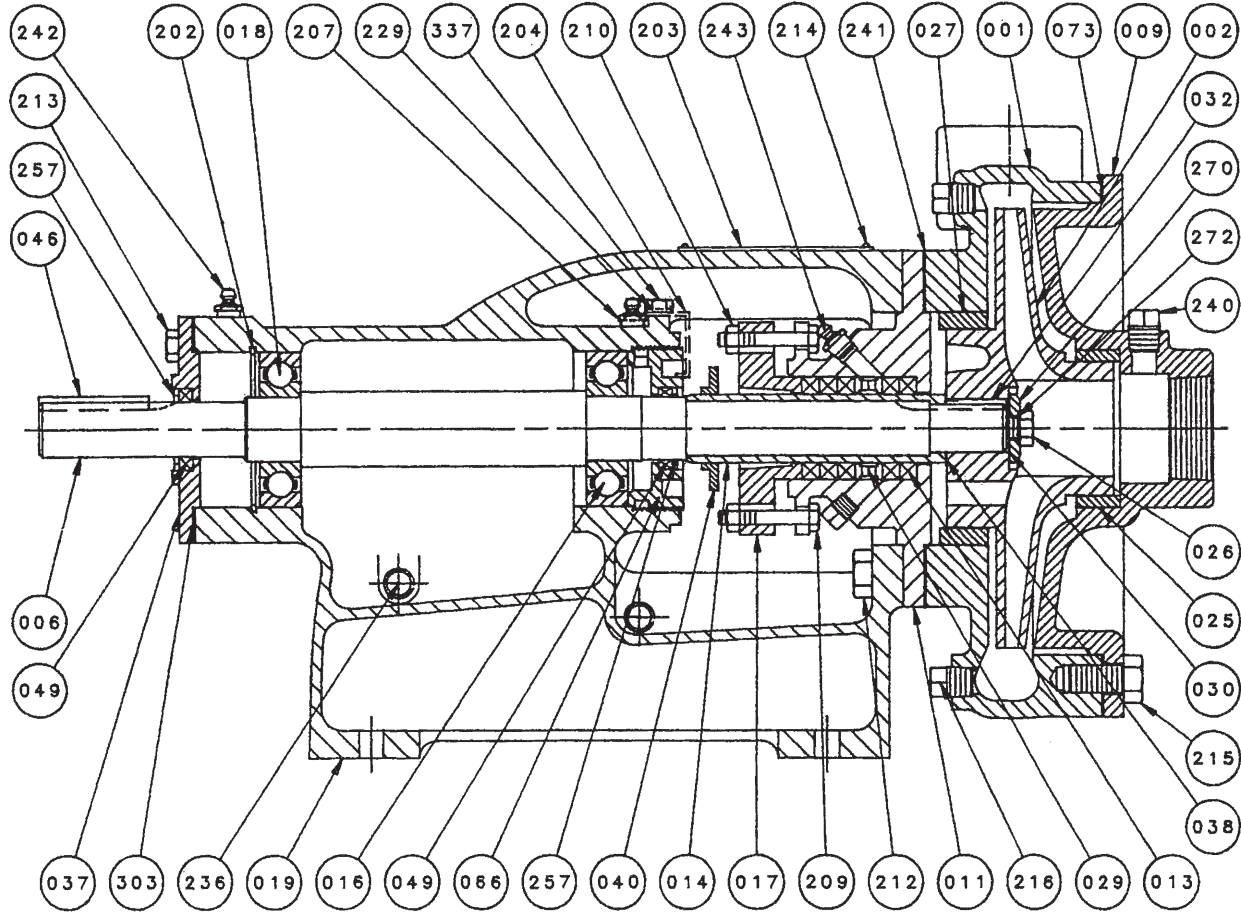


Grease Lubricated Construction



WARNING:
 CANCER AND REPRODUCTIVE HARM -
 WWW.P65WARNINGS.CA.GOV

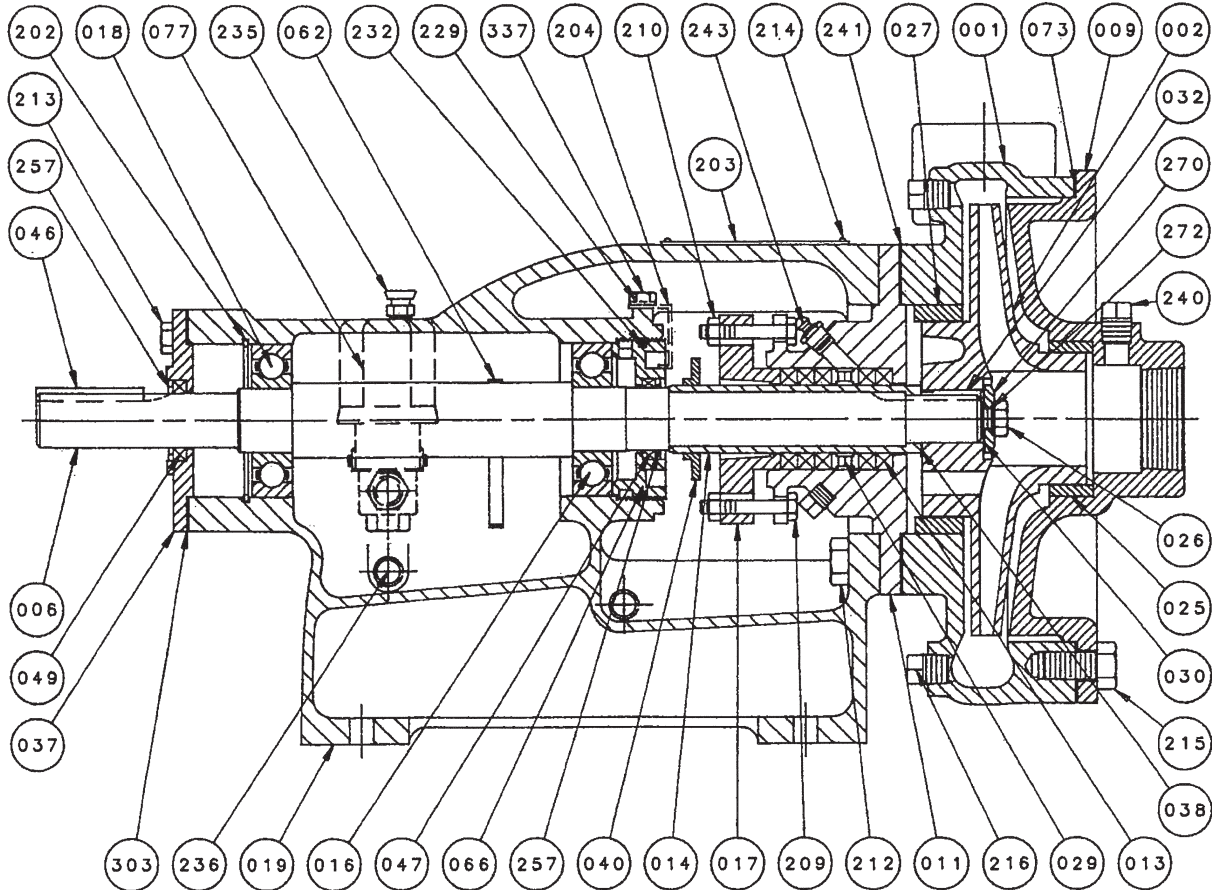
DISCONTINUED

Item No.	Name of Part	Item No.	Name of Part	Item No.	Name of Part
1	Casing	32	Impeller Key	212	Cap Screws
2	Impeller	37	Bearing Cover (Outboard)	213	Cap Screws
6	Pump Shaft	* 38	Shaft Gasket	214	Drive Screws
9	Suction Head	40	Deflector	215	Cap Screws
11	Packing Box Cover	46	Coupling Key	216	Pipe Plug
13	Packing	* 49	Felt Ring	229	Lockwasher
* 14	Shaft Sleeve	66	Shaft Adjusting Nut	236	Pipe Plug
* 16	Ball Bearing (Inboard)	* 73	Casing Gasket	240	Pipe Plug
17	Split Gland	202	Snap Ring	* 241	Packing Box Cover Gasket
* 18	Ball Bearing (Outboard)	203	Nameplate	242	Grease Fitting
