

INSHENG

Standardized Metallic Pump Type SD & SA

Horizontal, End-suction, Top Discharge, Centerline Mounted,
Single Stage Centrifugal Pump

Available: DIN 22858

ANSI B73.1 Standards



[http:// www.is-made.com](http://www.is-made.com)

Standardized Chemical Pump in metallic

Standardized Metallic Pump

SH pumps are manufactured to DIN standards in respect of design, performance and dimensions.

SH pumps also provide higher flows and heads of performance on request.

Design Features:

1. Back-Pull Out Design - simplifies maintenance as neither the motor nor the piping is disturbed

背拉出式设计 — 缩短维护时间,增加生产效益。

2. Available in different material of constructions.

材质可应客户需求选用。

3. Impellers: Closed impeller with front and back wear rings for standard services. Open and semi-open impellers are designed with back vanes for liquids containing solids. Ideal impeller of flow dynamics through 3-D curved vanes designs available to increase efficiency and power saving.

封闭式叶轮具有前后磨损环标准设计。开放式和半开式叶轮适用于含有固体颗粒的液体。优化3D叶型设计提高叶轮效率和节能。

4. Axial-trust-compensation by using back vanes or relief holes on impeller.

叶轮设计背叶或平衡孔能抵消轴向应力。

5. Full Compliance with ISO 2858 specification.

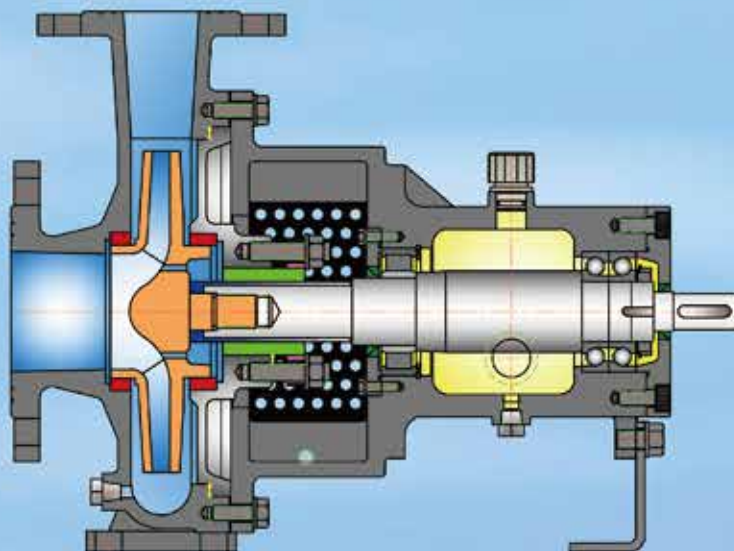
所有尺寸均符合ISO 2858标准规范。

6. Flexibility of design handles wide range of liquids.

可于各种环境液体使用。

7. Renewable Casing and Impeller Wear Rings reduce maintenance costs.

可替换式涡流座及叶轮磨损环可降低维护成本。



8. Oil or Grease Lubrications are available.

应客户需求添加机油或黄油脂。

9. Different mechanical seals design available including API Plans.

适用于各种机械轴封包括API形式。

10. High Efficiency & Energy Saving:

Low Impeller & Volute casing surface roughness at 0.01mm (Rmax=100µm). Normal roughness is 0.25mm (Rmax=250µm).

叶轮、涡流座表面粗糙度均为0.01mm，一般泵粗糙度均为0.25mm。

Precise surface roughness minimized friction loss between the fluid and the impeller.

将表面粗糙优化，可降低叶轮及涡流座磨擦增加使用寿命。

Precise step-ladder design impeller seals; stringent than the API 610 gap range, reduces gap losses (leakage losses) for closed impellers

封闭叶轮具有阶梯式叶轮密封设计，可减少叶轮间隙流失(泄漏损失)。

Special computerized 3-D curved vanes design machined by 5-axis CNC to obtain the most ideal performance of each pump.

特殊的3D叶轮线型设计搭配五轴CNC加工机掌握加工精确度使每台泵浦达到最佳状态。

Applications:

- Industrial process
- Chemical industries
- Waste treatment
- Other various industries

Materials:

Cast Iron, Carbon Steel, SS304, SS316, Duplex, Super Duplex, Hast-C & Titanium.

