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ShangHai HanThing pump Co.,ltd
Website: www.hanthing.com
Address: NO.566, Tongli road, songjiang district, Shanghai, China
Mobile: +86-021-56550238
Email: sales@hanthing.com

汉森
Hanthing

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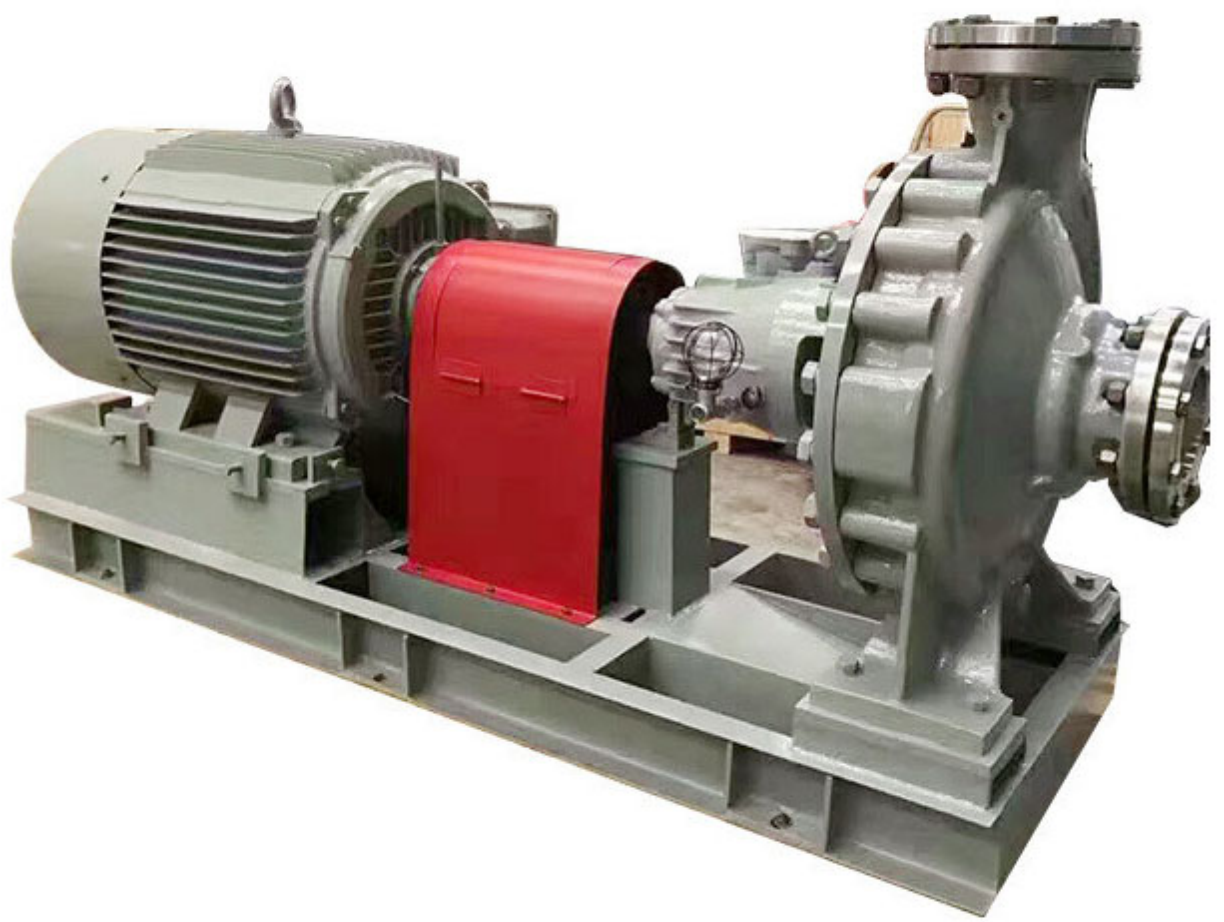
ZA/ZE系列化工泵

ZA/ZE Series Chemical Pump



Product Catalog 2020

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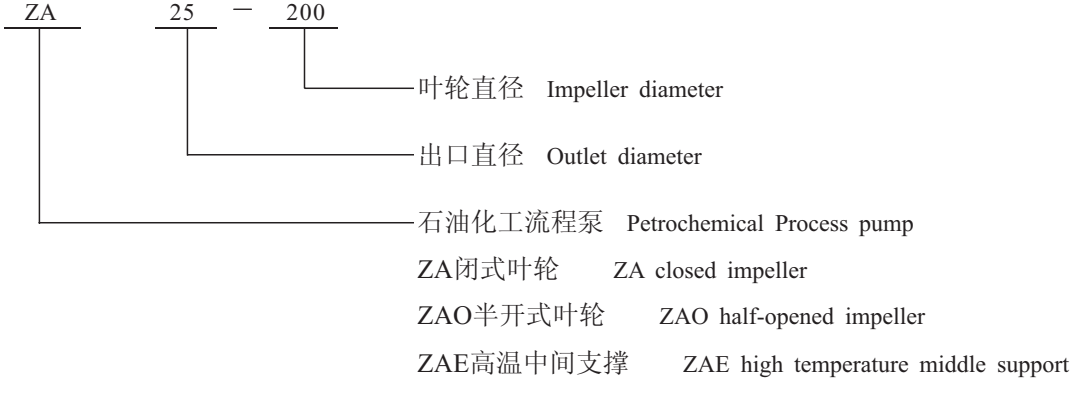
概 述 General

ZA型离心式流程泵是引进国外先进技术制造。按照API610、VDMA24297(轻/中型)和GB/T3215-82规范而设计、生产的产品。可输送各种温度和浓度的硫酸、硝酸、盐酸和磷酸等无机酸和有机酸溶液；各种温度和浓度的氢氧化钠和碳酸钠等碱性溶液；各种盐溶液；各种液态石油化工产品、有机化合物以及其它有腐蚀性的液体。该型泵适用于炼油厂、石油化学工业煤加工工程、低温工程、造纸业、制糖业、供水厂、海水 化厂、发电厂、环保工程和 舶业等。

Model ZA centrifugal process pump is made by means of introducing the foreign advanced know-how and designed in accordance with API610 ,VDMA24297(light/middle type) and GB/T3215-82 and can be used to transport the vitriol, nitric acid, hydrochloric acid, phosphoric acid etc. Inorganic and organic acid solutions of various temperatures and concentrations; the sod-ium hydroxide, sodium carbonate etc. alkaline solutions of various temperatures and concentrations; various salt solutions; various liquid petrochemical products, organic chemical compounds and other corrosive liquids. Suitable for oil refinery, petrochemical industry, coal process engineering, sub-zero engineering, paper making, sugar refinery, water works, sea water desalt plant, power plant, environmental protection project, ship industry and so on.

型号说明 Model meaning



主要用途 Main useage

- ■ 炼油厂、石油化学工业、煤加工工业和低温工程；
- ■ 化学工业、造纸、纸浆业、制糖业和普通流程工业；
- ■ 供水厂、海水 化厂；
- ■ 供暖和空气调节系统；
- ■ 发电厂；
- ■ 环境保护工程；
- ■ 舶 及海上工业等。

- ☐ Oil refinery, petrochemical industry, coal process Industry and sub-zero engineering;
- ☐ Chemical industry, paper making, paper pulp, sugar refinery and common process engineering;
- ☐ Water works, sea water desalt plant;
- ☐ Warming and air-conditioning system;
- ☐ Power plant;
- ☐ Environmental protection project;
- ☐ Ship and maritime industry and so on.

性能参数 Performance parameters

- ■ 口　　径　DN 25-400mm
- ■ 流　　量　Q≤2400m³/h
- ■ 扬　　程　H≤ 300m
- ■ 工作压力　P≤ 2.5MPa (当压力需高于2.5MPa时要提前提出，在合同中注明)
- ■ 工作温度　T　-80~+450℃ (当温度低于-25℃或水温高于80℃，烃类温度高于120℃时要提前说明)

- □ Aperture DN 25-400mm
- □ Flow Q≤2400m³/h
- □ Head H≤300m
- □ Working pressure P≤2.5MPa(It has to be set forth in advance and noted in the contract in case of a pressure higher than 2.5MPa.)
- □ Working temperature T -80~+450℃(It has to be noted in advance in case of a temperature below -25℃ or a water temperature higher than 80℃ and a hydrocarbon temperature higher than 120℃.)

结构特点 Structural characteristic

该泵为单级、卧式、径向剖分式蜗壳泵。ZA型常规泵体为脚支撑(当需要时按需要为ZAE型中心支撑)，采用单吸径向叶轮。轴向吸入，径向排出。根据使用条件，采用前、后口环及平衡孔平衡轴向力。标准设计出厂轴封采用单端面或双端面机械密封，也可采用填料密封。并配有冷却、冲洗或密封液系统。(如轴封有特殊要求请在合同中注明)

标准管路按API规范设计。吸入及排出管法兰的额定压力等级相同(常规法兰标准执行GB法兰2.5MPa等级，当有特殊要求时需提前与总部沟通)。从电机端看，泵为顺时针转动。

This pump is single-stage horizontal radial cut-opened spiral casing pump. The pump casing is foot supported and the impeller is a single-suction radial one, axial suck-in and radial drain-out. Both front and rear oral rings and balancing hole are used to balance the axial force upon the conditions of use. The standard designed axle seal at ex-works uses a single or dual end-face mechanical seal, either a packing seal, and is fitted cooling, rinsing or seal liquid system.(Please make a note in the contract in case of a special requirement with the axle seal).

The standard pipeline is designed per API. The rated pressure classes of the flanges on both suck-in and drain-out pipelines. The pump moves CW viewing from the motor.

输送介质 Media to be transported

各种温度和浓度的硫酸、硝酸、盐酸和磷酸等无机酸和有机酸。各种温度和浓度的氢氧化钠和碳酸钠等碱性溶液，各种盐溶液。

各种液态石油化工产品，有机化合物，以及其它有腐蚀性的原料和产品。

目前我厂的　腐蚀材料，能满足上述各种介质的要求。订货时，请用户提供所要输送介质的详细情况。

The vitriol, nitric acid, hydrochloric acid, phosphoric acid etc. inorganic and organic acids of various temperatures and concentrations; the sodium hydroxide, sodium carbonate etc. alkaline solutions of various temperatures and concentrations; various salt solutions.

Various liquid petrochemical products, organic chemical compounds and other corrosive raw materials and products.

The corrosion-proof materials available at present in this Co. can meet with the demands of the above media. Please provide the detailed information about the medium to be transported at order.

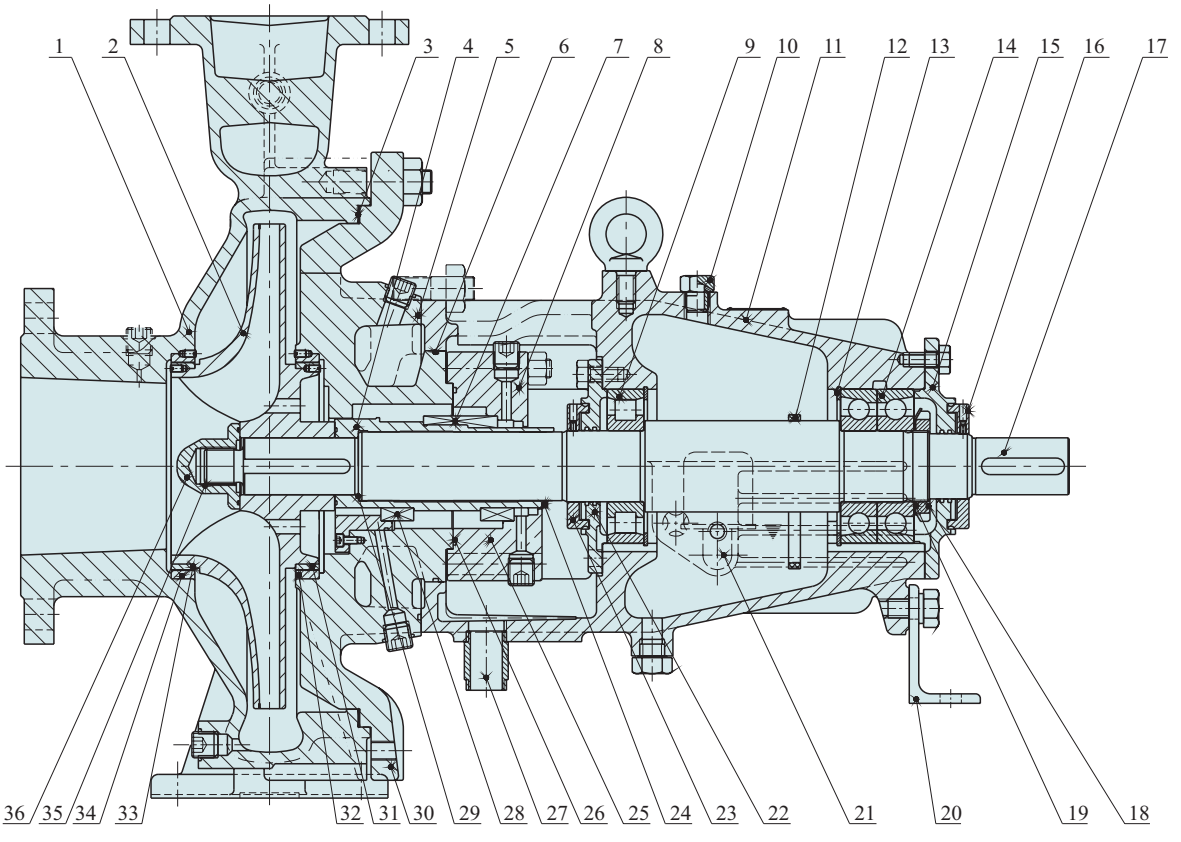
设计特点 Characteristic of design

设计特点 Characteristic of design	优　　点 Merits	经济效益 Economical benefit
按照API610(第八版)标准设计。 采用组件装配，联轴器带有加长段。 Designed per API610(the 8th version) Use modules' assembly, the clutch fitted with an extended section.	保证执行流程工业的结构和维修标准，拆装泵时无需拆下管道和电机，易于拆装，便于维修。 A structure able to ensure the execution of the Process industry and service standard, no need to remove both pipeline and motor when to remove the pump, easy to remove and repair.	可靠性高，互换性好。 停工时间短，维修费用低。 High reliability, good interchangeability, short stop time, low cost of service.
双蜗壳泵体(口径80mm以上)。 管径大，腐蚀余量大。 Dual spiral casings with the pump(theaperture over 80mm) Big pipe diameter, big surplus of corrosion.	径向力小，轴挠度小，轴承处挠度小于0.05mm 管内流速小，振动小，噪音低，泵体带有自动排气装置。管道结构简单，承载好，泵体无需支架，不会断裂寿命长。 Small radial force, small deflection of axle,which at the bearing is less than 0.05mm. Small flowrate and vibration and low noise inside of pipe, an automatic exhauster is set with the pump casing. The pipeline is of simple structures and a good bearing capacity. No need of a stand with the pump casing, it is not bearkable and of a long duration.	轴承和　磨轴承使用寿命长，维修方便，费用低，效率高，能耗小，管道支撑和消音附件费用低，备件少，稳定性高。 Bearing and wearable bearing feature a long duration, easy repair，low cost，high efficiency, small consumption, low cost for pipeline support and silencing fittings, less spare parts, high stability.
叶轮结构： 闭式叶轮(标准件) 半开式叶轮(SZA型) 叶轮用钢丝螺套自锁 Structure of impeller: Close impeller(standard part) Half-opened impeller(model ZAO) The impeller is self locked with steel wire screwed sleeve	闭式叶轮能在各种条件下良好运行，效率高，流蚀值低。 开式叶轮适于输送汽液两相流和含固体颗粒浓度大(达10%)的液体。 汽蚀值低，要求装置的汽蚀余量小，轴不与输送的介质接触。 The closed impeller can move well under various conditions, of a high efficiency and a low value of flow corrosion. The opened impeller is suitable for transporting the steam-liquid two-phase fluid. The liquid containing solid grains and of a big concentration(up to 10%). Low value of steam corrosion, small NPSH is required for the device, the axle is not contacted with the transported medium.	本系列泵结构合理，能耗低，稳定可靠，价格便宜。 This pump is reasonably structured, low energy consumption, stable, reliable and cheap.

