PENTAIR

AURORA® 3500 SERIES
MODEL 3550 ASME/ANSI B73.1 INDUSTRIAL PROCESS PUMPS

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AURORA® 3500 SERIES
Model 3550 ASME/ANSI B73.1 Industrial Process Pumps

Capacities to 4200 GPM (954 m^3/hr)
Heads to 725 Ft. (221 m)
Temperatures to 650°F (343°C)
Pressures to 375 PSIG (2586 kPa)

ANSI Pumps

The Aurora Model 3550 was designed to perform in the toughest industrial applications whether in the chemical, petro-chemical, mining, pulp and paper, consumer products or general industry.

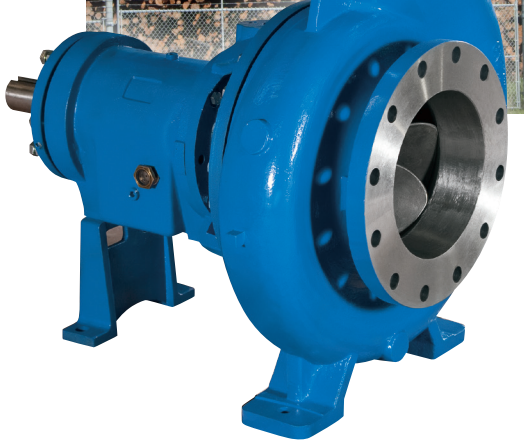
If you are considering an ANSI pump for an industrial application, look to Aurora Model 3550 for your pumping solution.

Model 3550 S, M/L, XL

The Aurora Model 3550-S, M/L, and XL were developed with the standard features required to withstand the most difficult applications and maximize mean-time-between-failures (MTBF).

- Model 3550-S – 5 ASME/ANSI Pumps
- Model 3550-M/L – 15 ASME/ANSI Pumps
- Model 3550-XL – 5 ASME/ANSI Pumps