▲ Performance data for 50 Hz operation

Pump capacity [Q] up to 1500 m³ /h

Total differential head [H] up to 90 m

Motor power rating [P] up to 700 kw

▲ Performance data for 60 Hz operation

Pump capacity [Q] up to 1500 m³ /h

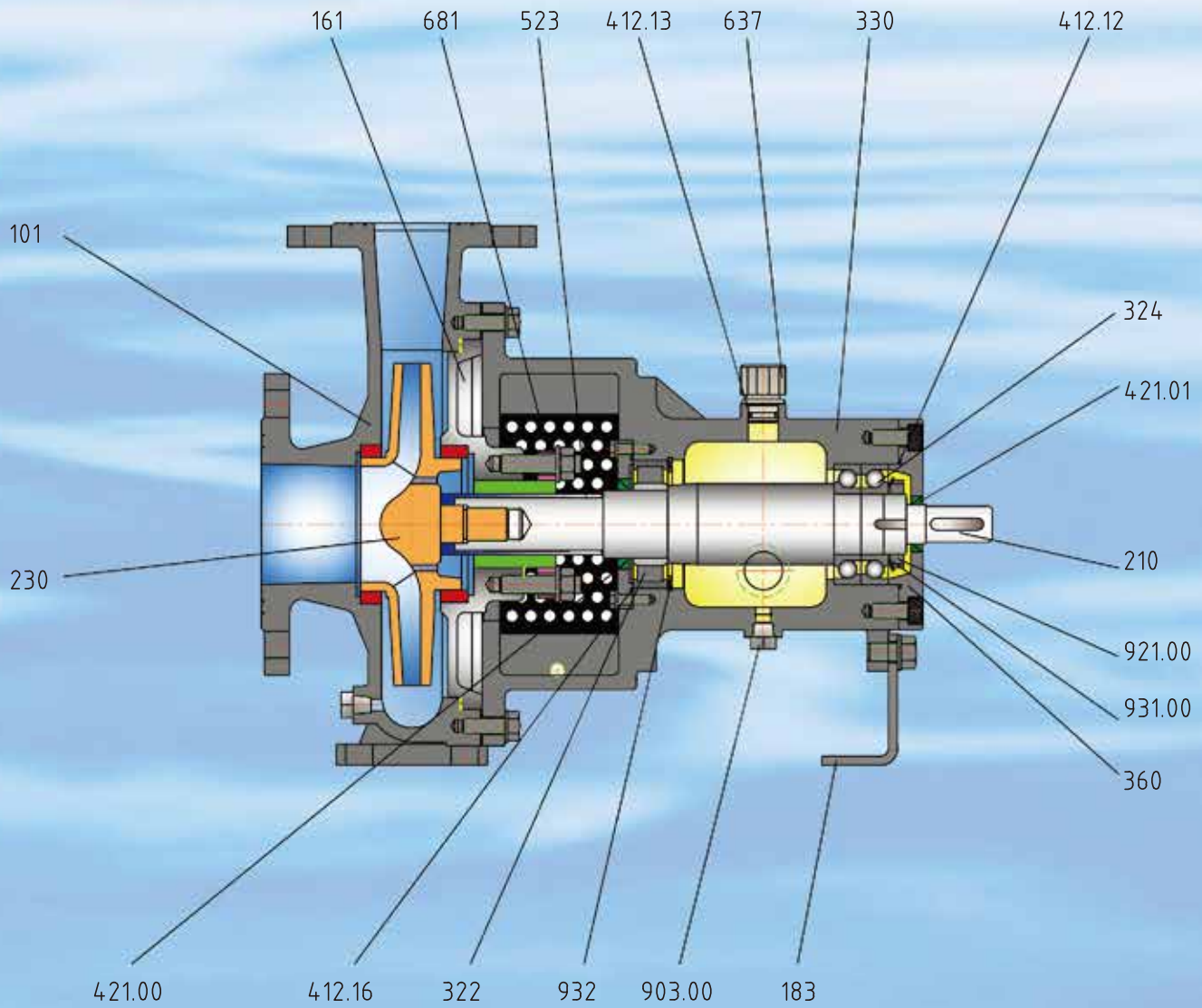
Total differential head [H] up to 90 m

Motor power rating [P] up to 700 kw

Dimensional Layout

Pump dimension for standard pumps, extended pump dimension on request.

