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ANSI B 73.1M STANDARD

MOC:

* CAST STEEL
* 304SS/316SS/304L/316L
* CD4MCUN
* DUPLEX GRADE 5A/6A
* 904L
* ALLOY 20
* CK 20
* HAST B&C
* 100% NICKEL
* MONEL 400
* TITANIUM C2/C3/C7

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SEMI OPEN IMPELLER

- Semi Open Radial impellers for higher efficiencies
- Smooth back veins and balanced holes reduces load on shaft and bearings.
- Helps in smooth passage of clear liquids and slurries.

STUFFING BOX OPTIONS

Standard Bore :
Designed for packing.
Also accomodates Mechanical Seals.

Big Bore : Enlarged chamber for increased seal life through improved lubrication & cooling.

Taper Bore (Conical Stuffing Box) : Lower Seal face temperatures, self-venting & draining. Solids & Vapours circulated away from seal faces.

	Water Based liquids with flush	Entrianed Air or Vapour	Solids 0-10% No Flush	Solids Greater than 10% with flush	Slurries 0-5%	High Boiling point Liquids No flush	Self-Venting & Draining	Seal Face Heat Removal
SB	A	C	C	B	C	C	C	C
BB	A	B	C	A	C	C	B	A
TB	A	A	A	C	A	A	A	A

A - Ideally Suited **B-** Acceptable **C-** Not Recommented

DYNAMIC SEALING ARRANGEMENT

- For handling slurries / solids up to 35 - 40%.
- Eliminate use of slurry mechanical seals and also eliminates pumpage contamination and product dilution

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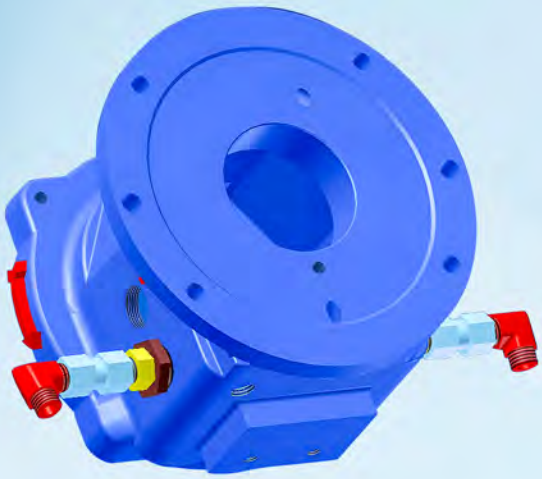
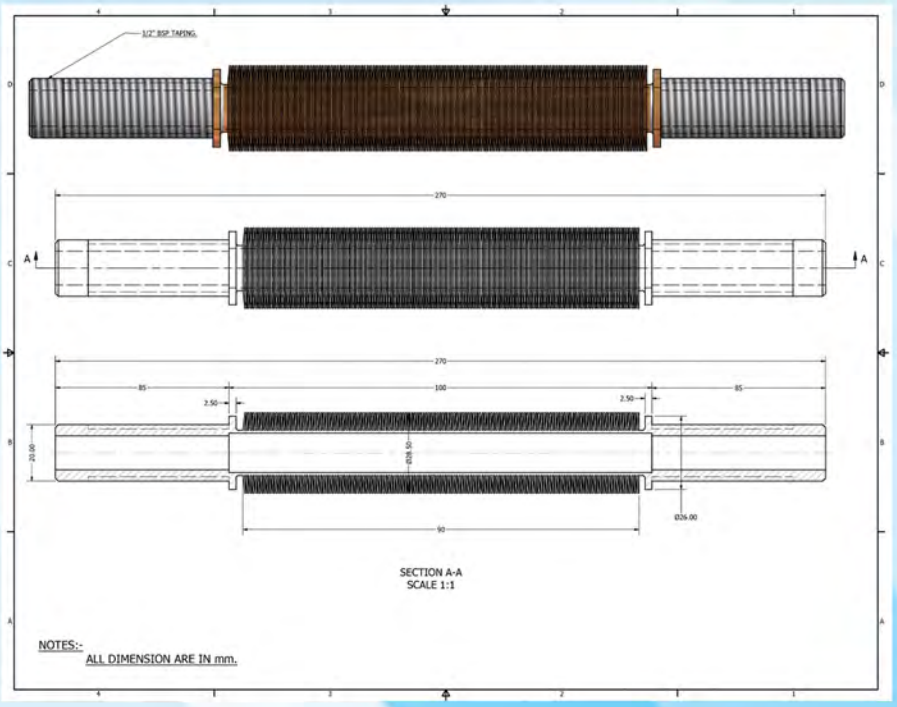
JACKETS FOR CASING & ST BOX FOR (HIGH TEMPERATURE & CRYSTALLISING LIQUIDS)