设计特点 Characteristic of design

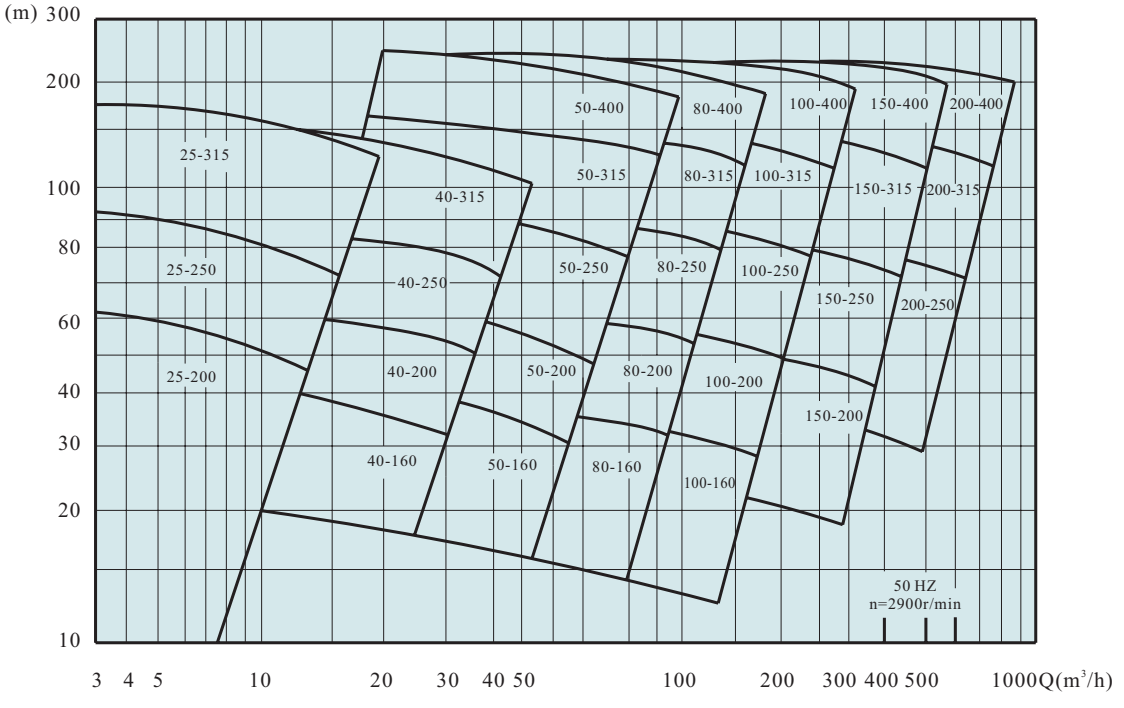
设计特点 Characteristic of design	优　点 Merits	经济效益　Economical benefit
密封： 优先采用机械密封(单端面和双端面)也可采用填料密封 Seal: Use a mechanical seal(single or dual end-face) first and a packing seal too.	单端面机封用于一般介质的密封； 双端面机封用于腐蚀性强、高温、含纤维、润滑性差，以及有毒、易挥发、易燃易爆、易结晶、贵重介质的密封。 Single end-face mechanical seal is usedfor common media; Dual end-face mechanical seal is used for those media strong corrosive, high tempe-rature, containing fiber, poor lubrication property, toxic, volatile, combustible, explosive, easy crystallized and valuable.	密封可靠，降低维护费用。 Reliable seal, lowering the cost of service.
磨损件可以更换。 叶轮和泵体口环，(角结构也可)轴封处轴套，泵体磨损环可以泵冲洗。 Easily-worn-out parts are replaceable Impeller and the oral ring of the pump casing,(also the angular structure), the muff at the axle seal, the wear ring of the pump casing can be rinsed by the pump.	当泵体、叶轮上的口环和轴承套受磨损后，更换之，泵体、叶轮和轴承仍能继续使用。 Replace the oral ring and bearing sleeve on the impeller of the pump casing. When they are worn out while keep the pump casing, impeller ad bearing on use.	节省维修和备件费用。 维修简便，迅速。 Save the cost of service and spare parts. Easy and quick service
整体重型轴承支架。 油润滑球轴承，自动润滑而且自动控制油位。 当温度T≤170℃时，不需冷却。 当温度T＞170℃时，采用风冷或水冷却。 迷宫环密封(标准件)，也可用径向密封。 Integrated heavy bearing stand Oil-lubricated ball bearing, automatic lubrication and control of the oil level. No need of cooling at the temperature T≤170℃. Use air or water cooling at the temperature ＞170℃. Sealed with a labyrinth ring(stndard part), and a radial seal too.	轴与轴承支架同轴度好，稳定性好，刚性好，挠度小。nk＞n，零件少。 不增加轴承温度。 Both axle and bearing stands are of a good concentricity, good stability, good rigidity and small deflection. nk＞n, less parts.	填料密封或机械密封寿命长，易于维修，停工时间短。 运行费用低，不需对冷却系统投资。 Packing or mechanical seal has a long duration, is easy to repair and of a short stop time. Low cost of movement, no need to invest a cooling system.
填料箱尺寸适宜。 Proper dimension of the packing box	填料密封和各种结构的机械密封，可互换。 Good interchangeability between packingseal and various mechanical seals.	互换性好，改型时填料箱不必另行加工。 The packing box needs not processing separately with the packing changed.

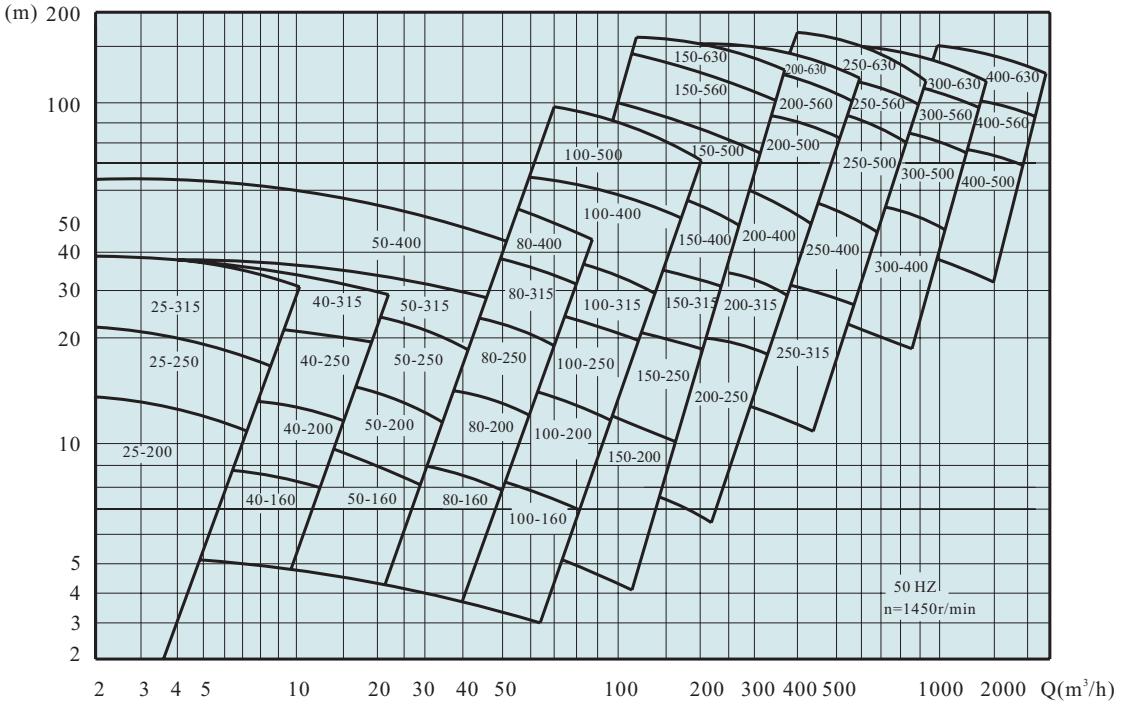
ZA型泵结构图 ZA type pump structural drawing



1-泵体 Pump casing
2-叶轮 Impeller
3、29-垫片 Gasket
4、24-轴套 Shaft sleeve
5、6、26-O形圈 O-ring
7、28-机械密封 Mechanical seal
8、25-密封盖 Sealing cover
9、14-滚珠轴承 Ball bearing
10-放气塞 Vent filter
11-悬架 Bearing bracket
12-甩油环 Lubricating ring
13-卡环 Circlip
15、22- 轴承压盖 Bearing cover
16、23防尘圈 Dust-proof ring
17-轴 Shaft
18-轴承螺母 Bearing nut
19- 垫圈 Gasket
20-支脚 Support foot
21- 油杯 Constant-level-oiler
27-排液管 Pipe
30-泵盖 Pump cover
31、33-叶轮密封环 Impeller seal ring
32、34-泵体密封圈 Seal ring of pump casing
35-钢丝螺套 Threaded insert
36-叶轮螺母 Impeller nut

ZA型泵性能范围(50Hz) Performance range of model ZA pump(50Hz)





ZA型泵性能表 ZA type performance table

泵型号 Pump Type	叶轮型式 Impeller Type	泵额定转速 Rated rotary speed of pump n=2900r/min									泵额定转速 Rated rotary speed of pump n=1450r/min								
		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84	
					电机功率及型号 Power and model of motor									电机功率及型号 Power and model of motor					
					kW		kW		kW					kW		kW		kW	
ZA25-200	A	11.5	49	LK0	5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	5.8	12	LK0	1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	B	10.5	42		4	Y112M-2	5.5	Y132S1-2	7.5	Y132S2-2	5.4	11						1.1	Y90S-4
	C	9	36		3	Y100L-2	4	Y112M-2	5.5	Y132S1-2	4.6	8.5							
	D	7.5	28		2.2	Y90L-2	3	Y100L-2	4	Y112M-2	4	6.5							
	E	5.5	16		1.5	Y90S-2	1.5	Y90S-2	2.2	Y90L-2	3	4							
ZA25-250	A	10.5	80	LK2	11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	7.5	18	LK1	2.2	Y100L1-4	3.0	Y100L2-4	4	Y112M-4
	B	9.7	68		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	7	16				3.0	Y100L2-4	4	Y112M-4
	C	9	50		5.5	Y132S1-2	11	Y160M1-2	15	Y160M2-2	6.5	11.5				2.2	Y100L1-4	3	Y100L2-4
	D	8.5	30		5.5	Y132S1-2	11	Y160M1-2	15	Y160M2-2	6	6.5		1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4
	E				4	Y112M-2	5.5	Y132S1-2	7.5	Y132S2-2									
ZA25-315	A	18.5	130	LK2	30	Y200L1-2	45	Y225M-2	55	Y250M-2	9.5	32	LK2	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
	B	17.5	115		30	Y200L1-2	37	Y200L2-2	45	Y225M-2	8.7	29		4.0	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	C	16	100		22	Y180M-2	30	Y200L1-2	45	Y225M-2	7.5	25		3.0	Y100L2-4	4.0	Y112M-4	5.5	Y132S-4
	D	14	90		18.5	Y160L-2	30	Y200L1-2	37	Y200L2-2	7	22		3.0	Y100L2-4	4.0	Y112M-4	5.5	Y132S-4
	E	13	80		18.5	Y160L-2	22	Y180M-2	30	Y200L1-2	6.8	20		3.0	Y100L2-4	4.0	Y112M-4	5.5	Y132S-4
	F	11.5	67		15	Y160M2-2	18.5	Y160L-2	30	Y200L1-2	6	16		2.2	Y100L1-4	3.0	Y100L2-4	4.0	Y112M-4
ZA40-160	A	28	33	LK2	5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	14	8	LK1	1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	B	25.6	29								13	7							
	C	22	22		4	Y112M-2	5.5	Y132S1-2	5.5	Y132S1-2	11	5.5						1.1	Y90S-4
	D	20	16		2.2	Y90L-2	3	Y100L-2	4	Y112M-2	9.5	4.5							
ZA40-200	A	29	53	LK1	11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	14.5	13	LK1	1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4
	B	26	47		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	13	11.5		1.1	Y90S-4	1.5	Y90L-4	3	Y100L2-4
	C	22	39		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	11.5	9				1.1	Y90S-4	1.5	Y90L-4
	D	18	30		4	Y112M-2	5.5	Y132S1-2	7.5	Y132S2-2	9.5	7		1.1	Y90S-4			1.1	Y90S-4
ZA40-250	A	32	78	LK2	18.5	Y160L-2	22	Y180M-2	30	Y200L1-2	16	19.5	LK2	3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
	B	30	72		15	Y160M2-2	18.5	Y160L-2			15	18		2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4
	C	24	60		11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	12.5	14		1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4
	D	21	47		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	10.5	11		1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4
ZA40-315	A	42	115	LK2	37	Y200L2-2	45	Y225M-2	75	Y280S-2	21	29	LK2	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
	B	40	107		30	Y200L1-2			55	Y250M-2	20	26.5							
	C	34	81		22	Y180M-2	30	Y200L1-2	45	Y225M-2	17.5	20		4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	D	29	61		15	Y160M2-2	22	Y180M-2	30	Y200L1-2	15	15		3	Y100L2-4	3	Y100L2-4	5.5	Y132S-4
ZA50-160	A	50	34	LK2	11	Y160M1-2	15	Y160M2-2	15	Y160M2-2	25	8.4	LK1	1.5	Y90L-4	2.2	Y100L1-4	2.2	Y100L1-4
	B	45	29		7.5	Y132S2-2	11	Y160M1-2			22.5	7				1.5	Y90L-4		
	C	38	22		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	19	5.5		1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	D	31	17		3	Y100L-2	4	Y112M-2	5.5	Y132S1-2	16.5	4						1.1	Y90S-4
ZA50-200	A	62	52	LK2	18.5	Y160L-2	22	Y180M-2	30	Y200L1-2	31	13	LK1	3	Y100L2-4	3	Y100L2-4	4	Y112M-4
	B	56	46		15	Y160M2-2	18.5	Y160L-2	22	Y180M-2	28.5	11.5		2.2	Y100L1-4				
	C	49	37		11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	25	9		1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4
	D	43	28		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	22	7		1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4