19	Frame	204	Adjusting Lock Nut	243	Grease Fitting
25	Suction Head Wearing Ring	207	Grease Fitting	257	Clamp Ring
* 26	Impeller Screw	209	Gland Bolt	* 270	Impeller Washer
27	Casing Wearing Ring	210	Nut	* 272	Impeller Screw "O" Ring
29	Lantern Ring			* 303	Bearing Cover Gasket
* 30	Impeller Washer Gasket			337	Cap Screw

* Recommended spare parts

Repair Parts

Oil Lubricated Construction



DISCONTINUED



WARNING:
CANCER AND REPRODUCTIVE HARM -
WWW.P65WARNINGS.CA.GOV

Item No.	Name of Part	Item No.	Name of Part	Item No.	Name of Part
1	Casing	32	Impeller Key	212	Cap Screws
2	Impeller	37	Bearing Cover (Outboard)	213	Cap Screws
6	Pump Shaft	* 38	Shaft Gasket	214	Drive Screws
9	Suction Head	40	Deflector	215	Cap Screws
11	Packing Box Cover	46	Coupling Key	216	Pipe Plug
13	Packing	* 47	Inboard Lip Seal	229	Lockwasher
* 14	Shaft Sleeve	* 49	Outboard Lip Seal	232	Quad Ring (Shaft Adjusting Nut)
* 16	Ball Bearing (Inboard)	60	Oil Slinger Ring	235	Breather 1/8" Alemite (Frame)
17	Split Gland	66	Shaft Adjusting Nut	236	Pipe Plug
* 18	Ball Bearing (Outboard)	* 73	Casing Gasket	240	Pipe Plug
19	Frame	77	Oiler - Trico Assembly #52	* 241	Packing Box Cover Gasket
25	Suction Head Wearing Ring	202	Snap Ring	243	Grease Fitting
* 26	Impeller Screw	203	Nameplate	257	Clamp Ring
27	Casing Wearing Ring	204	Adjusting Lock Nut	* 270	Impeller Washer
29	Lantern Ring	209	Gland Bolt	* 272	Impeller Screw "O" Ring
* 30	Impeller Washer Gasket	210	Nut	* 303	Bearing Cover Gasket
				337	Cap Screw