FINNED TUBE COOLER ASSEMBLY FOR HIGH TEMPERATURE APPLICATIONS



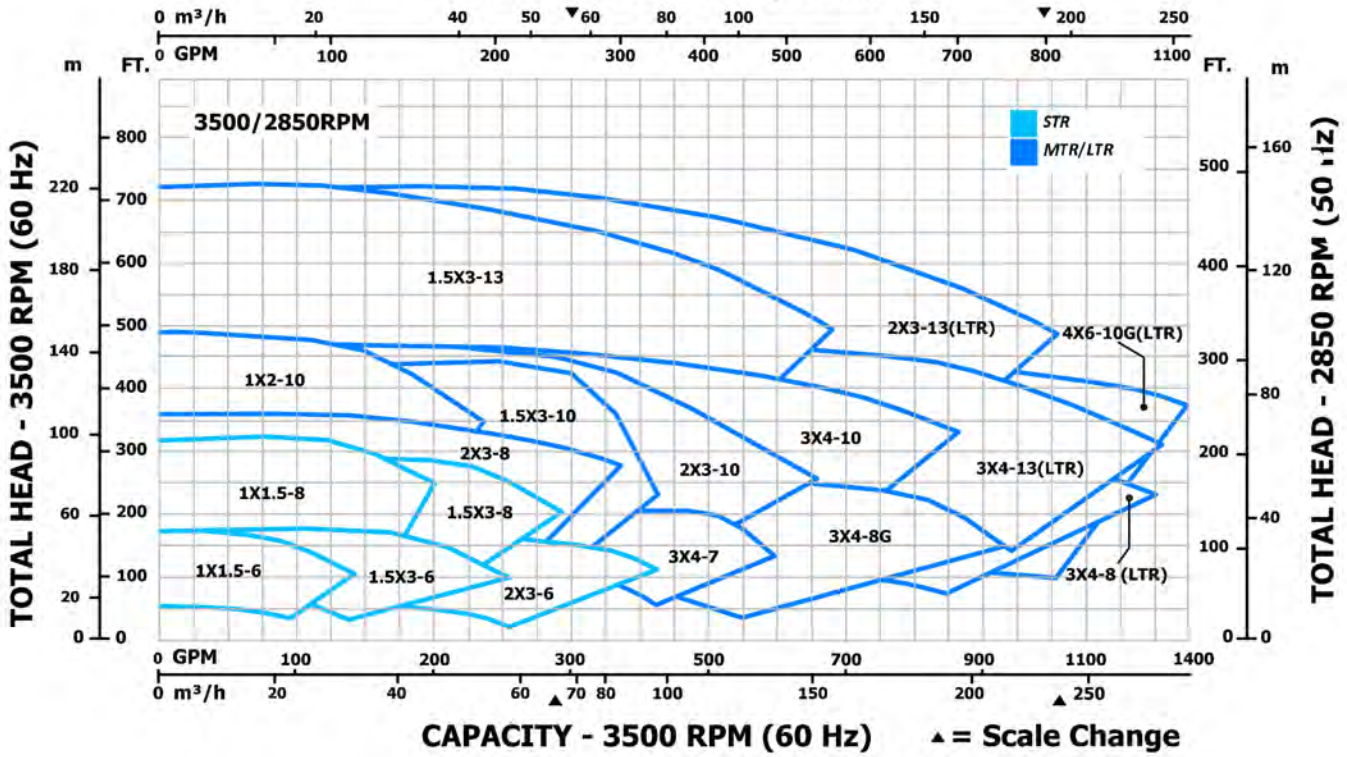


ADDITIONAL FEATURES

- 300 Class Flanges can be offered as optional with the same ANSI Pump Casings for **high pressure** requirements.