ZA型泵性能表 ZA type performance table

泵型号 Pump Type	叶轮型式 Impeller Type	泵额定转速 Rated rotary speed of pump n=2900r/min									泵额定转速 Rated rotary speed of pump n=1450r/min								
		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84	
					电机功率及型号 Power and model of motor									电机功率及型号 Power and model of motor					
					kW		kW		kW					kW		kW		kW	
ZA50-250	A	70	82	LK2	30	Y200L1-2	37	Y200L2-2	55	Y250M-2	35	20	LK2	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	B	66	75		30	Y200L1-2	37	Y200L2-2	45	Y225M-2	33	18.5		4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	C	60	60		22	Y180M-2	30	Y200L1-2	37	Y200L2-2	30	15		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
	D	50	45		15	Y160M2-2	18.5	Y160L-2	22	Y180M-2	26	11		2.2	Y100L1-4	3	Y100L2-4	3	Y100L2-4
ZA50-315	A	87	115	LK3	55	Y250M-2	75	Y280S-2	110	Y315S-2	44	28	LK2	11	Y160M-4	11	Y160M-4	15	Y160L-4
	B	80	100		45	Y225M-2	75	Y280S-2	90	Y280M-2	40	24		7.5	Y132M-4	11	Y160M-4	15	Y160L-4
	C	70	78		30	Y200L1-2	45	Y225M-2	55	Y250M-2	35	19		5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
	D	57	57		22	Y180M-2	30	Y200L1-2	37	Y200L2-2	30	14		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
ZA50-400	A	82	194	LK3	110	Y315S-2	160	Y315M2-2			41	48	LK2	15	Y160L-4	22	Y180L-4	30	Y200L-4
	B	78	175		90	Y280M-2	132	Y315M2-2	160	Y315L1-2	39	43		15	Y160L-4	18.5	Y180M-4	22	Y180L-4
	C	70	140		75	Y280S-2	90	Y280M-2	132	Y315M-2	35	34		11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	D	60	102		45	Y225M-2	75	Y280S-2	90	Y280M-2	30	25		7.5	Y132M-4	11	Y160M-4	15	Y160L-4
ZA80-160	A	94	32	LK2	15	Y160M2-2	18.5	Y160L-2	30	Y200L1-2	47	8	LK2	2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4
	B	85	28		11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	42	7		2.2	Y100L1-4	2.2	Y100L1-4	3	Y100L2-4
	C	76	23		11	Y160M1-2	11	Y160M1-2	15	Y160M2-2	38	5.5		1.5	Y90L-4	2.2	Y100L1-4	2.2	Y100L1-4
	D	66	17		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	34	4		1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
ZA80-200	A	103	54	LK2	30	Y200L1-2	37	Y200L2-2	55	Y250M-2	51	13.5	LK1	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	B	95	48		22	Y180M-2	30	Y200L1-2	37	Y200L2-2	47	12		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
	C	84	38		15	Y160M2-2	22	Y180M-2	30	Y200L1-2	41	9.5		2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4
	D	70	30		11	Y160M1-2	15	Y160M2-2	22	Y180M-2	36	7.5		1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4
ZA80-250	A	127	82	LK2	45	Y225M-2	75	Y280S-2	90	Y280M-2	64	20	LK2	7.5	Y132M-4	11	Y160M-4	15	Y160L-4
	B	120	76		45	Y225M-2	55	Y250M-2	75	Y280S-2	60	19		7.5	Y132M-4	7.5	Y132M-4	11	Y160M-4
	C	105	59		30	Y200L1-2	45	Y225M-2	55	Y250M-2	52	14.5		4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	D	87	45		22	Y180M-2	30	Y200L1-2	37	Y200L2-2	46	11		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
ZA80-315	A	141	127	LK2	90	Y280M-2	132	Y315M1-2	160	Y315L1-2	70	33	LK2	15	Y160L-4	18.5	Y180M-4	22	Y180L-4
	B	135	121		75	Y280S-2	110	Y315S-2	132	Y315M-2	66	30		11	Y160M-4	15	Y160L-4	22	Y180L-4
	C	115	97		55	Y250M-2	75	Y280S-2	110	Y315S-2	56	24		11	Y160M-4	11	Y160M-4	15	Y160L-4
	D	90	74		37	Y200L2-2	45	Y225M-2	75	Y280S-2	45	18		5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
ZA80-400	A	171	187	LK3	160	Y315L1-2					85	46	LK2	22	Y180L-4	30	Y200L-4	45	Y225M-4
	B	159	170		160	Y315L1-2	160	Y315L1-2			80	42		18.5	Y180M-4	30	Y200L-4	37	Y225S-4
	C	135	130		90	Y280M-2	132	Y315M-2	160	Y315L1-2	65	33		15	Y160L-4	18.5	Y180M-4	30	Y200L-4
	D	116	95		75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25		11	Y160M-4	15	Y160L-4	18.5	Y180M-4
ZA100-160	A	162	29	LK2	22	Y180M-2	30	Y200L1-2	37	Y200L2-2	81	7.2	LK2	3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
	B	150	24		15	Y160M2-2	22	Y180M-2	30	Y200L1-2	73	6		2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4
	C	130	17		11	Y160M1-2	15	Y160M1-2	18.5	Y160L-2	63	4.3		1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4
	D	110	12		7.5	Y132S-2	11	Y160M1-2	15	Y160M2-2	55	3		1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4
ZA100-200	A	193	50	LK2	45	Y225M-2	55	Y250M-2	75	Y280S-2	95	12.5	LK2	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
	B	180	44		37	Y200L2-2	45	Y225M-2	75	Y280S-2	90	10.5		5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4
	C	155	35		30	Y200L1-2	37	Y200L2-2	45	Y225M-2	80	8.5		4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	D	135	26		18.5	Y160L-2	30	Y200L1-2	37	Y200L2-2	70	6		3	Y100L2-4	3	Y100L2-4	7.5	Y112M-4
ZA100-250	A	230	79	LK3	75	Y280S-2	90	Y280M-2	132	Y315M-2	115	20	LK2	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	B	218	73		75	Y280S-2	90	Y280M-2	132	Y315M-2	110	18		11	Y160M-4	11	Y160M-4	15	Y160L-4
	C	190	58		45	Y225M-2	75	Y280S-2	90	Y280M-2	95	14		7.5	Y132M-4	11	Y160M-4	11	Y160M-4
	D	170	44		37	Y200L2-2	45	Y225M-2	75	Y280S-2	80	10		5.5	Y132S-4	7.5	Y132M-4	7.5	Y132M-4

ZA型泵性能表 ZA type performance table

泵型号 Pump Type	叶轮型式 Impeller Type	泵额定转速 Rated rotary speed of pump n=2900r/min										泵额定转速 Rated rotary speed of pump n=1450r/min									
		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84			流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84	
					电机功率及型号 Power and model of motor										电机功率及型号 Power and model of motor						
					kW		kW		kW						kW		kW		kW		
ZA100-315	A	250	126	LK3	132	Y315M-2						125	31	LK2	18.5	Y180M-4	30	Y200L-4	37	Y225S-4	
	B	240	120		132	Y315M-2	160	$Y315L_1$-2				119	29		18.5	Y180M-4	22	Y180L-4	30	Y200L-4	
	C	203	97		90	Y280M-2	132	$Y315M_1$-2	160	$Y315L_1$-2		104	24		15	Y160L-4	18.5	Y180M-4	22	Y180L-4	
	D	170	71		75	Y280S-2	75	Y280S-2	110	Y315S-2		86	17.5		11	Y160M-4	11	Y160M-4	15	Y160L-4	
ZA100-400	A	300	194	LK4								150	48	LK3	37	Y225S-4	45	Y225M-4	75	Y280S-4	
	B	290	180									145	44		30	Y200L-4	45	Y225M-4	55	Y250M-4	
	C	260	145		160	$Y315L_1$-2						130	36		22	Y180L-4	30	Y200L-4	45	Y225M-4	
	D	224	105		110	Y315S-2	160	$Y315L_1$-2				115	26		15	Y160L-4	22	Y180L-4	30	Y200L-4	
ZA100-500	A											180	75	LK3	75	Y280S-4	90	Y280M-4	110	Y315S-4	
	B											167	68		55	Y250M-4	75	Y280S-4	110	Y315S-4	
	C											142	53		37	Y225S-4	55	Y250M-4	75	Y280S-4	
	D											120	42		30	Y200L-4	37	Y225S-4	55	Y250M-4	
ZA150-200	A	320	44	LK2	55	Y250M-2	75	Y280S-2	110	Y315S-2		160	11	LK2	7.5	Y132M-4	11	Y160M-4	15	Y160L-4	
	B	300	39		45	Y225M-2	75	Y280S-2	90	Y280M-2		152	9.5		7.5	Y132M-4	11	Y160M-4	15	Y160L-4	
	C	265	30		37	$Y200L_2$-2	45	Y225M-2	75	Y280S-2		140	7		5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4	
	D	220	23		22	Y180M-2	30	$Y200L_1$-2	45	Y225M-2		123	5		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4	
ZA150-250	A	390	74	LK3	110	Y315S-2	160	$Y315L_1$-2				195	18.5	LK2	15	Y160L-4	22	Y180L-4	30	Y200L-4	
	B	355	62		90	Y280M-2	110	Y315S-2	160	$Y315L_1$-2		180	16		15	Y160L-4	18.5	Y180M-4	32	Y180L-4	
	C	325	46		75	Y280S-2	90	Y280M-2	110	Y315S-2		160	11.5		11	Y160M-4	11	Y160M-4	15	Y160L-4	
	D																				
ZA150-315	A	442	125	LK3								220	32.5	LK3	30	Y200L-4	45	Y225M-4	55	Y250M-4	
	B	430	120									210	30		30	Y200L-4	37	Y225S-4	55	Y250M-4	
	C	372	94		160	$Y315L_1$-2						180	24		22	Y180L-4	30	Y200L-4	37	Y225S-4	
	D	310	68		90	Y280M-2	132	Y315M-2	160	$Y315L_1$-2		150	17		15	Y160L-4	18.5	Y180M-4	22	Y180L-4	
ZA150-400	A	520	205	LK4								260	51	LK3	55	Y250M-4	75	Y280S-4	110	Y315S-4	
	B	498	190									250	48		55	Y250M-4	75	Y280S-4	90	Y280M-4	
	C	453	151									225	38		37	Y225S-4	55	Y250M-4	75	Y280S-4	
	D	400	113									200	28		30	Y200L-4	37	Y225S-4	55	Y250M-4	
ZA150-500	A											300	77	LK3	110	Y315S-4	132	Y315M-4	160	$Y315L_1$-4	
	B											283	72		90	Y280M-4	132	Y315M-4	110	Y315S-4	
	C											233	59		75	Y280S-4	90	Y280M-4	110	Y315S-4	
	D											208	45		45	Y225M-4	75	Y280S-4	75	Y280S-4	
ZA150-560	A											334	104	LK4	160	$Y315L_1$-4					
	B											315	97		132	Y315M-4					
	C											260	80		90	Y280M-4	132	Y315M-4	160	$Y315L_1$-4	
	D											212	60		75	Y280S-4	90	Y280M-4	110	Y315S-4	
ZA150-630	A											360	115	LK4							
	B											338	105.5								
	C											274	82		132	Y315M-4	160	$Y315L_1$-4			
	D											220	60		75	Y280S-4	110	Y315S-4	160	$Y315L_1$-4	
ZA200-250	A	610	72	LK3	160	$Y315L_1$-2						305	17.5	LK3	22	Y180L-4	30	Y200L-4	45	Y225M-4	
	B	580	65		160	$Y315L_1$-2						290	16		18.5	Y180M-4	30	Y200L-4	37	Y225S-4	
	C	520	47		110	Y315S-2	132	Y315M-2				260	12		15	Y160L-4	18.5	Y180M-4	30	Y200L-4	
	D	470	32		75	Y280S-2	90	Y280M-2	110	Y315S-2		240	8		11	Y160M-4	15	Y160L-4	15	Y160L-4	

ZA型泵性能表 ZA type performance table

泵型号 Pump Type	叶轮型式 Impeller Type	泵额定转速 Rated rotary speed of pump n=2900r/min										泵额定转速 Rated rotary speed of pump n=1450r/min									
		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84			流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84	
					电机功率及型号 Power and model of motor										电机功率及型号 Power and model of motor						
					kW		kW		kW						kW		kW		kW		
ZA200-315	A	710	122	LK4								350	30	LK3	45	Y225M-4	55	Y250M-4	75	Y280S-4	
	B	680	114									340	29		37	Y225S-4	55	Y250M-4	75	Y280S-4	
	C	600	87									300	22		30	Y200L-4	37	Y225S-4	55	Y250M-4	
	D	480	65		132	Y315M-2						250	15		18.5	Y180M-4	22	Y180L-4	30	Y200L-4	
ZA200-400	A	850	203	LK5								426	50	LK3	90	Y280M-4	110	Y315S-4	160	Y315L1-4	
	B	830	150									410	47		75	Y280S-4	110	Y315S-4	132	Y315M-4	
	C	750	145									370	36.5		55	Y250M-4	75	Y280S-4	110	Y315S-4	
	D	670	106									332	27		45	Y225M-4	55	Y250M-4	75	Y280S-4	
ZA200-500	A											495	84	LK4							
	B											470	79		160	Y315L1-4					
	C											400	63		110	Y315S-4	160	Y315L1-4			
	D											330	48		75	Y280S-4	90	Y280M-4	132	Y315M-4	
ZA200-560	A											540	105	LK5							
	B											510	98								
	C											430	81		160	Y315L1-4					
	D											350	62		110	Y315S-4	132	Y315M-4	160	Y315L1-4	
ZA200-630	A											580	132	LK5							
	B											550	125								
	C											468	100								
	D											372	75		132	Y315M-4					
ZA250-315	A											545	27	LK3	55	Y250M-4	75	Y280S-4	110	Y315S-4	
	B											528	25		55	Y250M-4	75	Y280S-4	90	Y280M-4	
	C											480	19		37	Y225S-4	55	Y250M-4	75	Y280S-4	
	D											434	13		30	Y200L-4	37	Y225S-4	45	Y225M-4	
ZA250-400	A											660	49	LK4	132	Y315M-4	160	Y315L1-4			
	B											630	46		110	Y315S-4	160	Y315L1-4			
	C											565	36		75	Y280S-4	110	Y315S-4	160	Y315L1-4	
	D											500	24		55	Y250M-4	75	Y280S-4	90	Y280M-4	
ZA250-500	A											800	82	LK5							
	B											770	76								
	C											700	58		160	Y315L1-4					
	D											630	42		110	Y315S-4	160	Y315L1-4			
ZA250-560	A											860	106	LK5							
	B											830	98								
	C											760	78								
	D											665	57		160	Y315L1-4					
ZA250-630	A											855	128	LK6							
	B											816	119								
	C											720	96								
	D											625	71								
ZA300-400	A											1050	48	LK4							
	B											1010	45		160	Y315L1-4					
	C											860	34		132	Y315M-4	160	Y315L1-4			
	D											780	26		90	Y280M-4	132	Y315M1-4	160	Y315L1-4	

ZA型泵性能表 ZA type performance table

泵型号 Pump Type	叶轮型式 Impeller Type	泵额定转速 Rated rotary speed of pump n=2900r/min									泵额定转速 Rated rotary speed of pump n=1450r/min									
		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84		流量 Q (m^3/h)	扬程 H (m)	轴承架 LK	比重=1.00 Specific gravity=1.00		比重=1.35 Specific gravity=1.35		比重=1.84 Specific gravity=1.84	
					电机功率及型号 Power and model of motor									电机功率及型号 Power and model of motor						
					kW		kW		kW					kW		kW		kW		
ZA300-500	A										1240	78	LK5							
	B										1170	75								
	C										1015	57								
	D										870	42		160	Y315L1-4					
ZA300-560	A										1340	104	LK6							
	B										1280	97								
	C										1140	77								
	D										950	56								
ZA300-630	A										1450	132	LK6							
	B										1375	125								
	C										1170	100								
	D										950	75								
ZA400-500	A										1870	74	LK6							
	B										1800	70								
	C										1520	52								
	D										1300	38								
ZA400-560	A										2040	98	LK6							
	B										1950	91								
	C										1760	74								
	D										1500	54								
ZA400-630	A										2390	125	LK7							
	B										2280	117								
	C										1960	95								
	D										1610	70								

说明：*订货合同在泵型号上还应注明叶轮型式；例如：选ZA40-250 、叶轮型式为A，应写成ZA40-250A；

*表中有流量、扬程值而无功率值的泵其功率超过160kW，需订货时当面确定。

*当用户有特殊要求口径为DN32、DN65、DN125等规格时，需与技术中心沟通确认。

*当定货时根据客户使用条件决定泵型是ZA、ZAO、ZAE等型式，请准确写明泵型代号，以免后期出现不必要的麻烦！

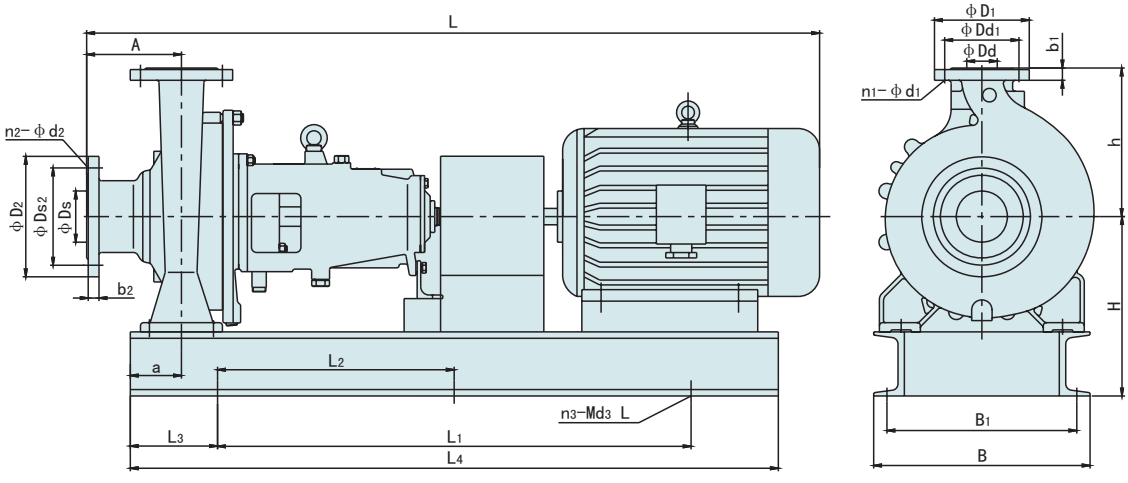
Note：* The impeller type should also be indicated with the pump model on the ordering contract: i.e.: model ZA40-250 should be ZA40-250A incase of type A impeller;

* If there is the value of flow and head but without the power value of pumps in the list, when their power values exceed 160kW, it should be made sure when ordering.

