



**AURORA<sup>®</sup>**

**610A SERIES**  
**HORIZONTAL AND VERTICAL**  
**ONE STAGE SOLIDS HANDLING PUMPS**  
**REPAIR PARTS INDEX**

NOTE! Read and understand the pump and motor instructions before attempting to install, disassemble or repair the pump.

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# 610A SERIES REPAIR PARTS INDEX

SECTION **610P** PAGE 1  
DATED JULY 1992  
SUPERSEDES 610P PAGE 1  
DATED NOV. 1988

PARTS ARE LISTED BY POWER FRAME AND LIQUID ENDS. SELECT POWER FRAME BY PUMP SIZE AND SPEED FROM CHART BELOW.

## MODEL 611A, 612A AND 613A\*\*

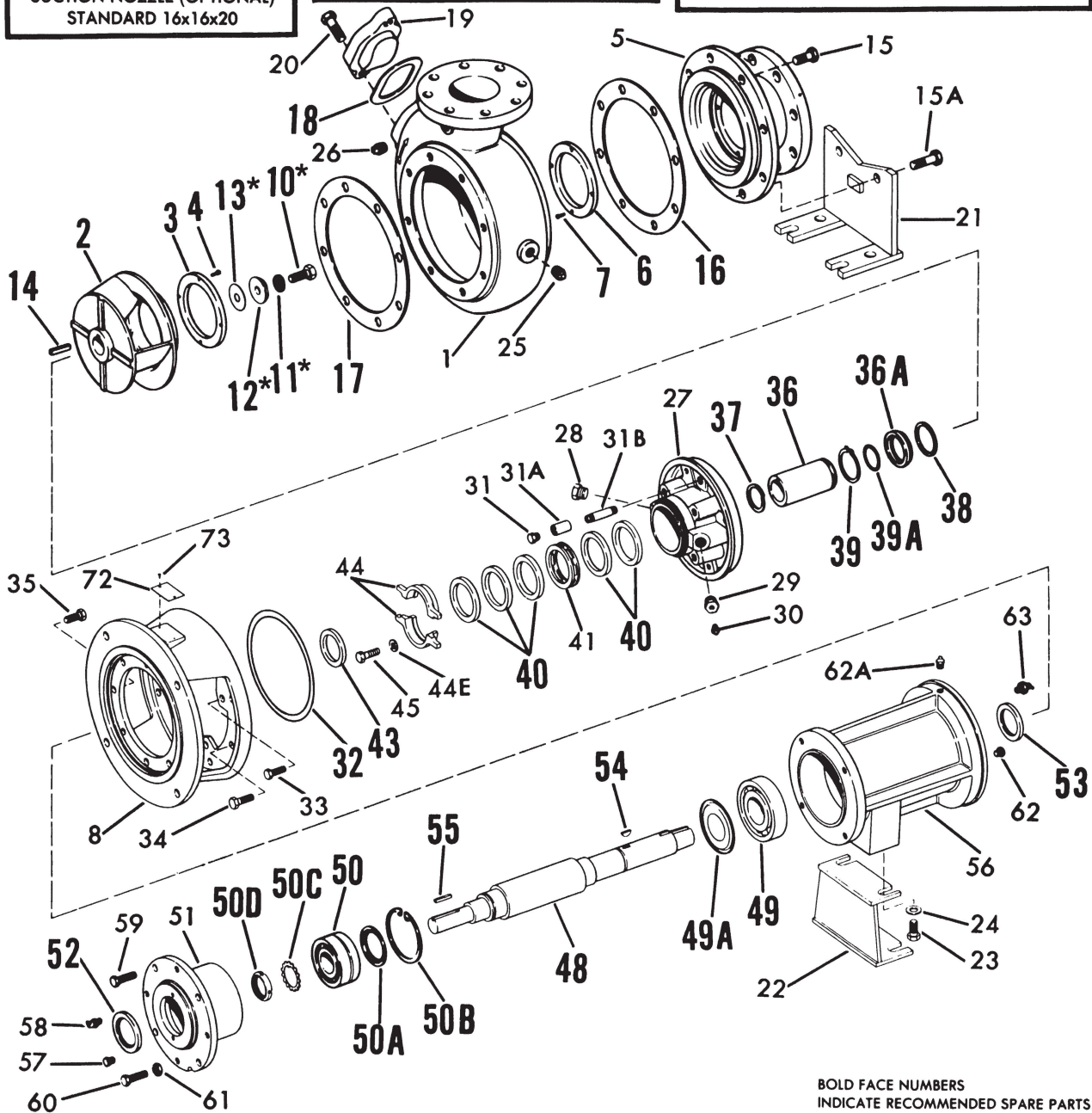
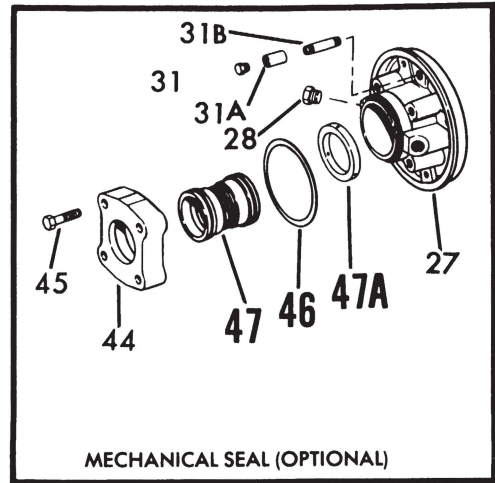
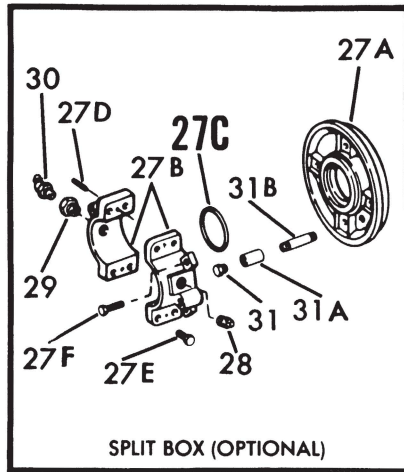
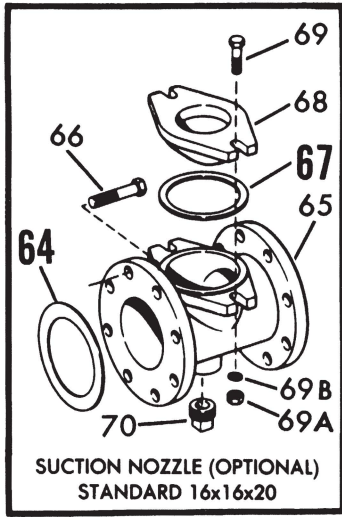
PUMP SIZE	RPM							
	1750	1175	1150	875	700	585	580	500
6x6x12	5F		5E ‡	4C	4C			
6x6x12B	5F		5E ‡	4C	4C			
6x8x15	5F		5E	5E	5E		5E	
8x8x15A			5E	5E	5E		5E	
10x10x15			5F	5E	5E		5E	
6x8x18			5F	5E	5E		5E	
8x10x18			5H	5G	5G		5G	
8x10x22				5H	5G		5G	
10x10x22		6E						
10x12x22				6D	5H		5G	
12x12x22		6E						
12x14x22A				6D	5H		5G	
12x14x22B				6D	5H		5G	
14x14x22A		6E						
16x16x20*				6F	6F	6F		6F
16x16x28				8	8	8		
18x18x28					8	8		8
20x20x28					8	8		8

\* Available as model 611A only.

‡ Prior to June 1, 1992, these 610A pumps were mounted on power frame 4D.

\*\* For 614A pumps power frame determined by impeller trim. Please consult factory for power frame/impeller trim combinations.