- Labyrynth seals (Bearing Protectors) are provided as **standard feature** in various materials to suit the outside environment.
- Non Wet ends can be offered in 304SS/316SS and other Alloys.

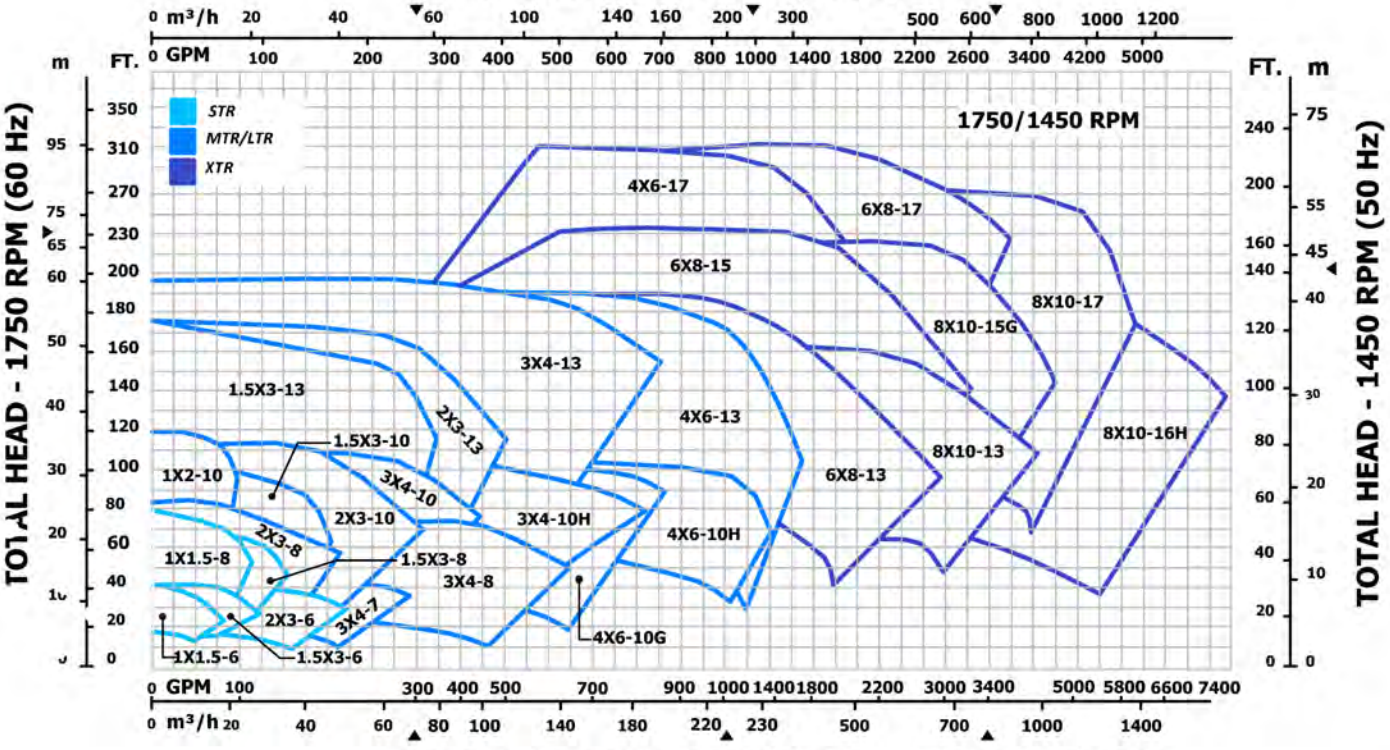
PERFORMANCE CURVES

CAPACITY - 2850 RPM (50 Hz)