* Recommended spare parts

Repair Parts

DISCONTINUED

Liquid End Parts								
Pump Size	Construction Or Material	Items 1, 27 & 216 Casing W/ Wearing Ring & Pipe Plugs	Item 27 Casing Wearing Ring	Items 9, 25 & 240 Suction Head W/ Wearing Ring & Pipe Plugs		Item 25 Suction Head Wearing Ring		Item 73 Casing Gasket All Construction
		Part No.	Part No.	Part No.		Part No.		* Part No.
2½	B.F. and A.I.	0027550	0017916	0027547		0017916		0004468
	Opt. Bronze Wear Ring	0027549	0017918	0027546		0017918		
	All Bronze Drawing No. 4845	0027551	0017918	0027548		0017918		19062
1¼ S	B.F. and A.I.	0087614	0017916	0087617		0017969		0004476
	Opt. Bronze Wear Ring	0087613	0017918	0087616		0017970		
	All Bronze Drawing No. 4784	0087615	0017918	0087618		0017970		111-779
1½ S	B.F. and A.I.	0027562	0017916	0027553		0017969		0004476
	Opt. Bronze Wear Ring	0027561	0017918	0027552		0017970		
	All Bronze Drawing No. 4782	0027563	0017918	0027554		0017970		111-779
2 S	B.F. and A.I.	0027565	0017916	0027556		0019015		0004476
	Opt. Bronze Wear Ring	0027564	0017918	0027555		0019014		
	All Bronze Drawing No. 4711	0027566	0017918	0027557		0019014		111-779
3 S	B.F. and A.I.	0027568	0017916	4121-21H	4111	4121-21H	4111	0004476
	Opt. Bronze Wear Ring	0027567	0017918	0027580	0027559	0017916	0019057	
	All Bronze	0027569	0017918	0027579	0027558	0017918	0019058	
	Drawing No. 5137		14456	0027581	0027560	0017918	0019058	111-779
				32557	32480	14456	113-710	
1½ M	B.F. and A.I.	0027589	0017916	0027571		0017969		0004474
	Opt. Bronze Wear Ring	0027588	0017918	0027570		0017970		
	All Bronze Drawing No. 4805	0027590	0017918	0027572		0017970		111-780
2 M	B.F. and A.I.	0027592	0017916	0027574		0017916		0004474
	Opt. Bronze Wear Ring	0027591	0017918	0027573		0017918		
	All Bronze Drawing No. 5125	0027593	0017918	0027575		0017918		111-780
3 M	B.F. and A.I.	0027595	0017916	0027577		0019057		0004474
	Opt. Bronze Wear Ring	0027594	0017918	0027576		0019058		
	All Bronze Drawing No. 5123	0027596	0017918	0027578		0019058		111-780
4 M & 4 MT	B.F. and A.I.	0027598	0017916	0027583		0019057		0004474
	Opt. Bronze Wear Ring	0027597	0017918	0027582		0019058		
	All Bronze Drawing No. 4803	0027599	0017918	0027584		0019058		111-780
5 M	B.F. and A.I.	0027601	0017916	0027586		0018761		0004474
	Opt. Bronze Wear Ring	0027600	0017918	0027585		0018762		
	All Bronze Drawing No. 5101	0027602	0017918	0027587		0018762		111-780
1½ L	B.F. and A.I.	0040171	0017916	0040174		0017969		0004470
	Opt. Bronze Wear Ring	0040170	0017918	0040173		0017970		
	All Bronze Drawing No. 5214	0040172	0017918	0040175		0017970		112-301
2 L	B.F. and A.I.	0040177	0017916	0040180		0017916		0004470
	Opt. Bronze Wear Ring	0040176	0017918	0040179		0017918		
	All Bronze Drawing No. 5213	0040178	0017918	0040181		0017918		112-301

Item No.	Name and Description	Part No.	Drawing No.
215	Cap Screw (8 Req'd Except Size 1½ L and 2 L Require 12)	0000431	
216	Pipe Plug (4 Req'd)	Cast Iron	0002009
		Bronze	0000019
240	Pipe Plug (1 Req'd)	Cast Iron	0002009
		Bronze	0000019

* Recommended spare parts



Repair Parts

Item No. 2 - Impeller

Please Order By The Part No.

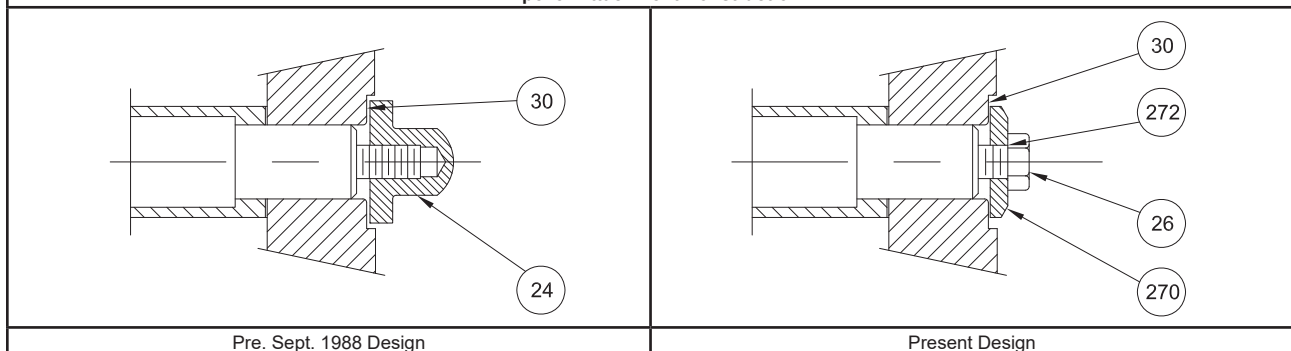
Part No. shown is for any dia. in that pump size. Order as follows; Example, (1 Brz. Imp. for 4111 2S, Unit E20 Part No. 0018351 except 6" dia.)