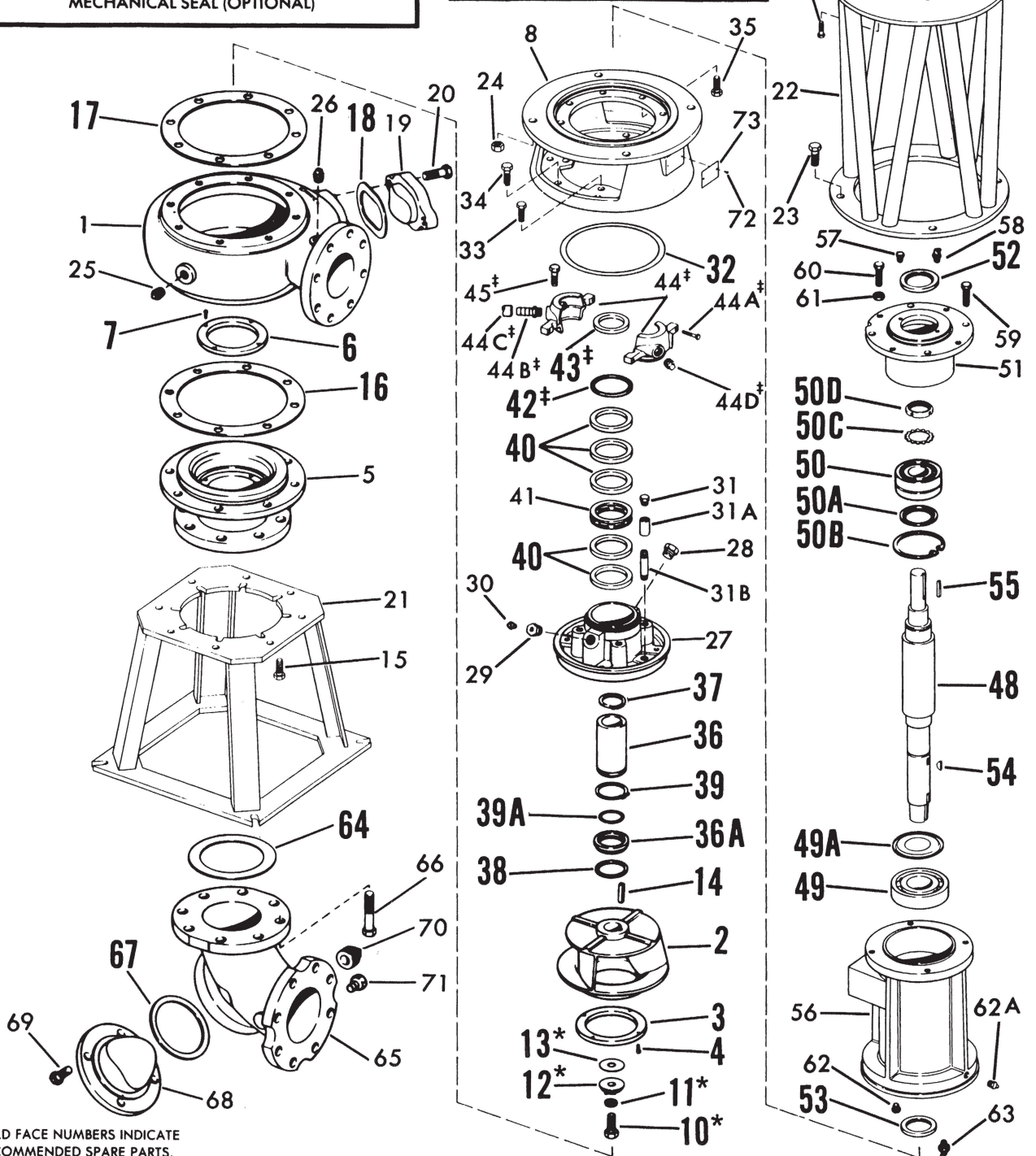
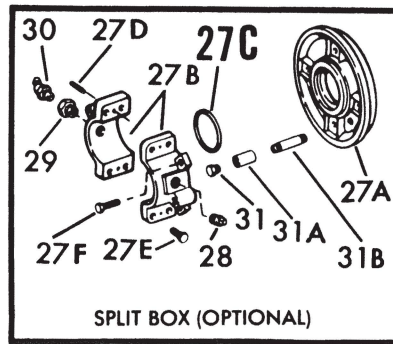
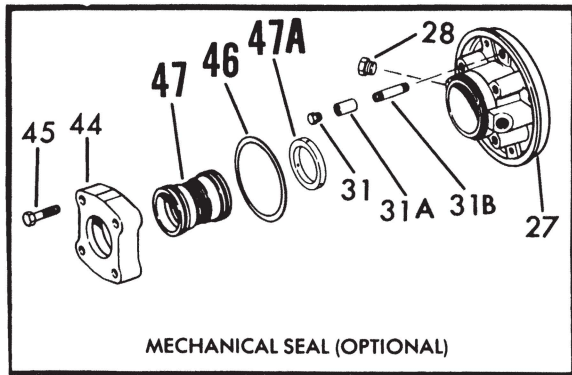
**610A SERIES  
 MODEL 611A  
 PIECE NUMBERS**



\*These items are available as a kit, refer to PC. NO. 9.



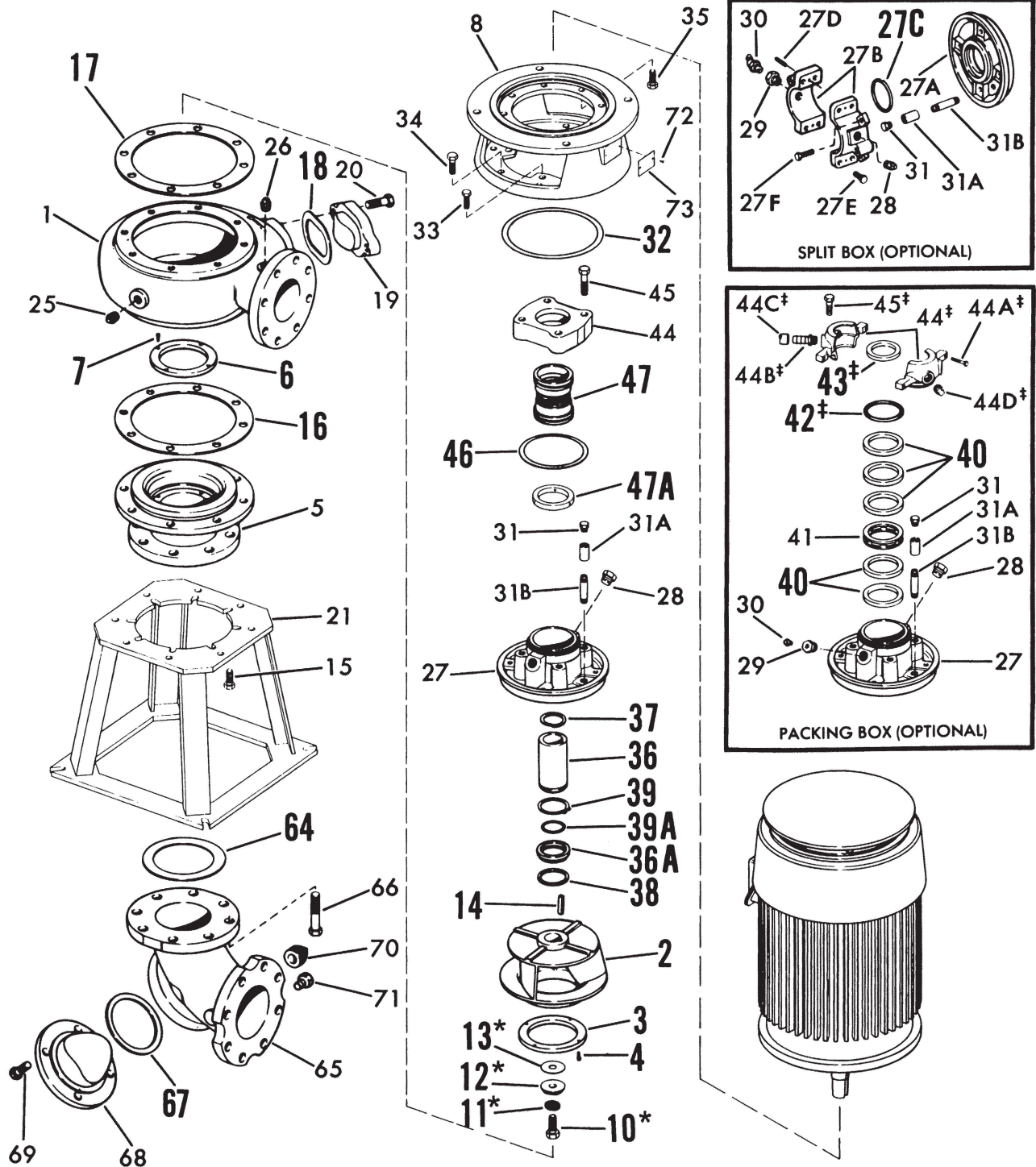
# 610A SERIES MODEL 612A & 613A PIECE NUMBERS