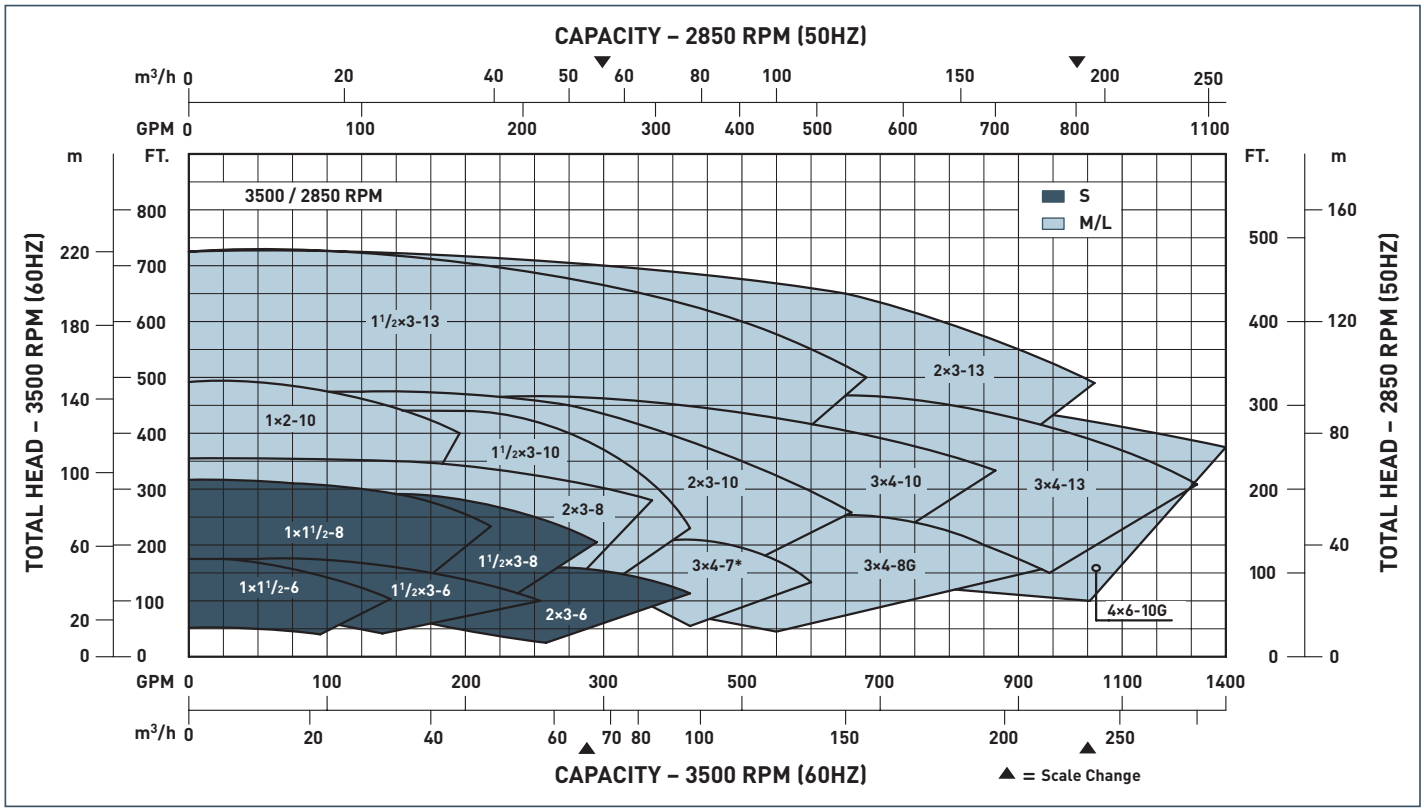
Model 3550-XL

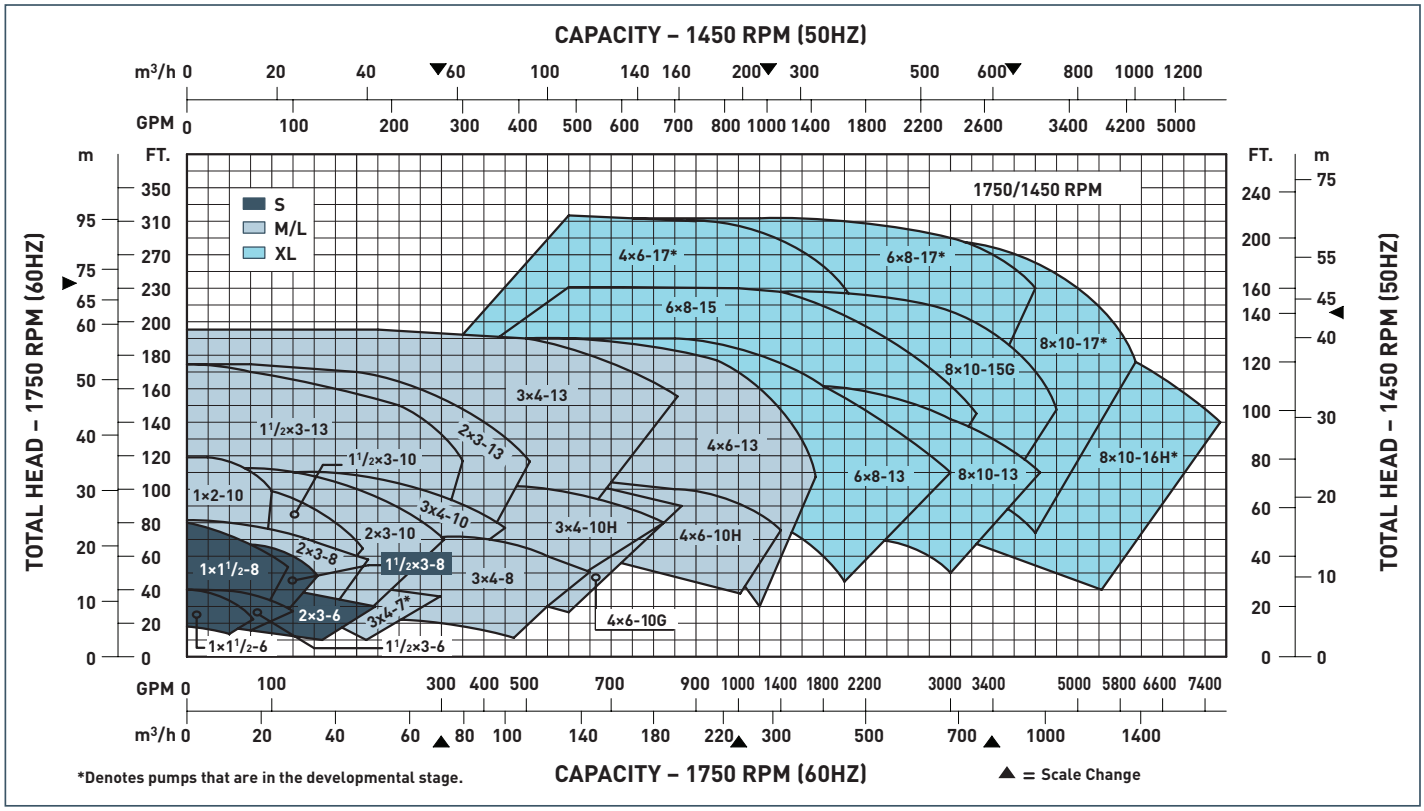


Model 3550-M/L

Model 3550-S

3500/2850 and 1750/1450 RPM Range Charts





Pump Features

A. Labyrinth Oil Seals
- Prevent external contaminants
- Lower oil temperature
- Dramatically improve bearing life

B. Lubrication Flexibility
- Oil flooded
- Oil mist
- Greased
- Maximum lubrication options

C. Oversized Shaft
- Shaft deflection less than .002 in. per ANSI B73.1
- Decreased vibration
- Significantly increases both seal and bearing life

D. External Impeller Adjustment
- Optimizes energy consumption
- Reduces repairs
- Simple external adjustments
- Long-term energy and repair savings

E. Large Capacity Oil Sump
- Cooler oil temperature
- Better heat transfer
- Increased bearing life