CAPACITY - 3500 RPM (60 Hz) ▲ = Scale Change

CAPACITY - 1450 RPM (50 Hz)



CAPACITY - 1750 RPM (60 Hz) ▲ = Scale Change

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PART LIST & MATERIALS OF CONSTRUCTION

Item Number	Part Name	Material							
		CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy B&C	Titanium
100	Casing	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
101	Impeller	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
105	Lantern Ring	Glass-Filled PTFE							
106	Stuffing Box Packing	PTFE							
108	Frame Adapter	Ductile Iron							
112A	Thrust Bearing	Double Row Angular Contact**							
122	Shaft – Less Sleeve (Optional)	316SS			Alloy 20	Monel	Nickel	Hastelloy	Titanium
122	Shaft – With Sleeve	SAE4140/316SS				316SS			
126	Shaft Sleeve	316SS		CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
136	Bearing Locknut and Lock washer	Steel							
168A	Radial Bearing	Single row Deep Groove							
184	Stuffing Box Cover (Packed Box)	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
184	Seal Chamber (Mechanical Seal)	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
228	Bearing Frame	Ductile Iron							
250	Gland	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
262	Repeller/Sleeve (Dynamic Seal Option)	316SS		CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
264	Gasket, Cover-to-Back plate (Dynamic Seal)	PTFE							
370H	Stud/Nut, Cover-to-Adapter	304SS							
319	Oil Sight Glass	Glass/Aluminium							
332A	Labyrinth Oil Seal (Outboard)	Stainless Steel/Bronze							
333A	Labyrinth Oil Seal (inboard)	Stainless Steel/Bronze							
351	Casing Gasket	PTFE							
358	Casing Drain Plug (Optional)	316SS		CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
360F	Gasket, Frame-to-Adapter	Natural Rubber							
360C	Gasket, Bearing End Cover	Oil Paper Gasket							
370	Cap Screw, Adapter-to-Casing	Steel							
412A	O-ring, Impeller	Glass-Filled PTFE							
418	Jacking Bolt	304SS							
444	Back plate (Dynamic Seal Option)	CS	316SS	CD4MCuN/DuplexSS	Alloy 20	Monel	Nickel	Hastelloy	Titanium
469B	Dowel Pin, Frame-to-Adapter	Steel							
496	O-ring, Bearing Housing	Buna Rubber							

**LTR Power End features standard Duplex Angular Contact: Optional STR, MTR, XTR Other Alloys Available: 304SS/316L/317/317L/904L etc.