Pump Size	Unit No.	Imp. Dia. Inch	Imp. Bore Inch	#8 Bronze Part No.	Cast Iron Part No.	Drawing No.
2½	E-3	5½"		0015790	0016432	32504
	E-4	6"	⅞"			
	E-5	7"				
1¼ S	E-9	6¼"		0084680	0084682	34233
	E-9A	7¾"				
	E-10	8"	⅞"			
	E-14	5¼"				
	E-14A	6¾"				
1½ S	E-11	6¼"		0016958	0016953	25433
	E-12	7⅞"	⅞"			
	E-13	7¾"				
1½ S	E-16	6⅞"		0016753	0016751	113-682
	E-17	7¾"	1¼"			
	E-15	7½"				
1½ S	E-15A	8"	1¼"	0084678	0084676	119-975
2 S	E-20	6"		0018351	0018342	25322
	E-21	6¾"				
	E-22	7⅞"	⅞"			
	E-23	8"				
	E-24	5⅞"				
	E-25	5¼"				
	E-26	6⅞"				
	E-27	7⅞"	1¼"			
	E-28	7¾"				
E-29	8"					
3 S 4111	E-31	5½"		0015657	0015652	32479
	E-32	5⅞"				
	E-33	6¼"	⅞"			
	E-34	7½"				
	E-35	8"				
3 S 4121 4121H	E-56	5¾"		0018495	0018490	32555
	E-57	6⅞"	1¼"			
	E-58	6⅞"				
	E-59	7⅞"				
	E-60	8"				
1½ L	E-6	9½"		0044969	0044968	33286
	E-7	10⅞"	1¼"			
	E-8	12"				

Pump Size	Unit No.	Imp. Dia. Inch	Imp. Bore Inch	#8 Bronze Part No.	Cast Iron Part No.	Drawing No.			
2 L	E-52	9⅞"		0044978	0044977	33288			
	E-53	11"	1¼"						
	E-54	12"							
1½ M	E-37	8"		0012599	0012593	32583			
	E-38	9¼"	⅞"						
	E-39	10"							
	E-76	7¾"							
	E-77	8½"	1¼"						
2 M	E-78	9¼"		0018414	0018409	25501			
	E-79	10"							
	E-40	7"					0018428	0018421	32487
	E-41	8⅞"	⅞"						
	E-42	9½"							
E-43	10"								
E-44	7¼"	1¼"							
2 M	E-45	7 ¹¹ / ₁₆ "		0018454	0018447	25342			
	E-46	8¾"							
	E-47	6"					0015850	0015844	32471
	E-48	7"	⅞"						
E-49	7⅞"								
E-50	8¾"								
3 M	E-51	9⅞"	1¼"	0018479	0018473	25319			
4 M	E-61	6¾"		0017183	0017178	32511			
	E-62	7⅞"	⅞"						
4 M	E-63	8⅞"		0017208	0017203	25370			
	E-64	9⅞"	1¼"						
	E-65	10"							
4 MT	E-66	5¾"		0013694	0013689	32656			
	E-67	6"	1¼"						
	E-68	6¼"							
	E-69	6¾"							
5 M	E-70	7⅞"		0018526	0018521	4920			
	E-71	8"	1¼"						
	E-72	8⅞"							
	E-73	9⅞"							
	E-74	10"							

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Impeller Attachment Construction



