQF (option)		2-36	***	SiC, SiC, FXM	96472620		YES
	Shaft Seal HQQK (option)		2-36	***	SiC, SiC, FFKM	96464381		YES
	Shaft Seal HUBE		2-36	***	TC, Carbon with resin-impregnated, EPDM	96441873		YES
	Shaft Seal HUBV		2-36	***	TC, Carbon with resin-impregnated, FKM	96441874		YES
	Shaft Seal HUBF (option)		2-36	***	TC, Carbon with resin-impregnated, FXM	96481464		YES
	Shaft Seal HUBK (option)		2-36	***	TC, Carbon with resin-impregnated, FFKM	96481463		YES
	Shaft Seal HUUE		2-36	***	TC, TC, EPDM	96441875		YES
	Shaft Seal HUUV		2-36	***	TC, TC, FKM	96441876		YES
	Shaft Seal HUUF (option)		2-36	***	TC, TC, FXM	96475542		YES
	Shaft Seal HUUK (option)		2-36	***	TC, TC, FFKM	96467885		YES
105b	Shaft Seal/inboard for Back-to-Back OQQE		2-36	1	SiC, SiC, EPDM	985200		YES
	Shaft Seal/inboard for Back-to-Back OQQV		2-36	1	SiC, SiC, FKM	985760		YES
	Shaft Seal/inboard for Back-to-Back OUUE		2-36	1	TC, TC, EPDM	985189		No
	Shaft Seal/inboard for Back-to-Back OUUV		2-36	1	TC, TC, FKM	985190		No
107	O-ring for Pos. 105b Back-to-Back		2-36	1	EPDM, ø11.5 x 4.3mm	00ID2040		YES
	O-ring for Pos. 105b Back-to-Back (option)		2-36	1	FKM, ø11.5 x 4.3mm	00ID2186		YES
			2-36	1	FFKM, ø11.5 x 4.3mm	96440282		No
			2-36	1	FXM, ø11.5 x 3.18mm	96472618		No
108	Spring for Pos. 105b Back-to-Back		2-36	1	12mm	980195		YES
109(a)	O-ring for Shaft Seal Pos. 105		2-36	1	EPDM, ø21.3 x 3.0mm	00ID1798		YES
	O-ring for Shaft Seal Pos. 106		2-36	1	FKM, ø21.2 x 3.0mm	00ID2339		YES
109b	O-ring for Shaft Seal Pos. 105 (option)		2-36	1	FXM, ø22 x 2.75mm	96458111		YES
			2-36	1	FFKM, ø23.47 x 2.62mm	96464384		YES
111	Seal Driver (small) for Pos. 105b Back-to-Back		2-36	1		980192		YES
112	Seal Driver (large) for Pos. 105b Back-to-Back		2-36	1		980191		YES
112a	Seal Drv thread. for 112, Pos. 105b Back-to-Back		2-36	1		400203		YES
113	Set Screw for 112a, for Pos. 105b Back-to-Back		2-36	1	3mm x M5 x 6mm	00ID7392		YES
146	Allen Bolt for 147/148, for Pos. 105b Back-to-Back		2-36	1	2.5mm x M3 x 5mm	96462639		YES
147	Stationary Seal Retainer - Pos. 105b Back-to-Back		2-36	1	NV36, 3165S	96457354		No
148	Seal Retainer Washer - Pos. 105b Back-to-Back		2-36	1	3165S, ø36.0 x ø21.6 x 5.0mm	96457355		No

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:

^ ^ ^
2 to 7 stage= # of Stages less 2
8 to 12 stage= # of stages less 3
13 to 16 stage = # of stages less 4
18 to 22 stage = # of stages less 5
24 to 26 stage = # of stages less 6
29 to 32 stage = # of stages less 7
36 stage = # of stages less 8
Exception to the above: Low NPSH model less 1 additional.