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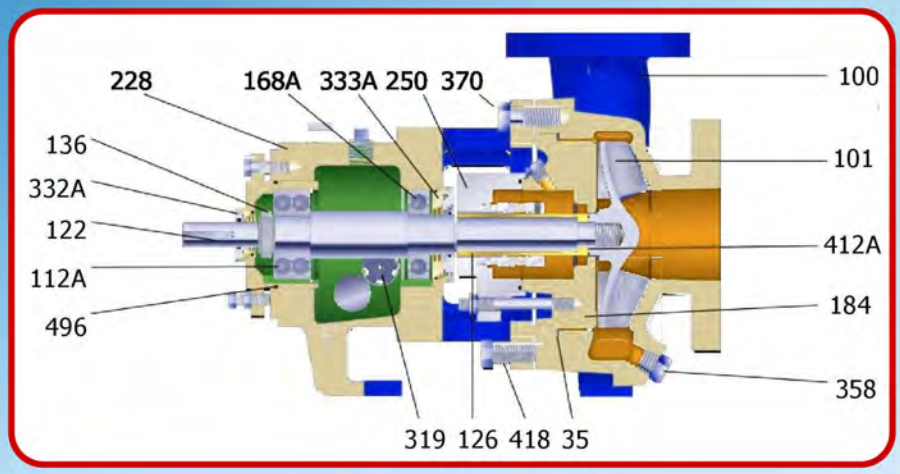
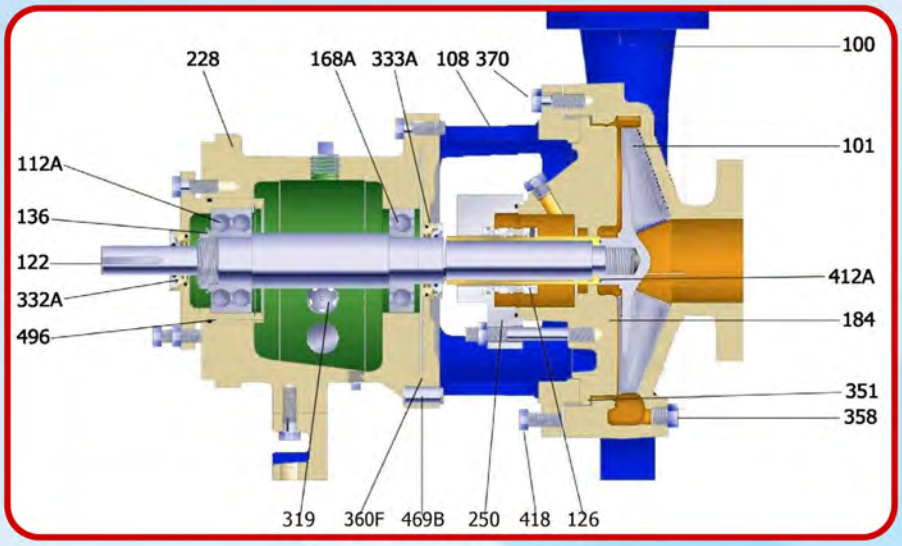
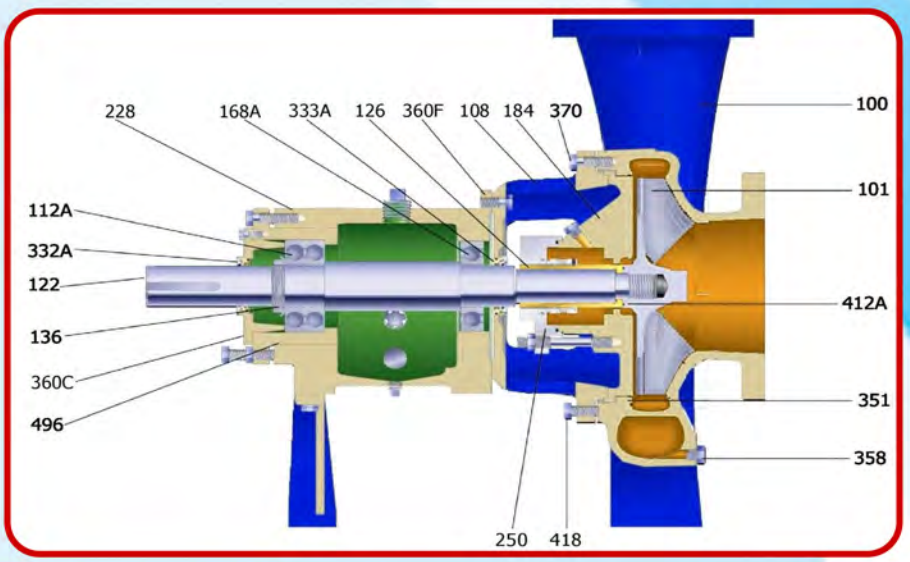
STR