F. Heavy Duty Bearing
- Designed for maximum hydraulic loads
- Optional duplex (40°/40° angular contact) thrust bearings
- Bearings can perform under the toughest conditions

G. Large Sight Glass
- Assures proper oil levels
- Allows monitoring of oil condition
- Helps increase bearing life

H. Magnetic Drain Plug
- Removes magnetic particles
- Increases bearing life

I. Sealing Options
- Packing
- Conventional single/double
- Cartridge single/double
- Sealing options to accommodate almost any fluid and temperature combinations

J. Positive Sealing
- Fully confined gasket
- Protects alignment fit
- Provides ease of maintenance and increased safety

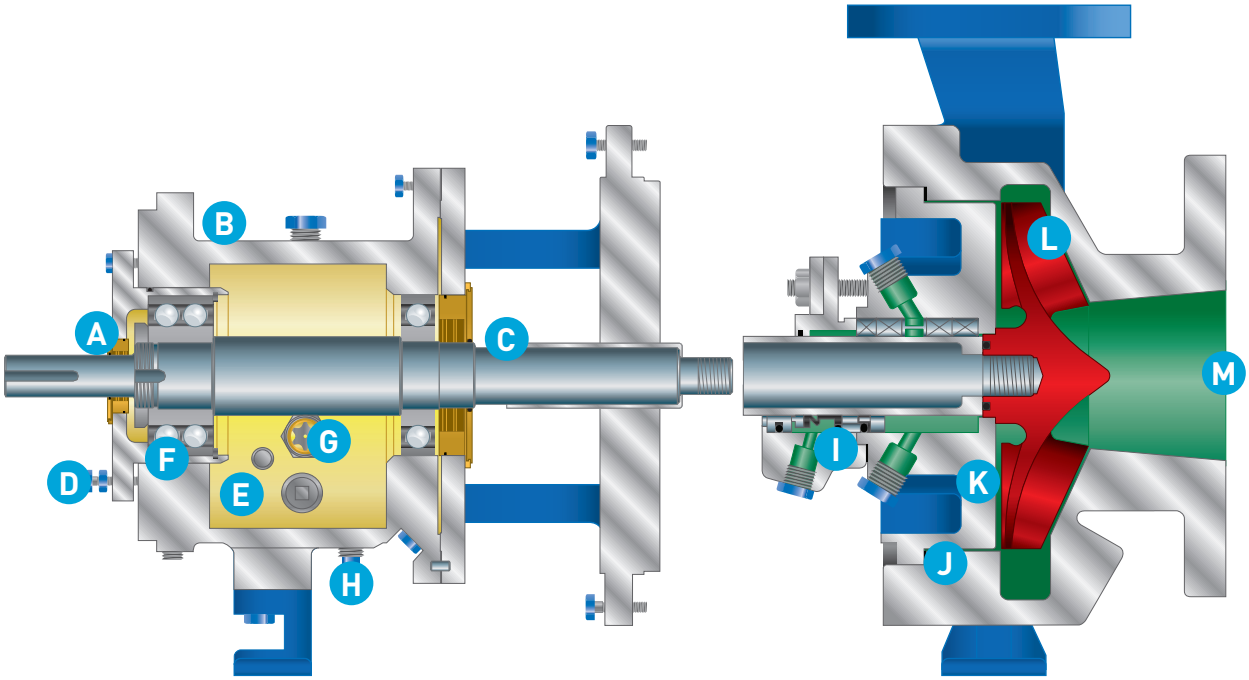
K. Engineered Seal Chambers
- Standard bore
- Large bore
- Taper bore
- Designed to provide optimum seal environment