^ ^ ^ ^
2 to 7 stage= use 1
8 to 12 stage= use 2
13 to 16 stage = use 3
18 to 22 stage = use 4
24 to 26 stage= use 5
29 to 32 stage= use 6
36 stage= use 7

^ ^ ^ ^ ^
1 used only in pumps with the following amount of stages
2, 4, 6, 8, 10, 12, 14, 16, 20, 22, &24.

*
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 1. CR(I,N)5-2/1 replace with pos.69a

stgs-
Use the number of stages in standard models, less one in de-staged and Low NPSH models.

♦ ♦
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

⌀ 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

NPSH Net Positive Suction Head

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)5 SiC Bearing		Kit No.	96455096							
WEAR PARTS KIT 2-7		Kit No.	96455097							
WEAR PARTS KIT 8-12		Kit No.	96455098							
WEAR PARTS KIT 13-16		Kit No.	96455099							
WEAR PARTS KIT 17-22		Kit No.	96455101							
WEAR PARTS KIT 23-26		Kit No.	96455100							
WEAR PARTS KIT 27-36		Kit No.	96455100							
Pos. No.	Description	Material No.	Qty. Included in each Kit							
4a	Chamber N Cpl. w/Pos.45 & 65 & SiC Bearing	96437645	1	2	3	4	5	6		
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2	2	2		
45	Neck Ring, ø50.45 x ø35 x .7mm, PTFE	96436720	6	10	13	18	21	30		
47a	Bearing Ring/Spacer, SiC 150, 13mm	96437488	1	2	3	4	5	6		
64a	Spacing Pipe, ø15.85 x ø12.85 x 13.0mm	96443611	1	2	3	4	5	6		
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1	1	1		
65	Neck Ring Retainer, N, ø52.5 x ø36.7 x 5.3mm	96436722	6	10	13	18	21	30		
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1	1	1		
67	Lock Nut. 13mm x M8	00ID2061	1	1	1	1	1	1		

CR(I, N)5 Graflon Bearing		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 2-7		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 8-12		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 13-16		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 17-22		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 23-26		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
WEAR PARTS KIT 27-36		Kit No.	96460141		96460142		96455113		96455114		96460143		96455115	
Pos. No.	Description	Material No.	Qty. Included in each Kit											
4a	Chamber N Cpl. w/Pos.45 & 65 & Graflon Brg.	96440619	1	2	3	4	5	6						
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2	2	2						
45	Neck Ring, ø50.45 x ø35 x .7mm, PTFE	96436720	6	10	13	18	21	30						
47a	Bearing Ring/Spacer, TC, 11.0mm	410121	1	2	3	4	5	6						
64a	Spacing Pipe, ø15.85 x ø12.85 x 15.0mm	00410142	1	2	3	4	5	6						
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1	1	1						
65	Neck Ring Retainer, N, ø52.5 x ø36.7 x 5.3mm	96436722	6	10	13	18	21	30						
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1	1	1						
67	Lock Nut. 13mm x M8	00ID2061	1	1	1	1	1	1						

CR(I) 5 Bronze Bearing		Kit No.	96455103					
WEAR PARTS KIT 2-7		Kit No.	96460106					
WEAR PARTS KIT 8-12		Kit No.	96455107					
WEAR PARTS KIT 13-16		Kit No.	96455108					
WEAR PARTS KIT 17-22		Kit No.	96460107					
WEAR PARTS KIT 23-26		Kit No.	96455109					
WEAR PARTS KIT 27-36		Kit No.						
Pos. No.	Description	Material No.	Qty. Included in each Kit					
4a	Chamber N Cpl. w/Pos.45 & 65 & Bronze Brg.	96440616	1	2	3	4	5	6
39	Gasket for Oval Flange, 95 x 55 x ø35 x 2mm	400189	2	2	2	2	2	2
45	Neck Ring, ø50.45 x ø35 x .7mm, PTFE	96436720	6	10	13	18	21	30
47a	Bearing Ring/Spacer, TC, 11.0mm	410121	1	2	3	4	5	6
64a	Spacing Pipe, ø15.85 x ø12.85 x 15.0mm	00410142	1	2	3	4	5	6
64c	Clamp, Splined, ø15 x ø13.10 x ø10.9 x 13mm	96439668	1	1	1	1	1	1
65	Neck Ring Retainer, N, ø52.5 x ø36.7 x 5.3mm	96436722	6	10	13	18	21	30
66	Lock Washer Set of 2, ø13.5 x ø8.2 x 2.6mm	96417297	1	1	1	1	1	1
67	Lock Nut. 13mm x M8	00ID2061	1	1	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

