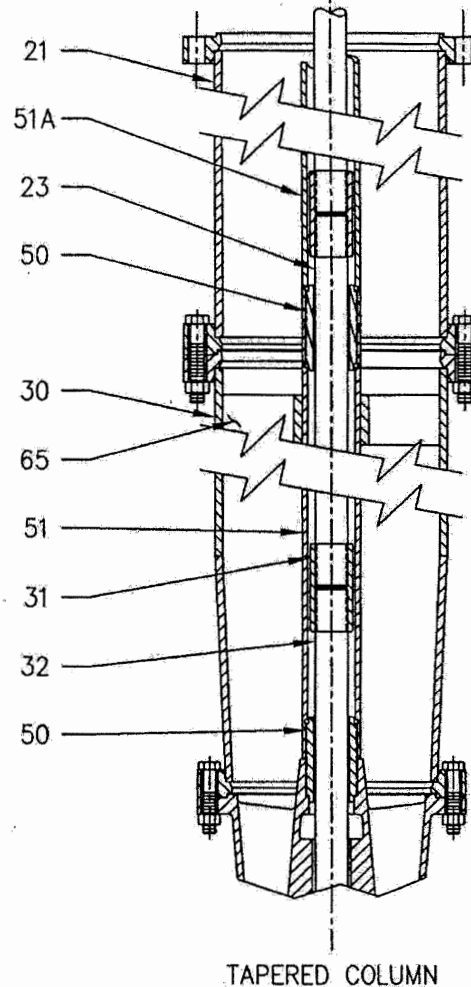
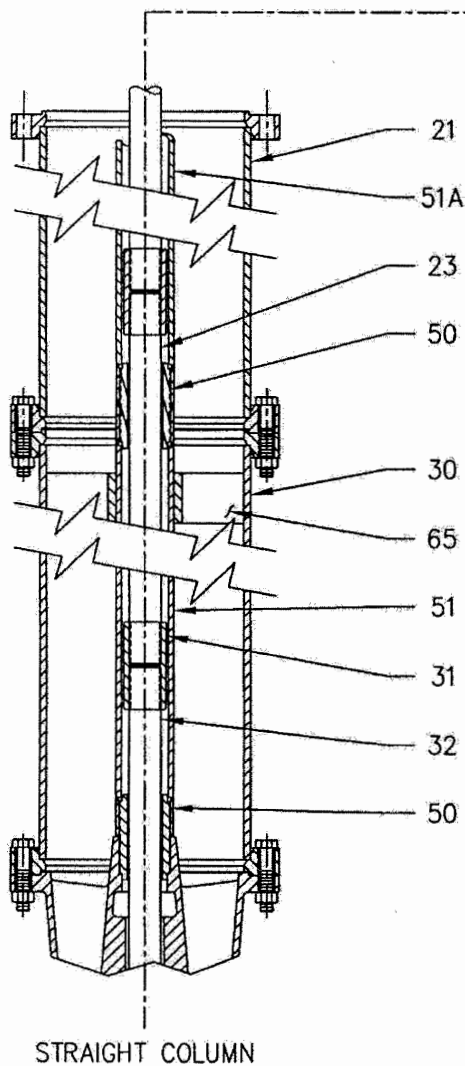


 **WARNING**
ALWAYS BE SURE LIFTING EQUIPMENT IS OF ADEQUATE
SIZE TO PREVENT POSSIBLE SERIOUS PERSONAL INJURY
OR DAMAGE TO THE EQUIPMENT.

SEE PACKING BOX
OR
MECHANICAL SEAL DETAIL



NOTES:

- (1) COLUMN SECTIONS ARE TO BE LIFTED BY EYEBOLTS OR "COLUMN CLAMPS" (SUPPLIED BY OTHERS).
- (2) COLUMN, TUBE AND SHAFT ASSEMBLIES SHOULD BE SECURED TOGETHER BY ROPE SLINGS OR OTHER SUITABLE MEANS.
- (3) TUBE STABILIZERS ARE REQUIRED WHEN SETTING EXCEEDS 30 FT.
- (4) BEARING CENTERS (MAX)
TOP: 6.5'
INTER: 5'
COLUMN & SHAFT LENGTHS (MAX): 10'
SHAFT PROJECTION: 17.5"
- (5) REFER TO TECHNICAL DATA PAGE FOR OTHER DIMENSIONS AND WEIGHTS.

WATER FLUSH-ENCLOSED LINESHAFT
8" THRU 20" COLUMN

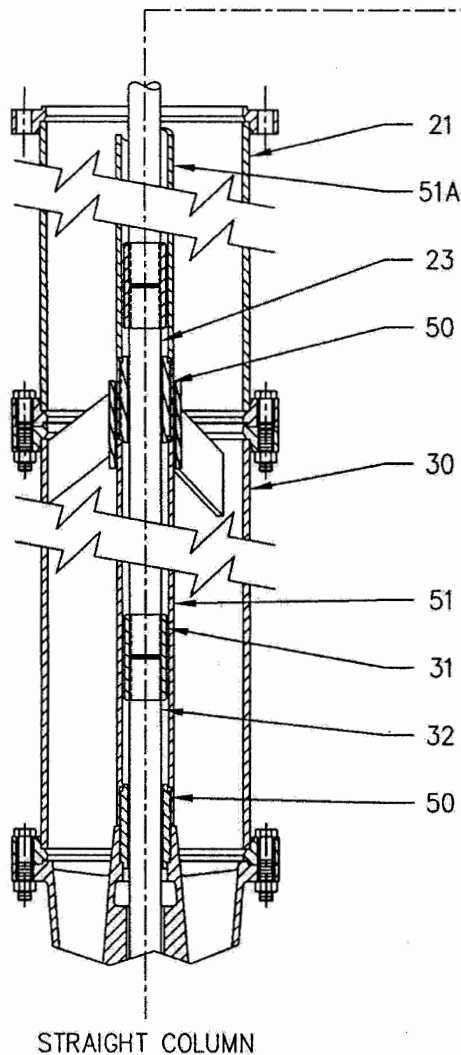
 **PENTAIR** FAIRBANKS NIJHUIS™

DWG NO 8000A049 REV NO 1

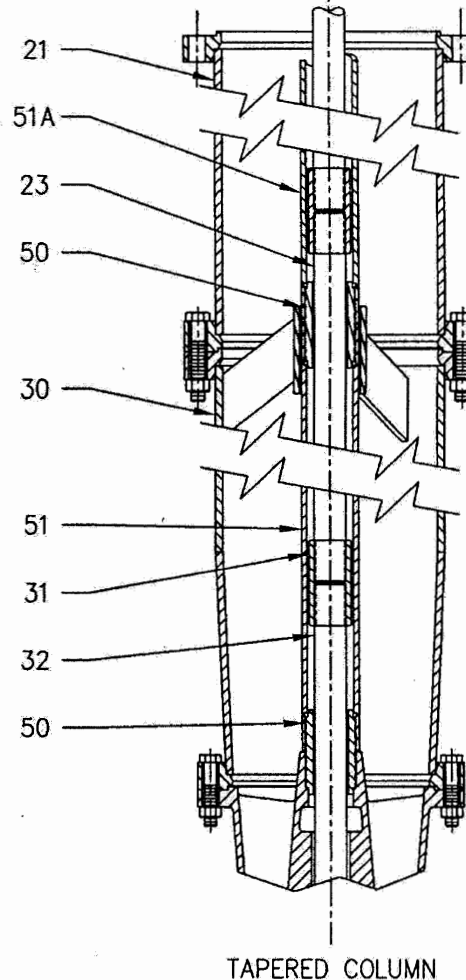
**WARNING**

ALWAYS BE SURE LIFTING EQUIPMENT IS OF ADEQUATE SIZE TO PREVENT POSSIBLE SERIOUS PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT.