* It is necessary to communicate with the technical center in case of specially required apertures of DN32, DN65, DN125 etc. norms from users.

* Please clearly note the pump model at order, either ZA, ZAO or ZAE etc. upon the conditions of use so as to prevent any troubles from happening in the late phase!

外形安装尺寸图表 Drawing and table of out–form installation dimensions



泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L1	L2	L3	L4	L	B1	B	h	H	n3-Md3 L	总重量 Weight (kg)
ZA25-200	Y90S-4/1.1	0	100	145	660		170	1000	950	400	440	175	300	4-M12 220	106
	Y90L-4/1.5								975						106
	Y90S-2/1.5								950						106
	Y90L-2/2.2								975						106
	Y100L-2/3								1020						117
	Y112M-2/4								1040						130
	Y132S1-2/5.5				740		190	1120	1115						165
	Y132S2-2/7.5								1115						165
	Y160M1-2/11				840		205	1250	1240						232
ZA25-250	Y90S-4/1.1	1	140	90	660		170	1000	1060	400	440	225	300	4-M12 220	148
	Y90L-4/1.5								1085						148
	Y100L1-4/2.2				740		190	1120	1130						163
	Y100L2-4/3								1130						163
	Y112M-4/4								1150						176
	Y112M-2/4	2							1150						194
	Y132S1-2/5.5				840		205	1250	1315						225
	Y132S2-2/7.5								1315						225
	Y160M1-2/11				940		230	1400	1440				365	4-M16 220	303
	Y160M2-2/15								1440						303
	Y160L-2/18.5								1485						303
ZA25-315	Y100L1-4/2.2	2	150	90	940		230	1400	1230	490	530	260	365	4-M16 220	224
	Y100L2-4/3								1230						224
	Y112M-4/4								1250						237
	Y132S-4/5.5								1325						266
	Y132M-4/7.5								1365						266
	Y160M-4/11								1450						332
	Y160M2-2/15								1450						332
	Y160L-2/18.5								1495						354
	Y180M-2/22								1520						389
	Y200L1-2/30				1060	530	270	1600	1625					6-M16 220	471
	Y200L2-2/37								1625						471
	Y225M-2/45								1665						565
	Y250M-2/55								1820	550	600		450		695
ZA40-160	Y90S-4/1.1	1	130	75	660		170	1000	1050	400	440	180	300	4-M12 220	127
	Y90L-4/1.5								1075						127
	Y90L-2/2.2								1075						127
	Y100L-2/3								1120						138
	Y112M-2/4								1140						151
	Y132S1-2/5.5				740		190	1120	1215						183
	Y132S2-2/7.5								1215						183
	Y160M1-2/11				840		205	1250	1340						252

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L1	L2	L3	L4	L	B1	B	h	H	n3-Md3	L	总重量 Weight (kg)
ZA40-200	Y90S-4/1.1	1	140	175	660		170	1000	1060	400	440	200	300	4-M12	220	131
	Y90L-4/1.5								1085							131
	Y00L1-4/2.2								1130							142
	Y112M-4/4								1150							155
	Y112M-2/4								1150							155
	Y132S-4/5.5				740		190	1120	1225							176
	Y132S1-2/5.5								1225							176
	Y132S2-2/7.5								1225							176
	Y160M1-2/11				840		205	1250	1350							256
	Y160M2-2/15								1350							256
	Y160L-2/18.5								1395							256
ZA40-250	Y90S-4/1.1	2	140	90	660		170	1000	1060	400	440	225	300	4-M12	220	148
	Y90L-4/1.5								1085							148
	Y00L1-4/2.2				740		190	1120	1130							163
	Y100L2-4/3								1130							163
	Y112M-4/4								1150							176
	Y132S-4/5.5				840		205	1250	1225							205
	Y132S2-2/7.5				940		230	1400	1315							205
	Y160M1-2/11								1440					4-M16	220	225
	Y160M2-2/15								1440				365			303
	Y160L-2/18.5								1485							359
	Y180M-2/22								1510							359
	Y200L1-2/30						245	1430	1615	490	530					448
ZA40-315	Y100L2-4/3	2	160	90	1060		270	1600	1240	490	530	280	365	4-M16	220	224
	Y112M-4/4								1260							237
	Y132S-4/5.5								1335							257
	Y132M-4/7.5								1375							266
	Y160M-4/11								1460							332
	Y160M2-2/15								1460							332
	Y160L-2/18.5								1530							332
	Y180M-2/22								1530							332
	Y200L1-2/30								1635					6-M16	220	389
	Y200L2-2/37					530			1635							471
	Y225M-2/45								1675							565
	Y250M-2/55								1820	550	600		450			565
	Y280S-2/75				1200	600	300	1800	1900	670	720					820
ZA50-160	Y90S-4/1.1	1	140	75	660		170	1000	1060	400	440	185	300	4-M12	220	130
	Y90L-4/1.5								1085							130
	Y00L1-4/2.2								1130							141
	Y100L-2/3	2			740		190	1120	1220							128
	Y112M-2/4								1240							134
	Y132S1-2/5.5								1315							166
	Y132S2-2/7.5								1315							179
	Y160M1-2/11				940		230	1400	1400				310	4-M16	220	210
	Y160M2-2/15								1400							285
ZA50-200	Y90S-4/1.1	1	150	75	660		170	1000	1070	400	440	200	300	4-M12	220	134
	Y90L-4/1.5								1095							134
	Y00L1-4/2.2								1140					4-M16	220	145
	Y100L2-4/3								1140							145
	Y112M-4/4								1160					4-M12	220	158
	Y132S2-2/7.5	2			840		205	1250	1325							212
	Y160M1-2/11				940		230	1400	1450				315	4-M16	220	287
	Y160M2-2/15								1450							287
	Y160L-2/18.5								1495							287
	Y180M-2/22								1520				365			287
	Y200L1-2/30								1625							348

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3 L	总重量 Weight (kg)
ZA50-250	Y00L1-4/2.2	2	150	90	740		190	1120	1235	400	440	240	300	4-M12 220	184
	Y100L2-4/3								1235						184
	Y112M-4/4								1255						197
	Y132S-4/5.5						205	1250	1330						228
	Y132M-4/7.5				840				1370						228
	Y160M2-2/15				940		230	1400	1455				365	4-M16 220	303
	Y160L-2/18.5								1500						303
	Y180M-2/22								1525						362
	Y200L1-2/30				1060		270	1600	1630	490	530				452
	Y200L2-2/37								1630						452
	Y225M-2/45								1670						452
	Y250M-2/55								1785						575
ZA50-315	Y100L2-4/3	2	175	90	940		230	1400	1255	490	530	280	365	4-M16 220	230
	Y112M-4/4								1275						243
	Y132S-4/5.5								1350						272
	Y132M-4/7.5								1390						272
	Y160M-4/11								1475						338
	Y160L-4/15								1520						338
	Y180M-2/22	3			1060	530	270	1600	1610				365	6-M16 220	428
	Y200L1-2/30								1610				385		505
	Y200L2-2/37								1715						505
	Y225M-2/45								1755				365		600
	Y250M-2/55								1870	550	600		450		723
	Y280S-2/75				1200	600	300	1800	1940	670	720				986
	Y280M-2/90								1990						986
	Y315S-2/110								2040						1342
ZA50-400	Y132M-4/7.5	2	165	105	940		230	1400	1380	490	530	335	430	4-M16 220	321
	Y160M-4/11								1460						388
	Y160L-4/15								1510						388
	Y180M-4/18.5								1535						388
	Y180L-4/22								1575						444
	Y200L-4/30	3			1060	530	270	1600	1640					6-M16 220	526
	Y225M-4/45								1745						654
	Y250M-2/55								1860						777
	Y280S-2/75				1200	600	300	1800	1930	670	720		450		1029
	Y280M-2/90								1980						1029
	Y315S-2/110								2130						1357
	Y315M-2/132								2180						1357
	Y315L1-2/160								2180						1357
ZA80-160	Y90S-4/1.1	2	155	90	740		190	1120	1165	400	440	220	330	4-M12 220	166
	Y90L-4/1.5								1190						166
	Y00L1-4/2.2								1235						177
	Y100L2-4/3								1235						177
	Y112M-4/4								1235						190
	Y132S1-2/5.5				840		205	1250	1330						221
	Y132S2-2/7.5								1330						221
	Y160M1-2/11				940		230	1400	1455				315	4-M16 220	297
	Y160M2-2/15								1455						297
	Y160L-2/18.5								1500						297
	Y200L1-2/30								1625						384

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3 L	总重量 Weight (kg)
ZA80-200	Y90L-4/1.5	2	160	90	660		190	1120	1150	400	440	240	300	4-M14 220	154
	Y00L1-4/2.2				740				1150						169
	Y100L2-4/3								1150						169
	Y112M-4/4								1170						182
	Y132S-4/5.5								1245						210
	Y132M-4/7.5								1285						210
	Y160M1-2/11				840		205	1250	1370						280
	Y160M2-2/15								1370						280
	Y180M-2/22				940		230	1400	1440					4-M16 220	348
	Y200L1-2/30								1545				350		424
	Y200L2-2/37								1545						442
	Y225M-2/45								1595				300		504
ZA80-250	Y100L2-4/3	2	165	105	840		205	1250	1245	400	440	260	350	4-M12 220	205
	Y112M-4/4								1265						219
	Y132S-4/5.5								1340						247
	Y132M-4/7.5								1380						247
	Y160M-4/11				940		230	1400	1465				365	4-M16 220	324
	Y160L-4/15								1510						324
	Y180M-2/22								1535						380
	Y200L1-2/30				1060	530	270	1600	1640	490	530			6-M16 220	468
	Y200L2-2/37								1640						468
	Y225M-2/45								1680						563
	Y250M-2/55								1795	550	600		450		686
	Y280S-2/75				1200	600	300	1800	1865	670	720				948
	Y280M-2/90								1915						948
ZA80-315	Y132S-4/5.5	2	185	105	940		230	1400	1400	490	530	290	365	4-M16 220	288
	Y132M-4/7.5								1440						288
	Y160M-4/11								1525						354
	Y160L-4/15								1570						354
	Y180M-4/18.5				1060	530	270	1600	1595					6-M16 220	415
	Y180L-4/22								1635						415
	Y200L2-2/37								1700						492
	Y225M-2/45								1740						588
	Y250M-2/55				1200	600	300	1800	1855	670	720		450		710
	Y280S-2/75								1925						972
	Y280M-2/90								1975						972
	Y315S-2/110				1600	800	320	2240	2075	730	780		570		1250
	Y315M-2/132								2175						1338
	Y315L1-2/160								2175						1413
ZA80-400	Y160M-4/11	2	180	105	940		230	1400	1520	490	530	350	430	4-M16 220	398
	Y160L-4/15								1565						398
	Y180M-4/18.5				1060	530	270	1600	1590					6-M16 220	432
	Y180L-4/22								1630						459
	Y200L-4/30								1695						537
	Y225S-4/37								1740						631
	Y225M-4/45								1765						631
	Y280S-2/75	3			1200	600	300	1800	1985	670	720		450		1049
	Y280M-2/90								2035						1049
	Y315M-2/132				1600	800	320	2240	2235	730	780		570	6-M20 220	1463
	Y315L1-2/160								2235						1463

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3 L	总重量 Weight (kg)
ZA100-160	Y90S-4/1.1	2	175	90	740		190	1120	1185	400	440	260	300	4-M12 220	174
	Y90L-4/1.5								1210						174
	Y00L1-4/2.2								1255						185
	Y100L2-4/3								1255						185
	Y112M-4/4								1275						198
	Y132S-4/5.5				840		205	1250	1350						229
	Y132S2-2/7.5								1350				365		229
	Y160M1-2/11				940		230	1400	1475	400	440	260	365	4-M16 220	305
	Y160M2-2/15								1475						305
	Y160L-2/18.5								1520						305
	Y180M-2/22				1060	530	270	1600	1545					6-M16 220	364
	Y200L1-2/30								1650	490	530				453
	Y200L2-2/37								1650						453
ZA100-200	Y100L2-4/3	2	165	90	840		205	1250	1285	400	440	270	350	4-M12 220	204
	Y112M-4/4								1305						217
	Y132S-4/5.5								1380						246
	Y132M-4/7.5								1420						246
	Y160M-4/11				940		230	1400	1505				450	4-M16 220	322
	Y160L-2/18.5								1550						322
	Y180M-2/22				1060	530	270	1600	1575	490	530		365	6-M16 220	378
	Y200L1-2/30								1680						467
	Y200L2-2/37								1680						467
	Y225M-2/45								1720						561
	Y250M-2/55								1835	550	600				684
	Y280S-2/75				1200	600	300	1800	1905	670	720				947
ZA100-250	Y132S-4/5.5	2	200	105	940		230	1400	1415	490	530	290	365	4-M16 220	296
	Y132M-4/7.5								1455						296
	Y160M-4/11								1540						362
	Y160L-4/15								1585						362
	Y180M-4/18.5				1060	530	270	1600	1610					6-M16 220	423
	Y200L2-2/37	3							1715						500
	Y225M-2/45								1755						595
	Y250M-2/55								1775						670
	Y280S-2/75				1230	600	300	1800	1940	670	720		450		980
	Y280M-2/90								1990						980
	Y315M-2/132				1400	700		2000							1313
ZA100-315	Y160M-4/11	2	195	105	940		230	1400	1535	490	530	320	430	4-M16 220	366
	Y160L-4/15								1580						366
	Y180M-4/18.5				1060	530	270	1600	1650					6-M16 220	430
	Y180L-4/22								1645						430
	Y200L-4/30								1710						509
	Y225S-4/37								1710						509
	Y280S-2/75				1200	600	300	1800	2000	670	720		450		1001
	Y280M-2/90	3							2050						1001
	Y315S-2/110				1400	700		2000	2000				530		1334
	Y315M-2/132								2250						1334
	Y315L1-2/160								2250						1334
ZA100-400	Y160L-4/15	3	210	125	1060	530	270	1600	1660	550	600	380	430	6-M16 220	493
	Y180M-4/18.5								1725						552
	Y180L-4/22								1725						552
	Y200L-4/30								1790						630
	Y225S-4/37								1835						725
	Y225M-4/45								1860						725
	Y250M-4/55				1200	600	300	1800	1945	670	720				838
	Y280S-4/75								2015						1077
	Y315S-2/110	4			1600	800	320	2240	2265	730	780		570	6-M20 220	1542
	Y315L1-2/160								2315						1542