Sectional Drawing and Parts List Design SD



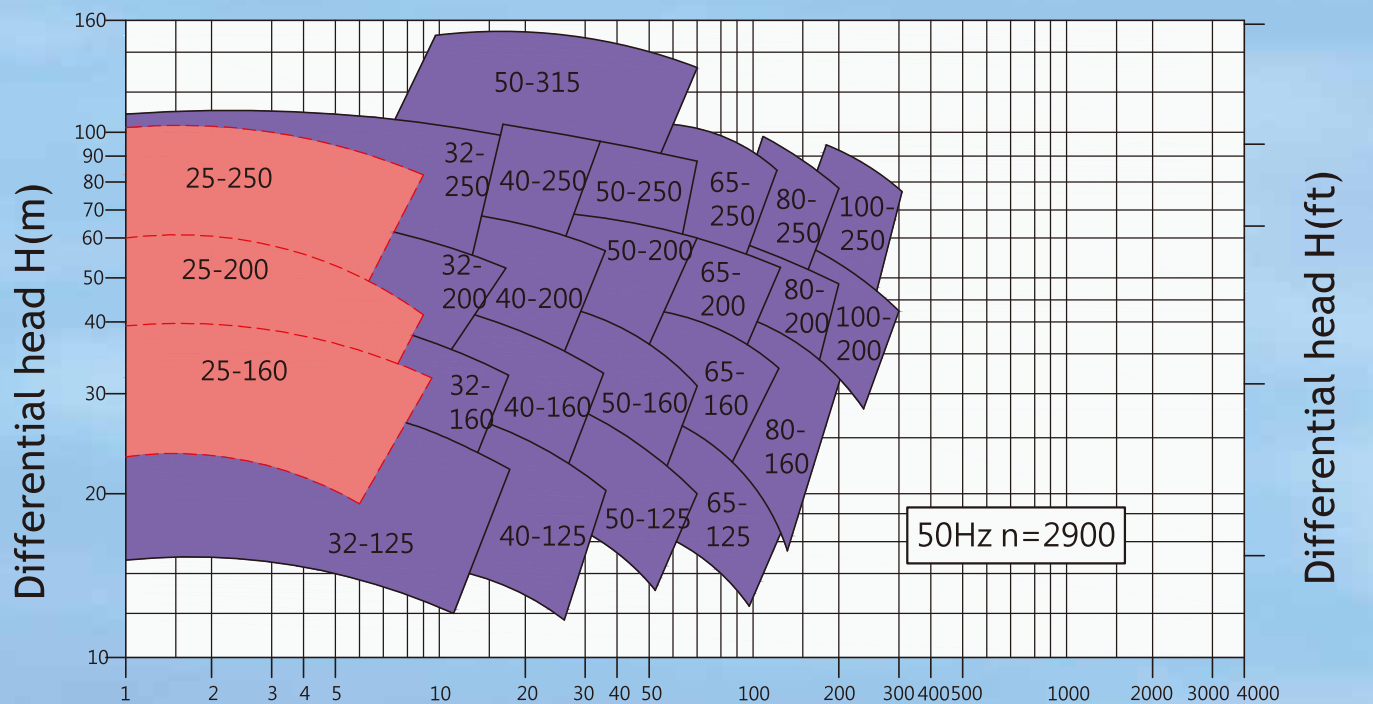
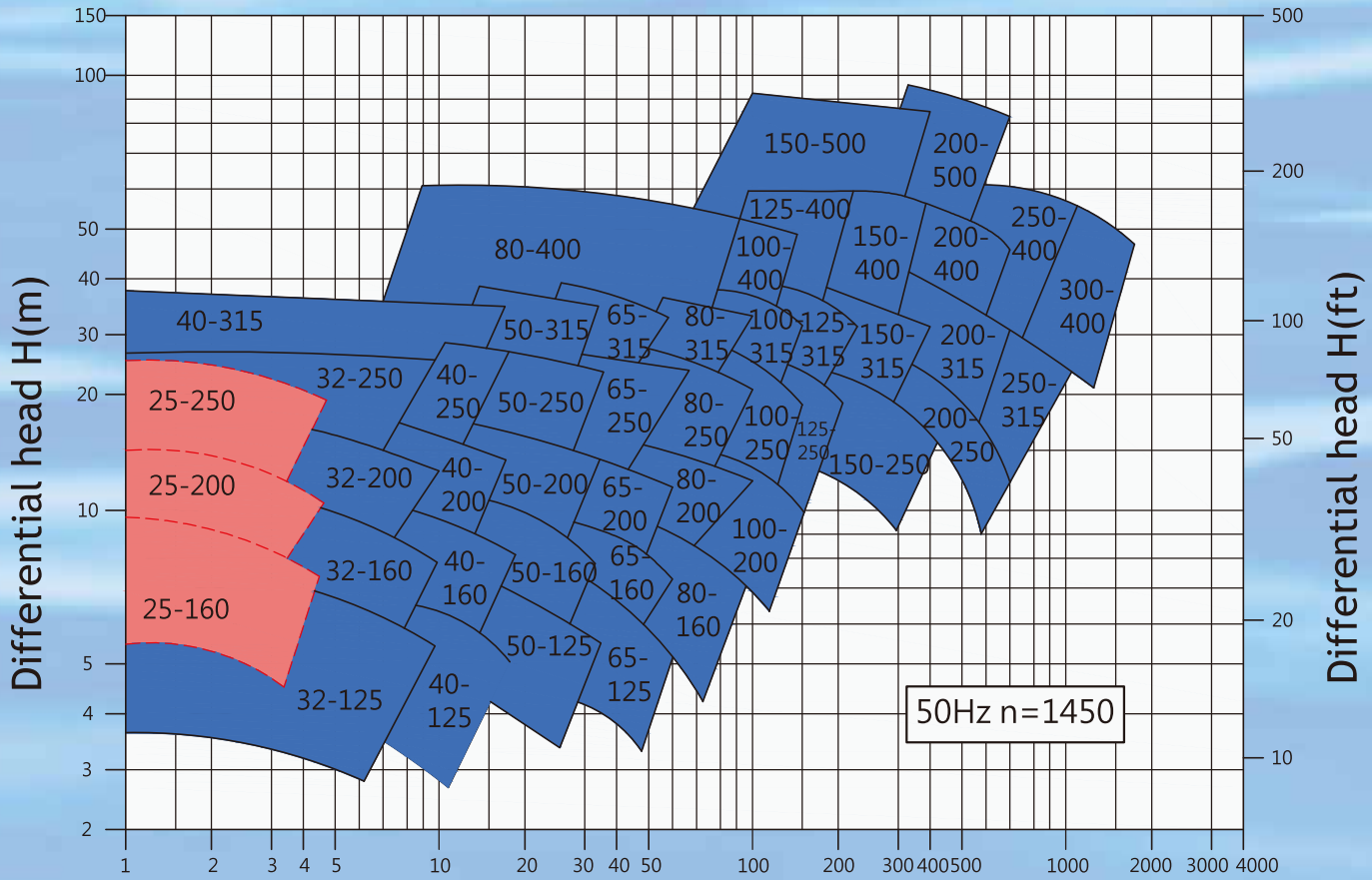
101	渦流座 Volute casing	412.XX	O型環 O-ring	931.00	太陽華司 Lock washer
161	背板 Casing cover	421.XX	油封 Radial shaft seal ring	932	C型扣環 Circlip
183	腳座 Support	168	機械軸封 Mechanical shaft seal		
210	軸心 Shaft	523.XX	軸套 Shaft sleeve		
230	葉輪 Impeller	637	注油孔塞頭 Oil filler plug		
322	圓柱滾子軸承 Cylindrical roller bearing	681	安全護蓋 Guard		
323	深溝滾珠軸承 Deep groove ball bearing	903.XX	塞頭 Screwed plug		
330	軸承基座 Bearing bracket	912.XX	洩流孔塞頭 Drain plug		
360	軸承蓋 Bearing cover	921.00	太陽螺帽 Shaft nut		