L. Fully Open Impeller
- Back pump-out vanes
- Reduced radial/thrust loads
- Lower seal chamber pressure
- Double the wear area of a closed impeller
- Designed for the toughest applications including solids handling, stringy materials, abrasives and corrosives

M. Heavy Duty Casing
- Class 150 flanges with Class 300 casing wall thickness
- Self-venting
- Back pullout design
- Integral cast feet
- Serrated flange surfaces
- Standard Class 150 FF and optional Class 150 RF, 300 FF/RF
- Designed for increased reliability, ease of maintenance and maximum life

Pump Features

The Model 3550 power and wet ends were developed with the standard features required to withstand the most difficult applications and maximize mean-time-between-failures (MTBF).



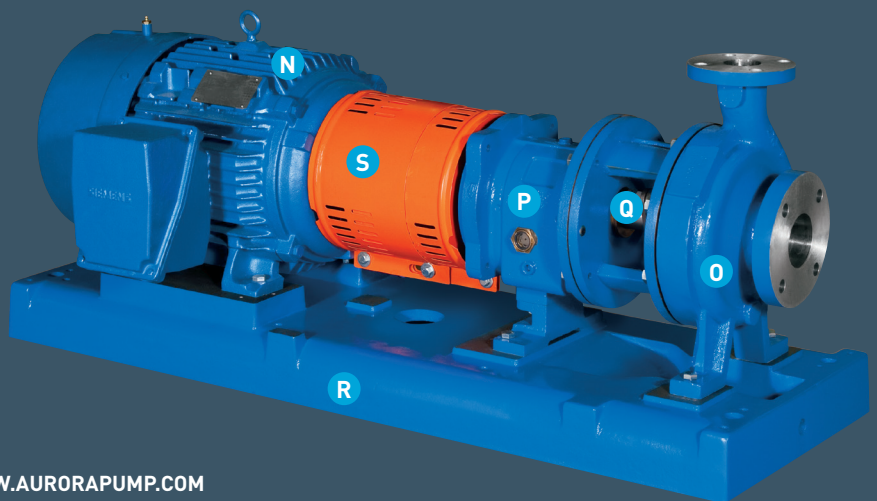
The Aurora® Model 3550 has a broad range of engineered options and upgrades that will support a variety of process requirements and meet almost any fluid processing application.

N. Drivers

- Electric motors ODP / TEFC / XP
- Variable frequency drives

O. Process Temperature Control

- Jacketed casings
- Jacketed seal chamber



P. Oil Temperature Control

- Bearing frame cooling coil

Q. Seal Flush / Cooling

- Most ASME/ANSI B73.1 seal flush and cooling plans available

R. Mounting Baseplates

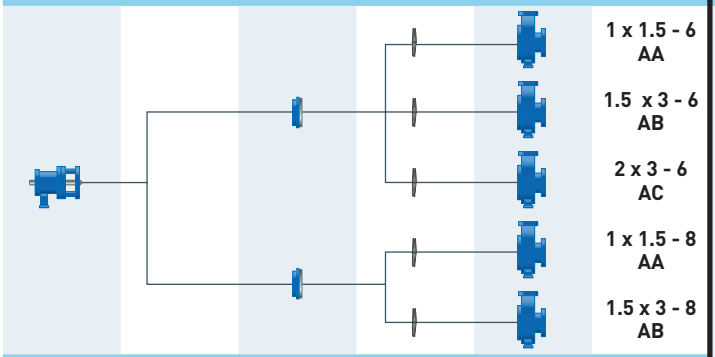
- Fabricated steel per ASME/ANSI B73.1
- Cast iron in compliance with PIP
- Heavy-duty epoxy resin based polymer composite to ASME/ANSI B73.1