SEE PACKING BOX
OR
MECHANICAL SEAL DETAIL



STRAIGHT COLUMN



TAPERED COLUMN

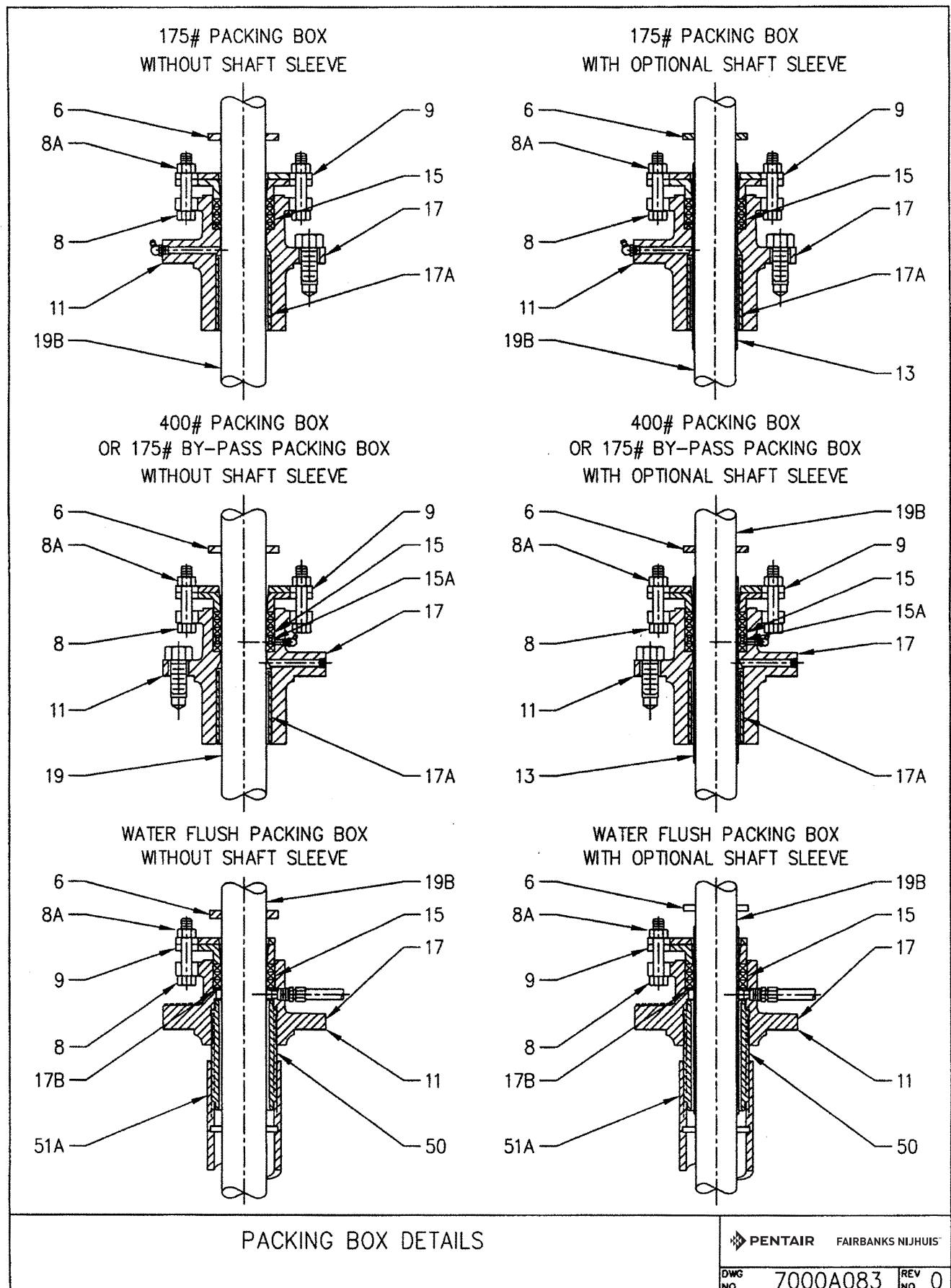
NOTES:

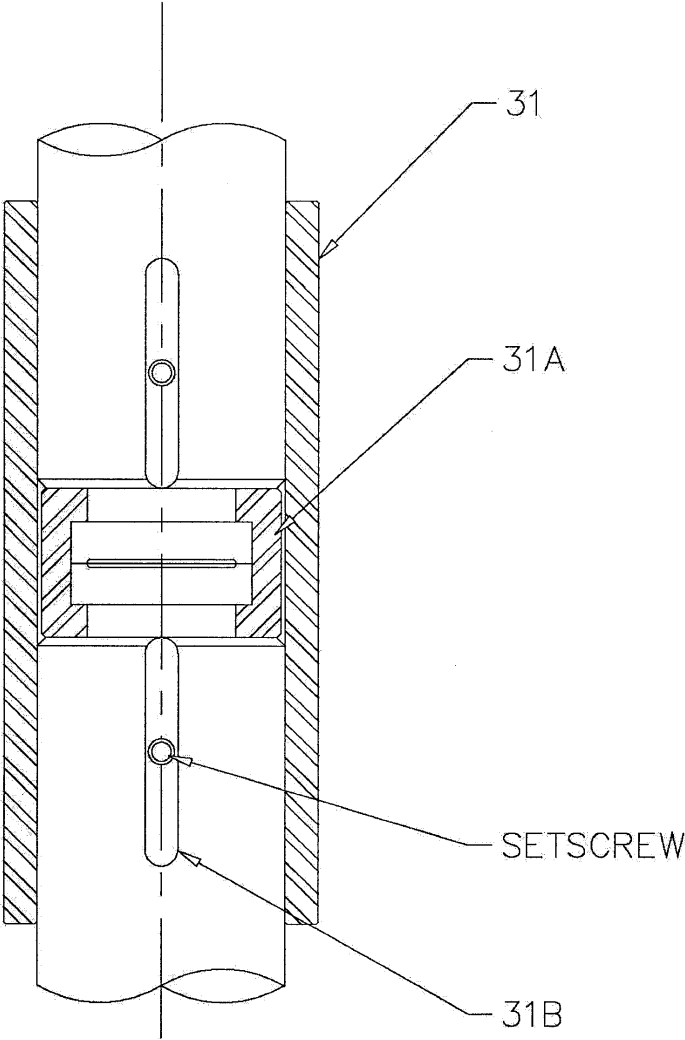
- (1) COLUMN SECTIONS ARE TO BE LIFTED BY EYEBOLTS OR "COLUMN CLAMPS" (SUPPLIED BY OTHERS).
- (2) COLUMN, TUBE AND SHAFT ASSEMBLIES SHOULD BE SECURED TOGETHER BY ROPE SLINGS OR OTHER SUITABLE MEANS.
- (3) TUBE STABILIZERS ARE REQUIRED WHEN SETTING EXCEEDS 30 FT.
- (4) BEARING CENTERS (MAX)
TOP: 6.5'
INTER: 5'
COLUMN & SHAFT LENGTHS (MAX): 10'
SHAFT PROJECTION: 17.5"
- (5) REFER TO TECHNICAL DATA PAGE FOR OTHER DIMENSIONS AND WEIGHTS.