Part-No. and designation in accordance with DIN 24250

Performance range charts with type SD

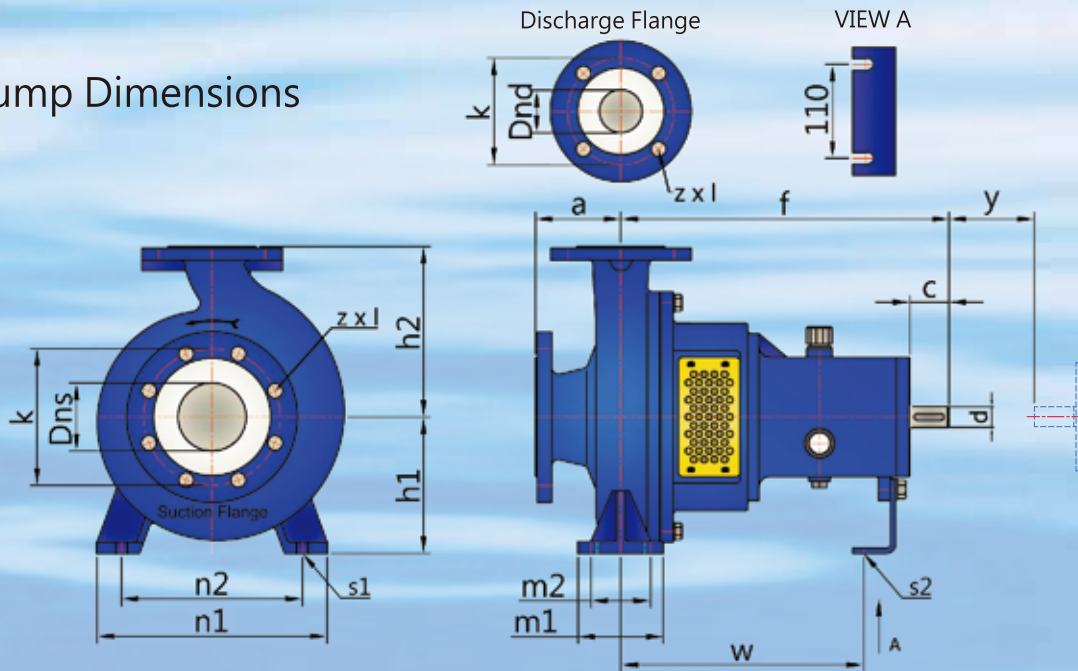
Quantity Q(m³/h)