MTR / LTR



XTR



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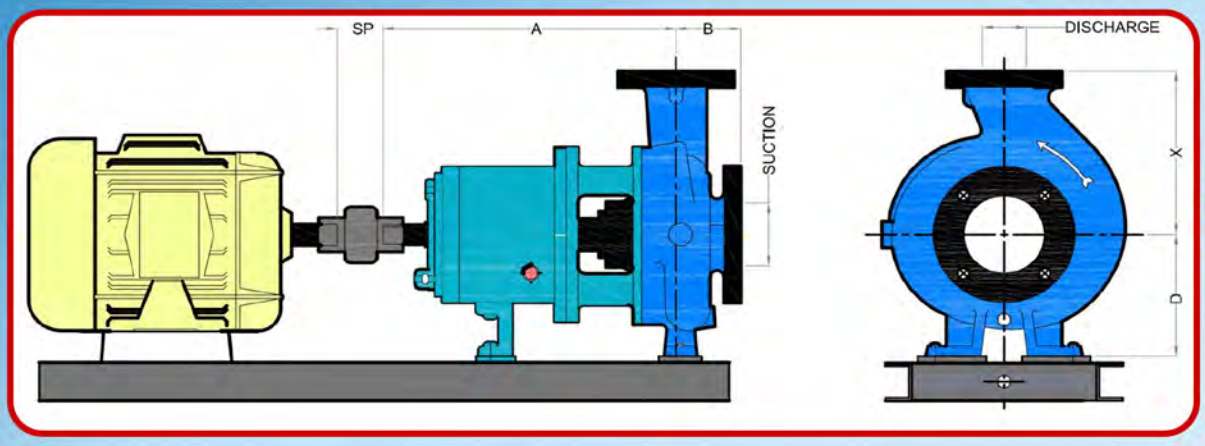
DIMENSIONS



DIMENSIONS										
Group	Pump Size	ANSI Design ation	Discharge Size	Suction Size	X	A	B	D	SP	Bare Pump Weight Lbs. (kg)
STR	1x1.5-6	AA	1	1.5	6.5 (165)	13.5 (343)	4 (102)	5.25 (133)	3.75 (95)	104 (47)
	1.5x3-6	AB	1.5	3						110 (50)
	2x3-6	AC	2	3						106 (48)
	1x1.5-8	AA	1	1.5						115 (52)
	1.5x3-8	AB	1.5	3						121 (55)
MTR/LTR	3X4-7	A70	3	4	11 (280)	19.5 (495)	4 (102)	8.25 (210)	3.75 (95)	236 (107)
	2X3-8	A60	2	3	9.5 (242)					231 (105)
	3X4-8	A70	3	4	11 (280)					242 (110)
	3X4-8G	A70	3	4						
	1X2-10	A05	1	2	8.5 (216)					258 (117)
	1.5X3-10	A50	1.5	3						264 (120)
	2X3-10	A60	2	3	9.5 (242)					275 (125)
	3X4-10	A70	3	4	11 (280)					287 (130)
	3X4-10H	A40	3	4	12.5 (318)	19.5 (495)	4 (102)	10 (254)		353 (160)
	4X6-10G	A80	4	6	13.5 (343)					375 (170)
	4X6-10H	A80	4	6						
	1.5X3-13	A20	1.5	3	10.5 (267)					326 (148)
	2X3-13	A30	2	3	11.5 (292)					348 (158)
	3X4-13	A40	3	4	12.5 (318)					357 (162)
	4X6-13	A80	4	6	13.5 (343)					386 (175)
XTR	6X8-13	A90	6	8	16 (406)	27.875 (708)	6 (152)	14.5 (368)	5.25 (133)	639 (290)
	8X10-13	A100	8	10	18 (457)					805 (365)
	6X8-15	A110	6	8						732 (332)
	8X10-15	A120	8	10	19 (483)					794 (360)
	8X10-15G	A120	8	10						1098 (498)
	8X10-16H	A120	8	10						1098 (498)
	4X6-17	A105	4	6	16 (406)					705 (320)
	6X8-17	A110	6	8	18 (457)					838 (380)
	8X10-17	A120	8	10	19 (483)					926 (420)