\*These items are available as a kit, refer to PC. NO.9

‡These items are available as a kit, refer to PC. NO. 74

# 610A SERIES MODEL 614A PIECE NUMBERS

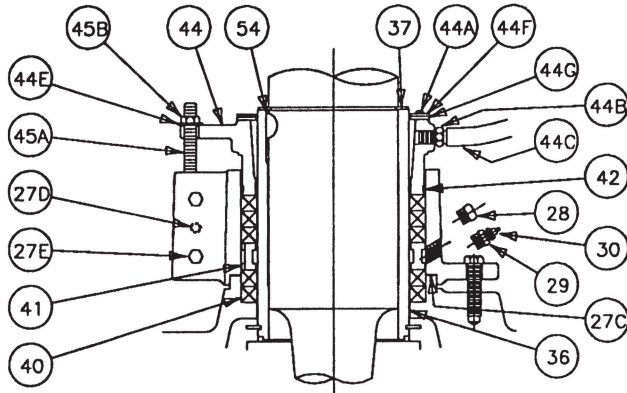


BOLD FACE NUMBERS INDICATE  
 RECOMMENDED SPARE PARTS

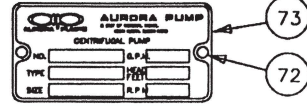
\*These items are available as a kit, refer to PC. NO.9

‡These items are available as a kit, refer to PC. NO. 74

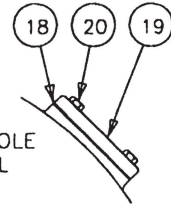
**610A SERIES  
MODEL 612A  
POWER FRAME 8  
PIECE NUMBERS**



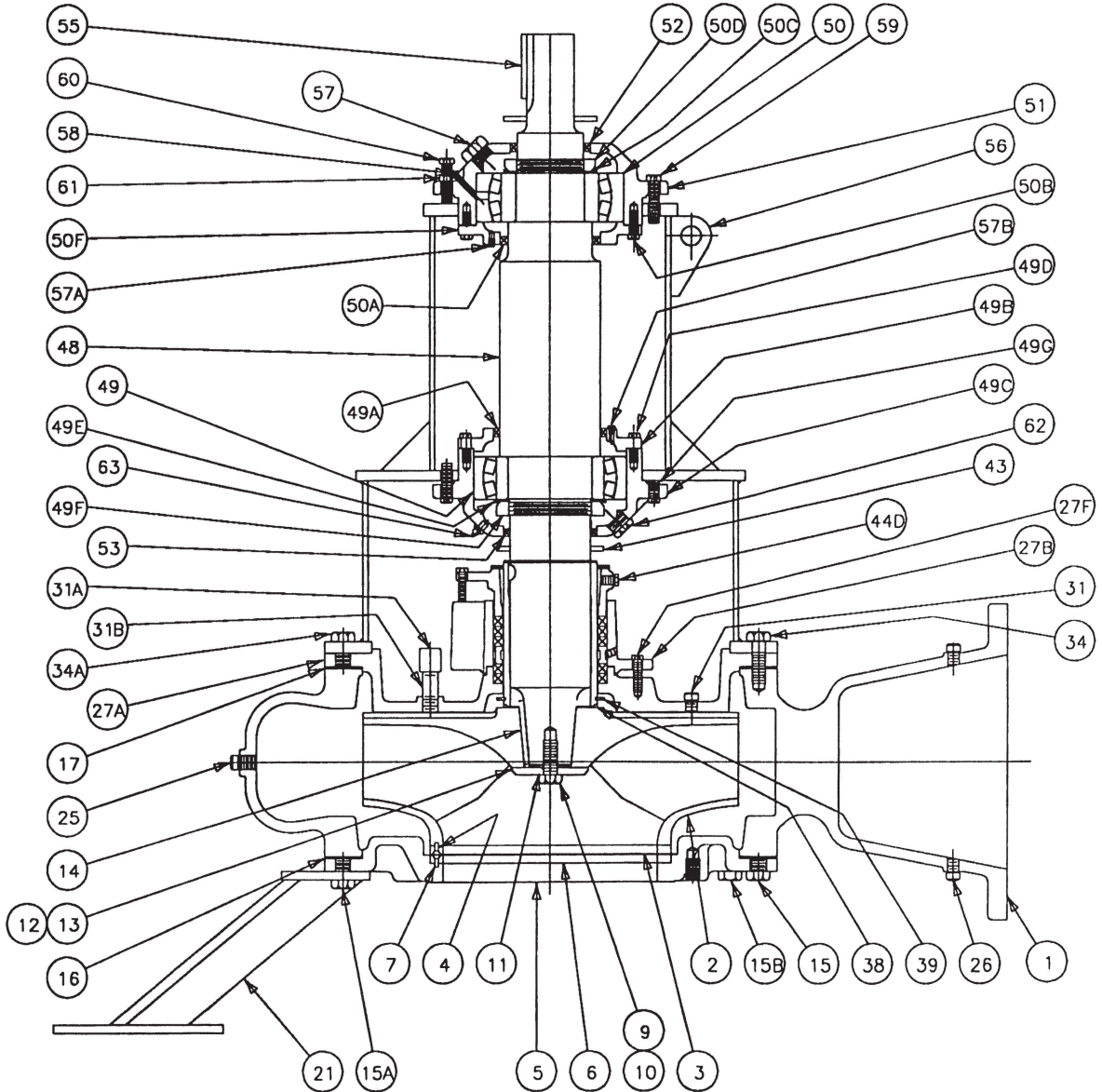
PACKING BOX DETAILS



NAMEPLATE DETAIL



CASING HANDHOLE COVER DETAIL





610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL				
				B.F.	A.B.	A.I.	S.S.	
1	CASING							
	6x6x12	1	180-1888	010				
	6x6x12B	1	180-2395	010				
	6x8x15	1	180-1889	010				
	8x8x15A	1	180-2385	010				
	10x10x15	1	180-1898	010				
	6x8x18	1	180-1890	010				
	8x10x18	1	180-1892	010				
	8x10x22	1	180-1893	010				
	10x10x22	1	180-0648	010				
	10x12x22	1	180-1894	010				
	12x12x22	1	180-0649	010				
	12x14x22A	1	180-1895	010				
	12x14x22B	1	180-1895	010				
	14x14x22A	1	180-1811	010				
	16x16x20	1	180-2450	010				
	16x16x28	1	180-2245	010				
	18x18x28	1	180-2246	010				
	20x20x28	1	180-2247	010				
	2	IMPELLER 611A, 612A, 613A						
6x6x12 PF 4		1	443-2541	010				
6x6x12 PF 5		1	443-2077	010				
6x6x12B PF 4		1	443-2543	010				
6x6x12B PF 5		1	443-2434	010				
6x8x15		1	443-2078	010				
8x8x15A		1	443-2442	010				
10x10x15		1	443-2086	010				
6x8x18		1	443-2079	010				
8x10x18		1	443-2081	010				
8x10x22		1	443-2082	010				
10x10x22		1	443-2082	010				
10x12x22		1	443-2083	010				
12x12x22		1	443-2083	010				
12x14x22A		1	443-2084	010				
12x14x22B		1	443-2333	010				
14x14x22A		1	443-2084	010				
16x16x20			REFER IMP WITH WR/RG					
16x16x28		1	443-2305	010				
18x18x28		1	443-2306	010				
20x20x28	1	443-2307	010					
2	IMPELLER 614A							
	6x6x12 PF 4	1	443-2643	010				
	6x6x12 PF 5	1	443-2077	010				
	6x6x12B PF 4	1	443-2645	010				

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
2	IMPELLER 614A (CONT'D)						
	6x6x12B PF 5	1	443-2434	010			
	6x8x15	1	443-2078	010			
	8x8x15A	1	443-2442	010			
	10x10x15	1	443-2086	010			
	6x8x18	1	443-2079	010			
2	IMPELLER 611A, 612A, 613A WITH WEARING RING						*
	6x6x12 PF 4	1	443-2542	644		646	
	6x6x12 PF 5	1	443-2316	644		646	
	6x6x12B PF 4	1	443-2544	644		646	
	6x6x12B PF 5	1	443-2435	644		646	
	6x8x15	1	443-2317	644		646	
	8x8x15A	1	443-2443	644		646	
	10x10x15	1	443-2322	644		646	
	6x8x18	1	443-2318	644		646	
	8x10x18	1	443-2320	644		646	
	8x10x22	1	443-2321	644		646	
	10x10x22	1	443-2321	644		646	
	10x12x22	1	443-2323	644		646	
	12x12x22	1	443-2323	644		646	
	12x14x22A	1	443-2324	644		646	
	12x14x22B	1	443-2325	644		646	
	14x14x22A	1	443-2324	644		646	
	16x16x20	1	443-2631	644		646	
	16x16x28	1	443-2634	644		646	
	18x18x28	1	443-2635	644		646	
20x20x28	1	443-2636	644		646		
2	IMPELLER 614A WITH WEARING RING						*
	6x6x12 PF 4	1	443-2644	644		646	
	6x6x12 PF 5	1	443-2316	644		646	
	6x6x12B PF 4	1	443-2646	644		646	
	6x6x12B PF 5	1	443-2435	644		646	
	6x8x15	1	443-2317	644		646	
	8x8x15A	1	443-2443	644		646	
	10x10x15	1	443-2322	644		646	
	6x8x18	1	443-2318	644		646	
3	IMPELLER WEARING RING						*
	6x6x12B, 6x6x12	1	676-1918	208		108	
	6x8x15, 6x8x18	1	676-1911	208		108	
	8x8x15A	1	676-2035	208		108	

\*HARDENED STAINLESS STEEL WEARING RING OPTION.