WATER FLUSH-ENCLOSED LINESHAFT
24" AND LARGER COLUMN (AVAILABLE ALL SIZES)

PENTAIR FAIRBANKS NIJHUIS™

DWG NO 8000A051 REV NO 1





SHAFT COUPLINGS

 PENTAIR		FAIRBANKS NIJHUIS™
DWG NO	7000-CPLG	REV NO 0

BOWL TECHNICAL DATA*

Bowl Size	6A	6B	6D	6F	6M	6G	6J
Pump Shaft Diameter - Inches	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bowl Weight, 1st Stage - Lbs.	100	100	100	100	50	60	60
Bowl Weight, Ea. Add. Stage - Lbs.	25	25	25	25	15	16	16
Allowable Shaft Stretch - Inches	0.36	0.36	0.50	0.50	0.27	0.25	0.25
Maximum Working Pressure - PSI	530	530	530	530	826	400	400
Maximum Hydro Pressure - PSI	795	795	795	795	1239	600	600
Impeller Eye Area - Sq. In.	2.86	3.38	3.88	4.32	4.10	6.28	6.28
Rotor Weight 1st/add stages - K _a	8.0 / 3.3	8.4 / 3.7	8.3 / 3.6	7.9 / 3.2	4.0 / 4.0	9.3/3.8	9.3/3.8
Maximum Sphere Size - Inches	0.34	0.34	0.28	0.34	0.43	0.34	0.34
Thrust Factor - K _t	1.50	1.60	2.40	2.50	1.74	2.20	2.10
WR ²	0.03	0.03	0.03	0.03	0.05	0.03	0.03
Running Position (above seat) - In.	0.187	0.187	0.250	0.125	0.200	0.125	0.125
Submergence - In.	13	16	21	27	30	28	32
Max. Bowl Brg Clearance - In. Diam.	0.009	0.009	0.009	0.009	0.014	0.009	0.009
Max Wear Ring Clearance - In. Diam.	0.018	0.018	0.018	0.018	0.018	0.018	0.018
Max Bowl O.D. - In.	5.63	5.63	5.63	5.63	5.50	5.50	5.50
Suct Bell O.D. - In.	5.50	5.50	5.50	5.50	NA	5.50	5.50

Bowl Size	7M	7A	7D	7B	8B	8M	8P
Pump Shaft Diameter - Inches	1.000	1.000	1.000	1.000	1.188	1.188	1.188
Bowl Weight, 1st Stage - Lbs.	71	84	84	84	107	82	140
Bowl Weight, Ea. Add. Stage - Lbs.	22	30	30	30	37	31	45
Allowable Shaft Stretch - Inches	0.39	0.25	0.25	0.25	0.44	0.37	0.375
Maximum Working Pressure - PSI	823	400	400	400	800	804	400
Maximum Hydro Pressure - PSI	1234	600	600	600	1200	1206	600
Impeller Eye Area - Sq. In.	6.05	7.56	7.56	7.56	4.11	6.93	10.4
Rotor Weight 1st/add stages - K _a	4.4 / 4.4	9.7/4.7	9.7/4.7	9.7/4.7	17.3 / 7.7	5.25 / 5.25	19.0/11.0
Maximum Sphere Size - Inches	0.50	0.44	0.44	0.44	0.41	0.56	0.56
Thrust Factor - K _t	2.56	3.70	3.00	3.70	2.20	2.32	4.30
WR ²	0.09	0.1	0.16	0.1	0.13	0.17	0.16
Running Position (above seat) - In.	0.200	0.125	0.125	0.125	0.250	0.200	0.125
Submergence - In.	30	24	26	32	14	32	19
Max. Bowl Brg Clearance - In. Diam.	0.014	0.009	0.009	0.009	0.009	0.014	0.009
Max Wear Ring Clearance - In. Diam.	0.018	0.018	0.018	0.018	0.018	0.018	0.018
Max Bowl O.D. - In.	6.50	7.13	7.13	7.13	7.75	7.70	7.63
Suct Bell O.D. - In.	NA	7.50	7.50	7.50	7.50	8.00	9.50

Bowl Size	8T	8V	10M	10G	10J	10A	10B
Pump Shaft Diameter - Inches	1.188	1.188	1.437	1.500	1.500	1.500	1.500
Bowl Weight, 1st Stage - Lbs.	140	140	180	200	200	185	185
Bowl Weight, Ea. Add. Stage - Lbs.	45	45	49	73	73	67	67
Allowable Shaft Stretch - Inches	0.375	0.375	0.63	0.44	0.44	0.920	0.560
Maximum Working Pressure - PSI	400	400	475	450	450	530	700
Maximum Hydro Pressure - PSI	600	600	712	675	675	795	1050
Impeller Eye Area - Sq. In.	10.40	10.40	11.19	16.53	19.53	10.15	11.36
Rotor Weight 1st/add stages - K _a	19.0/11.0	19.0/11.0	15.8/15.8	34.6/18.3	32.2/15.9	30.8/14.5	30.5/14.2
Maximum Sphere Size - Inches	0.56	0.56	0.68	0.63	0.94	0.47	0.63
Thrust Factor - K _t	4.30	4.30	3.80	6.00	10.00	5.20	4.00
WR ²	0.16	0.16	0.52	0.63	0.54	0.44	0.432
Running Position (above seat) - In.	0.125	0.125	0.200	0.250	0.250	0.437	0.437
Submergence - In.	20	20	33	26	36	25	30
Max. Bowl Brg Clearance - In. Diam.	0.009	0.009	0.014	0.013	0.013	0.013	0.013
Max Wear Ring Clearance - In. Diam.	0.018	0.018	0.018	0.023	0.023	0.023	0.023
Max Bowl O.D. - In.	7.63	7.63	9.63	9.88	9.88	9.75	9.75
Suct Bell O.D. - In.	9.50	9.50	10.00	9.50	9.50	9.50	9.50

*Maximum operating temperature is 160° F with bronze bearings and 150° with rubber bearings.