S. Couplings and Guards

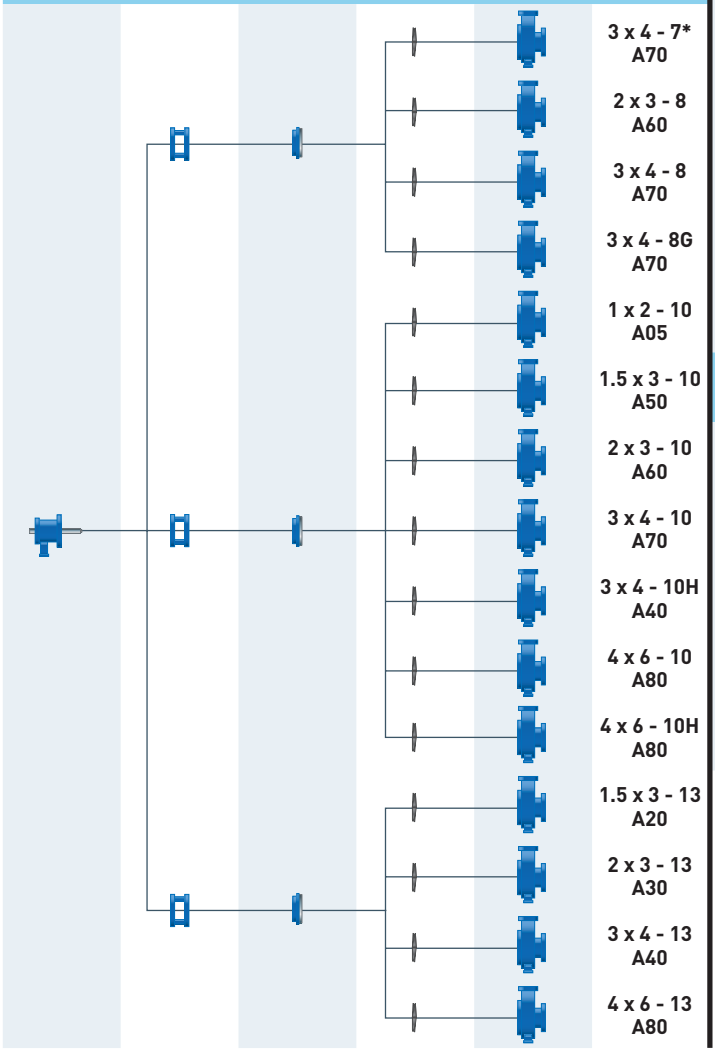
- OSHA approved coupling guards
- Various coupling options

Modular/Dimensional Interchangeability

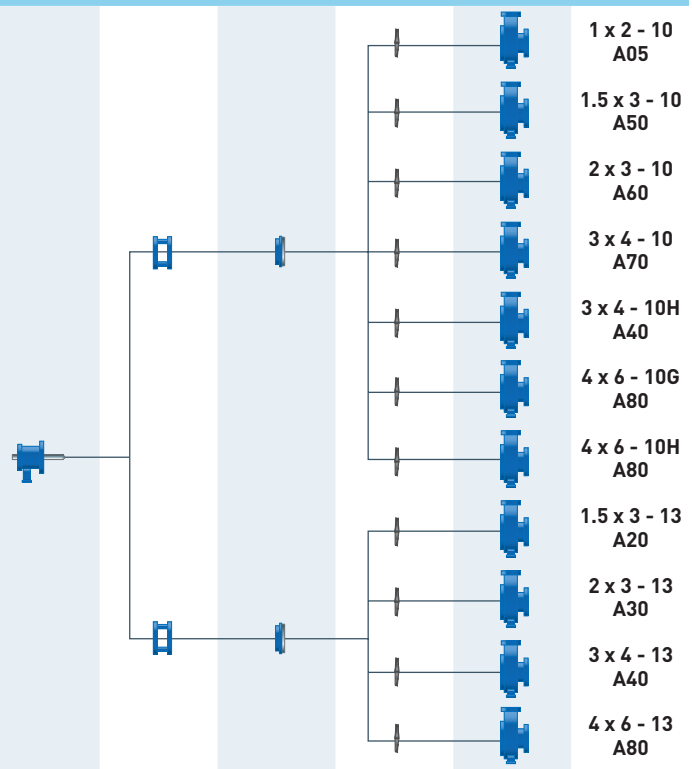
MODEL S 1-3/8" SHAFT DIA. – MAX BHP–40 HP