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
3	IMPELLER WEARING RING (CONT'D)					*	
	10x10x15, 8x10x18	1	676-1915	208		108	
	8x10x22, 10x10x22	1	676-1912	208		108	
	10x12x22	1	676-1913	208		108	
	12x12x22	1	676-1913	208		108	
	12x14x22A	1	676-1914	208		108	
	12x14x22B	1	676-1914	208		108	
	14x14x22A	1	676-1914	208		108	
	16x16x20	1	676-2085	208		108	
	16x16x28	1	676-1110	208		108	
	18x18x28	1	676-1110	208		108	
	20x20x28	1	676-1110	208		108	
	4	SETSCREW					
6x6x12B, 6x8x15		4	708-0406	104			
8x8x15A, 10x10x15		4	708-0406	104			
6x8x18, 6x6x12		4	708-0406	104			
8x10x18, 8x10x22		8	708-0406	104			
10x10x22,		8	708-0406	104			
10x12x22,		8	708-0406	104			
12x12x22,		8	708-0406	104			
12x14x22A		8	708-0406	104			
12x14x22B		8	708-0406	104			
14x14x22A		8	708-0406	104			
16x16x20		8	708-0406	104			
16x16x28		8	708-0410	104			
18x18x28		8	708-0410	104			
20x20x28		8	708-0410	104			
5		SUCTION COVER					
	6x6x12, 6x6x12B	1	816-1133	010			
	6x8x15	1	816-1116	010			
	8x8x15A	1	816-1230	010			
	10x10x15	1	816-1182	010			
	6x8x18	1	816-1117	010			
	8x10x18	1	815-1119	010			
	8x10x22	1	816-1120	010			
	10x10x22	1	816-1120	010			
	10x12x22	1	816-1121	010			
	12x12x22	1	816-1121	010			
	12x14x22A	1	816-1122	010			
	12x14x22B	1	816-1122	010			
	14x14x22A	1	816-1122	010			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL				
				B.F.	A.B.	A.I.	S.S.	
5	SUCTION COVER (CONT'D)							
	16x16x28	1	816-0502	010				
	18x18x28	1	816-0503	010				
	20x20x28	1	816-0504	010				
	SUCTION COVER WITH IMP. RING							
	6x6x12, 6x6x12B	1	816-1143	010				
	6x8x15	1	816-1145	010				
	8x8x15A	1	816-1231	010				
	10x10x15	1	816-1183	010				
	6x8x18	1	816-1147	010				
	8x10x18	1	816-1151	010				
	8x10x22	1	816-1153	010				
	10x10x22	1	816-1153	010				
	10x12x22	1	816-1155	010				
	12x12x22	1	816-1155	010				
	12x14x22A	1	816-1157	010				
	12x14x22B	1	816-1157	010				
	14x14x22A	1	816-1157	010				
	16x16x28	1	816-0648	010				
	18x18x28	1	816-0662	010				
	20x20x28	1	816-0664	010				
	SUCTION COVER WITH IMP. AND CASE RINGS						*	
	6x6x12, 6x6x12B	1	816-1144	644		646		
	6x8x15		816-1146	644		646		
8x8x15A	1	816-1232	644		646			
10x10x15	1	816-1184	644		646			
6x8x18	1	816-1148	644		646			
8x10x18	1	816-1152	644		646			
8x10x22	1	816-1154	644		646			
10x10x22	1	816-1154	644		646			
10x12x22	1	816-1156	644		646			
12x12x22	1	816-1156	644		646			
12x14x22A	1	816-1158	644		646			
12x14x22B	1	816-1158	644		646			
14x14x22A	1	816-1158	644		646			
16x16x20	1	816-1281	644		646			
16x16x28	1	816-0770	644		646			
18x18x28	1	816-0771	644		646			
20x20x28	1	816-0772	644		646			

\* HARDENED STAINLESS STEEL WEARING RING OPTION.



610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
6	CASE WEARING RING					*	
	6x6x12B, 6x6x12	1	676-1918	208		108	
	6x8x15, 6x8x18	1	676-1911	208		108	
	8x8x15A	1	676-2035	208		108	
	10x10x15, 8x10x18	1	676-1915	208		108	
	8x10x22, 10x10x22	1	676-1912	208		108	
	10x12x22,	1	676-1913	208		108	
	12x12x22	1	676-1913	208		108	
	12x14x22A,	1	676-1914	208		108	
	12x14x22B,	1	676-1914	208		108	
	14x14x22A	1	676-1914	208		108	
	16x16x20	1	676-2085	208		108	
	16x16x28,	1	676-1110	208		108	
	18x18x28,	1	676-1110	208		108	
	20x20x28	1	676-1110	208		108	
7	SETSCREW						
	6x6x12B, 6x8x15	4	708-0406	104			
	8x8x15A, 10x10x15	4	708-0406	104			
	6x8x18, 6x6x12	4	708-0406	104			
	8x10x18, 8x10x22	8	708-0406	104			
	10x10x22,	8	708-0406	104			
	10x12x22,	8	708-0406	104			
	12x12x22,	8	708-0406	104			
	12x14x22A,	8	708-0406	104			
	12x14x22B,	8	708-0406	104			
	14x14x22A	8	708-0406	104			
	16x16x20	8	708-0406	104			
	16x16x28	8	708-0410	104			
18x18x28	8	708-0410	104				
20x20x28	8	708-0410	104				
8	BRACKET						
	12" CASE BORE PF4	1	116-0490	010			
	12" CASE BORE PF5	1	116-0491	010			
	15" CASE BORE	1	116-0492	010			
	18" CASE BORE	1	116-0495	010			
	20" CASE BORE	1	116-0499	010			
	22" CASE BORE PF5	1	116-0493	010			
	22" CASE BORE PF6	1	116-0496	010			
28" CASE BORE		INCLUDED WITH NO. 56					
9	IMPELLER FASTENER KIT (PC. NO. 10, 11, 12, 13)						
	PF 4C, D	1	476-0030	644			
	PF 5E, F	1	476-0031	644			
	PF 5G, H-6D, E, F-8	1	476-0032	644			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
10	IMPELLER SCREW						
	PF 4C, D	1	168-1008	082			
	PF 5E, F	1	168-1009	082			
	PF 5G, H-6D, E, F-8	1	168-1010	082			
11	IMPELLER SCREW SEAL						
	PF 4C, D	1	908-1283	999			
	PF 5E, F	1	908-1284	999			
	PF 5G, H-6D, E, F-8	1	908-1286	999			
12	IMPELLER WASHER						
	PF 4C, D	1	908-0457	062			
	PF 5E, F	1	908-0458	062			
	PF 5G, H	1	908-0459	062			
	PF 6D, E, F	1	908-0459	062			
	16x16x28 PF 8	1	908-0460	062			
	18x18x28 PF 8	1	908-0461	062			
	20x20x28 PF 8	1	908-0461	062			
13	IMPELLER WASHER GASKET						
	PF 4C, D	1	364-2025	803			
	PF 5E, F	1	364-2029	803			
	PF 5G, H	1	364-2032	803			
	PF 6D, E, F	1	364-2032	803			
	16x16x28 PF 8	1	364-0068	803			
	18x18x28 PF 8	1	364-0069	803			
	20x20x28 PF 8	1	364-0069	803			
14	IMPELLER KEY						
	PF 4C, D	1	472-0250	087			
	PF 5E, F	1	472-0391	087			
	PF 5G, H	1	472-0408	087			
	PF 6D, E	1	472-0408	087			
	PF 6F	1	472-0420	087			
	PF 8	1	472-0419	087			
15	CAPSCREW 611A						
	12" CASE BORE PF4	6	168-0560	082			
	12" CASE BORE PF5	6	168-0560	082			
	15" CASE BORE	6	168-0632	082			
	18" CASE BORE	6	168-0632	082			
	20" CASE BORE	14	168-0670	082			
	22" CASE BORE	12	168-0670	082			
	612A, 613A, 614A						
6" SUCTION	8	168-0566	082				
8" SUCTION	6	168-0636	082				
10" SUC. 15 & 18 BORE	8	168-0638	082				

\* HARDENED STAINLESS STEEL WEARING RING OPTION.