BOWL TECHNICAL DATA*

Bowl Size	10D	10E	11M	11H	12A	12B	12D
Pump Shaft Diameter - Inches	1.500	1.500	1.437	1.437	1.687	1.687	1.687
Bowl Weight, 1st Stage - Lbs.	185	185	240	236	278	278	278
Bowl Weight, Ea. Add. Stage - Lbs.	67	67	75	115	105	105	105
Allowable Shaft Stretch - Inches	0.680	0.860	0.680	0.80	0.70	0.70	0.70
Maximum Working Pressure - PSI	700	700	488	488	580	580	580
Maximum Hydro Pressure - PSI	1050	1050	732	732	870	870	870
Impeller Eye Area - Sq. In.	11.63	19.50	14.86	22.40	16.40	16.40	16.40
Rotor Weight 1st/add stages - K _a	29.3/12.7	10.2/10.2	22.0/22.0	33.0/33.0	42.2/21.5	43.6/22.4	43.5/22.3
Maximum Sphere Size - Inches	0.84	0.63	0.81	0.88	0.88	0.88	0.88
Thrust Factor - K _t	4.00	4.00	5.02	8.71	6.00	5.20	6.20
WR ²	0.37	0.43	1.03	1.90	0.95	1.00	1.00
Running Position (above seat) - In.	0.437	0.437	0.200	0.200	0.312	0.312	0.312
Submergence - In.	20	30	34	30	20	25	25
Max. Bowl Brg Clearance - In. Diam.	0.013	0.013	0.014	0.014	0.013	0.013	0.013
Max Wear Ring Clearance - In. Diam.	0.023	0.023	0.018	0.018	0.023	0.023	0.023
Max Bowl O.D. - In.	9.75	9.75	10.86	11.48	11.75	11.75	11.75
Suct Bell O.D. - In.	9.50	9.50	11.38	11.38	11.50	11.50	11.50

Bowl Size	12F	12K	12S	12M	12E	12G	12I
Pump Shaft Diameter - Inches	1.687	1.687	1.687	1.687	1.938	1.938	1.938
Bowl Weight, 1st Stage - Lbs.	278	328	328	290	410	410	410
Bowl Weight, Ea. Add. Stage - Lbs.	105	123	123	105	145	145	145
Allowable Shaft Stretch - Inches	0.70	0.50	0.50	0.920	0.375	0.375	0.375
Maximum Working Pressure - PSI	580	410	410	380	400	400	400
Maximum Hydro Pressure - PSI	870	615	615	570	600	600	600
Impeller Eye Area - Sq. In.	16.40	28.30	29.63	19.40	25.50	25.50	25.50
Rotor Weight 1st/add stages - K _a	45.6/24.3	50.1/29.8	47.3/27.0	29.5/29.5	58.0/31.0	58.0/31.0	58.0/31.0
Maximum Sphere Size - Inches	0.88	1.12	1.06	0.94	0.75	0.75	0.75
Thrust Factor - K _t	5.50	8.50	8.00	6.33	9.40	9.40	9.40
WR ²	1.12	1.52	1.28	1.62	1.30	1.30	1.30
Running Position (above seat) - In.	0.312	0.125	0.125	0.200	0.125	0.125	0.125
Submergence - In.	27	33	46	33	22	23	24
Max. Bowl Brg Clearance - In. Diam.	0.013	0.013	0.013	0.014	0.014	0.014	0.014
Max Wear Ring Clearance - In. Diam.	0.023	0.023	0.023	0.018	0.023	0.023	0.023
Max Bowl O.D. - In.	11.75	11.75	11.75	12.26	11.38	11.38	11.38
Suct Bell O.D. - In.	11.50	11.50	11.50	13.00	13.00	13.00	13.00

Bowl Size	12N	12U	12W	12V	13E	13F	13H
Pump Shaft Diameter - Inches	1.938	1.938	1.938	1.687	1.687	1.687	1.687
Bowl Weight, 1st Stage - Lbs.	240	240	240	280	278	278	327
Bowl Weight, Ea. Add. Stage - Lbs.	130	130	130	120	116	116	157
Allowable Shaft Stretch - Inches	0.560	0.560	0.560	1.00	0.64	0.64	0.80
Maximum Working Pressure - PSI	400	400	400	400	400	400	380
Maximum Hydro Pressure - PSI	600	600	600	600	600	600	570
Impeller Eye Area - Sq. In.	27.50	37.40	37.40	34.94	25.50	25.50	28.40
Rotor Weight 1st/add stages - K _a	51.0/27.0	51.0/27.0	51.0/27.0	18.0/18.0	46.5/25.7	46.5/25.7	43.3/43.3
Maximum Sphere Size - Inches	0.75	1.5	0.75	0.88	1.00	1.00	1.00
Thrust Factor - K _t	13.20	13.20	13.20	12.50	13.50	15.20	12.02
WR ²	1.68	1.68	1.68	1.40	1.45	1.45	3.11
Running Position (above seat) - In.	0.125	0.125	0.125	0.125	0.125	0.125	0.20
Submergence - In.	24	30	30	48	33	41	34
Max. Bowl Brg Clearance - In. Diam.	0.014	0.014	0.014	0.013	0.013	0.013	0.014
Max Wear Ring Clearance - In. Diam.	0.023	0.023	0.023	0.023	0.023	0.023	0.018
Max Bowl O.D. - In.	11.50	11.50	11.50	11.75	12.63	12.63	12.90
Suct Bell O.D. - In.	13.00	13.00	13.00	11.50	11.50	11.50	13.00

*Maximum operating temperature is 160° F with bronze bearings and 150° with rubber bearings.

BOWL TECHNICAL DATA*

Bowl Size	14C / F	14D	14M	14I / J	15H	16E	17M
Pump Shaft Diameter - Inches	2.188	2.188	1.938	2.188	1.937	2.187	2.187
Bowl Weight, 1st Stage - Lbs.	700	700	376	650	469	400	600
Bowl Weight, Ea. Add. Stage - Lbs.	265	265	138	240	200	250	250
Allowable Shaft Stretch - Inches	0.70	0.70	0.93	0.56	0.86	0.44	0.88
Maximum Working Pressure - PSI	400	400	433	400	476	300	460
Maximum Hydro Pressure - PSI	600	600	649	600	714	450	690
Impeller Eye Area - Sq. In.	41.20	41.20	24.80	56.00	37.80	51.20	56.95
Rotor Weight 1st/add stages - K _a	95.0/53.0	95.0/53.0	37.5	85/45	53.4	98.4/61.3	65
Maximum Sphere Size - Inches	1.25 / 1.00	1.25	1.00	1.25	1.31	1.42	1.38
Thrust Factor - K _t	15.50	15.50	8.41	23.20	14.47	22.00	21.08
WR ²	4.15	4.15	3.55	2.90	4.91	7.20	7.50
Running Position (above seat) - In.	0.125	0.125	0.200	0.125	0.200	0.125	0.200
Submergence - In.	30	33	36	36 / 38	34	32	26
Max. Bowl Brg Clearance - In. Diam.	.010/.011	.010/.011	0.014	.010/.011	0.014	.010/.011	0.014
Max Wear Ring Clearance - In. Diam.	0.023	0.023	0.018	0.023	0.018	0.023	0.028
Max Bowl O.D. - In.	14.25	14.25	14.00	13.63	15.00	16.25	16.92
Suct Bell O.D. - In.	17.00	17.00	14.75	17	14.75	17.25	18