STACK KITS	
Model	Material No.
CR(I)5-2	96453575
CR(I)5-3	96453576
CR(I)5-4	96453577
CR(I)5-5	96453578
CR(I)5-6	96453579
CR(I)5-7	96453580
CR(I)5-8	96453581
CR(I)5-9	96453582
CR(I)5-10	96453583
CR(I)5-11	96453584
CR(I)5-12	96453585
CR(I)5-13	96453586
CR(I)5-14	96453587
CR(I)5-15	96453588
CR(I)5-16	96453589
CR(I)5-18	96453590
CR(I)5-20	96453591
CR(I)5-22	96453592
CR(I)5-24	96453593
*** CR(I)5-26	96453594
*** CR(I)5-29	96453595
*** CR(I)5-32	96453596
*** CR(I)5-36	96453597

***For 50 Hz operation only.

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							
			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
N/A	Emery Cloth	370712	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
N/A	Emery Cloth	370712	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, $\phi 137.5 \times 3.3$ mm	96438743	3	
	Sleeve O-ring, FKM, $\phi 137.5 \times 3.3$ mm	96438744		3
38, 100(a)	Drain Plug O-ring, EPDM, $\phi 16.3 \times 2.4$ mm	00ID1288	7	
	Drain Plug O-ring, FKM, $\phi 16.3 \times 2.4$ mm	00ID2231		7
102	O-ring, EPDM, $\phi 18 \times 2.5$ mm	00ID2041	1	
	O-ring, FKM, $\phi 17.86 \times 2.62$ mm	00ID2187		1
103	Stationary Seal Ring, SiC, 12mm	980746	1	
104	Rotating Seal Ring, SiC, 12mm	980733	1	1
107	O-ring, EPDM, $\phi 11.5 \times 4.3$ mm	00ID2040	1	
	O-ring, FKM, $\phi 11.5 \times 4.3$ mm	00ID2186		1
108	Spring, 12mm	980195	1	1
109a	O-ring, EPDM, $\phi 21.3 \times 3.0$ mm	00ID1798	1	
	O-ring, FKM, $\phi 21.2 \times 3.0$ mm	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			
ø14/ø12			Kit No. 415061			
ø19/ø12			Kit No. 415062			
ø24/ø12			Kit No. 415063			
ø28/ø12			Kit No. 415065			
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
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

Spare Part Kits *(continued)*

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

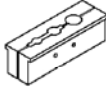
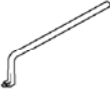
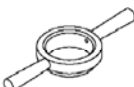
OVAL FLANGE KIT FOR SMALL CR15, 1, & 3			
1-1/4" Threaded Cast Iron (232 PSI Max.)		Kit No.	96474337
Pos. No.	Description	Material No.	Qty. Included in each Kit
12	Flange, Cast Iron, 1-1/4" - 11.5 NPT	96468335	2
35	Hex Head Bolt, M10 x 40mm, Delta Seal	00ID8027	4
39	Gasket, 95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189	2

Accessories

ANSI COMPANION FLANGES FOR SMALL CR			
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

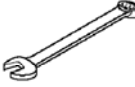
Special Tools

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-027 0504

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