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	612A, 613A, 614A (CONT'D)						
	10" SUC. 22" BORE	16	168-0676	082			
	12" SUCTION	16	168-0676	082			
	28" CASE BORE	8	168-0825	082			
15A	CAPSCREW 611A						
	12" CASE BORE PF4	2	168-0564	082			
	12" CASE BORE PF5	2	168-0564	082			
	15" CASE BORE	2	168-0636	082			
	18" CASE BORE	2	168-0636	082			
	20" CASE BORE	2	168-0676	082			
	22" CASE BORE	4	168-0674	082			
	28" CASE BORE	8	168-0831	082			
15B	CAPSCREW						
	612A PF 8	4	168-0819	082			
16	GASKET						
	12" CASE BORE	1	364-1326	803			
	15" CASE BORE	1	364-1327	803			
	18" CASE BORE	1	364-1328	803			
	20" & 22" CASE BORE	1	364-1329	803			
	28" CASE BORE	4	364-1032	803			
17	GASKET *						
	12" CASE BORE	1	364-1326	803			
	15" CASE BORE	1	364-1327	803			
	18" CASE BORE	1	364-1328	803			
	20" & 22" CASE BORE	1	364-1329	803			
	28" CASE BORE	4	364-1032	803			
18	GASKET						
	6x6x12	1	364-2039	457			
	6x6x12B	1	364-1046	457			
	6x8x15	1	364-2039	457			
	8x8x15A	1	364-1322	457			
	10x10x15	1	364-1322	457			
	6x8x18	1	364-2039	457			
	8x10x18	1	364-1322	457			
	8x10x22	1	364-1322	457			
	10x10x22	1	364-1322	457			
	10x12x22	1	364-1322	457			
	12x12x22	1	364-1322	457			
	12x14x22A	1	364-1322	457			
	12x14x22B	1	364-1322	457			
	14x14x22A	1	364-1322	457			
	16x16x20	1	364-1048	457			
	16x16x28	1	364-1048	457			
	18x18x28	1	364-1048	457			
	20x20x28	1	364-1048	457			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
19	HANDHOLE COVER						
	6x6x12	1	260-0657	010			
	6x6x12B	1	260-0734	010			
	6x8x15	1	260-0657	010			
	8x8x15A	1	260-0729	010			
	10x10x15	1	260-0663	010			
	6x8x18	1	260-0657	010			
	8x10x18	1	260-0660	010			
	8x10x22	1	260-0067	010			
	10x10x22	1	260-0064	010			
	10x12x22	1	260-0068	010			
	12x12x22	1	260-0072	010			
	12x14x22A	1	260-0072	010			
	12x14x22B	1	260-0072	010			
	14x14x22A	1	260-0725	010			
	16x16x20	1	260-5091	010			
	16x16x28	1	260-0061	010			
	18x18x28	1	260-0062	010			
	20x20x28	1	260-0063	010			
20	CAPSCREW						
	6x6x12	2	168-0562	082			
	6x6x12B	2	168-0564	082			
	6x8x15	2	168-0562	082			
	8x8x15A	2	168-0562	082			
	10x10x15	2	168-0562	082			
	6x8x18	2	168-0562	082			
	8x10x18	2	168-0562	082			
	8x10x22	4	168-0562	082			
	10x10x22	4	168-0564	082			
	10x12x22	4	168-0562	082			
	12x12x22	4	168-0564	082			
	12x14x22A	4	168-0562	082			
	12x14x22B	4	168-0562	082			
	14x14x22A	4	168-0564	082			
	16x16x20	4	168-0560	082			
	16x16x28	4	168-0562	082			
	18x18x28	4	168-0562	082			
	20x20x28	4	168-0562	082			
21	PUMP SUPPORT						
	FRONT FOOT 611A						
	12" CASE BORE	1	820-0507	087			
	15" CASE BORE	1	820-0505	087			
	18" CASE BORE	1	820-0508	087			
	20" CASE BORE	1	820-1693	087			
	22" CASE BORE	1	820-0506	087			

\*FOR MODEL 614A REFER TO FACTORY FOR SHIM GASKETS.



610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	PUMP BASE 612A, 613A, 614A						
	12" CASE BORE	1	060-1388	087			
	15 & 18" CASE BORE	1	060-1389	087			
	22" CASE BORE	1	060-1390	087			
	16x16x28	3	820-0511	087			
	18x18x28	3	820-0991	087			
	20x20x28	3	820-0992	087			
22	PUMP SUPPORT REAR FOOT 611A						
	12" CASE BORE PF 4	1	820-1628	087			
	12" CASE BORE PF 5	1	820-1629	087			
	15" CASE BORE	1	820-1625	087			
	18" CASE BORE	1	820-1626	087			
	20" CASE BORE	1	820-1694	087			
	22" CASE BORE	1	820-1627	087			
	MOTOR SUPPORT						
	613A PF 4	1	820-1397	010			
	< 284 HPH PF 5 & 6	1	820-1617	087			
	≥ 284 HPH PF 5 & 6	1	820-1620	087			
22A	ADAPTOR 613A ≥ 284 HPH PF 4	1	008-0340	010			
22B	CAPSCREW 613A ≥ 284 HPH PF 4	1	168-0562	082			
23	CAPSCREW REAR FOOT 611A						
	PF 4	2	168-0560	082			
	PF 5	2	168-0668	082			
	18" CASE BORE PF 6	2	168-0668	082			
	20" CASE BORE PF 6	2	168-0670	082			
	22" CASE BORE PF 6	2	168-0670	082			
	CAPSCREW 613A						
	PF 4	4	168-0494	082			
	PF 5 & 6	4	168-0640	082			
24	WASHER REAR FOOT 611A						
	PF 4	2	908-0116	080			
	PF 5 & 6	2	908-0118	080			
	NUT 613A						
	PF 4	4	544-0113	080			
	PF 5 & 6	4	544-0117	080			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
25	PIPE PLUG PF 4, 5 & 6	2	600-0005	028			
	16x16x20 PF 6F	5	600-0006	028			
	16x16x28 PF 8	3	600-0005	028			
	18x18x28 PF 8	3	600-0006	028			
	20x20x28 PF 8	3	600-0006	028			
26	PIPE PLUG PF 4, 5, 6, & 8	1	600-0004	028			
27	STUFFING BOX STANDARD PF 4	1	812-1084	010			
	STANDARD PF 5	1	812-1085	010			
	STANDARD PF 6D, E	1	812-1086	010			
	STANDARD PF 6F	1	812-1087	010			
27A	STUFFING BOX ADAPTOR						
	OPTIONAL PF 4	1	008-0564	010			
	OPTIONAL PF 5	1	008-0565	010			
	OPTIONAL PF 6D, E	1	008-0566	010			
	STANDARD PF 8	1	008-0020	010			
27B	SPLIT STUFFING BOX						
	OPTIONAL PF 4	1	812-0305	010			
	OPTIONAL PF 5	1	812-0309	010			
	OPTIONAL PF 6D, E	1	812-0312	010			
	STANDARD PF 8	1	812-0069	010			
27C	GASKET OPT. PF 4	1	364-2006	803			
	OPTIONAL PF 5	1	364-2027	803			
	OPTIONAL PF 6D, E	1	364-2031	803			
	STANDARD PF 8	1	364-1131	803			
27D	PIN OPT. PF 4	2	592-0361	107			
	OPTIONAL PF 5	2	592-0361	107			
	OPTIONAL PF 6D, E	2	592-0361	107			
	STANDARD PF 8	2	592-0838	104			
27E	CAPSCREW OPT. PF4	4	168-0382	082			
	OPTIONAL PF 5	4	168-0382	082			
	OPTIONAL PF 6D, E	4	168-0490	082			
	STANDARD PF 8	4	168-0562	082			
27F	CAPSCREW OPT. PF4	4	168-0382	082			
	OPTIONAL PF 5	4	168-0492	082			
	OPTIONAL PF 6D, E	8	168-0562	082			
	STANDARD PF 8	8	168-0568	082			
28	PIPE PLUG	1	600-0004	028			
29	BUSHING (PACK) PF 8	1	600-0905	387			
		1	600-0906	387			