Bowl Size	17H	18H	19A	19B	20HL	21H	22A
Pump Shaft Diameter - Inches	2.187	2.187	2.187	2.187	2.187	2.437	2.687
Bowl Weight, 1st Stage - Lbs.	664	500	610	610	698	900	1200
Bowl Weight, Ea. Add. Stage - Lbs.	274	350	350	350	529	435	550
Allowable Shaft Stretch - Inches	0.81	0.38	0.62	0.62	0.44	0.94	0.56
Maximum Working Pressure - PSI	452	300	300	300	RTF	465	350
Maximum Hydro Pressure - PSI	678	450	450	450	RTF	697	525
Impeller Eye Area - Sq. In.	50.47	59.00	69.50	82.80	97.47	77.50	91.44
Rotor Weight 1st/add stages - K _a	70.1	131.0/93.0	100.0/80.0	100.0/80.0	138.5/138.5	88.0/88.0	167.0/119.0
Maximum Sphere Size - Inches	1.48	1.62	1.25	1.25	RTF	1.62	1.42
Thrust Factor - K _t	18.54	27	32	31	49	28.49	40
WR ²	7.62	10.20	7.45	7.45	19.20	16.93	22.00
Running Position (above seat) - In.	0.200	0.125	0.125	0.125	0.12	0.12	0.250
Submergence - In.	25	44	32	32	36	31	30
Max. Bowl Brg Clearance - In. Diam.	0.014	.010/.011	.010/.011	.010/.011	.014	.017	.010/.011
Max Wear Ring Clearance - In. Diam.	0.026	0.023	0.027	0.027	0.029	0.028	0.027
Max Bowl O.D. - In.	16.92	17.38	18.50	18.50	21.50	19.56	21.50
Suct Bell O.D. - In.	16.75	17.25	17.5/22.5	17.5/22.5	24.00	20.75	22.50

Bowl Size	22B	23HL	23HM	23HH	24E	27M	27ML
Pump Shaft Diameter - Inches	2.687	2.438	2.438	2.438	2.687	3.187	3.187
Bowl Weight, 1st Stage - Lbs.	1200	961	961	961	1300	1388	1388
Bowl Weight, Ea. Add. Stage - Lbs.	550	695	695	695	680	940	940
Allowable Shaft Stretch - Inches	0.56	0.88	0.88	0.88	0.44	1.25	1.25
Maximum Working Pressure - PSI	350	RTF	RTF	RTF	RTF	377	377
Maximum Hydro Pressure - PSI	525	RTF	RTF	RTF	RTF	565	565
Impeller Eye Area - Sq. In.	91.44	147.40	145.60	145.60	115.00	139.36	139.36
Rotor Weight 1st/add stages - K _a	167/119	155/155	155/155	155/155	217/217	225/225	225/225
Maximum Sphere Size - Inches	1.42	1.89	1.67	1.88	1.88	2.75	2.75
Thrust Factor - K _t	44.00	69.00	69.00	69.00	48.00	48.63	48.63
WR ²	22.0	36.4	36.4	36.4	40.0	60.0	60.0
Running Position (above seat) - In.	0.25	0.10	0.10	0.10	0.25	0.12	0.12
Submergence - In.	30	44	44	44	40	42	42
Max. Bowl Brg Clearance - In. Diam.	.010/.011	.017	.017	.017	.010/.011	.010/.015	.010/.015
Max Wear Ring Clearance - In. Diam.	0.027	0.031	0.031	0.031	0.027	0.031	0.031
Max Bowl O.D. - In.	21.50	23.00	23.00	23.00	24.00	26.60	26.60
Suct Bell O.D. - In.	22.50	29.00	29.00	29.00	22.50	28.11	28.11

*Maximum operating temperature is 160° F with bronze bearings and 150° with rubber bearings.

BOWL TECHNICAL DATA*

Bowl Size	30D LT	30D HVY	30E LT	30E HVY	31M	33HH	34H LT
Pump Shaft Diameter - Inches	3.187	3.187	3.187	3.187	3.687	3.687	2.437
Bowl Weight, 1st Stage - Lbs.	1860	1860	1860	1860	1750	2279	3500
Bowl Weight, Ea. Add. Stage - Lbs.	1057	1057	1057	1057	1200	1765	1400
Allowable Shaft Stretch - Inches	1.00	1.00	1.00	1.00	1.00	1.25	0.38
Maximum Working Pressure - PSI	300	RTF	300	RTF	485	RTF	363
Maximum Hydro Pressure - PSI	450	RTF	450	RTF	727	RTF	544
Impeller Eye Area - Sq. In.	146.12	146.12	174.0	174.0	168.0	293.4	227.0
Rotor Weight 1st/add stages - K _a	177/177	177/177	177/177	177/177	285/285	479/479	305/305
Maximum Sphere Size - Inches	1.81	1.81	2.36	2.36	3.25	2.36	3.25
Thrust Factor - K _t	70.00	70.00	65.00	65.00	62.04	137.00	111.00
WR ²	48.0	48.0	56.0	56.0	83.2	174.0	171.0
Running Position (above seat) - In.	0.25	0.25	0.25	0.25	0.18	0.18	0.18
Submergence - In.	40	40	47	47	47	58	80
Max. Bowl Brg Clearance - In. Diam.	.010/.011	.010/.011	.010/.011	.010/.011	.012/.018	.012/.018	.012/.018
Max Wear Ring Clearance - In. Diam.	0.027	0.027	0.027	0.027	0.034	0.033	0.032
Max Bowl O.D. - In.	27.75	27.75	27.75	27.75	29.56	32.25	34.75
Suct Bell O.D. - In.	27.00	27.00	27.00	27.00	31.30	41.50	32.00

Bowl Size	34H HVY	36F	36G	38A	38B	42A	44A
Pump Shaft Diameter - Inches	3.188	3.437	3.437	3.437	3.437	3.687	3.687
Bowl Weight, 1st Stage - Lbs.	3500	2580	2580	4000	4000	5905	8411
Bowl Weight, Ea. Add. Stage - Lbs.	1400	2150	2150	2370	2370	3352	4657
Allowable Shaft Stretch - Inches	0.38	1.20	1.20	1.12	0.76	1.00	1.50
Maximum Working Pressure - PSI	363	300	300	320	320	310	300
Maximum Hydro Pressure - PSI	544	450	450	480	480	465	450
Impeller Eye Area - Sq. In.	227.0	258.9	308.4	205.0	205.00	270.00	361.29
Rotor Weight 1st/add stages - K _a	305/305	417/417	417/417	320/320	320	425	687
Maximum Sphere Size - Inches	3.25	2.41	2.41	2.50	2.50	1.50	2.85
Thrust Factor - K _t	111.00	120.00	115.00	86.00	74	100	175
WR ²	171.0	195.0	195.0	160.0	170	300	440
Running Position (above seat) - In.	0.18	0.25	0.25	0.50	0.500	0.005	0.625
Submergence - In.	80	39	44	32	32	48	44
Max. Bowl Brg Clearance - In. Diam.	.012/.018	0.013	0.013	0.013	0.013	0.014	0.014
Max Wear Ring Clearance - In. Diam.	0.032	0.027	0.027	0.027	0.027	0.027	0.027
Max Bowl O.D. - In.	34.75	35.75	35.75	34.25	34.25	40.00	43.00
Suct Bell O.D. - In.	32.00	40.00	40.00	34.25	34.25	43.00	43.00