All dimensions in inches and (mm). Not to be used for construction

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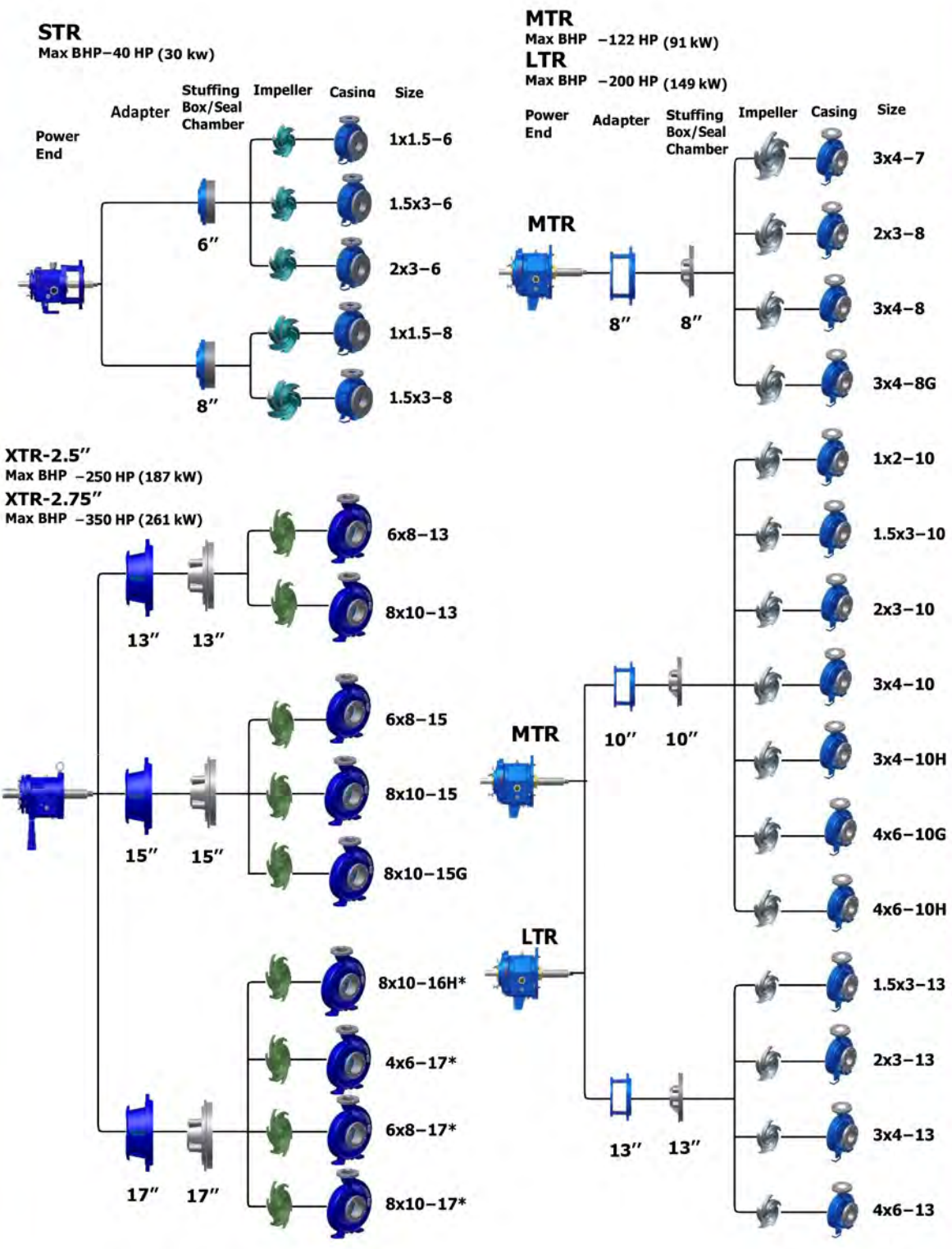
MODULAR INTERCHANGEABILITY



*Uses 350 BHP shaft.