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3	L	总重量 Weight (kg)
ZA100-500	Y200L-4/30	3	220	125	1200	600	300	1800	1875	670	720	150	530	6-M16	220	730
	Y225S-4/37								1915							826
	Y225M-4/45								2025							865
	Y250M-4/55								2025							917
	Y280S-4/75				1400	700		2000	2095							1163
	Y280M-4/90								2014							1475
	Y315S-4/110								2295							1475
ZA150-200	Y100L2-4/3	2	200	105	940		230	1400	1320	490	530	310	365	4-M16	220	274
	Y112M-4/4								1340							274
	Y132S-4/5.5								1415							274
	Y132M-4/7.5								1455							274
	Y160M-4/11								1540							340
	Y160L-4/15								1585							340
	Y180M-2/22				1060	530	270	1600	1610					6-M16	220	401
	Y200L1-2/30								1715							478
	Y200L2-2/37								1715							478
	Y225M-2/45								1755							573
	Y250M-2/55								1870	550	600		450	6-M20	220	696
	Y280S-2/75				1200	600	300	1800	1940	670	720			6-M16	220	958
	Y280M-2/90								1990							958
	Y315S-2/110				1400	700		2000	2140				530			1286
ZA150-250	Y160M-4/11	2	200	105	940		230	1400	1540	490	530	315	430	4-M16	220	379
	Y160L-4/15								1585							379
	Y180M-4/18.5				1060	530	270	1600	1610					6-M16	220	443
	Y180L-4/22								1650							443
	Y200L-4/30								1715							521
	Y280S-2/75	3			1200	600	300	1800	2005	670	720		450			1017
	Y280M-2/90								2055							1017
	Y315S-2/110				1400	700	300	2000	2205				530	6-M16	220	1350
	Y315M-2/132								2255							1350
	Y315L1-2/160								2255							1350
ZA150-315	Y160L-4/15	3	205	125	1060	530	270	1600	1655	550	600	370	450	6-M16	220	448
	Y180M-4/18.5								1680							507
	Y180L-4/22								1720							507
	Y200L-4/30								1785							585
	Y225S-4/37								1830							679
	Y225M-4/45								1855							679
	Y250M-4/55				1200	600	300	1800	1940	670	720					793
	Y280M-2/90	4							2060							1032
	Y315S-2/110				1600	800	320	2240	2210	730	780		570	6-M20	220	1446
	Y315M-2/132								2260							1446
	Y315L1-2/160								2260							1446
ZA150-400	Y200L-4/30	3	230	125	1200	600	300	1800	1880	670	720	410	530	6-M16	220	676
	Y225S-4/37								1925							772
	Y225M-4/45								2035							863
	Y250M-4/55								2035							863
	Y280S-4/75				1400	700		2000	2105							1109
	Y280M-4/90								2155							1109
	Y315S-4/110								2305							1421
ZA150-450																
ZA150-500	Y225M-4/45	3	240	125	1200	600	300	1800	1960	670	720	500	600	6-M16	220	861
	Y250M-4/55				1400	700		2000	2115							950
	Y280S-4/75								2115							1199
	Y280M-4/90								2165							1199

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3 L	总重量 Weight (kg)
ZA150-500	Y315S-4/110	3	240	125	1600	800	320	2240	2240	730	780	500	640	6-M20 220	1594
	Y315M-4/132								2240						1594
	Y315L1-4/160								2240						1594
ZA150-560	Y280S-4/75	4	250	155	1400	700	300	2000	2175	670	720	500	600	6-M16 220	1358
	Y280M-4/90								2225						1358
	Y315S-4/110				1600	800	320	2240	2375	730	780		640	6-M20 220	1752
	Y315M-4/132								2425						1752
	Y315L1-4/160								2425						1752
ZA150-630	Y280S-4/75	4	260	160	1600	800	300	2240	2235	920	970	540	700	6-M16 220	1524
	Y280M-4/90								2285						1524
	Y315S-4/110								2435						1847
	Y315M-4/132								2435						1847
	Y315L1-4/160								2435						1847
ZA200-250	Y160L-4/15	3	235	125	1060	530	270	1600	1755	550	600	300	450	6-M16 220	486
	Y180M-4/18.5								1780						545
	Y180L-4/22								1820						545
	Y200L-4/30				1200	600	300	1800	1855	670	720				645
	Y225S-4/37								1930						741
	Y225M-4/45								1955						741
	Y280S-2/75				1400	700		2000	2110				530		1092
	Y280M-2/90								2160						1092
	Y315S-2/110				1600	800	320	2240	2310	730	780		570	6-M20 220	1484
	Y315M-2/132								2360						1484
	Y315L1-2/160								2360						1484
ZA200-315	Y180M-4/18.5	3	245	125	1060	530	270	2600	1790	550	660	420	530	6-M16 220	563
	Y180L-4/22								1830						563
	Y200L-4/30				1200	600	300	1800	1895	670	720				665
	Y225S-4/37								1940						761
	Y225M-4/45								1965						1484
	Y250M-4/55								2050						852
	Y280S-4/75				1400	700		2000	2120						1098
ZA200-400	Y225M-4/45	3	260	125	1200	600	300	1800	1980	670	720	470	530	6-M16 220	823
	Y250M-4/55								2065						914
	Y280S-4/75				1400	700		2000	2135						1160
	Y280M-4/90								2185						1160
	Y315S-4/110				1600	800	320	2240	2335	730	780		570	6-M20 400	1552
	Y315M-4/132								2385						1552
	Y315L1-4/160								2385						1552
ZA200-450															
ZA200-500	Y280S-4/75	4	265	155	1400	700	300	2000	2190	670	720	540	600	6-M16 220	1299
	Y280M-4/90								2240						1299
	Y315S-4/110				1600	800	320	2240	2390	730	780		640	6-M20 400	1694
	Y315M-4/132								2440						1694
	Y315L1-4/160								2440						1694
ZA200-560	Y315S-4/110	5	270	155	1600	800	320	2240	2550	730	780	570	640	6-M20 400	1855
	Y315M-4/132								2600						1855
	Y315L1-4/160								2600						1855
ZA200-630	Y315M-4/132	6	280	155											

泵 型 号 Model of pump	电机型号 Model of motor	轴承架号 Name of shaft	A	a	L_1	L_2	L_3	L_4	L	B_1	B	h	H	n_3-Md_3	L	总重量 Weight (kg)
ZA250-315	Y200L-4/303	3	255	125	1200	600	300	1800	1905	670	720	470	530	6-M16	220	729
	Y225S-4/37								1950							825
	Y225M-4/45								1975							825
	Y250M-4/55								2060							916
	Y280S-4/75				1400	700		2000	2130							1162
	Y280M-4/90								2180							1162
	Y315S-4/110								2330							1474
ZA250-400	Y250M-4/554	4	280	155	1400	700	300	2000	2135	670	720	520	530	6-M16	220	1043
	Y280S-4/75								2205							1283
	Y280M-4/90								2255							1283
	Y315S-4/110				1600	800	320	2240	2405	730	780		570	6-M20	400	1283
	Y315M-4/132								2455							1675
	Y315L1-4/160								2455							1675
ZA250-500	Y315S-4/1105	5	300	155	1600	800	320	2240	2580	730	780	610	640	6-M20	400	1846
	Y315M-4/132								2630							1846
	Y315L1-4/160								2630							1846
ZA250-560	Y315L1-4/160	5	290	155												
ZA300-400	Y280M-4/90	4	300	155	1400	700	320	2000	2275	670	720	590	600	6-M16	220	1368
	Y315S-4/110				1600	800		2240	2475	730	780		640	6-M20	400	1763
	Y315M-4/132								2475							1763
	Y315L1-4/160								2475							1763
ZA300-500	Y315L1-4/160	5														
ZA300-560																
ZA300-630		6														
ZA400-500																
ZA400-560																
ZA400-630																

说明：本表只提供了配套Y、YB系列小于160kW电机的安装尺寸，配套功率大于185kW的电机的安装尺寸请提供电机型号后来函索取安装尺寸。

Note: here in this table only the installation dimensions equipped with Y, YB series motors less than 160kW are offered, for those equipped with the motors bigger than 185kW, please provide the motor model and then ask for the related installation dimensions.

进出口法兰尺寸表 Inlet & outlet flange dimensions table

泵 型 号 Model of pump	ϕ Dd	ϕ Dd1	ϕ D1	b1	n1- ϕ d1	ϕ Ds	ϕ Ds2	ϕ D2	b2	n2- ϕ d2
ZA25-200	25	85	115	16	4- ϕ 14	40	110	150	18	4- ϕ 18
ZA25-250						50	125	165	20	
ZA25-315										
ZA40-160	40	110	150	18	4- ϕ 18	80	160	200	24	8- ϕ 18
ZA40-200										
ZA40-250										
ZA40-315										
ZA50-160	50	125	165	20	4- ϕ 18	80	160	200	24	8- ϕ 18
ZA50-200										
ZA50-250										
ZA50-315						100	190	235	24	8- ϕ 23
ZA50-400										
ZA80-160	80	160	200	24	8- ϕ 18	100	190	235	24	8- ϕ 23
ZA80-200										
ZA80-250										
ZA80-315										
ZA80-400										
ZA100-160	100	190	235	24	8- ϕ 23	100	190	235	24	8- ϕ 23
ZA100-200										
ZA100-250						150	250	300	28	8- ϕ 27
ZA100-315										
ZA100-400										
ZA100-500										
ZA150-200	150	250	300	28	8- ϕ 27	150	250	300	28	8- ϕ 27
ZA150-250										
ZA150-315										
ZA150-400										
ZA150-500										
ZA150-560										
ZA150-630										
ZA200-250	200	310	360	30	12- ϕ 27	200	310	360	30	12- ϕ 27
ZA200-315										
ZA200-400										
ZA200-500										
ZA200-560										
ZA200-630										
ZA250-315	250	370	425	32	12- ϕ 30	250	370	425	32	12- ϕ 30
ZA250-400										
ZA250-500										
ZA250-560										
ZA250-630										
ZA300-400	300	430	485	34	16- ϕ 30	300	430	485	34	16- ϕ 30
ZA300-500		450	515	42	16- ϕ 33	300	450	515	42	16- ϕ 33
ZA300-560										
ZA300-630		430	485	34	16- ϕ 30	300	430	485	34	16- ϕ 30
ZA400-500	400					400				
ZA400-560										

最大容许试验压力(20℃) Maximum allowed test pressure(20℃)

泵　体 Pump casing	材　料 Material
I	1.4312(B)，1.4308(304)，1.4446(304L)
II	1.4410(M4)，1.4408(316)，1.6902(316L)，24879(804) 1.4500(904)，1.4536(904L)，钛及钛合金
III	E，HT200
IV	ZG25
V	ZG1Cr13

材　料 Material		泵　体 Pump casing	法　兰 Flange					
泵　体	泵体螺栓 Bolt on the pump casing	MPa	GB	DN			ANSI	
			PN25	PN10	PN16	PN25	Class 125	Class 150
I II	1Cr18Ni9	3.0		-	2543	2544	-	B16.5
III	2Cr13	1.2	2565-81	2532	2533	2534	B16.1	-
IV	2Cr13	3.75		-	2543	2544	-	B16.5
V	2Cr13	3.75		-	2543	2544	-	B16.5

泵体材料介质适应表 Table of the pump casing ma tertals suitable for the media

符号说明 Symbol meaning

符号 symbol	说明(耐蚀情况，腐蚀率、毫米/年) Notice(about corrosion resisting, corrosive rate:mm/year)	
A	优良，<0.05	Excellet,<0.05
B	良好，<0.05～0.5	Good,<0.05～0.5
C	可用，但腐蚀较重，0.5～1.5	Use, but severe corrosive, 0.5～1.5
D	不适用，腐蚀严重，>1.5	Unsuitable, severe corrosive,>1.5
*	可能产生应力腐蚀破裂	Possibly to produce stress corroded cracking
△	溶液或介质变色	Color change with solution or medium
⌀	可能产生晶间腐蚀	Possibly to form corrosion between crystals
∞	可能产生孔蚀	Possibly to produce hole corrosion

铸铁和低碳钢泵适应介质表 Table of the media sutable to both cast iron and low carbon steel made pumps

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature (℃) 25	50	80	100
过氧化氢(双氧水) Hydrogen peroxide	10	B	B	B	B
	20～40	D			
氨 水 Ammonia	<30	A	B	B	B
	40	A			
甲 醇 Methanol	<100	B	B	B	B
	100	A	A	A	A
乙 醇 Ethanol	<100	A	A	A	
	100	A	A	A	A
丙 醇 Propyl alcohol		A	A	A	A
丁 醇 Butanol		A	A	A	A
		B(120)			
甲 醛 Ormaldehyde	10～30	D			
	40～50	C			
	80～90			D	D
	100	A	A	A	A
乙 醛 Acetaldehyde	10	C	C		
	100	A	A	A	
丙 醛 Propionic aldehyde		A	A		
丁 醛 Butyric aldehyde		A	A	A	A
(二)甲醚 Dimethyl ether		B	B	B	B
丙 酮 Acetone	<100	B			
	100	A	A	A	A
		A(120)			
甲 烷 Methane		A	A	A	A
		A(120)			
乙 烷 Elayl		A	A	A	A
		A(120)			
乙 烯 Ethane		A	A	A	A
丙 烷 Propane		A	A	A	A
		A(120)			
丁 烷 Tetrane		A	A	A	A
汽油(高辛烷值) Gasoline(high octane value)		B	B	B	
汽油(喷汽机燃料) Gasoline(fuel for oil sprayer)		B	B	B	

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature (℃) 25	50	80	100
汽油 (含H_2S) Gasoline(containing H_2S)		B			
汽油(含HCL，SO_2，H_2O) Gasoline(containing HCL, SO_2, H_2O)		C	C		
煤 油 Coal oil		B	B	B	B
三乙醇胺 Triethanolamine		B	B	B	B
植物油 Vegetable oil	100	A	A	A	A
		A	D		
	90	D	产生催化 Producing catalyze		
豆 油 Soy bean oil		B	B		
玉米油 Corn oil		B	B	B	
棉籽油 Cottonseed oil		B	B	B	
饮用水 Drinking water		B	B	B	
高纯水 High pure water		A			
		A	A		
海 水 Sea water	流 速 Flowrate				
	<1.5m/s	B			
	>1.5m/s	D	D		
水 PH=7 Water PH=7		C	C	C	C
水 PH<7 Water PH<7		D			
水 PH>7 Water PH>7		A	B		
硫 酸 Sulphuric acid	<65	D	D		
	65～75	C	C	D	D
	75～100①	B	C	D	D
氢氟酸 (不含氧) Hydrofluoric acid (containing no oxygen)	<70	D	D		
	70～90	C			
	100	B	B		
氢氟酸 (含氧) Hydrofluoric acid (containing oxygen)	<70	B	B		
	70～90	C			

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature (℃) 25	50	80	100
	100	B	B	C	
铬 酸 Chromic acid	<25	D			
	30～80	B			
	100	A			
硼 酸 Boratic acid	<10	C	C	C	C
		C(120)			
	>10	D		D	
70～90%硫酸+硝酸 70～90% sulphuric acid+nitric acid		A			
氢氧化钠 Sodium hydroxide	<30②	A	B	B	B*
		D*(200)			
	30～40	A	B	B	C
	50～60	B	B	D	D
		D*(200)			
	80	B	D	D	D
	90			D	D
	100	B		D	
		D*(370)			
氢化铵 Ammonium hydride	<10	C	D		
	10～99	D	D		
	100	B			
硫酸钠(PH>7) Sodium sulphate(PH>7)		B	B	B	B
硝酸钠 Sodium nitrate	<90	A	A	B	C
	100	A	A	A	A
		B(120)			
碳酸钠 Sodium carbonate		A	A	A	A
氯化钠(含氧) Solidum chloride (containing oxygen)	10	D③	C	C	D
	20～30	C			D
	100	A			
氰化钠 Sodium cyanide	10	A	A	A	A
		A(120)			
	20～90	A	A	A	A

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature (℃) 25	50	80	100
	100	A	A	A	A
		B(120)			
碳酸氢钠 Sodium bicarbonate	<100	B	B	B	B
	100	C			
硅酸钠 Sodium silicate		B	B	B	B
		B(120)			
柠檬酸钠 Sodium citrate	10	D			
	100	A			
硫酸钾△ Potassium sulphate△	10～20	B	B	B	D③
		D			
	100	A			
硝酸钾 Potassium nitrate	<90	B	B	B	B
	100	A	A	A	A
		A(120)			
氟化钾 Potassium fluoride	20	B	B	B	
	100	A	B	B	B
氰化钾 Potassium cyanide	<50	C④	C	C	C
	60～70			C	C
	80～90	B			C
	100	B	B	B	B
		C(120)			
重铬酸钾 Heavy Potassium chromate	<60	B	B	B	B
		B	120		
	100	B	B	B	B
高锰酸钾 Potassium permanganate	<100	B	B	B	C
	100	B			
氯化钙 Lime chloride	10	A	A	A	A
		A(120)			
	20～70	B	B	C	D
	100	A	A	A	A
			A(120)		
氟化钙 Calcium fluoride	90	C			
	100	B	B	B	B

注：①高转速泵、阀，以用高铬镍不锈钢为好。铸铁优于碳钢，可用于80～100℃以下。②铸铁不 100℃。③铸铁为C。④铸铁为D。

Note：①It is better to use the high Cr-Ni stainless steel for the pump and valve of a high rotating speed.Cast iron is better than carbon steel. May be used below 80～100℃.
②Cast iron does not withstand 100℃.
③Cast iron to be C.
④Cast iron to be D.