Bowl Size	44B	57H	10HRO	14HRO	16HRO	17HRO	18HRO
Pump Shaft Diameter - Inches	3.687	5.500	1.187	1.688	1.938	2.187	2.187
Bowl Weight, 1st Stage - Lbs.	8411	11,500	85	244	328	425	525
Bowl Weight, Ea. Add. Stage - Lbs.	4657	8800	62	177	237	307	380
Allowable Shaft Stretch - Inches	1.50	RTF	RTF	RTF	RTF	RTF	RTF
Maximum Working Pressure - PSI	350	318	364	364	364	364	364
Maximum Hydro Pressure - PSI	525	477	546	546	546	546	546
Impeller Eye Area - Sq. In.	480.00	832.6	10.5	23.1	28.21	34.5	40.4
Rotor Weight 1st/add stages - K _a	707	1850	6	16	22	28	35
Maximum Sphere Size - Inches	3.75	3.2	0.75	1.14	1.22	1.34	1.45
Thrust Factor - K _t	159	364	4.5	9.8	12	14.5	17.2
WR ²	480	1440	0.10	0.80	1.30	2.10	3.0
Running Position (above seat) - In.	0.625	0.25	0.133	0.133	0.133	0.133	0.133
Submergence - In.	43	114	30.0	31.0	36.0	40.0	45.0
Max. Bowl Brg Clearance - In. Diam.	0.014	RTF	0.014	0.016	0.016	0.016	0.016
Max Wear Ring Clearance - In. Diam.	0.027	RTF	0.020	0.022	0.022	0.022	0.024
Max Bowl O.D. - In.	43.00	56.00	9.6	14.1	15.6	17.2	18.57
Suct Bell O.D. - In.	43.00	58.00	9.5	14.0	15.5	17.0	18

*Maximum operating temperature is 160° F with bronze bearings and 150° with rubber bearings.

ENCLOSING TUBE AND THREADED LINESHAFT TECHNICAL DATA

Enclosing Tube		1-1/2"	2"	2-1/2"		3"	
Lineshaft Size		1"	1-1/4"	1-1/2"	1-11/16"	1-15/16"	2-3/16"
Tube Technical Data							
Schedule Number		80	80	80		80	
Maximum Setting (Feet)		RTF	RTF	RTF		RTF	
Outside Diameter (Inches)		1.900	2.375	2.875		3.500	
Inside Diameter (Inches)		1.500	1.939	2.323		2.900	
Wall Thickness (Inches)		.200	.218	.276		.300	
Weight Per Foot (Lbs./Ft.)		3.63	5.02	7.66		10.25	
Connector Bearing Length (Inches)		3-7/8	4-3/4	5		5-1/4	
Connector Bearing Weight (Lbs.)		1.5	3	5		7.5	
Shaft Technical Data							
Exact Lengths	5 Foot Section	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"
	10 Foot Section	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
	20 Foot Section	20'0"	20'0"	20'0"	20'0"	20'0"	20'0"
Weight Per Foot (Lbs./Ft.)		2.76	4.18	6.01	7.60	10.02	12.78
Shaft Coupling Weight (Lbs.)		.5	1.6	1.8	2.3	4.5	5.6
Open Lineshaft Sleeve Thickness (Inches)		.093	.093	.093	.093	.093	.093
Open Lineshaft Sleeve Length (Inches)		7	7	7	7	7	7
Open Lineshaft Sleeve Weight (Lbs.)		.6	.7	.9	1.0	1.2	1.3
Open Lineshaft Bearing and Retainer Weight (Lbs.)	4" Column	1.4	1.4	N/A	N/A	N/A	N/A
	5" Column	2.2	2.2	2.6	N/A	N/A	N/A
	6" Column	2.7	2.7	2.9	2.9	N/A	N/A
	8" Column	3.7	3.7	4.2	4.2	4.8	N/A
	10" Column	6.9	6.9	6.9	6.9	6.9	6.9
	12" Column	9.8	9.8	9.8	9.8	9.8	98
	14" Column	16.0	16.0	16.0	16.0	16.0	16.0
	16" Column	N/A	N/A	26.5	26.5	26.5	26.5
20" Column & Larger		N/A	N/A	N/A	N/A	N/A	N/A

ENCLOSING TUBE, THREADED LINESHAFT, BEARING AND RETAINER TECHNICAL DATA

Enclosing Tube		3-1/2"	4"	5"			6"
Lineshaft Size		2-7/16"	2-11/16"	2-15/16"	3-3/16"	3-7/16"	3-11/16"
Tube Technical Data							
Schedule Number		80	80	80			80
Maximum Setting (Feet)		RTF	RTF	RTF			RTF
Outside Diameter (Inches)		4.000	4.500	5.563			6.625
Inside Diameter (Inches)		3.364	3.826	4.813			5.761
Wall Thickness (Inches)		.318	.337	.375			.432
Weight Per Foot (Lbs./Ft.)		12.50	14.98	20.78			28.57
Connector Bearing Length (Inches)		5-1/2	5-3/4	6			7-1/4
Connector Bearing Weight (Lbs.)		9	12	23			39
Shaft Technical Data							
Exact Lengths	5 Foot Section	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"
	10 Foot Section	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
	20 Foot Section	20'0"	20'0"	20'0"	20'0"	20'0"	20'0"
Weight Per Foot (Lbs./Ft.)		15.87	19.31	23.06	27.16	31.58	36.35
Shaft Coupling Weight (Lbs.)		5.6	13	18	22	28	36
Open Lineshaft Sleeve Thickness (Inches)		.125	.125	.125	.125	.125	.125
Open Lineshaft Sleeve Length (Inches)		7	8.125	8.875	9.125	9.500	9.750
Open Lineshaft Sleeve Weight (Lbs.)		1.6	2.5	3.0	3.4	3.8	4.1
Bearing and Retainer Technical Data							
Open Lineshaft Bearing and Retainer Weight (Lbs.)	4" Column	N/A	N/A	N/A	N/A	N/A	N/A
	5" Column	N/A	N/A	N/A	N/A	N/A	N/A
	6" Column	N/A	N/A	N/A	N/A	N/A	N/A
	8" Column	N/A	N/A	N/A	N/A	N/A	N/A
	10" Column	7.5	N/A	N/A	N/A	N/A	N/A
	12" Column	10.5	N/A	N/A	N/A	N/A	N/A
	14" Column	16.0	16.0	N/A	N/A	N/A	N/A
	16" Column	26.5	26.5	26.5	N/A	N/A	N/A
20" Column & Larger		N/A	Bearing Retainers For These Sizes Are Fabricated In The Column				