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CONSTRUCTION DETAILS

		STR	MTR	LTR	XTR
Shaft	Diameter at Impeller	0.75 (19)	1 (25)	1.25 (32)	1.5 (38)
	Diameter in Stuffing Box/Seal Chamber(Less Sleeve) (With Sleeve)	1.375 (35) 1.125 (29)	1.75 (45) 1.5 (38)	2.125 (54) 1.875 (48)	2.5 (64) 2 (51)*
	Diameter Between Bearings	1.5 (38)	2.125 (54)	2.5 (64)	3.125 (79)
	Diameter at Coupling	0.875 (22)	1.125 (29)	1.875 (48)	2.375 (60)
	Overhang	6.125 (156)	8.375 (213)	8.375 (213)	9.969 (253)
	Maximum Shaft Deflection	0.002 (0.05)			
	Shaft Deflection Index (L^3/D^4)(With Sleeve) (Less Sleeve)	143 64	116 63	48 29	62 25
Sleeve	O.D. thru Stuffing Box/Seal Chamber	1.375 (35)	1.75 (45)	2.125 (54)	2.5 (64)*
Bearings	Radial	6207	6309	6311	6313
	Thrust	3306	3309	7310	3313
	Bearing Span	4.125 (105)	6.75 (171)	6.875 (164)	9.25 (235)
BigBore Seal Chamber	Bore	2.875 (73)	3.5 (89)	3.875 (98)	4.75 (120)*
Stuffing Box	Bore	2 (51)	2.5 (64)	2.875 (73)	3.375 (86)*
Power Limits	HP (kW) per 100 RPM	1.1 (.82)	3.4 (2.6)	5.6 (4.2)	14 (10.5)**
Temperature	Maximum Liquid Temperature – Oil/Grease Lubrication without Cooling	350°F (177°C)			
	MAWP PSI (kPa)	up to 280 PSI (1931 kPa) at 100°F with 150# flanges			
		Up to 375 PSI (2586 kpa) at 100°F with 300 # flange			
		°Consult Pressure Temperature chart for various temperature			
	Maximum Liquid Temperature –Oil Lubrication with High Temp. Option	700°F (370°C)			
Casing	Corrosion Allowance	.125 (3)			

*** 17 inch sizes have 2.25 inch (57) shaft diameters in stuffing box/seal chamber with sleeve. Shaft sleeve O.D. is 2.75 inches (70) for packing and 2.5 inches (64) for mechanical seals. Seal chamber bore is 4.75 inches (121). Stuffing box bore is 35/8 inches (92).**

**** 17 inch sizes power limit per 100 RPM is 20 HP (15kW).**

All dimensions in inches and (mm). Not to be used for construction.

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Other Related Products...

LOW FLOW PUMPS

- Concentric Casing.
- Radial Vane Impeller.
- Very efficient at low capacities.
- Ideal for small and batch processes.
- Works very well at Throttle valve conditions.
- Maximum Capacity: Upto 50 cu.m/hr.

NON-CLOG PUMPS

- Concentric volute casing with recessed open impeller helps in pumping all spherical solids, slurry, sludge, grit, and stringy or fibrous material without clogging.
- Very adaptive to handle solids in liquid suspension without much degradation.
- Reduction in redial loads leads to smooth operations in throttled valve conditions.
- Most of the parts are retrofit/interchangeable with existing Investa ANSI series pumps.

Why Investa ?

- Precision parts to closest tolerances.
- On-time global & domestic deliveries.
- Offered in wide range of alloys.
- Wide range of process applications.
- Global distribution & service network.
- 25+ Years of proven track record.

Our Infrastructure

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