铬18镍19不锈钢(304，304L)泵适应介质表 Table of the media suitable to the pump made of cr18ni9 stainless steel(304,304L)

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
无机酸 Inorganic acid					
硫酸*(不充气) Shlphuric acid* (without gas filled)	<5	B	D		
	10～80	D	D		
	90	B	D		
	100	B	C		D
硫酸*(充气) Shlphuric acid* (gas filled)	<20	C	D		
	30～60	D	D		
	70～80	C	D		
	90～100	B	C	D	D
发烟硫酸 Fuming sulphuric acid		D			
硝 酸 Nitric acid	<30	A	A	A	A
		C(120)		D(150)	
	40～60				
	70				
盐 酸 Chlorhydric acid		D			
磷 酸 Phosphoric acid	<5	B	B	B	B
		B(沸点) B(Boiling point)			
	10	B	D	D	D
		D(沸点) D(Boiling point)			
	10～85	D			
氢氧酸(不充气)*∞ Hydrofluoric acid (without gas filled)*∞	<100	D			
	100	B	D		
氢氟酸(充气) Hydrofluoric acid (gas filled)*∞		D		D	
铬 酸*∞ Chromic acid*∞	<10	B	C	C	
		C(沸点) C(Boiling point)			
	20～30	B	D	D	D
	50	D			
	100	D			
硼 酸∞ Boratic acid∞	<30	A	A	A	A
		A(沸点) A(Boiling point)			
	40	B	B	B	B
		B(150)			
	50	B	B	B	B

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
		C(200)			
硼 酸∞ Boratic acid∞	70～80	D			
	70～80	D(120)			
	100	B	B		
		D(200)			
混酸：硫酸＞50%+硝酸<50%+水>20% Mixed acid: sulphuric acid>50%+nitric acid <50%+water>20%		B	B	B	D(沸点) D(Boiling point)
硫酸20～60%+硝酸<25%+水>20% Sulphuric acid 20～60%+nitric acid<25%+water>20%		D			
硫酸15%+硝酸5%+水80% Sulphuric acid 15%+nitric acid 5%+water 80%		B	B	B	B (沸104) (Boiled 104)
氢氧化钠 Sodium hydroxide	<50	A	C	C	D
		D*(200)			
	70*	B	B	B	D*
		D*(200)			
	80*	B	B	B	D
		D*(200)			
	100	B	B	B	B
		C(316)		D(370)	
氢氧化钾* Potassium hydroxide*	<50	B	B	B	B
		B(沸点) B(Boiling point)			
	50	B	B	B	D
		D(200)			
	60～70	B	B	B	C
		C(120)			
	80	B			D
		D(200)			
氢氧化钾 Potassium hydroxide	100	A			
		D(250)			
硫酸钠* Sodium sulphate*		A	A	A	A
		A(200)		B(840)	

铸铁和低碳钢泵适应介质表 Table of the media suitable to the pump made of cast iron and low carbon steel

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
硝酸钠∞ Sodium nitrate∞	<70	A	A	A	A
		A(沸点) A(Boiling point)			
	100	B		D	
		D(510)			
碳酸钠 Sodium carbonate	10	A	A	A	A
		A(沸点) A(Boiling point)			
	20~40	B	B	A	A
	100	A	A	A	B
碳酸钠 Sodium carbonat	100	D*(400)		D*(900)	
氯化钠*∞ Sodium chloride*∞	10~30	B	B	B	B
		B(沸点) B(Boiling point)			
	90	D			
	100	B	B	B	
		D(260)		D(700)	
氰化钠 Sodium cyanide	10	A	A	A	A
	20~30	A			
	40~100	A	A	A	D
		D(700)			
硅酸钠 Sodium silicate		A	A	A	A
		D(800)			
醋酸钠∞ Sodium acetate∞	10	A	A	A	A
		A(150)			
	20~60	B	B	B	B
	100	B	B	B	B
		B(370)			
柠檬酸钠 Sodium citrate	<40	B	B	B	B
	100	B			
硫酸钾 Potassium sulphate	<饱和	A	A	A	A
		A(沸点) A(Boiling point)			
	100	D(200)			
硝酸钾 Saturation	<80	B	B	B	B
		B(沸点) B(Boiling point)			
	100	A	A	A	A
		A(560)			
氟化钾 Potassium fluoride		B	B	B	B
氰化钾 Potassium cyanide	<30	A	A	A	A
	40~	B	B	B	B

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
氰化钾 Potassium cyanide	90				
	100	B			
重铬酸钾 Heavy potassium chromate	<30	A	A	A	A
		A(沸点) A(Boiling point)			
	40~60	A	A	A	A
	100	B			
高锰酸钾 Potassium permanganate	<30	B	B	B	B
		B(沸点) B(Boiling point)			
	100	B			
氯化钙*∞ Calcium chloride*∞	<20	A	A	A	D
	30~80	B	B	B	D
	100	B			
		D(150)			
氟化钙 Calcium fluoride	10	A	A	A	A
	100	A	A	A	A
过氧化氢(PH>7) Solozone(PH>7) (双氧水) (Hydrogen peroxide solution)	10~40	B	B	B	B
		B(沸点) B(Boiling point)			
	90	A	A		
	100	B			C
氨 水 Ammonium water		A	A	A	A
氨 (无水) Ammonium (free of water)		A	A	A	A
		A(316)		A(500)	
甲 醇 Methanol	<100	A	A	A	A
	100	A	A	A	C
乙 醇 Alcohol		A	B	B	B
丙 醇 Propanol		A	A	A	A
丁 醇 Butanol		A	A	A	A
甲 醛∞ Formaldehyde∞	<40	A	A	A	A
		A(150)			
	50	A	A	B	B
		B(300)			
	60~70	A	A		
	80~90	A	A	A	
	100	A			
乙 醛 Acetaldehyde		A	A	A	A
丙 醛 Propionic aldehyde		A			
丁 醛 Butyric aldehyde		A	A	A	A
(二)甲醚 Dimethyl ether		B	B	B	B

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃)			
		25	50	80	100
乙 醚 Ethyl ether		A	A	A	A
丙 酮 Acetone		A	A	A	A
甲 烷 Methane		A	A	A	A
		A(370)			
乙 烷 Ethane		A	A	A	A
		A(316)			
丙烷 (液及气) Propane(liuid and gas)		A	A	A	A
丁 烷 Tetrane		A	A	A	A
汽油(高辛烷值) Gasoline(high value of octane)		B	B	B	
汽油(喷汽机燃料) Gasoil(fuel of steam sprayer)		B	B	B	
煤 油 Coal oil		A	A	A	A
		A(200)			
三乙醇胺 Triethanolamine		B	B	B	B

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃)			
		25	50	80	100
植物油 Vegetable oil		A	A	A	A
		A(350)			
豆 油 Soy bean oil		A	A	A	A
玉米油 Corn oil		A	A	A	A
棉子油 Cottonseed oil		A	A	A	A
饮用水 Drinking water		A	A	A	A
海 水 Sea water	流 速 Flowrate				
	<1.5m/s	A∞		A	
	>1.5m/s	A∞			

铬18镍12钼(钛)(316,316L)不锈钢泵的适应介质表 Table of the media suitable to the pump made of Cr18Ni12Mo(Ti) (316,316L) stainless steel

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃)			
		25	50	80	100
硫酸*(充气) Vitriol* (gas filled)	<5	B	B	D	D
	10～30	B	C	D	D
	40～50	C	D	D	
	60～70	D	D	D	
	90	B①	C	D	D
	100	B	C	C	C
		D(120)			
硫酸*(不充气) Vitriol* (without gas filled)	<5	B	D	D	D
	20～80	D	D	D	D
	80～90	B	D	D	
	100	B	B	B	C
硝 酸 Nitric acid	<20	A	A	A	A
		C(120)		D(150)	
	30～60	A	B	B	B
		D(120)			
	70	A	B	B	
	80	A	B	D	
	90	A	D		
	100	A②	D		
磷酸*(充气) Phosphoric acid (gas filled)	<25	A	A	A	A
		A(沸点) A(Boiling point)		D(>120)	
	25-50	A	A	A	B

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃)			
		25	50	80	100
		D(120)			
	50～85	A	B	B	B
		D(120)			
	90	D			
	100	B			
磷酸*(不含氧) Phosphoric acid*(containing no oxygen)		B	B	B	B
氢氟酸(不充气) Hydrofluoric acid (without gas filled)	<100	D			
	100	B			
氢氟酸(充气) Hydrofluoric acid (gas filled)	<10	B			
	10～90	D			
	100	B			
碳 酸 Carbethylic acid	10	B			
	30				A
	100	A	A	A	A
		A(816)			
铬 酸 Chromic acid		D			D
氯 酸∞ Chloric acid∞		D			
四磷酸 Tetra-phosphoric acid		B			
硼 酸∞ Boratic acid∞	<10	A	A	A	A
		A(沸点) A(Boiling point)			
	20～50	B	B	B	B

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃) 25	50	80	100
		B(150)		B(沸点) B(Boiling point)	
	70～80	B		D(120)	
	100	B	B	D(250)	
王 水 Nitro-hydrochloric acid		D			
混酸：硫酸>50%+硝酸<50%+水<20% Mixed acid: sulphuric acid>50%+nitric acid<50%+water<20%		B	B	B	
		D(沸点) D(Boiling point)			
		D			
混酸：硫酸20～60%+硝酸<25%+水<20% Mixed acid: sulphuric acid>20～60%+nitric acid<25%+water<20%		D			
混酸：硫酸30%+硝酸15%+水55% Mixed acid: sulphuric acid 30%+nitric acid 15%+water55%		B	B	B	
		B(沸点) B(Boiling) (110)			
混酸：硫酸15%+硝酸5%+水80% Mixed acid: sulphuric acid 15%+nitric acid 5%+water80%		B	B	B	
		B(沸点) B(Boiling) (110)			
甲 酸∞③ Aminic acid	<5	B	B	B	B
	>5	C	C	C	C
		D(沸点) D(Boiling point)			
醋酸*③(不充气) (乙酸) Acetic acid* (without gas filled) (acetic acid)	<50	A	A	A	A
	60～90	B	B	B	B
	100	B	B	B	B
		D(200)			
醋酸(充气) Acetic aicd (gas filled)	<40	A	A	A	A
		B(150)		D(200)	
	50	A	B	B	B
	60～90	A	B	B	C
	100	A	B	B	C
		D(150)			
氢氧化钠 Sodium hydroxide	<20	A	A	A	A
		B(沸点) B(Boiling point)		D(150)	
	30～50	A	A	B	D
		D*(150)			
	70	A	A	B	B
		D*(150)			
	80	A	A	B	D*
		D(260)		D(370)	

介质名称 Medium name	浓度 Concent-ration (%)	温度 Temperature(℃) 25	50	80	100
氢氧化钠 Sodium hydroxide	100	A	A	A	A
		C(260)		D(370)	
氢氧化钾* Potassium hydroxide*	<50	A	A	A	A
		A(沸点) A(Boiling point)			
	50	B	B	B	D
		D(200)			
	60～70	B	B	B	C
		C(150)			
	80	B			
		D(200)			
	100	A			
		D(260)			
硫酸钠 Sodium sulphate		A	A	A	A
		A(200)		B(840)	
硝酸钠 Sodium nitrate	<70	A	A	A	A
		A(沸点) A(Boiling point)			
	100	B			
		A(510)			
碳酸钠 Sodium carbonate	10	A	A	A	A
		A(沸点) A(Boiling point)			
	20～40	B	B	A	A
		A(沸点) A(Boiling point)			
	100	B	B	B	B(260)
		D*(400)		D*(900)	
氯化钠*∞ Sodium chloride*∞	10	B	D		
	20～30	B	B	B	B
		B(沸点) B(Boiling point)		D(120)	
	90	D			
	100	A	D(700)		
碳酸氢钠 Sodium bicarbonate		A	A	A	A
氰化钠∞ Sodium cyanide*∞	<10	A	A	A	A
	20～30	A			
	40～100	B			D
		D(700)			
硅酸钠 Potassium silicate		A	A	A	A
		D(800～100)			
硫酸钠 Potassium sulphate	<100	A	A	A	A
		A(沸点) A(Boiling point)			

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
	100	A			
硝酸钾 Potassium nitrate	<80	B	B	B	B
		B(沸点) B(Boiling point)			
	100	B			
		B(550)			
碳酸钾 Potassium bicarbonate	<70	B	B	B	B
		B(沸点) B(Boiling point)			
	100	B	B	B	B
氟化钾 Potassium fluoride		B	B	B	B
氰化钾 Potassium cyanide	<90	B	B	B	B
	100	B			
重铬酸钾 Heavy potassium chromate	<30	A	A	A	A
		A(沸点) A(Boiling point)			
	40～60				A
	10	B			
高锰酸钾 Potassium permanganate	<30	B	B	B	B
氯化钙*㊀ Calcium chloride*㊀	10	B	D		
	20～30	B	B		
	40～90	B	B	B	
		D(沸点) D(Boiling point)			
	100	A	A	A	A
	50	C(-18)			
氟化钙 Calcium fluoride	10	A	A	A	A
	100	A	A	A	A
甲 醇 Methanol	<100	A	A	A	A

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
	100	A	A	A	A
乙 醇 Alcohol		A	A	A	A
乙二醇 Ethandiol		A	A	A	A
甲 醛㊀ Formaldehyde㊀	<40	A	A	A	A
		A(150)			
	50	A	A	B	B
		B(300)			
	60～70	A	A		
	80～90	A	A	A	
	100	A			
乙 醚 Ethyl ether		A	A	A	A
丙 酮 Acetone		A	A	A	A
醋酸乙脂 Ethyl ester acetate		A	A	B	B
甲 苯 Toluene		A	A	A	A
		A(沸点) A(Boiling point)			
汽 油 Gasoline		A	A	A	A
		A(175)			
煤 油 Coal oil		A	A	A	A
		A(200)			
苯 酚 Phenyl hydroxide	70～90	B	B	B	B
		B(150)		D(200)	
海 水 Sea water	流 速 Flowrate				
	<1.5m/s	A㊀*		A(PH≈7)	
	>1.5m/s	A㊀*			

注：① Cr26Mol铁素体钢不　蚀；
② 高流速和摩擦会增加腐蚀；
③ 不许可含微量盐酸、硫酸或氯化钠。Cr26Mol铁素体钢　蚀较好。

Note：① Cr26Mol ferritic steel does not withstand corrosion;
② High flowrate and friction may increase corrosion;
③ Not allowed to contain micro chlorhydric acid, sulphuric acid or sodium chloride.Cr26MOl ferritic steel is of a better corrosion resistance.