< = LESS THAN    ≥ = GREATER THAN OR EQUAL TO

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
30	FITTING (PACK) PF 8	1	508-0012	651			
		1	508-0015	651			
31	PIPE PLUG						
		PF 4	2	600-0002	087		
		PF 5	2	600-0003	087		
		PF 6	2	600-0004	028		
		PF 8	2	600-0006	028		
31A	PIPE COUPLING						
		PF 4	1	600-0721	387		
		PF 5	1	600-0722	387		
		PF 6	1	600-0723	387		
		PF 8	1	600-0725	387		
31B	NIPPLE						
		PF 4	1	600-1103	387		
		PF 5	1	600-1254	387		
		PF 6	1	600-1304	387		
		PF 8	1	600-1412	387		
32	GASKET	PF 4	1	364-1344	803		
		PF 5	1	364-1345	803		
		PF 6	1	364-1346	803		
33	CAPSCREW	PF 4	1	168-0382	082		
		PF 5	4	168-0560	082		
		PF 6	4	168-0564	082		
		PF 6F	8	168-0564	082		
34	CAPSCREW						
		6x6x12 PF 4	8	168-0560	082		
		6x6x12B PF 4	8	168-0560	082		
		6x6x12 PF 5	8	168-0562	082		
		6x6x12B PF 5	8	168-0562	082		
		6x8x15	8	168-0632	082		
		8x8x15A	8	168-0632	082		
		10x10x15	8	168-0632	082		
		6x8x18	8	168-0632	082		
		8x10x18	8	168-0632	082		
		8x10x22	16	168-0670	082		
		10x10x22	16	168-0670	082		
		10x12x22	16	168-0670	082		
		12x12x22	16	168-0670	082		
		12x14x22A	16	168-0670	082		
		12x14x22B	16	168-0670	082		
		14x14x22A	16	168-0670	082		
		16x16x20	16	168-0670	082		
		16x16x28	16	168-0833	082		
		18x18x28	16	168-0833	082		
20x20x28	16	168-0833	082				

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL				
				B.F.	A.B.	A.I.	S.S.	
34A	CAPSCREW PF 8	4	168-0636	082				
35	CAPSCREW PF 4 PF 5 PF 6D, F PF 6E	4	168-0490	082				
		4	168-0564	082				
		8	168-0564	082				
		8	168-0566	082				
36	SLEEVE (PACK)							
		PF 4	1	756-0414	108			
		PF 5	1	756-0415	108			
		PF 6D, E	1	756-0416	108			
		PF 6F	1	756-0576	108			
	PF 8	1	756-0339	108				
	CERAMIC COATED							
		PF 4	1	756-0554	548			
		PF 5	1	756-0555	548			
		PF 6D, E	1	756-0556	548			
PF 6F		1	756-0582	548				
PF 8	1	756-0534	548					
SLEEVE (MECHANICAL SEALS)								
	PF 4	1	756-0411	208				
	PF 5	1	756-0412	208				
	DURA BRO PF 5	1	756-0578	208				
	PF 6D, E	1	756-0413	208				
	PF 6F	1	756-0580	208				
	DURA BRO PF 6	1	756-0579	208				
	PF 6F	1	756-0581	208				
	36A	SLEEVE ADAPTOR PF 5G & 5H	1	756-0417	104			
	37	RETAINING RING						
PF 4			1	676-0470	088			
PF 5			1	676-0471	088			
PF 6			1	676-0472	088			
PF 8			1	676-0467	088			
38	GASKET	PF 4	1	364-0581	457			
		PF 5E & 5F	1	364-0584	457			
		PF 5G & 5H	1	364-0582	457			
		PF 6	1	364-0586	457			
		PF 8	1	364-0585	457			
39	RETAINING RING							
		PF 4	1	676-0294	088			
		PF 5E & 5F	1	676-0460	088			
		PF 5G & 5H		NOT REQUIRED				
		PF 6D, E		NOT REQUIRED				
		PF 6F	1	676-0469	088			
		PF 8	1	676-0468	088			



610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
39A	O-RING PF 5G & H	1	364-0429	457			
40	PACKING						
	PF 4	5	564-0114	802			
	PF 5	5	564-0183	802			
	PF 6	5	564-0003	802			
	PF 8	5	564-0005	802			
41	LANTERN RING						
	PF 4	1	676-1105	512			
	PF 5	1	676-1106	512			
	PF 6	1	676-1107	010			
42	O-RING (PACK)						
	PF 4	1	364-0425	457			
	PF 5	1	364-2101	457			
	PF 6	1	364-0451	457			
43	SLINGER (PACK)						
	PF 4	1	764-0021	478			
	PF 5	1	764-0023	478			
	PF 6	1	764-0184	478			
	PF 8	1	764-0180	478			
	MECHANICAL SEAL SLINGER						
	PF 4	1	764-0020	478			
	PF 5	1	764-0022	478			
44	GLAND 611A PACKING						
	PF 4	1	372-0320	010			
	PF 5	1	372-0321	010			
	PF 6	1	372-0322	010			
	612A & 613A PACKING						
	PF 4	1	372-0515	319			
	PF 5	1	372-0516	319			
	PF 6D, E	1	372-0477	319			
	PF 8	1	372-0163	010			
	MECHANICAL SEAL GLAND FOR JOHN CRANE TYPE 1, 21, 8TD						
PF 4	1	372-0518	010				
PF 5	1	372-0520	010				
PF 6	1	372-0522	010				

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	JOHN CRANE TYPE 8B2						
	PF 4	1	372-0519	104			
	PF 5	1	372-0521	104			
	PF 6	1	372-0523	104			
	MECHANICAL SEAL GLAND FOR DURAMETALLIC TYPE CRO, BRO						
	PF 4	1	372-0524	010			
	PF 5	1	372-0520	010			
	PF 6	1	372-0528	010			
	DURAMETALLIC SEAL TYPE RA						
	PF 4	1	372-0525	104			
	PF 5	1	372-0527	104			
	PF 6	1	372-0529	104			
	MECHANICAL SEAL GLAND FOR CHESTERTON TYPE 880						
	PF 4	1	372-0530	104			
	PF 5	1	372-0531	104			
	PF 6	1	372-0532	104			
44A	CAPSCREW (PACK)						
	PF 4, 5 & 6	2	168-0718	080			
	PF 8	10	708-0246	080			
44B	HOSE CONNECTOR (PACK)						
	PF 4 & 5	1	600-2966	503			
	PF 6	1	600-2967	503			
	PF 8	1	600-2966	503			
44C	HOSE (PACK)	1	872-0005	505			
44D	PIPE PLUG (PACK)						
	PF 4 & 5	3	600-0004	511			
	PF 6	3	600-5104	511			
	PF 8	1	600-0004	511			
44E	GLAND CLAMP 611A (PACK)						
	PF 4	2	204-0116	360			
	PF 5	2	204-0121	360			
	PF 6	2	204-0121	360			
	WASHER 612A						
	PF 8	2	908-0114	104			
44F	GLAND COVER PF 8	1	260-5072	104			

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
44G	GLAND COVER						
	GASKET PF 8	1	364-0044	803			
45	CAPSCREW						
	611A PACKING	2	168-0500	082			
	612A & 613A PACKING	2	168-0502	082			
	MECH. SEAL SCREWS		REFER TO FACTORY				
45A	STUD PF 8	2	808-0322	082			
45B	NUT PF 8	2	544-0113	080			
46	GASKET (SEAL)						
	PF 4	1	364-0074	803			
	PF 5	1	364-0075	803			
	PF 6	1	364-0076	803			
47	MECHANICAL SEAL POWER FRAME 4						
	J.C. 21 DBL.	1	712-6410	753			
	J.C. 8TD DBL.	1	712-6411	753			
	J.C. 88 CART.	1	712-6413	767			
	* J.C. 1 SINGLE	1	712-6409	678			
	J.C. 8B2 OUT.	1	712-6412	678			
	DURA CRO DBL.	1	712-6424	773			
	DURA X-200 CART.	1	712-6431	586			
	DURA RA OUT.	1	712-6425	566			
	CHEST. 241 CART.	1	712-6433	571			
	CHEST. 880 SINGLE	1	712-6435	571			
	POWER FRAME 5						
	J.C. 1 DBL.	1	712-6415	753			
	J.C. 8TD DBL.	1	712-6416	753			
	J.C. 88 CART.	1	712-6418	767			
	* J.C. 1 SINGLE	1	712-6414	678			
	J.C. 8B2 OUT.	1	712-6417	678			
	DURA CRO DBL.	1	712-6426	772			
	DURA BRO DBL.	1	712-6427	741			
	DURA RA OUT.	1	712-6428	566			
CHEST. 241 CART.	1	712-6434	571				
CHEST. 880 SINGLE	1	712-6436	571				
POWER FRAME 6							
J.C. 21 DBL.	1	712-6420	753				
J.C. 8TD DBL.	1	712-6421	753				
J.C. 88 CART.	1	712-6423	767				
* J.C. 1 SINGLE	1	712-6419	678				
J.C. 8B2 OUT.	1	712-6422	678				
DURA BRO DBL.	1	712-6429	741				
DURA RA OUT.	1	712-6430	566				
CHEST. 880 SINGLE	1	712-6437	571				