4.4 10 20 50 100 200 500 1000 2000 5000 10000 US.GPM
 3.7 10 20 50 100 200 500 1000 2000 5000 10000 IMP.GPM



Standardized Metallic Pump

Pump Dimensions

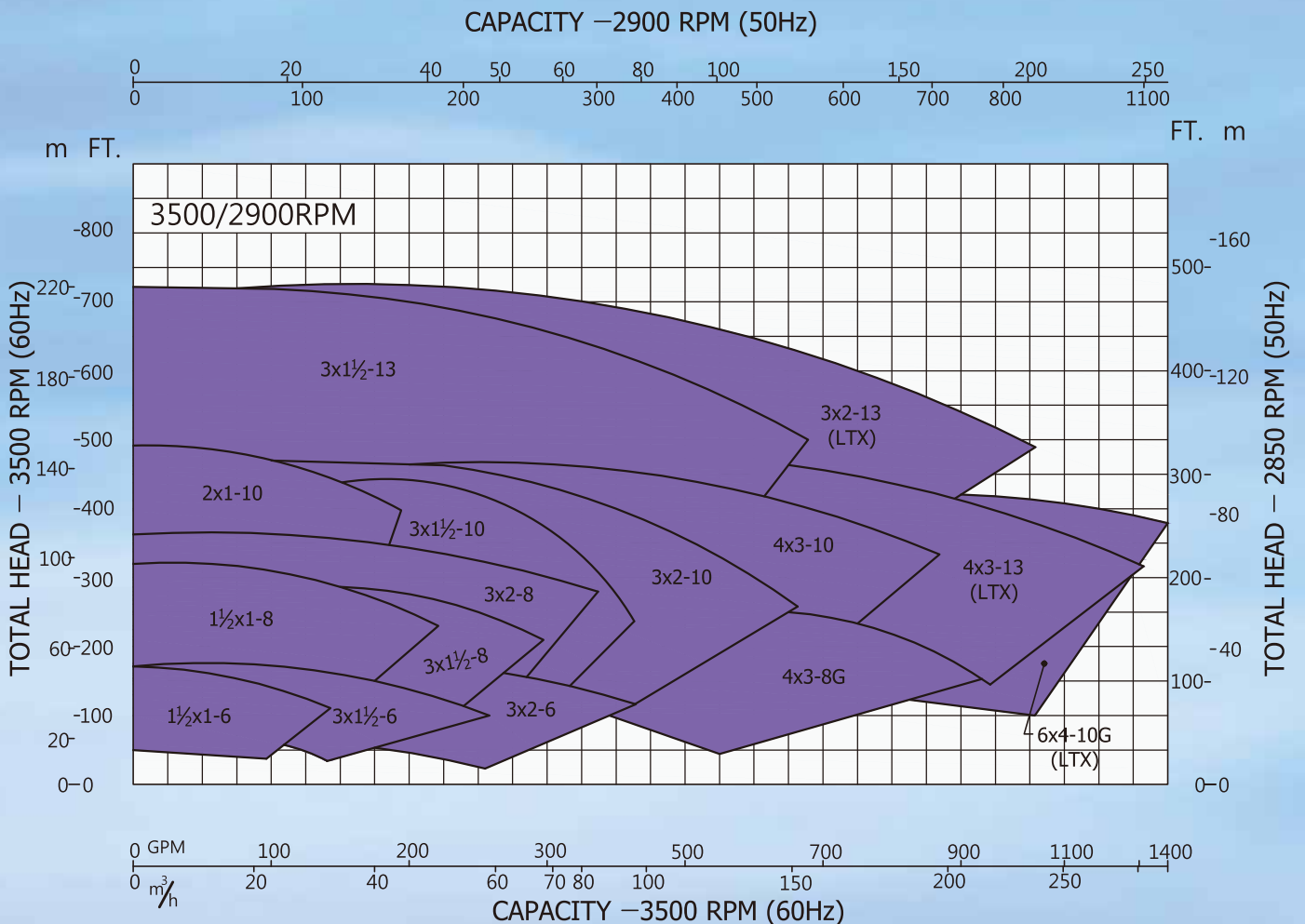
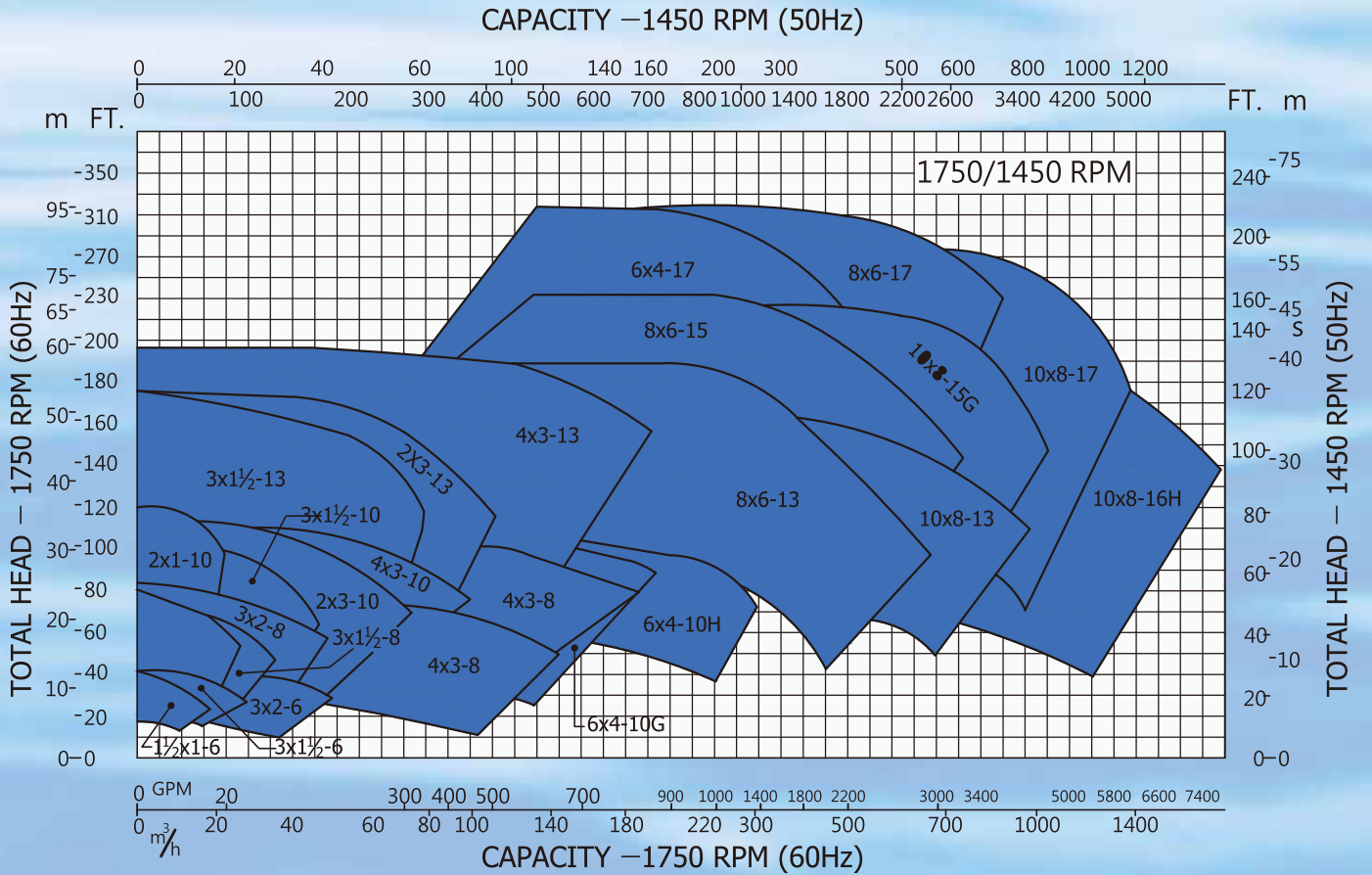