钛及钛合金泵的适应介质表 Table of the media suitable to the pump of titanium and titanium alloy

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
硫酸①(充气) Vitriol① (gas filled)	1	B	B	B	B
		B(沸点) B(Boiling point)			
	<3	B	B		D
	<10	B	C	D	D
	10～30	B	C	D	
	40～50	C	D		
	50～100	D	D		
硫酸(不充气) Vitriol (without gas filled)	<10	B			
	10～100	D			

介质名称 Medium name	浓度 Concentration (%)	温度 Temperature(℃) 25	50	80	100
硝 酸 Nitric acid	10	A	A	A	A(150)
		B(200)			
	20	A	A	A	
		A(150)		B(200)	
		D(316)			
	30～80	A	A	A	A(150)
		D(200)			
	80～100	A	A	B	
		B(150)			

介质名称 Medium name	浓度 Concentr-ation (%)	温度 Temperature(℃) 25	50	80	100
盐酸①(不充气) Chlorhydric acid① (without gas filled)	10	B	D		
	20	C	D		
	>30	D			
盐酸①(充气) Chlorhydric acid① (gas filled)	1	B	B	B	B(沸点) B(Boiling point)
	<20	B			D(35)
	30	B	D		
	>50	D			
磷酸(充气) Phosphoric acid (gas filled)	5	B	B	B	B
	<10	B	B	B	
磷酸(充气) Phosphoric acid (gas filled)		D(沸点) D(Boiling point)			
	10～20	B	D		
	30	B	C		D
	40	C	C		
	50～70	C	C	D	
	100	D			
磷酸①(不充气) Phosphoric acid① (without gas filled)		D			
铬 酸 Chromic acid	10	A	A	A	A
		A(沸点) A(Boiling point)			
	<90	A	A	A	A
硼 酸 Boratic acid	10	A	A	A	A
		A(沸点) A(Bolling point)			
	<饱和 <Saturation	A	A	A	A
盐酸1%+硝酸3% Chlorhydric acid 1%+nitric acid 3%		A			
盐酸2%+硝酸1% Chlorhydric acid 2%+nitric acid 1%		A			
王 水 Nitro-hdrochloric acid		A	A	B	B
盐酸4%+硝酸1% Chlorhydric acid 4%+nitric acid 1%		A			

介质名称 Medium name	浓度 Concentr-ation (%)	温度 Temperature(℃) 25	50	80	100
甲酸(不充气) Aminic acid (without gas filled)	<10	A	A	A	
		A(沸点) A(Boiling)			
	30	D			D
	<50	B	B	D	D
	90			D	D
甲酸(充气) Amini acid(gas filled)		B	B	B	B
醋 酸 Acetic acid		A	A	A	A
		A(200)			
氢氧化钾 Potassium hydroxide	10	A	A	A	A
氢氧化钾 Potassium hydroxide		A(沸点) A(Boiling point)			
	20～100	B			D(沸点) D(Boiling point)
		D(260)			
氢氧化钠 Sodium hydroxide	10	A	A	A	A
		A(沸点) A(Boiling point)			
硫酸钠 Sodium sulphate	10～30	A	A	A	A
		A(沸点) A(Boiling point)			
	饱和 Saturation	A	A		
		D(900)			
硝酸钠 Sodium nitrate	<饱和 <Saturation	A	A	A	A
		A(300)			
氯化钠 Sodium chloride	<饱和 <Saturation	A	A	A	A
		A(沸点) A(Boiling point)			
	100	A*(沸点) A*(Boiling point)			
乙醇*②Alcohol*		A	A	A	A
乙二醇 Ethandiol		A	A	A	A
乙 醚 Ethyl ether		A	A	A	A
丙 酮 Acetone		A	A	A	A
醋酸乙脂 Ethyl ester acetate		A	A	A	A
甲 苯 Toluene		A	A	A	A
苯 酚 Phenyl hydroxide		A			

注：①含Cu、Ni等离子或其他氧化剂能降低腐蚀。

②含微量Cl^-的甲、乙醇可能产生应力腐蚀破裂，含2%以上的水时可避免。

Note：①Containing Cu, Ni etc.ions or other oxidants can lower the corrosion.

②Both methanol and alcohol containing micro cl^- may produce stress corrosive craking,which can be avoided by containing more than 2% water.

ZGOOCr20Ni25Mo4.5Cu1.5(904L)耐腐蚀性能表 ZGOOCr20Ni25MO4.5CU1.5(904L)Table of anti-corrosive performance

介质名称 Medium name	介质条件 Medium condition		腐蚀情况 Corrosion condition
	浓度 Concentration(%)	温度 Temperature(℃)	
硫 酸 Vitriol	5-40	60	A
	10	80	B
	20	70	B
	30	70	B
	40	30-50	A
	50	40	A
	50	50	B
	60	20-35	A
	60	40	B
	80-98	40	A
	80-98	50	B

介质名称 Medium name	介质条件 Medium condition		腐蚀情况 Corrosion condition
	浓度 Concentration(%)	温度 Temperature(℃)	
硝 酸 Nitric acid	10-40	20-沸腾 20-Boiling	A
	50	100	A
	60	90	A
	70	100	B
	80	80	B
醋 酸 Acetic acid	1-80	沸腾 Boiling	A
	99.5	200	A
	100	20-75	A
	100	100	A
	100	沸腾 Boiling	A

ZG1Cr13(410)耐腐蚀性能表 ZG1Cr13(410) Table of anti-corrosive performance

介质条件 Medium condition			延续时间 Extended time	腐蚀情况 Corrosion condition
介质名称 Medium name	浓度 Concentration(%)	温度 Temperature(℃)	h	
硝 酸 Nitric acid	5	20		A
	7	20	720	A
	5	沸腾 Boiling		D
	20	20		A
	20	沸腾 Boiling		A
	50	20		A
	50	沸腾 Boiling	24	C
	65	20		A
	65	沸腾 Boiling	24	D
	90	20		A
	90	沸腾 Boiling		D
醋 酸 Acetic acid	10-50	20		C
	10	沸腾 Boiling		D
蚁 酸 Formic acid	10-50	20		A
	10-50	沸腾 Boiling		D
柠檬酸 Citric acid	1	20		A
	1	沸腾 Boiling		D
	25	20	720	C
氨 Ammonia	溶液或气体 Solution or air	20-100		A
氢氧化钠 Sodium hydroxide	20	20		A
	20	沸腾 Boiling		A
	50	100		D
	浓 液 Thick liquid	20		A

介质条件 Medium condition			延续时间 Extended time	腐蚀情况 Corrosion condition
介质名称 Medium name	浓度 Concentration(%)	温度 Temperature(℃)	h	
草 酸 Oxalic acid	浓 液 Thick liquid	20		A
	浓 液 Thick liquid	沸腾 Boiling		D
硝酸铵 Ammonium nitrate	约65 About 65	20	1127	A
	约65 About 65	125	110	C

Hanthing Pump	**离心泵数据表** **CENTRIFUGAL PUMP DATA SHEET**	项目名称 PROJECT	
		分项名称 SUBPROJECT	
		图号 DWG. NO.	
	项目号 PROJECT NO	设计阶段 STAGE	页次 SHEET 1/3

用户 Client		设备名称 Service	位号 Item No.
制造厂 Manufacturer	Hanthing Pump	型号 Model	数量 QTY. 开 Run. 备 Spare 共 Total 台

操作条件 OPERATING CONDITION

1	输送介质 Liquid handled		8	操作状态 Operating	□连续 Continuous □间断 Intermittent
2	介质特性 Liquid characteristic	□结晶 □有毒 Toxic □腐蚀性 Corrossive □磨蚀性 Erosive	9	进口压力 Inlet press.	额定 Rated 最大 Max. MPa.G
3	固体颗粒 Solid content % 重量 Wet	粒度 Particle size mm	10	出口压力 Outlet press.	额定 Rated 最大 Max. MPa.G
4	温度 Temp. 正常 Nor. 最高 Max. 最低 Min. ℃		11	正常温度下的汽化压力 Vapor press. at nor. temp.	MPa.G
5	正常温度下的密度 Density at nor. temp. kg/m³		12	额定压差 Rated difference of press.	MPa
6	正常温度下的粘度 Viscosity at nor. temp. cp.		13	扬程 Head	额定 Rated 最高 Max. m
7	流量 Flow rate 正常 Nor. 额定 Rated m³/h		14	有效汽蚀余量 NPSHa	m

泵 性 能 PERFORMANCE

15	流量 Capacity 额定 Rated 最小连续 Min. continuous m³/h		18	操作点效率 Efficiency for operating point	%
16	扬程 Head 操作 Operating 关闭 Shut-off m		19	轴功率 Shaft power	额定 Rated 最大 Max. kW
17	必需汽蚀余量 NPSHr m 最大提升高度 Max. lift height m		20	转速 Speed r/min	数 Stage No.

结 构 CONSTRUCTION FEATURES

标准 Code	型式 Type	□卧式 Horiz.	□立式 Verti.	□筒型 Barrel

21	叶轮 Impeller	外径 OD	额定 Rated.	最大 Max.	□单 Single suction	33	泵体 Casing	支承方式 Mount	□底脚 Foot □中心线 C.L. □托架 Bracket
22	叶轮 Impeller	□闭式 Closed	□半开式 Semi-closed	□开式 Open	□双吸 Double suct.	34	泵体 Casing	剖分形式 Split	□径向 Radial □轴向 Axial
23	叶轮 Impeller	安装 Installation	□悬臂 Overhung	□双支承 Between bearings		35	泵体 Casing	承磨环 Wear ring	□有 Yes □无 No
	叶轮 Impeller	承磨环 Wear ring	□有 Yes	□无 No			泵体 Casing	设计压力 Design press.	水压试验 Hydro. test MPa.G

24	传动方式 Transmission	□直联 Direct	□三角皮带 V-belt	□变速器 Gearbox		36	法兰标准号 Standard No. of flange				
25	联轴器 Coupling	□弹性柱销 Flexible	□中间隔套 With spacer	□(1)		37	接管 Nozzle	DN (mm)	PN (MPa)	法兰面 Face	方位 Direction
26	底座 Base plate	□泵驱动机公用 For pump & driver	□泵驱动机分离 Only for pump			38	进口 Inlet				□水平 Hori. □垂直 Vertical
27	泵转向(从联轴器端看) Rotation(viewed from coupling end)	□顺时针 CW	□逆时针 CCW			39	出口 Outlet				□水平 Hori. □垂直 Vertical

离心泵数据表
CENTRIFUGAL PUMP DATA SHEET

项目名称 PROJECT	
分项名称 SUBPROJECT	
图号 DWG. NO.	

项目号 PROJECT NO		设计阶段 STAGE		页次 SHEET	1/3

型号 Model		设备名称 Service	位号 Item No.

结 构 CONSTRUCTION FEATURES

28	机械密封 Mechanical seal	型号 Model	轴套外径 Shaft sleeve OD. mm	40	轴承 Bearing	径向 Radial	☐滚动 Rolling ☐滑动 Sleeve
29		☐单端面 Single	☐内装式 Inside ☐非平衡型 Unbalanced ☐串联式 Tandem	41		止推 Thrust	☐滚动 Rolling ☐滑动 Sleeve
30		☐双端面 Double	☐外装式 Ouside ☐平衡型 Balanced ☐集装式 Cartridge	42		润滑方式 Lubrication	☐油 Greases ☐脂 Oil ☐强制 Forced ☐油浴 Flood
31		制造厂 Manufacturer		43		水冷夹套 Water jacket	☐有 Yes ☐无 No
32	☐填料密封 Packing ☐水封环 Lantern ring ☐有付叶轮 W/.Expeller ☐无付叶轮 W/O Expeller ☐其它型式密封 Other type						

材 料 MATERIAL

44	泵体 Casing	叶轮 Impeller	47	机械密封 Mech. seal	动环 Rotating seal ring 静环 Stationary seal ring
45	轴 Shaft	轴套 Shaft sleeve	48		辅助密封环 Aux. seal ring 弹簧 Spring
46	承磨环(泵体/叶轮) Wear ring (casing/impeller)		49		填料 Packing 水封环 Lantern ring

辅 助 管 路 (按 API 610) AUXILIARY PIPING (PER API 610)

50	冲洗方案 Flush plan	材料 Material		53	冷却水 Cooling water	冷却方案 Cooling plan	材料 Material
51	轴封冲洗液 Shaft seal flush liquid	名称 Liquid		54		压力 Press. MPa.G	进水 Inlet 回水 Return
52		流量 Capacity m^3/h	压力 Press. MPa.G	55		温度 Temp. ℃	进 Inlet 出 Outlet

立 式 液 下 泵 VERTICAL SUBMERGED PUMP

56	槽深 Pit or sump depth mm	安装支架 Height of mounting steel	58	泵底板至吸入口 Pump base plate to inlet mm
57	最小必需浸深 Min. submergence required mm		59	吸入口至槽底 Inlet to pit bottom mm

驱 动 机 DRIVER

60	电动机 Elec. motor	型号 Model	额定功率 Rated power kW	64	其它类型驱动机 Other type drivers 见驱动机数据表 See data sheets
61		电源 Elec. power V PH.		65	厂家 Vendor
62		转速 Speed r/min	绝缘等 Insulation class F	66	
63		防护等 Enclosure	防爆等 Explosive-proof	67	

备注：
Note:

Hanthing Pump	**离心泵数据表** **CENTRIFUGAL PUMP DATA SHEET**	项目名称 PROJECT	
		分项名称 SUBPROJECT	
		图号 DWG. NO.	
	项目号 PROJECT NO	设计阶段 STAGE	页次 SHEET 1/3

型号 Model		设备名称 Service	位号 Item No.

试 验 和 检 验 TEST AND INSPECTIONS

68	☐机械运转试验 Mechanical running test	71	☐性能试验 Peformance test
69	☐水压试验 Hydrostatic test	72	☐汽蚀试验 NPSH test
70	☐特殊要求 Special requirements		☐车间检验 Shop inspections

供 货 范 围 SCOPE OF DELIVERY

73	☐泵 Pump	☐驱动机 Driver	☐联轴器&护罩 Coupling & guard	☐底座 Base plate	☐地脚螺栓、螺母 Anchor bolts, Nuts
74	☐随机条件 Spare parts for commissioning		☐所有接管的配对 法兰、螺栓、螺母、垫片 Counter flanges, bolts, nuts and gaskets for all the connections.		
75	☐辅助管路 Auxiliary piping		☐进口滤网 Inlet sieve		
76	☐两年备品备件 Spare parts for two year operation				

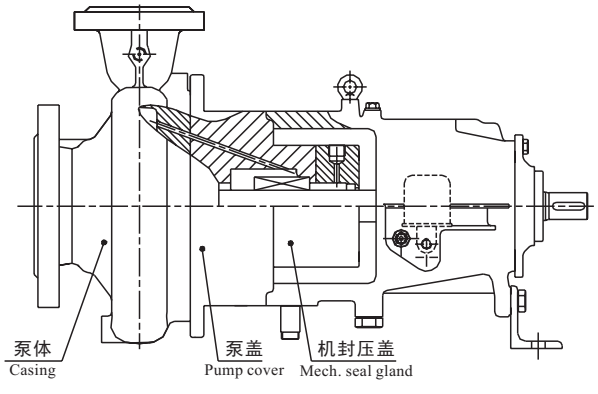
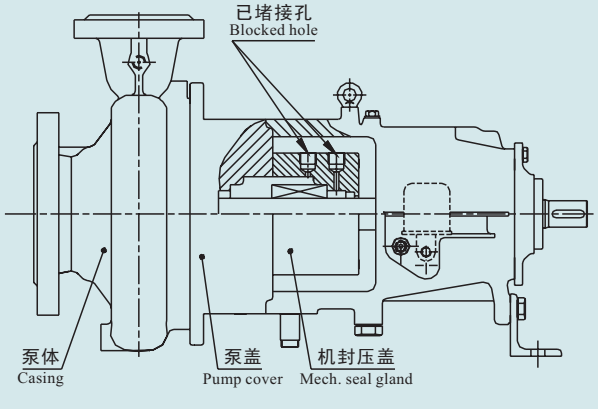
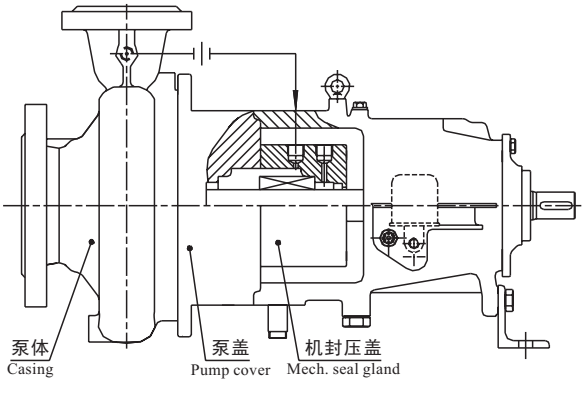
其 它 OTHERS

77	重量 kg Weight	泵 Pump	驱动机 Driver	81	外形尺寸 Outline size	长 Length / 宽 Width
78		底座 Base plate	传动装置 Transmission	82		高 Height
79		总重 Total		83		现场安装 Location ☐室内 Indoor ☐室外 Outdoor ☐防雨棚 Under shelter
80		最大维修件 Max. maintenance part		84		