Refer to top of page 121

* Recommended spare parts

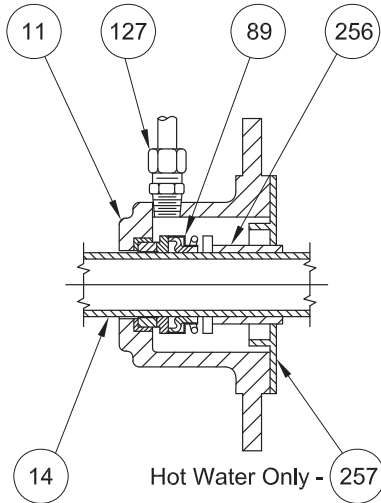
Shaft Assembly								
Please Order By The Part No.								
Item No.	Name of Part	Fig. 4111		Fig. 4121		Fig. 4121 H		
		Part No.	Drawing No.	Part No.	Drawing No.	Part No.	Drawing No.	
6	Shaft Assembly: Includes Shaft and items #14, 26, 30, 32, 270, and 272	1040 Steel	0033269		0033271		0033273	
		416 SS	0102809	26654	0102811	26655	0102813	26656
* 14	Shaft Sleeve - Type 316 SS Shaft Sleeve - Type 440C Hardened		0099115 0075358	113-331	0086019 0076967	113-339	0086019 0076967	113-339
* 24	Impeller Nut	For B.F. and A.B For A.I.	0017549 0017548	113-333	0017627 0017625	113-329	0017627 0017625	113-329
* 26	Cap Screw		0053313		0053315		0053315	
* 30	Gasket - for Item 24 - Rulon		0068362	116-040	0068363	116-040	0068363	116-040
32	Impeller Key		0017546	113-334	0011260	113-336	0011260	113-336
* 38	Sleeve Gasket - for Item 14 - Rulon		0068369	116-040	0068367	113-340	0068367	113-340
46	Coupling key - for Item 6		0002205	114-932	0002205	114-932	0002205	114-932
270	Impeller Washer		0081097	119-744	0068347	119-154	0068347	119-154
* 272	O-Ring		0068366	111-279	0068365	111-279	0068365	111-279
Standard Grease Lubricated Power Frame Parts								
* 16	Bearing - Inboard		0005265		0005244		0016456	
* 18	Bearing - Outboard		0005265		0005225		0005244	
19	Frame		0012761	4764	0013228	5117	0013118	5143
37	Bearing Cover - Outboard		0009976	112-170	0009869	112-167	0009924	112-713
40	Deflector		0000707	18195	0000708	18195	0000709	18195
* 49	Felt Ring	for Item 37 for Item 66	0009953 0033132	112-161	0009955 0033187	112-161	0009955 0009957	112-161
66	Shaft Adjusting Nut Assembly Includes Items - #49, 204, and 257		0040155	110-864	0040156	111-278	0034339	113-474
202	Snap Ring - Steel		0033569		0033259		0033259	
204	Adjusting Nut Clip		0009981	110-867	0009981	110-867	0009981	110-867
207	Grease Fitting - for Item 1		0003131		0003131		0003131	
212	Cap Screw - (4 Req'd)		0000434		0000434		0000434	
213	Cap Screw - (4 Req'd)		0000715		0000715		0014746	
229	Lockwasher - for Item 204		0002588		0002588		0002588	
236	Pipe Plug - 1/4"		0002009		0002009		0002009	
241	Gasket - for Item 11		0004553	111-969	0004553	111-969	0004553	111-969
242	Grease Fitting - for Item 1		0003131		0003131		0003131	
257	Clamp Ring	for Item 37 for Item 66	0009942 0009942	112-159	0009944 0009944	112-159	0009944 0009946	112-159
* 303	Gasket - for Item 37		0009978	111-968	0009871	111-970	0009871	111-970
337	Cap Screw - for Item 204		0000342		0000342		0000342	
Oil Lubricated Power Frame Parts								
The Parts Shown Below Replace Standard Parts For Oil Lubricated Construction								
19A	Frame		0012760	4764	0013227	5117	0016387	5143
37A	Bearing Cover - Outboard		0016978	112-170	0009869	112-167	0043010	112-713
* 47	Lip Seal - Inboard - for Item 66A		0006924		0006934		0006934	
* 49	Lip Seal - Outboard - for Item 37A		0006924		0006934		0068932	
60	Oil Slinger		0016381	112-665	0016381	112-665	0016381	112-665
66	Shaft Adjusting Nut - Inboard		0043012	112-677	0041959	115-008	0043011	113-474
77	Oiler - Trico Assembly #52		0057697		0057697		0057697	
* 232	Quad Ring - for Item 66A (1 Req'd)		0041964		0041772		0043009	
235	Breather 1/8" Alemite - for Item 19A		0039022		0039022		0039022	