Type	Size	Pump Dimensions					Foot Dimensions					Shaft End		Suction Flange				Discharge Flange					
		a	f	h1	h2	w	n1	n2	m1	m2	s1	s2	y	d	c	DNs	k	l	z	DNd	k	l	z
SD	40/25/125	80	385	112	140	285	240	190	135	70	M12	M12	100	24	50	40	110	M16	4	25	85	M12	4
	40/25/160	80	385	132	160	285	240	190	135	70	M12	M12	100	24	50	40	110	M16	4	25	85	M12	4
	50/32/125	80	385	112	140	285	240	190	135	70	M12	M12	100	24	50	50	125	M16	4	32	100	M16	4
	50/32/160	80	385	132	160	285	240	190	125	70	M12	M12	100	24	50	50	125	M16	4	32	100	M16	4
	50/32/200	80	385	160	180	285	250	190	145	70	M12	M12	100	24	50	50	125	M16	4	32	100	M16	4
	65/40/125	80	385	112	140	285	240	190	135	70	M12	M12	100	24	50	65	145	M16	4	40	110	M16	4
	65/40/160	80	385	132	160	285	240	190	135	70	M12	M12	100	24	50	65	145	M16	4	40	110	M16	4
	65/40/200	100	385	160	180	285	250	212	145	70	M12	M12	100	24	50	65	145	M16	4	40	110	M16	4
	65/40/250	100	500	180	225	370	335	250	160	95	M12	M12	100	32	80	65	145	M16	4	40	110	M16	4
	65/40/315	125	500	200	250	370	380	280	155	95	M12	M12	100	32	80	65	145	M16	4	40	110	M16	4
	65/50/125	80	385	112	140	285	240	190	135	70	M12	M12	100	24	50	65	145	M16	4	50	125	M16	4
	65/50/160	80	385	132	160	285	240	190	135	70	M12	M12	100	24	50	65	145	M16	4	50	125	M16	4
	80/50/125	100	385	132	160	285	240	190	135	70	M12	M12	100	24	50	80	160	M16	8	50	125	M16	4
	80/50/160	100	385	160	180	285	250	212	145	70	M12	M12	100	24	50	80	160	M16	8	50	125	M16	4
	80/50/200	100	385	160	200	285	265	212	160	70	M12	M12	100	24	50	80	160	M16	8	50	125	M16	4
	80/50/250	125	500	180	225	370	265	250	160	95	M12	M12	100	32	80	80	160	M16	8	50	125	M16	4
	80/50/315	125	500	225	280	370	370	280	185	95	M12	M12	100	32	80	80	160	M16	8	50	125	M16	4
	80/65/125	100	385	132	160	285	240	190	135	70	M12	M12	100	24	50	80	160	M16	8	65	145	M16	4
	80/65/160	100	385	160	180	285	250	212	145	70	M12	M12	100	24	50	80	160	M16	8	65	145	M16	4
	80/65/250	125	500	180	225	370	335	250	160	95	M12	M12	100	32	80	80	160	M16	8	65	145	M16	4
	100/65/160	100	500	160	200	270	265	212	160	95	M12	M12	100	32	80	100	180	M16	8	65	145	M16	4
	100/65/200	100	500	180	225	370	335	250	160	95	M12	M12	140	32	80	100	180	M16	8	65	145	M16	4
	100/65/250	125	500	200	250	370	340	280	180	120	M12	M12	140	32	80	100	180	M16	8	65	145	M16	4
	100/65/315	125	530	225	280	370	370	315	185	120	M16	M16	140	42	110	100	180	M16	8	65	145	M16	4
	125/80/160	125	500	180	225	370	335	250	160	95	M12	M12	140	32	80	125	210	M16	8	80	160	M16	8
	125/80/200	125	500	180	250	370	335	250	170	95	M12	M12	140	32	80	125	210	M16	8	80	160	M16	8
	125/80/250	125	500	225	280	370	385	315	205	120	M20	M12	140	32	80	125	210	M16	8	80	160	M16	8
	125/80/315	125	530	250	315	370	400	315	210	120	M16	M12	140	42	110	125	210	M16	8	80	160	M16	8
	125/100/250	140	530	225	280	370	375	315	210	120	M20	M12	140	42	110	125	210	M16	8	100	180	M16	8
	125/100/315	140	530	250	315	370	400	315	210	120	M16	M12	140	42	110	125	210	M16	8	100	180	M16	8
150/125/250	140	530	250	355	370	400	315	225	120	M16	M12	140	42	110	150	240	M20	8	125	210	M16	8	
150/125/315	140	530	280	355	370	485	400	225	150	M16	M12	140	42	110	150	240	M20	8	125	210	M16	8	
200/150/250	160	530	280	375	370	500	400	235	150	M20	M12	180	42	110	200	295	M20	12	150	240	M20	8	
250/200/315	180	670	315	450	500	560	450	280	150	M24	M16	180	48	110	200	355	M24	12	200	295	M20	12	