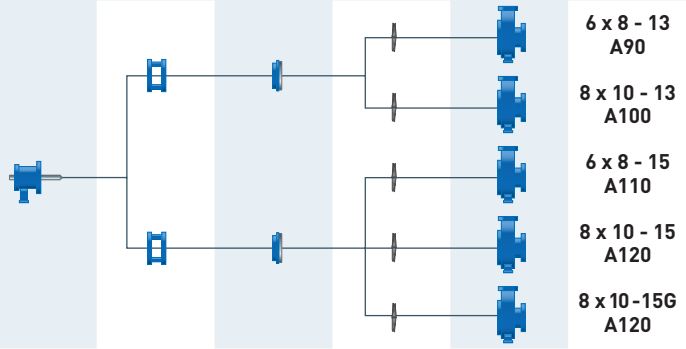
MODEL M 1-3/4" SHAFT DIA. – MAX BHP–122 HP

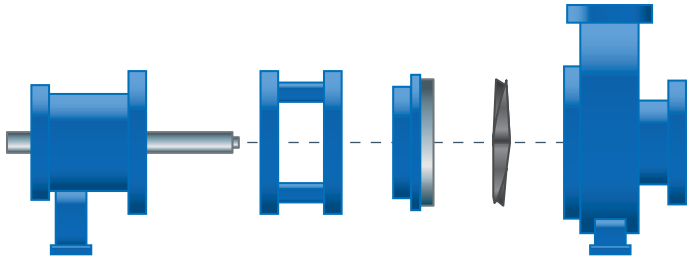


MODEL L 2-1/8" SHAFT DIA. – MAX BHP–200 HP



MODEL XL 2-1/2" SHAFT DIA. – MAX BHP–250 HP



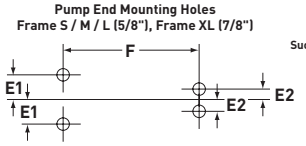


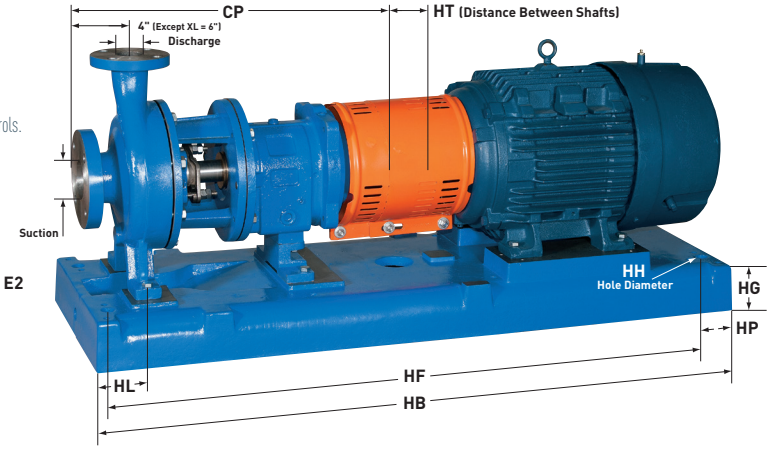
*In the developmental stage.

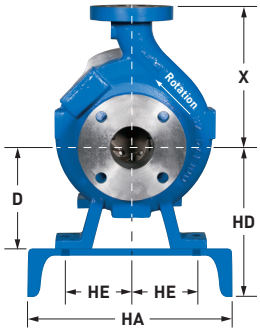
Pump Dimensions

Notes:

1. All dimensions are in inches.
2. Motor should not extend beyond end of baseplate.
3. Includes 0.13 shimming allowance where motor height controls.
4. Baseplate/Mounting surface width.