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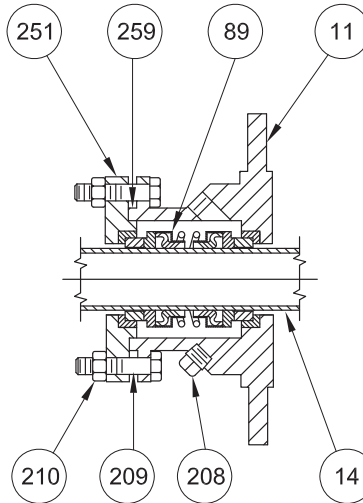
* Recommended spare parts

Repair Parts

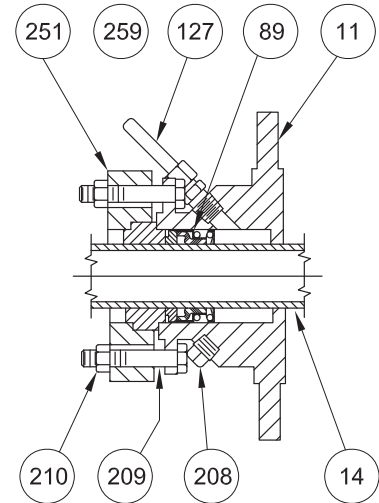
TYPE 21 SINGLE SEAL



TYPE 21 DOUBLE SEAL



TYPE 9 SINGLE SEAL



Also:
For Hot Water Service
When Using Item 257

Also:
Dura Cro Double Seal
Similar Construction

Packing and Mechanical Seal Assemblies

Please Order By The Part No.

Item No.	Description	Packing Part No.	Crane Type 21 Single Seal		J.C. Type 21 Double Seal Part No.	J.C. Type 9 Single Seal Part No.	Dura CRO Double Seal Part No.
			Std. Const. Part No.	Hot Water Part No.			
For use with Model 4111							
11	Packing Box Cover	Cast Iron 0009885	0013438	0013438	0013468	0009885	0013827
		Bronze 0001282	0013440	N.A.	0013470	0001282	0013828
* 13	Packing (5 Req'd)	Std. Teflon 0030713 0087938	N.R.	N.R.	N.R.	N.R.	N.R.
17	Packing Gland	Cast Iron Bronze 0017026 0017027	N.R.	N.R.	N.R.	N.R.	N.R.
29	Lantern Ring (2 Req'd)	0076639	N.R.	N.R.	N.R.	N.R.	N.R.
* 89	Mechanical Seal	BF1C1 BF171 QF1C1 QF171 EX5 - TV N.R.	0030880 0030881	0030881	0030898 0030899	0060645 0060644	0006917
208	Pipe Plug	Cast Iron Brass 0002553 0000018	N.R.	N.R.	0002553 0000018	0002553 0000018	0002553 0000018
209	Cap Screw (2 Req'd)	Steel Brass 0003717 0017630	N.R.	N.R.	0013367 0013368	0003280 0000385	0013367 0013368
210	Hex Nut (2 Req'd)	Steel Brass 0000113 0002146	N.R.	N.R.	0000113 0002146	0000113 0002146	0000113 0002146
251	Seal Gland	Cast Iron Bronze N.R.	N.R.	N.R.	0013472 0013474	0013387 0013389	0013788 0014898
257	Choker Ring	Cast Iron Bronze N.R.	N.R.	0043632 0043634	N.R.	N.R.	N.R.
* 259	Gland Gasket	Velbuna JM86A N.R.	N.R.	N.R.	0013371 0015138	0013371 0015138	0013371 0015138
266	Spacer Sleeve	N.R.	0010391	0010391	N.R.	N.R.	N.R.