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
47A	BUSHING FOR SINGLE SEALS						
	PF 4	1	224-0223	208			
	PF 5	1	224-0224	208			
	PF 6	1	224-0225	208			
48	SHAFT						
	PF 4C, 4D	1	728-0514	063			
	PF 5E, 5F	1	728-0515	063			
	PF 5G, 5H	1	728-0528	063			
	PF 6D	1	728-0526	063			
	PF 6E	1	728-0527	063			
	PF 6F	1	728-0586	063			
	PF 8	1	728-0599	063			
49	BEARING INBOARD						
	PF 4C	1	068-0162	647			
	PF 4D	1	068-2999	647			
	PF 5E, 5G	1	068-0168	647			
	PF 5F, 5H	1	068-0046	647			
	PF 6D, 6F	1	068-3000	647			
	PF 6E	1	068-3001	647			
	PF 8	1	068-0594	647			
49A	GREASE SHIELD						
	PF 4C, 4D	1	712-0280	087			
	PF 5E, 5F, 5G & 5H	1	712-0281	087			
	PF 6D, 6F	1	712-0286	087			
	PF 6E	1	712-0282	087			
	PF 8	1	712-0133	653			
49B	BEARING CAP PF 8	1	164-0102	010			
49C	BEARING CARTRIDGE PF 8	1	164-0105	010			
49D	CAPSCREW PF 8	8	168-0562	082			
49E	LOCK WASHER PF 8	1	908-0428	080			
49F	LOCK NUT PF 8	1	544-0728	080			
49G	CAPSCREWS PF 8	1	168-0636	082			
50	BEARING OUTBOARD						
	PF 4C & 4D	1	068-3004	647			
	PF 5E, 5F, 5G, & 5H	2	068-2996	647			
	PF 6D, 6F	2	068-2997	647			
	PF 6E	2	068-2998	647			
	PF 8	1	068-0592	647			

\*REFER TO FACTORY FOR J.C. 1 SINGLE SEALS, COLLARS & SETSCREWS.



610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
50A	GREASE SHIELD						
	PF 4C & 4D	1	676-0560	087			
	PF 5E, 5F, 5G & 5H	1	676-0398	010			
	PF 6D, 6F	1	676-2071	010			
	PF 6E	1	672-0010	010			
	PF 8	1	712-0131	653			
50B	RETAINING RING						
	PF 4C, 4D	1	676-0446	088			
	PF 5E, 5F, 5G & 5H	1	676-0447	088			
	PF 6D, 6F	1	676-0448	088			
	CAPSCREW PF 6E	8	168-0258	082			
	PF 8	8	168-0562	082			
50C	RETAINING RING						
	PF 4C, 4D	1	676-0943	088			
	LOCK WASHER						
	PF 5E, 5F, 5G, & 5H	1	908-0416	080			
	PF 6D, 6E & 6F	1	908-0423	080			
	PF 8	1	908-0425	080			
50D	LOCKNUT						
	PF 5E, 5F, 5G & 5H	1	544-0716	080			
	PF 6D, 6E & 6F	1	544-0723	080			
	PF 8	1	544-0725	080			
50E	WASHERS PF 6E	8	908-0159	088			
50F	BEARING CAP PF 8	1	164-0101	010			
51	BEARING CARTRIDGE						
	PF 4C, 4D	1	164-0447	010			
	PF 5E, 5F, 5G & 5H	1	164-0448	010			
	PF 6D, 6F	1	164-0449	010			
	PF 6E	1	164-0450	010			
	PF 8	1	164-0100	010			
52	GREASE SEAL						
	PF 4C, 4D	1	712-6327	653			
	PF 5E, 5F, 5G & 5H	1	712-0241	653			
	PF 6D, 6F	1	712-0048	653			
	PF 6E	1	712-0048	653			
	PF 8	1	712-0132	653			
53	GREASE SEAL						
	PF 4C, 4D	1	712-6330	653			
	PF 5E, 5F, 5G & 5H	1	712-0265	653			
	PF 6D, 6F	1	712-0243	653			
	PF 6E	1	712-0243	653			
	PF 8	1	712-0134	653			
54	KEY, SLEEVE						
	PF 4, 5 & 6	1	472-0010	087			
	PF 8	1	472-0128	087			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
55	KEY, SHAFT						
	PF 4	1	472-0250	087			
	PF 5	1	472-0390	087			
	PF 6	1	472-0401	087			
	PF 8	1	472-0419	087			
56	POWER FRAME HOUSING						
	PF 4C, 4D	1	356-0044	010			
	PF 5E, 5F, 5G & 5H	1	356-0045	010			
	PF 6D, 6F	1	356-0046	010			
	PF 6E	1	356-0047	010			
	PF 8	1	356-0298	087			
57	PIPE PLUG						
	PF 4	1	600-0001	087			
	PF 5	1	600-0001	087			
	PF 6	1	600-0001	087			
	PF 8	1	600-0007	087			
57A	PIPE PLUG PF 8	2	600-0001	087			
57B	PIPE PLUG PF 8	2	600-0001	087			
58	GREASE FITTING						
	PF 4	1	508-0015	651			
	PF 5	1	508-0010	651			
	PF 6	1	508-0010	651			
	PF 8	1	508-0001	651			
59	CAPSCREW						
	PF 4	3	168-0492	082			
	PF 5	4	168-0564	082			
	PF 6	4	168-0566	082			
	PF 8	8	168-0644	082			
60	CAPSCREW						
	PF 4	3	168-0201	080			
	PF 5	4	168-0202	080			
	PF 6	4	168-0202	080			
	PF 8	4	168-0203	080			
61	JAM NUT						
	PF 4	3	544-0312	080			
	PF 5	4	544-0316	080			
	PF 6	4	544-0316	080			
	PF 8	4	544-0318	080			
62	PIPE PLUG						
	PF 4	1	600-0001	087			
	PF 5	1	600-0001	087			
	PF 6	1	600-0001	087			
	PF 8	1	600-0007	087			

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
62A	FITTING PF 6	1	508-0002	651			
	PIPE PLUG PF 8	2	600-0001	087			
63	GREASE FITTING						
	PF 4	1	508-0015	651			
	PF 5	1	508-0010	651			
	PIPE PLUG PF 6	1	600-0001	087			
	FITTING PF 8	1	508-0015	651			
64	GASKET						
	6" SUCTION	1	364-0609	603			
	8" SUCTION	1	364-0610	803			
	10" SUCTION	1	364-0611	803			
	12" SUCTION	1	364-0612	803			
	14" SUCTION	1	364-0613	803			
	16" SUCTION	1	364-0614	803			
	16x16x20	1	364-1341	803			
	18" SUCTION	1	364-0615	803			
	20" SUCTION	1	364-0616	803			
65	SUCTION NOZZLE						
	611A 6x6	1	816-1162	010			
	8x8	1	816-1128	010			
	10x10	1	816-1129	010			
	12x12	1	816-1130	010			
	14x14	1	816-1131	010			
	16x16x20	1	816-1282	010			
	SUCTION ELBOW						
	612A, 613A & 614A						
	6x6	1	816-1018	010			
	6x8	1	816-1019	010			
	8x8	1	816-1207	010			
	8x10	1	816-1208	010			
	10x10	1	816-0726	010			
	10x12	1	816-0647	010			
	12x12	1	816-1209	010			
	12x14	1	816-1210	010			
	14x14	1	816-1211	010			
	14x16	1	816-0670	010			
	16x16	1	816-0747	010			
	18x18	1	816-0748	010			
	20x20	1	816-0749	010			
66	CAPSCREW						
	6" SUCTION	8	168-0636	082			
	8" SUCTION	8	168-0638	082			
	10" SUCTION	12	168-0674	082			
	12" SUCTION	12	168-0674	082			
	14" SUCTION	12	168-0743	082			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
66	CAPSCREW						
	CONT'D						
	16" SUCTION	16	168-0743	082			
	16x16x20	12	168-0676	082			
	18" SUCTION	16	168-0743	082			
	20" SUCTION	20	168-0743	082			
67	GASKET 611A						
	6x6	1	364-1053	453			
	8x8	1	364-1048	478			
	10x10	1	364-1048	478			
	12x12	1	364-1048	478			
	14x14	1	364-1048	478			
	16x16x20	1	364-1046	457			
	GASKET 612A, 613A & 614A						
	6x6	1	364-1048	478			
	6x8	1	364-1048	478			
	8x8	1	364-1048	478			
	8x10	1	364-2041	457			
	10x10	1	364-1048	478			
	10x12	1	364-1048	478			
	12x12	1	364-2041	457			
	12x14	1	364-2041	457			
	14x14	1	364-2041	457			
	14x16	1	364-1048	478			
	16x16	1	364-2041	457			
	18x18	1	364-2041	457			
	20x20	1	364-2041	457			
	68	HANDHOLE COVER					
611A 6x6		1	260-0667	010			
8x8		1	260-0668	010			
10x10		1	260-0668	010			
12x12		1	260-0668	010			
14x14		1	260-0668	010			
16x16x20		1	260-5089	010			
612A, 613A & 614A							
6x6		1	260-0649	010			
6x8		1	260-0649	010			
8x8		1	260-0649	010			
8x10		1	260-0678	010			
10x10		1	260-0649	010			
10x12		1	260-0649	010			
12x12		1	260-0679	010			
12x14	1	260-0679	010				
14x14	1	260-0679	010				
14x16	1	260-0069	010				