ENCLOSING TUBE AND KEYED LINESHAFT TECHNICAL DATA

Enclosing Tube		3-1/2"	4"		5"		
Lineshaft Size		1-11/16"	1-15/16"	2-3/16"	2-7/16"	2-11/16	2-15/16
Tube Technical Data							
Schedule Number		80	80		80		
Maximum Setting (Feet)		RTF	RTF		RTF		
Outside Diameter (Inches)		4.000	4.500		5.563		
Inside Diameter (Inches)		3.364	3.826		4.813		
Wall Thickness (Inches)		.318	.337		.375		
Weight Per Foot (Lbs./Ft.)		12.50	14.98		20.78		
Connector Bearing Length (Inches)		5-1/2	5-3/4		6		
Connector Bearing Weight (Lbs.)		9	12		23		
Shaft Technical Data							
Exact Lengths	5 Foot Section	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"
	10 Foot Section	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
	20 Foot Section	20'0"	20'0"	20'0"	20'0"	20'0"	20'0"
Weight Per Foot (Lbs./Ft.)		7.60	10.02	12.78	15.87	19.31	23.06
Shaft Coupling Weight (Lbs.)		20.3	24.7	27.6	45.5	48.3	50.1
Open Lineshaft Sleeve Thickness (Inches)		.093	.093	.093	.122	.125	.125
Open Lineshaft Sleeve Length (Inches)		7	7	7	7	8.125	8.875
Open Lineshaft Sleeve Weight (Lbs.)		1.0	1.2	1.3	1.6	2.5	3.0
Open Lineshaft Bearing and Retainer Weight (Lbs.)	4" Column	N/A	N/A	N/A	N/A	N/A	N/A
	5" Column	N/A	N/A	N/A	N/A	N/A	N/A
	6" Column	2.9	N/A	N/A	N/A	N/A	N/A
	8" Column	4.2	4.8	N/A	N/A	N/A	N/A
	10" Column	6.9	6.9	6.9	7.5	N/A	N/A
	12" Column	9.8	9.8	9.8	10.5	N/A	N/A
	14" Column	16.0	16.0	16.0	16.0	16.0	N/A
	16" Column	26.5	26.5	26.5	26.5	26.5	26.5
20" Column & Larger		N/A	Bearing Retainers For These Sizes Are Fabricated In The Column				

ENCLOSING TUBE AND KEYED LINESHAFT TECHNICAL DATA

Enclosing Tube		6"		
Lineshaft Size		3-3/16"	3-7/16	3-11/16
Tube Technical Data				
Schedule Number		80		
Maximum Setting (Feet)		RTF		
Outside Diameter (Inches)		6.625		
Inside Diameter (Inches)		5.761		
Wall Thickness (Inches)		.432		
Weight Per Foot (Lbs./Ft.)		28.57		
Connector Bearing Length (Inches)		5-1/2		
Connector Bearing Weight (Lbs.)		9		
Shaft Technical Data				
Exact Lengths	5 Foot Section	5'0"	5'0"	5'0"
	10 Foot Section	10'0"	10'0"	10'0"
	20 Foot Section	20'0"	20'0"	20'0"
Weight Per Foot (Lbs./Ft.)		27.16	31.58	36.35
Shaft Coupling Weight (Lbs.)		50.1	52.76	54.6
Open Lineshaft Sleeve Thickness (Inches)		.125	.125	.125
Open Lineshaft Sleeve Length (Inches)		9.125	9.500	9.750
Open Lineshaft Sleeve Weight (Lbs.)		3.4	3.8	4.1
Open Lineshaft Bearing and Retainer Weight (Lbs.)	4" Column	N/A	N/A	N/A
	5" Column	N/A	N/A	N/A
	6" Column	N/A	N/A	N/A
	8" Column	N/A	N/A	N/A
	10" Column	N/A	N/A	N/A
	12" Column	N/A	N/A	N/A
	14" Column	N/A	N/A	N/A
	16" Column	N/A	N/A	N/A
20" Column & Larger		Bearing Retainers For These Sizes Are Fabricated In The Column		

COLUMN TECHNICAL DATA

Data	4"	5"	6"	8"	10"	12"	14"
.250 WALL PIPE							
Schedule Number	N/A	N/A	N/A	20	20	20	10
Outside Diameter (Inches)	N/A	N/A	6.625	8.625	10.750	12.750	14.000
Inside Diameter (Inches)	N/A	N/A	6.125	8.125	10.250	12.250	13.500
Wall Thickness (Inches)	N/A	N/A	.250	.250	.250	.250	.250
Weight Per Foot (Lbs./Ft.)	N/A	N/A	17.02	22.36	28.04	33.38	36.71

AWWA STANDARD WALL PIPE							
Schedule Number	40	40	40	30	N/A	N/A	30
Outside Diameter (Inches)	4.500	5.563	6.625	8.625	10.750	12.750	14.000
Inside Diameter (Inches)	4.026	5.047	6.065	8.071	10.192	12.000	13.250
Wall Thickness (Inches)	.237	.258	.280	.277	.279	.375	.375
Weight Per Foot (Lbs./Ft.)	10.79	14.62	18.97	24.70	31.20	49.56	54.60

.250 WALL AND AWWA STANDARD WALL PIPE									
Exact Column Lengths	Open Lineshaft Construction	5' Section	4'11-1/2"	4'11-1/4"	4'11-1/4"	4'11-1/4"	4'11-1/4"	4'11-1/4"	4'11-1/4"
		10' Section	9'11-1/2"	9'11-1/4"	9'11-1/4"	9'11-1/4"	9'11-1/4"	9'11-1/4"	9'11-1/4"
	Enclosed Lineshaft Construction	5 ' Section	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"
		10' Section	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
		20' Section	20'0"	20'0"	20'0"	20'0"	20'0"	5'0"	20'0"
Coupling Outside Diameter (Inches)			5.00	6.25	7.31	9.56	11.69	13.88	15.00
Coupling Weight (Lbs.)			5.65	10.74	12.70	23.90	32.58	47.21	62.00
Flange Outside Diameter (Inches)			6.63	7.63	9.25	11.75	13.88	16.38	17.63
Flange Weight (Lbs.)			6.01	7.68	11.72	17.98	21.73	29.81	35.60

Data	16"	18"	20"	24"	30"	36"
.250 WALL PIPE						
Schedule Number	10	10	10	10	N/A	N/A
Outside Diameter (Inches)	16.000	18.000	20.000	24.000	N/A	N/A
Inside Diameter (Inches)	15.500	17.500	19.500	23.500	N/A	N/A
Wall Thickness (Inches)	.250	.250	.250	.250	N/A	N/A
Weight Per Foot (Lbs./Ft.)	42.05	47.39	52.73	63.41	N/A	N/A

AWWA STANDARD WALL PIPE						
Schedule Number	30	N/A	20	20	N/A	N/A
Outside Diameter (Inches)	16.000	18.000	20.000	24.000	30.000	36.000
Inside Diameter (Inches)	15.250	17.250	19.250	23.250	29.250	32.250
Wall Thickness (Inches)	.375	.375	.375	.375	.375	.375
Weight Per Foot (Lbs./Ft.)	62.50	70.53	78.60	94.62	119.00	143.34