Dimensions in mm
 Flange connection dimensions to DIN 2501, PN 16
 Keyway and key to DIN 6885
 Shaft to DIN 748

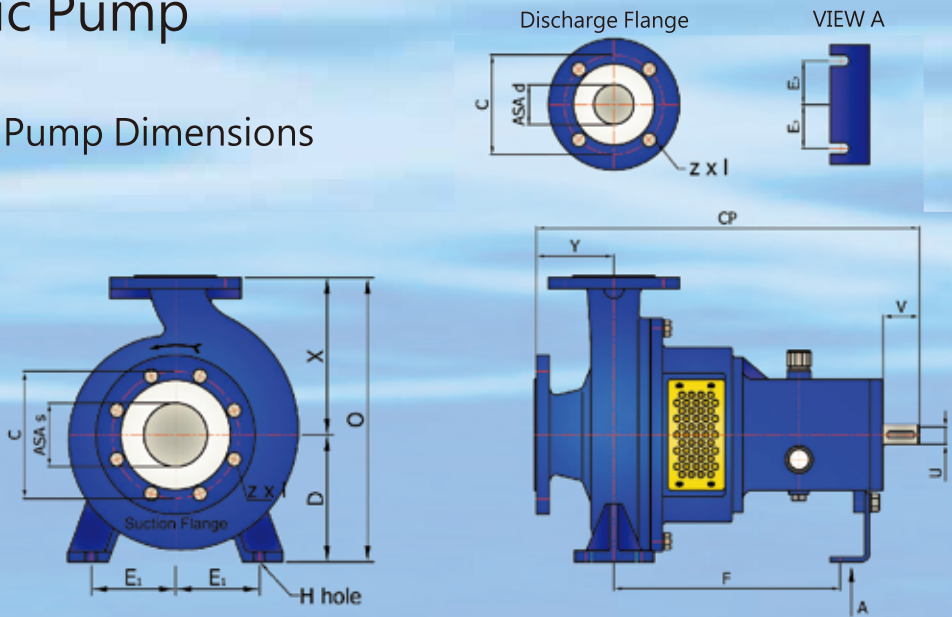
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Performance range charts with type SA