* Recommended spare parts

DISCONTINUED

DISCONTINUED

Packing and Mechanical Seal Assemblies								
Please Order By The Part No.								
Item No.	Description	Packing Part No.	J.C. Type 21 Single Seal		J.C. Type 21 Double Seal Part No.	J.C. Type 9 Single Seal Part No.	Dura CRO Double Seal Part No.	
			Std. Const. Part No.	Hot Water Part No.				
For use with Model 4121 & 4121H								
11	Packing Box Cover	Cast Iron Bronze	0015879 0017614	0044493 0044495	0044493 N.A.	0019084 0019086	0019102 0019103	0019326 0019327
* 13	Packing (5 Req'd)	Std. Teflon	0072344 0087937	N.R.	N.R.	N.R.	N.R.	N.R.
17	Packing Gland	Cast Iron Bronze	0017618 0017624	N.R.	N.R.	N.R.	N.R.	N.R.
29	Lantern Ring (2 Req'd)		0076641	N.R.	N.R.	N.R.	N.R.	N.R.
* 89	Mechanical Seal	BF1C1 BF171 QF1C1 QF171 EX5 - TV	N.R.	0030886 0030887	0030887	0030902 0030903		0019121
208	Pipe Plug	Cast Iron Brass	0002553 0000018	N.R.	N.R.	0002553 0000018	0002553 0000018	0002553 0000018
209	Cap Screw (2 Req'd)	Steel Brass	0003717 0017630	N.R.	N.R.	0000371 0000372	0000376 0000377	0000371 0000372
210	Hex Nut (2 Req'd)	Steel Brass	0000113 0002146	N.R.	N.R.	0000113 0002146	0000113 0002146	0000113 0002146
251	Seal Gland	Cast Iron Bronze	N.R.	N.R.	N.R.	0019069 0019071	0019077 0019079	0019073 0019074
257	Choker Ring	Cast Iron Bronze	N.R.	N.R.	0043640 0043641	N.R.	N.R.	N.R.
* 259	Gland Gasket	Velbuna JM86A	N.R.	N.R.	N.R.	0019081 0019295	0019081 0019295	0019081 0019295
256	Spacer Sleeve		N.R.	0044434	0044434	N.R.	N.R.	N.R.

Lubrication Fittings for packing or Seals		
Item No.	Description	Part No.
127	For Packing - Bronze Fitted or All Bronze Tubing - Copper ¼" x 7" long Connector - 90° ¼" x ¼" NPT Brass Connector - Straight ¼" x ¼" NPT Brass	0017024 0000030 0003740
	For Single Type 21 Seal - Bronze Fitted or All Bronze Tubing - Copper ⅜" x 9" long Connector - 90° ⅜" x ¼" NPT Brass Connector - Straight ⅜" x ¼" NPT Brass	0017076 0001574 0001570
	For Single Type 21 Seal - All Iron Tubing - 316 S.S. ⅜" x 9" long Street Elbow - ¼" - 90° Galvanized Connector - Straight ⅜" x ¼" NPT 316 S.S. (2 Req'd)	0017077 0001807 0013348
	For Single Type 21 Seal - Hot Water Pump - Bronze Fitted Tubing - Copper ⅜" x 12" long Connector - 90° ⅜" x ¼" NPT Brass Connector - Straight ⅜" x ¼" NPT Brass	0014800 0001574 0001570
243	Grease Fitting ⅜" NPT for Packing - Bronze Fitted or All Iron	0003131

* Recommended spare parts