	Pump Size & Designation	ANSI Designation	Discharge	Suction	D	X	CP	E1	E2	F	Impeller Eye (square inches)	Maximum Diameter Solids
S	1x1-1/2-6	AA	1	1-1/2	5-1/4	6-1/2	17-1/2	3	0	7-1/4	3.1	11/32
	1-1/2x3-6	AB	1-1/2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/4	7.1	7/16
	2x3-6	AC	2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/4	6.5	3/8
	1x1-1/2-8	AA	1	1-1/2	5-1/4	6-1/2	17-1/2	3	0	7-1/4	3.5	11/32
	1-1/2x3-8	AB	1-1/2	3	5-1/4	6-1/2	17-1/2	3	0	7-1/4	4.4	7/16
M	2x3-8	A60	2	3	8-1/4	9-1/2	23-1/2	4-7/8	3-5/8	12-1/2	5.4	1/2
	3x4-8	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2	12.5	1-1/8
	3x4-8G	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2	11	11/16
M or L	1x2-10	A05	1	2	8-1/4	8-1/2	23-1/2	4-7/8	3-5/8	12-1/2	4.9	7/16
	1-1/2x3-10	A50	1-1/2	3	8-1/4	8-1/2	23-1/2	4-7/8	3-5/8	12-1/2	6.5	7/32
	2x3-10	A60	2	3	8-1/4	9-1/2	23-1/2	4-7/8	3-5/8	12-1/2	3.1	3/8
	3x4-10	A70	3	4	8-1/4	11	23-1/2	4-7/8	3-5/8	12-1/2	12.5	5/8
	3x4-10H	A40	3	4	10	12-1/2	23-1/2	4-7/8	3-5/8	12-1/2	12.5	5/8
	4x6-10G	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2	25.9	1
	4x6-10H	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2	27.1	1
	1-1/2x3-13	A20	1-1/2	3	10	10-1/2	23-1/2	4-7/8	3-5/8	12-1/2	4.9	7/32
	2x3-13	A30	2	3	10	11-1/2	23-1/2	4-7/8	3-5/8	12-1/2	3.1	3/8
	3x4-13	A40	3	4	10	12-1/2	23-1/2	4-7/8	3-5/8	12-1/2	14.2	5/8
	4x6-13	A80	4	6	10	13-1/2	23-1/2	4-7/8	3-5/8	12-1/2	28	1
XL	6x8-13	A90	6	8	14-1/2	16	33-7/8	8	4-1/2	18-3/4	45.5	11/16
	8x10-13	A100	8	10	14-1/2	18	33-7/8	8	4-1/2	18-3/4	56.7	1
	6x8-15	A110	6	8	14-1/2	18	33-7/8	8	4-1/2	18-3/4	50	13/16
	8x10-15	A120	8	10	14-1/2	19	33-7/8	8	4-1/2	18-3/4	74.6	1-1/8
	8x10-15G	A120	8	10	14-1/2	19	33-7/8	8	4-1/2	18-3/4	63	1-1/8

	Maximum NEMA Frame	Baseplate Number	A Min. (Note 4)	HA Max.	HB	HT Min.	HD Max. (Note 3)				HE	HF	HG Max.	HH	HL	HP
							D=5.25	D=8.25	D=10	D=14.5						
S	184T	139	12	15	39	3.5	9	NA	NA	NA	4.5	36-1/2	3-3/4	0.75	4.5	1-1/4
	256T	148	15	18	48	3.5	10.5	NA	NA	NA	6	45-1/2	4-1/8	0.75	4.5	1-1/4
	326TS	153	18	21	53	3.5	12.875	NA	NA	NA	7.5	50-1/2	4-3/4	0.75	4.5	1-1/4
M or L	184T	245	12	15	45	3.5	NA	12	13.75	NA	4.5	42-1/2	3-3/4	0.75	4.5	1-1/4
	215T	252	15	18	52	3.5	NA	12.375	14.125	NA	6	49-1/2	4-1/8	0.75	4.5	1-1/4
	286T	258	18	21	58	3.5	NA	13	14.75	NA	7.5	55-1/2	4-3/4	1	4.5	1-1/4
	365T	264	18	21	64	3.5	NA	13.875	14.75	NA	7.5	61-1/2	4-3/4	1	4.5	1-1/4
	405TS	268	22	26	68	3.5	NA	14.875	14.875	NA	9.5	65-1/2	4-3/4	1	4.5	1-1/4
	449TS	280	22	26	80	3.5	NA	15.875	15.875	NA	9.5	77-1/2	4-3/4	1	4.5	1-1/4
XL	286T	368	22	26	68	5	NA	NA	NA	19.25	9.5	65-1/2	4-3/4	1	6.5	1-1/4
	405T	380	22	26	80	5	NA	NA	NA	19.25	9.5	77-1/2	4-3/4	1	6.5	1-1/4
	449T	398	22	26	98	5	NA	NA	NA	19.25	9.5	95-1/2	4-3/4	1	6.5	1-1/4