ANSI Metallic Pump

Pump Dimensions



Type	Size	ANSI Designation	Pump Dimensions					Foot Dimensions				Shaft End			Suction Flange				Discharge Flange			
			Y	CP	D	X	O	2E ₁	2E ₂	H	F	U	V	Keyway	ASA s	C	z	l	ASA d	C	z	l
SA	1.5x1-6	AA	4	17.5	5.25	6.5	11.75	6	X	0.625	7.25	0.875	2	0.188x0.094	1.5	3.875	4	0.6	1	3.125	4	0.6
			102	445	133	165	298	152	X	16	184	22.3	51	4.76x2.38	40	98.4	4	15	25	79.4	4	15
	3x1.5-6	AB	4	17.5	5.25	6.5	11.75	6	X	0.625	7.25	0.875	2	0.188x0.094	3	6	4	0.75	1.5	3.875	4	0.75
			102	445	133	165	298	152	X	16	184	22.3	51	4.76x2.38	80	152.4	4	19	40	98.4	4	19
	3x2-6	AC	4	17.5	5.25	6.5	11.75	6	X	0.625	7.25	0.875	2	0.188x0.094	3	6	4	0.75	2	4.75	4	0.75
			102	445	133	165	298	152	X	16	184	22.3	51	4.76x2.38	80	152.4	4	19	50	120.6	4	19
	1.5x1-8	AA	4	17.5	5.25	6.5	11.75	6	X	0.625	7.25	0.875	2	0.188x0.094	1.5	3.875	4	0.6	1	3.125	4	0.6
			102	445	133	165	298	152	X	16	184	22.3	51	4.76x2.38	40	98.4	4	15	25	79.4	4	15
	3x1.5-8	AB	4	17.5	5.25	6.5	11.75	6	X	0.625	7.25	0.875	2	0.188x0.094	3	6	4	0.75	1.5	3.875	4	0.75
			102	445	133	165	298	152	X	16	184	22.3	51	4.76x2.38	80	152.4	4	19	40	98.4	4	15
	3x2-8	A60	4	23.5	8.25	9.5	17.75	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	3	7	4	0.75	2	4.75	4	0.75
			102	597	210	242	298	248	184	16	184	28.58	67	6.35x3.18	80	178	8	19	50	120.6	4	19
	4x3-8	A70	4	23.5	8.25	11	19.25	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	4	7.5	4	0.75	3	6	4	0.75
			102	597	210	280	490	248	184	16	184	28.58	67	6.35x3.18	100	190.5	8	19	80	152.4	4	19
	2x1-10	A05	4	23.5	8.25	8.5	16.75	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	2	4.75	4	0.75	1	3.125	4	0.6
			102	597	210	216	425	248	184	16	184	28.58	67	6.35x3.18	50	120.6	4	19	25	79.4	4	15
	3x1.5-10	A50	4	23.5	8.25	8.5	16.75	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	3	6	4	0.75	1.5	3.875	4	0.75
			102	597	210	216	425	248	184	16	184	28.58	67	6.35x3.18	80	152.4	4	19	40	98.4	4	19
	3x2-10	A60	4	23.5	8.25	9.5	17.75	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	3	6	4	0.75	2	4.75	4	0.75
			102	597	210	242	450	248	184	16	184	28.58	67	6.35x3.18	80	152.4	4	19	50	120.6	4	19
	4x3-10	A70	4	23.5	8.25	11	19.25	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	4	7.5	8	0.75	3	6	4	0.75
			102	597	210	280	490	248	184	16	184	28.58	67	6.35x3.18	100	190.5	8	19	80	152.4	4	19
	6x4-10	A80	4	23.5	10	13.5	23.5	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	6	9.5	8	0.875	4	7.5	8	0.75
			102	597	254	34.3	597	248	184	16	184	28.58	67	6.35x3.18	150	241.3	8	22	100	190.5	8	19
	3x1.5-13	A20	4	23.5	10	10.5	20.5	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	3	6	4	0.75	1.5	3.875	4	0.6
			102	597	254	266	520	248	184	16	184	28.58	67	6.35x3.18	80	152.4	4	19	40	98.4	4	15
	3x2-13	A30	4	23.5	10	11.5	21.5	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	3	6	4	0.75	2	4.75	4	0.75
			102	597	254	292	546	248	184	16	184	28.58	67	6.35x3.18	80	152.4	4	19	50	120.6	4	19
4x3-13	A40	4	23.5	10	12.5	22.5	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	4	7.5	4	0.75	3	6	4	0.75	
		102	597	254	318	572	248	184	16	184	28.58	67	6.35x3.18	100	190.5	8	19	80	152.4	4	19	
6x4-13	A80	4	23.5	10	13.5	23.5	9.75	7.25	0.625	12.5	1.125	2.652	0.25x0.125	6	9.5	8	0.875	4	7.5	8	0.75	
		102	597	254	34.3	597	248	184	16	184	28.58	67	6.35x3.18	150	241.3	8	22	100	190.5	8	19	
8x6-13	A90	6	33.875	14.5	16	30.5	16	9	0.875	18.75	2.375	4	0.625x0.125	8	11.75	8	0.875	6	9.5	8	0.875	
		152	860	368	406	775	406	229	22	476	60.33	67	15.88x7.94	200	298.4	8	22	150	241.3	8	22	
10x8-13	A100	6	33.875	14.5	18	32.5	16	9	0.875	18.75	2.375	4	0.625x0.125	10	14.25	12	0.875	8	11.75	8	0.875	
		152	860	368	457	826	406	229	22	476	60.33	67	15.88x7.94	250	361.9	12	25	200	298.4	8	22	
8x6-15	A110	6	33.875	14.5	18	32.5	16	9	0.875	18.75	2.375	4	0.625x0.125	8	11.75	8	0.875	6	9.5	8	0.875	
		152	860	368	457	826	406	229	22	476	60.33	67	15.88x7.94	200	298.4	8	22	150	241.3	8	22	
10x8-15	A120	6	33.875	14.5	19	33.5	16	9	0.875	18.75	2.375	4	0.625x0.125	10	14.25	12	0.98	8	11.75	8	0.875	
		152	860	368	483	851	406	229	22	476	60.33	67	15.88x7.94	250	361.9	12	25	200	298.4	8	22	
6x4-17	A105	6	33.875	14.5	16	30.5	16	9	0.875	18.75	2.375	4	0.625x0.125	6	9.5	8	0.875	4	7.5	8	0.75	
		152	860	368	406	775	406	229	22	476	60.33	67	15.88x7.94	150	241.3	8	22	100	190.5	8	19	
8x6-17	A110	6	33.875	14.5	18	32.5	16	9	0.875	18.75	2.375	4	0.625x0.125	8	11.75	8	0.875	6	9.5	8	0.875	
		152	860	368	457	826	406	229	22	476	60.33	67	15.88x7.94	200	298.4	8	22	150	241.3	8	22	
10x8-17	A120	6	33.875	14.5	19	33.5	16	9	0.875	18.75	2.375	4	0.625x0.125	10	14.25	12	0.98	8	11.75	8	0.875	
		152	860	368	483	851	406	229	22	476	60.33	67	15.88x7.94	250	361.9	12	25	200	298.4	8	22	

All Dimensions in inch and (mm)
Class 150 & 300 Raised Face Flanges

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