.250 WALL AND AWWA STANDARD WALL PIPE								
Exact Column Lengths	Open Lineshaft Construction	5' Section	4'11-1/4"	5'0"	5'0"	5'0"	5'0"	5'0"
		10' Section	9'11-1/4"	10'0"	10'0"	10'0"	10'0"	10'0"
	Enclosed Lineshaft Construction	5' Section	5'0"	5'0"	5'0"	5'0"	5'0"	5'0"
		10' Section	10'0"	10'0"	10'0"	10'0"	10'0"	10'0"
		20' Section	20'0"	20'0"	20'0"	20'0"	20'0"	20'0"
		Flange Outside Diameter		20.00	22.00	24.250	28.500	34.500
Flange Weight (Lbs.)		44.72	49.69	63.72	86.71	131.11	155.50	

DISCHARGE HEADS TECHNICAL DATA

CT AND DT DISCHARGE HEADS

DATA		12X4 DT	16-1/2x6 CT	16-1/2x 8 CT	16-1/2x10 CT	20x12 CT
Discharge Flange Size (Inches)		4	6	8	10	12
Available Threaded Column Size (Inches)		4	6	8	10	12
Available Flanged Column Size (Inches)		N/A	N/A	N/A	N/A	N/A
NEMA Driver "AK" Size (Inches)		8-1/4	8-1/4, 13-1/2	8-1/4, 13-1/2	8-1/4, 13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temperature)	125 lb. Flange	175	175	175	175	175
	250 lb. Flange	400	N/A	N/A	N/A	N/A
Weight (Including Packing Box) (Lbs.)		311	432	456	499	657

Reference: Assembly Drawing 700MA002 and 700MA004

D DISCHARGE HEADS

DATA		16-1/2x6	16-1/2x8	20x10
Discharge Flange Size (Inches)		6	8	10
Available Threaded Column Size (Inches)		4,6,8,10,12	4,6,8,10,12	4,6,8,10,12
Available Flanged Column Size (Inches)		4,6,8,10	4,6,8,10	4,6,8,10
NEMA Driver "AK" Size (Inches)		8-1/2, 13-1/2	8-1/4, 13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temperature)	125 lb. Flange	175	175	175
	250 lb. Flange	400*	400*	400*
Weight (Including Packing Box) (Lbs.)		487	544	682

Reference: Assembly Drawing 700MA001

H DISCHARGE HEADS

DATA		20X12	24-1/2X14
Discharge Flange Size (Inches)		12	14
Available Threaded Column Size (Inches)		10,12	12,14
Available Flanged Column Size (Inches)		10,12	12,14
NEMA Driver "AK" Size (Inches)		13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temperature)	125 lb. Flange	175	175
	250 lb. Flange	N/A	N/A
Weight (Including Packing Box) (Lbs.)		1015	1660

Reference: Assembly Drawing 700MA003

***ON WATER LUBRICATED APPLICATIONS, A 400 PSI PACKING BOX IS INCLUDED.**

DISCHARGE HEADS TECHNICAL DATA

LS DISCHARGE HEADS

Data	12x4	12x6	16-1/2x6	12x8	16-1/2x8	20x8	12x10
Discharge Flange Size (Inches)	4	6	6	8	8	8	10
Available Threaded Column Size (Inches)	4,6	4,6,8	4,6,8	6,8,10	4,6,8,10	4,6,8,10	8,10,12
Available Flanged Column Size (Inches)	4,6	4,6,8	4,6,8	6,8,10	4,6,8,10	4,6,8,10	8,10,12
NEMA Driver "AK" Size (Inches)	8-1/4	13-1/2	13-1/2	8-1/4	13-1/2	13-1/2	8-1/4
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)	313	324	341	342	366	426	448

Data	16-1/2x10	20x10	12x12	16-1/2x12	20x12	12x14
Discharge Flange Size (Inches)	10	10	10	12	12	14
Available Threaded Column Size (Inches)	8,10,12	8,10,12	8,10,12	10,12	10,12	14
Available Flanged Column Size (Inches)	8,10,12	8,10,12	8,10,12	10,12	10,12	14
NEMA Driver "AK" Size (Inches)	13-1/2	13-1/2	8-1/4	13-1/2	13-1/2	8-1/4
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)	457	518	551	617	678	706

Data	16-1/2x14	20x14	24-1/2x14	12x16	16-1/2x16
Discharge Flange Size (Inches)	14	14	16	16	16
Available Threaded Column Size (Inches)	14	14	16	16	16
Available Flanged Column Size (Inches)	14	14	16	16	16
NEMA Driver "AK" Size (Inches)	13-1/2	13-1/2	13-1/2	8-1/4	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)	754	791	855	895	902

Data	20x16	24-1/2x16
Discharge Flange Size (Inches)	16	16
Available Threaded Column Size (Inches)	16	16
Available Flanged Column Size (Inches)	16	16
NEMA Driver "AK" Size (Inches)	13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175
	300 lb. Flange	400*
Weight (Including Packing Box) (Lbs.)	1006	1088

Reference: Assembly Drawing 700MA012 and 700MA013

***ON WATER LUBRICATED APPLICATIONS, A 400 PSI PACKING BOX IS INCLUDED.**

DISCHARGE HEADS TECHNICAL DATA

F DISCHARGE HEADS

Data		12x8	16-1/2x8	20x8	12X10	16-1/2x10	20X10
Discharge Flange Size (Inches)		8	8	8	10	10	10
Available Threaded Column Size (Inches)		8	8	8	10	10	10
Available Flanged Column Size (Inches)		8	8	8	10	10	10
NEMA Driver "AK" Size (Inches)		8-1/4	13-1/2	13-1/2	8-1/4	13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)		370	420	485	486	492	557

Data		12X12	16-1/2X12	20X12	12X14	16-1/2X14	20X14
Discharge Flange Size (Inches)		12	12	12	14	14	14
Available Threaded Column Size (Inches)		12	12	12	14	14	14
Available Flanged Column Size (Inches)		12	12	12	14	14	14
NEMA Driver "AK" Size (Inches)		8-1/4	13-1/2	13-1/2	8-1/4	13-1/2	13-1/2
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)		605	671	732	786	834	871

Data		24-1/2X14	12X16	16-1/2X16	20x16	24-1/2x16
Discharge Flange Size (Inches)		14	16	16	16	16
Available Threaded Column Size (Inches)		14	N/A	N/A	N/A	N/A
Available Flanged Column Size (Inches)		14	16	16	16	16
NEMA Driver "AK" Size (Inches)		13-1/2	8-1/4	13-1/2	22	22
Maximum Discharge Pressure (PSI) (Non-Shock Rating At Room Temp)	150 lb. Flange	175	175	175	175	175
	300 lb. Flange	400*	400*	400*	400*	400*
Weight (Including Packing Box) (Lbs.)		934	992	1000	1103	1185

Reference: Assembly Drawing 700MA006 and 700MA007

***ON WATER LUBRICATED APPLICATIONS A 400 PSI PACKING BOX IS INCLUDED.**