Parts and Material Composition

Item Number	Required Per Pump	Part Name	All Iron	All 316SS	All Alloy 20	All CD4MCu	All Titanium	Hastelloy® B&C
100	1	Casing	Ductile Iron	316SS	Alloy 20	CD4MCu	Titanium	Hastelloy B&C
101	1	Impeller	Ductile Iron	316SS	Alloy 20	CD4MCu	Titanium	Hastelloy B&C
105	1	Lantern Ring	Glass Filled Teflon®					
106	1	Packing	Teflon Impregnated Fibers					
107	1	Packing Gland	316SS		Alloy 20		Titanium	Hastelloy B&C
108	1	Frame Adapter	Ductile Iron					
112	1	Outboard (Thrust) Bearing	Double Row Angular Contact*					
122	1	Shaft – Less Sleeve (Optional)	316SS					
122	1	Shaft – With Sleeve	SAE4140				316SS	
126	1	Shaft Sleeve	316SS	316SS	Alloy 20	316SS	Titanium	Hastelloy B&C
134	1	Bearing Housing	Cast Iron					
136	1	Lock Nut / Lock Washer	Steel					
168	1	Inboard (Radial) Bearing	Single Row Deep Groove					
184	1	Seal Box	Ductile Iron	316SS	Alloy 20	CD4MCu	Titanium	Hastelloy B&C
228	1	Bearing Frame	Cast Iron (Ductile for Small Frame)					
241	1	Bearing Frame Foot	Cast Iron					
250	1	Gland	316SS		Alloy 20			
319	1	Sight Oil Gauge	316SS					
332A	1	Labyrinth Oil Seal (Outboard)	Bronze (Optional Carbon Filled Teflon)					
333A	1	Labyrinth Oil Seal (Inboard)	Bronze (Optional Carbon Filled Teflon)					
351	1	Casing Gasket	Aramid Fiber with EPDM Rubber					
353	4	Gland Stud	316SS					
355	4	Gland Nut	304SS					
357K	2	Hex Nut	304SS					
358A	1	Casing Drain Plug (Optional)	Steel	316SS	Alloy 20	316SS	Titanium	Hastelloy B&C
360	1	Gasket, Frame-to-Adapter	Vellumoid					
360A	1	Gasket, Bearing End Cover	Vellumoid (XL Only)					
370	3	Bearing Housing Hex Bolt	Steel					
418	3	Casing Jack Screw	Steel					
469B	2	Dowel Pin	Steel					
496	1	Bearing Housing O-Ring	Buna Rubber					
496A	1	Impeller O-Ring	Glass Filled TFE					

*L Power End features Duplex Angular Contact.

Model		S	M	L	XL
Volute		single			
Nominal Case Thickness (inches)		3/8	1/2 (4 x 6 - 13A80 = 5/8)		9/16
Corrosive Allowance at Maximum		1/8			
Working Pressure		Limits set by ANSI B16.5			
Maximum Working PSIG		See Pressure / Temperature charts			
Hydro Test PSIG at 100°F		150% of working pressure at 100°F (38°C)			
Maximum Liquid Temperature (°F)		350°F without cooling / 650°F with cooling			
Shaft Diameter	At Coupling (inches)	7/8	1-1/8	1-7/8	2-3/8
	Sleeve Diameter Under Seal (inches)	1-3/8	1-3/4	2-1/8	2-1/2
	Under Impeller (inches)	3/4	1	1-1/4	1-1/2
	Under Sleeve (inches)	1-1/8	1-1/2	1-7/8	2
	Overhang (inches)	6-1/8	8-3/8	8-3/8	9-31/32

Model		S	M	L	XL
Bearings	Radial	SKF 6207	SKF 6309	SKF 6311	SKF 6313
	Thrust	SKF 5306 A/C3	SKF 5309 A/C3	SKF 7310 BECBM	SKF 5313 A/C3
	Bearing Span	4-1/8	6-3/4	6-7/8	9-1/4
Mechanical Seal Size (inches)		1-3/8	1-3/4	2-1/8	2-1/2
Stuffing Box – Standard Bore	I.D. (inches)	2	2-1/2	2-7/8	3-3/8
	Depth (inches)	2-1/8	2-5/8		3
	Distance End of Box to Nearest Obstruction	2-1/2	2-13/16		2-15/16
Stuffing Box – Large Bore	I.D. (inches)	2-7/8	3-1/2	3-7/8	4-3/4
	Depth (inches)	2-1/8	2-1/8		4-1/2
	Distance End of Box to Nearest Obstruction	2-3/16	2-13/16		2.85
Lantern Ring Width (inches)		7/16	5/8		5/8

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