610A SERIES

PARTS LIST

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
	612A, 613A & 614A						
	CONT'D 16x16	1	260-0673	010			
	18x18	1	260-0674	010			
	20x20	1	260-0675	010			
69	CAPSCREW 611A						
	6x6	2	168-0572	082			
	8x8	4	168-0566	082			
	10x10	4	168-0566	082			
	12x12	4	168-0566	082			
	14x14	4	168-0566	082			
	16x16x20	2	168-0562	082			
	CAPSCREW						
	612A, 613A & 614A						
	6x6	4	168-0562	082			
	6x8	4	168-0562	082			
	8x8	4	168-0562	082			
	8x10	4	168-0562	082			
	10x10	4	168-0562	082			
	10x12	4	168-0562	082			
	12x12	4	168-0562	082			
	12x14	4	168-0562	082			
	14x14	4	168-0562	082			
	14x16	4	168-0562	082			
	16x16	8	168-0636	082			
	18x18	8	168-0636	082			
	20x20	8	168-0636	082			
69A	NUT 611A 6x6	2	544-0115	080			
69B	WASHER 611A 6x6	4	908-0116	080			
70	PIPE PLUG 611A						
	6x6	1	600-0009	028			
	8x8	1	600-0009	028			
	10x10	1	600-0009	028			
	12x12	1	600-0009	028			
	14x14	1	600-0009	028			
70	PIPE PLUG						
	612A, 613A & 614A						
	6x6	1	600-0008	028			
	6x8	1	600-0008	028			
	8x8	1	600-0008	028			
	8x10	1	600-0008	028			
	10x10	1	600-0008	028			
	10x12	1	600-0008	028			
	12x12	1	600-0008	028			
	12x14	1	600-0008	028			
	14x14	1	600-0010	028			

PC. NO.	DESCRIPTION	QTY	PART NO.	MATERIAL			
				B.F.	A.B.	A.I.	S.S.
70	PIPE PLUG						
	CONT'D 14x16	1	600-0010	028			
	16x16	1	600-0010	028			
	18x18	1	600-0010	028			
	20x20	1	600-0010	028			
71	PIPE PLUG						
	612A, 613A & 614A						
	6x6	1	600-0002	087			
	6x8	1	600-0002	087			
	8x8	1	600-0002	087			
	8x10	1	600-0002	087			
	10x10	1	600-0002	087			
	10x12	1	600-0002	087			
	12x12	1	600-0002	087			
	12x14	1	600-0002	087			
	14x14	1	600-0002	087			
	14x16	1	600-0002	087			
	16x16	2	600-0002	087			
	18x18	2	600-0002	087			
	20x20	2	600-0002	087			
72	DRIVE PINS	2	708-0013	365			
73	NAMEPLATE	1	532-0045	114			
74	LEAKAGE						
	ACCUMULATOR KIT						
	612A & 613A PF 4	1	476-0395	645			
	612A & 613A PF 5	1	476-0396	645			
	612A & 613A PF 6	1	476-0397	645			
	(INCLUDES PIECE						
	NO'S 42, 43, 44, 44A						
	44B, 44C, 44D, 44E,						
	45 & 75)						
75	SEALANT	1	716-0025	621			
	(REQUIRED WITH						
	PIECE 44 PACKED						
	612A & 613A)						

AP-610P-REPAIR



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## WARRANTY

Seller warrants equipment (and its component parts) of its own manufacture against defects in materials and workmanship under normal use and service for one (1) year from the date of installation or start-up, or for eighteen (18) months after the date of shipment, whichever occurs first. Seller does not warrant accessories or components that are not manufactured by Seller; however, to the extent possible, Seller agrees to assign to Buyer its rights under the original manufacturer's warranty, without recourse to Seller. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the serial number, the type of equipment, and the date of purchase) within thirty (30) days of the discovery of such defect during the warranty period. No claim made more than 30 days after the expiration of the warranty period shall be valid. Guarantees of performance and warranties are based on the use of original equipment manufactured (OEM) replacement parts. Seller assumes no responsibility or liability if alterations, non-authorized design modifications and/or non-OEM replacement parts are incorporated. If requested by Seller, any equipment (or its component parts) must be promptly returned to Seller prior to any attempted repair, or sent to an authorized service station designated by Seller, and Buyer shall prepay all shipping expenses. Seller shall not be liable for any loss or damage to goods in transit, nor will any warranty claim be valid unless the returned goods are received intact and undamaged as a result of shipment. Repaired or replaced material returned to customer will be shipped F.O.B., Seller's factory. Seller will not give Buyer credit for parts or equipment returned to Seller, and will not accept delivery of any such parts or equipment, unless Buyer has obtained Seller's approval in writing. The warranty extends to repaired or replaced parts of Seller's manufacture for ninety (90) days or for the remainder of the original warranty period applicable to the equipment or parts being repaired or replaced, whichever is greater. This warranty applies to the repaired or replaced part and is not extended to the product or any other component of the product being repaired. Repair parts of its own manufacture sold after the original warranty period are warranted for a period of one (1) year from shipment against defects in materials and workmanship under normal use and service. This warranty applies to the replacement part only and is not extended to the product or any other component of the product being repaired. Seller may substitute new equipment or improve part(s) of any equipment judged defective without further liability. All repairs or services performed by Seller, which are not covered by this warranty, will be charged in accordance with Seller's standard prices then in effect.

THIS WARRANTY IS THE SOLE WARRANTY OF SELLER AND SELLER HEREBY EXPRESSLY DISCLAIMS AND BUYER WAIVES ALL OTHER WARRANTIES EXPRESSED, IMPLIED IN LAW OR IMPLIED IN FACT, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Seller's sole obligation under this warranty shall be, at its option, to repair or replace any equipment (or its component parts) which has a defect covered by this warranty, or to refund the purchase price of such equipment or part. Under the terms of this warranty, Seller shall not be liable for (a) consequential, collateral, special or liquidated losses or damages; (b) equipment conditions caused by normal wear and tear, abnormal conditions of use, accident, neglect, or misuse of said equipment; (c) the expense of, and loss or damage caused by, repairs or alterations made by anyone other than the Seller; (d) damage caused by abrasive materials, chemicals, scale deposits, corrosion, lightning, improper voltage, mishandling, or other similar conditions; (e) any loss, damage, or expense relating to or resulting from installation, removal or reinstallation of equipment; (f) any labor costs or charges incurred in repairing or replacing defective equipment or parts, including the cost of reinstalling parts that are repaired or replaced by Seller; (g) any expense of shipment of equipment or repaired or replacement parts; or (h) any other loss, damage or expense of any nature.

The above warranty shall not apply to any equipment which may be separately covered by any alternate or special warranties.

**PERFORMANCE:** In the absence of Certified Pump Performance Tests, equipment performance is not warranted or guaranteed. Performance curves and other information submitted to Buyer are approximate and no warranty or guarantee shall be deemed to arise as a result of such submittal. All testing shall be done in accordance with Seller's standard policy under Hydraulic Institute procedures.

**LIABILITY LIMITATIONS:** Under no circumstances shall the Seller have any liability under the Order or otherwise for liquidated damages or for collateral, consequential or special damages or for loss of profits, or for actual losses or for loss of production or progress of construction, regardless of the cause of such damages or losses. In any event, Seller's aggregate total liability under the Order or otherwise shall not exceed the contract price.

**ACTS OF GOD:** Seller shall in no event be liable for delays in delivery of the equipment or other failures to perform caused by fires, acts of God, strikes, labor difficulties, acts of governmental or military authorities, delays in transportation or procuring materials, or causes of any kind beyond Seller's control.

**COMPLIANCE WITH LAW:** Seller agrees to comply with all United States laws and regulations applicable to the manufacturing of the subject equipment. Such compliance shall include: The Fair Labor Standards Acts of 1938, as amended; Equal Employment Opportunity clauses of Executive Order 11246, as amended; Occupational Safety and Health Act of 1970 and the standards promulgated thereunder, if applicable. Since compliance with the various Federal, State, and Local laws and regulations concerning occupational health and safety, pollution or local codes are affected by the use, installation and operation of the equipment and other matters over which Seller has no control, Seller assumes no responsibility for compliance with those laws and regulations, whether by way of indemnity, warranty, or otherwise. It is incumbent upon the Buyer to specify equipment which complies with local codes and ordinances.



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