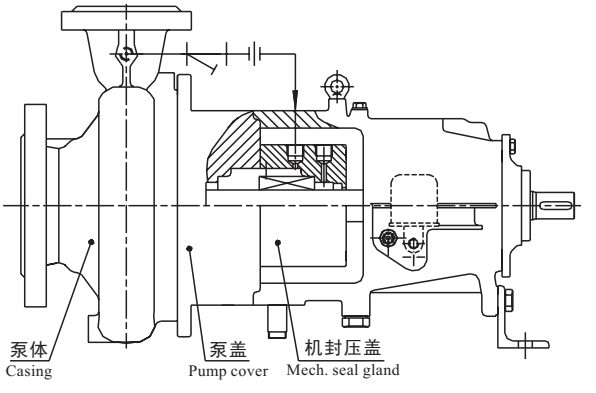
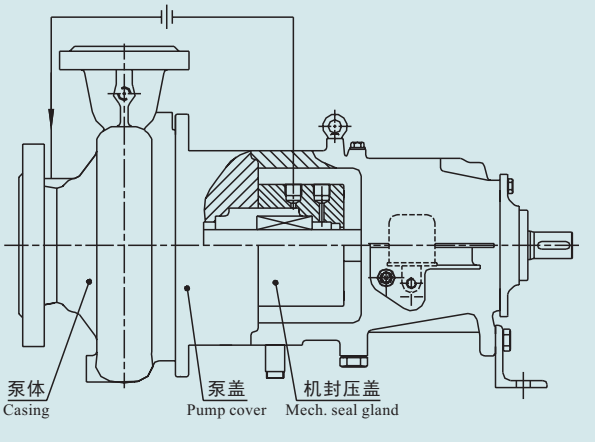
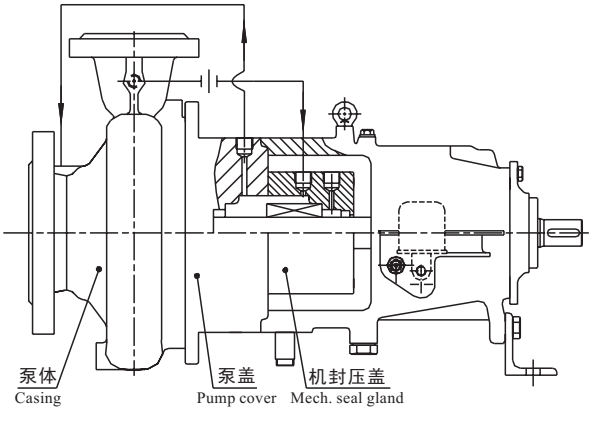
备注：
Note:

REV 版次	DATE 日期	DESCRIPTION 修改说明	REVISED PAGE 修改页号	DESIGN 设计	CHECKED 校核	APPROVED 审核
6						
5						
4						
3						
2						
1						
0						

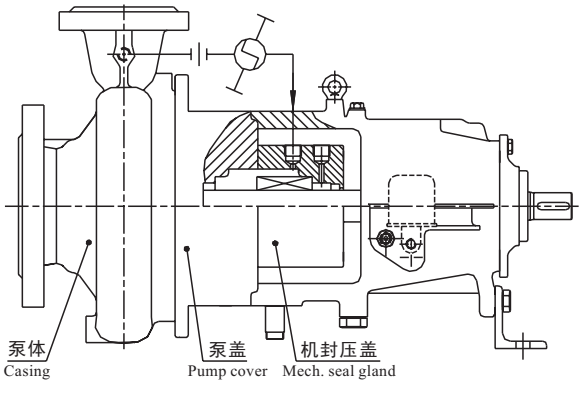
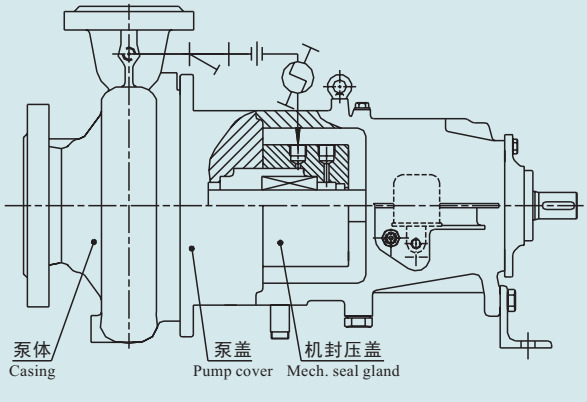
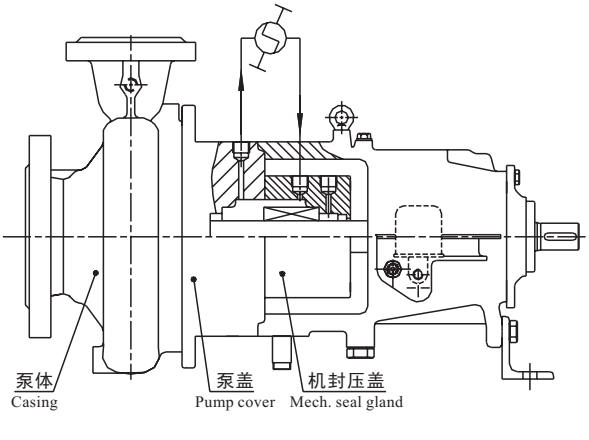
API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan01		封液从泵腔叶轮出口处到达密封的内部再循环，只推荐用于清洁介质，必须保证足够的循环量，以保持密封面上的稳定条件； 通常用于单端面机械密封。 The sealing liquid gets to the inside of the seal from the exit of the impeller at the pump cavity and then recycles. Only recommended for cleaning the medium and sufficient amount of cycle must be ensured so as to keep the stable condition on the sealing face. Usually used for the mechanical seal with a single end-face.
Plan02		机封压盖预留接口，在有必要时将封液从泵出口引到密封处，实现内部循环，只推荐用于清洁介质，必须保证足够的循环量，以保持密封面上的稳定条件； 通常用于单端面机械密封。 Preset an interface for the mechanical seal gland and, when necessary, lead the sealing liquid to the seal from the pump exit. Only recommended for cleaning the medium and sufficient amount of cycle must be ensured so as to keep the stable condition on the sealing face. Usually used for the mechanical seal with a single end-face.
Plan11		循环液从泵出口经过流量控制孔板到达密封，冲洗液流进密封腔中临近密封面的地方，冲洗密封面后液流返回到泵中； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The cycling liquid gets to the seal via the flow control orifice from the pump exit and the rinsing liquid flows into the place adjacent to the sealing face in the seal cavity and, after rinsing the said face, flows back into the pump. Usually used for the mechanical seal with a single end-face.

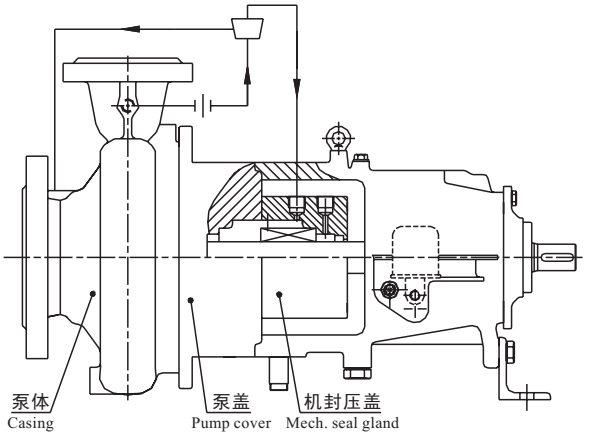
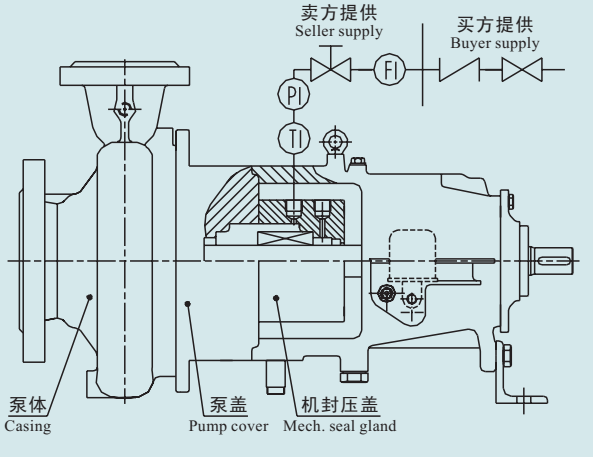
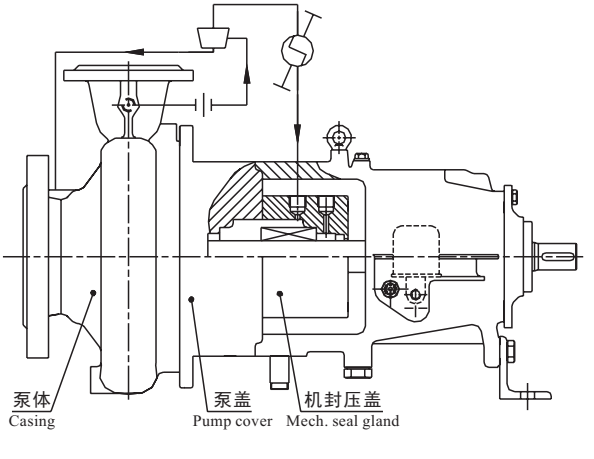
API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan12		循环液从泵出口经过流量控制板到达密封，冲洗液流进密封腔中临近密封面的地方，冲洗密封面后液流返回到泵中。正常情况下过滤器不推荐使用，因其赌塞后可能导致密封失效； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The cycling liquid gets to the seal via the flow control orifice from the pump exit and the rinsing liquid flows into the place adjacent to the sealing face in the seal cavity and, after rinsing the said face, flows back into the pump. The filter is not recommended to use in case of a normal condition, as it may cause the seal to be out of work if it is possibly blocked. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.
Plan13		循环液从密封腔经过流量控制孔板返回到吸入室； 当△P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The cycling liquid returns to the suck-in room from the seal cavity via the flow control orifice. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.
Plan14		再循环液从泵出口经过流量控制孔板到达密封并返回到吸入口。孔板的尺寸和规格必须根据卸压衬套和返回管线确定。类似于方案11，但液流返回到吸入侧，将把可能聚集于密封室内的蒸气排出。推荐用于轻烃类的使用条件； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The recycling liquid gets to the seal via the flow control orifice from the pump exit and returns to the suck-in port. The size and norm of the orifice must be decided upon the pressure unloading bush and the returning line. Similar to the plan 11, but returning to the suck-in side of the liquid flow will get the steam gathered in the sealing room exhausted. Recommended to use with the light hydrocarbon used condition. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.

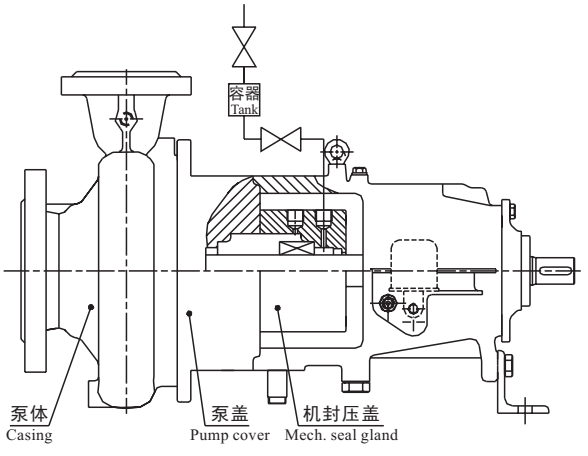
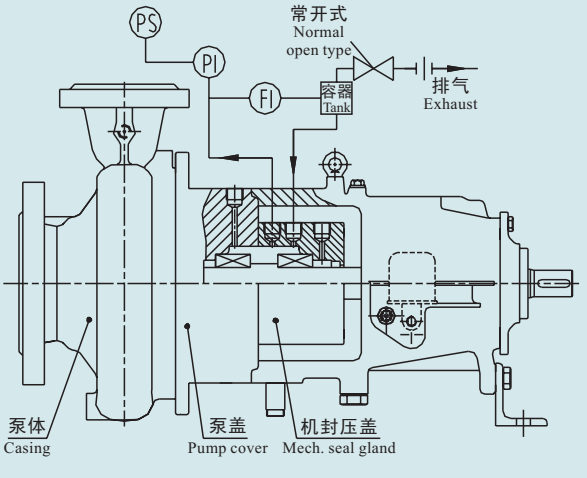
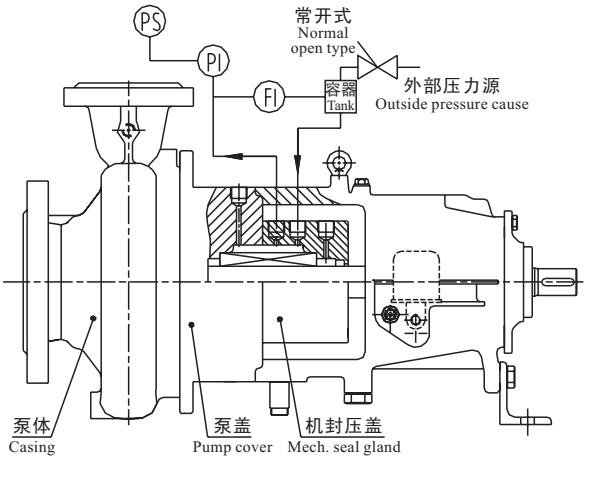
API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan21		封液从泵出口经过流量控制孔板和冷却器进入密封室； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 A circulation for the liquid to get to the rotary liquid separator via the flow control orifice from the pump exit to feed cleaned liquid to the seal cavity, with the solid grains fed to the pipeline at the pump entrance. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.
Plan22		循环液从泵出口经过过滤器、流量控制孔板和冷却器进入密封腔。正常情况下过滤器不推荐使用，因其赌塞后可能导致密封失效； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The rinsing liquid from the external liquid source is poured into the seal room as well as the pump cavity. It is required to select a right seal rinsing liquid so as to prevent it from being vaporized and the medium being fed by the pump from being polluted by it. Usually used for the mechanical seal with a single end-face.
Plan23		循环液由密封室中的泵送环送出，经过冷却器返回到密封室。这个方案能用在温度较高的条件下，通过只冷却部分循环液来最大限度的降低冷却器的热负荷； 通常用于单端面机械密封。 The liquid gets to the rotary liquid separator via the flow control orifice from the pump exit to feed cleaned liquid to the seal cavity via a cooler, with the solid grains fed to the pipeline at the pump entrance. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.

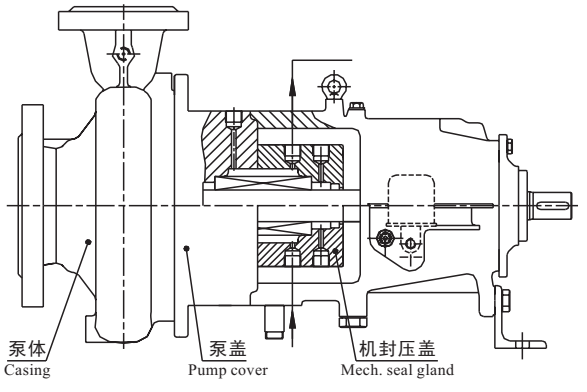
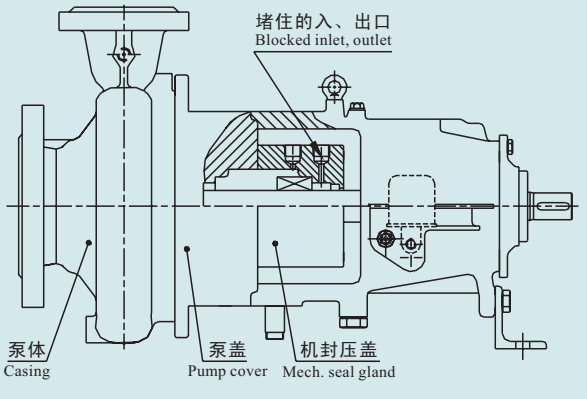
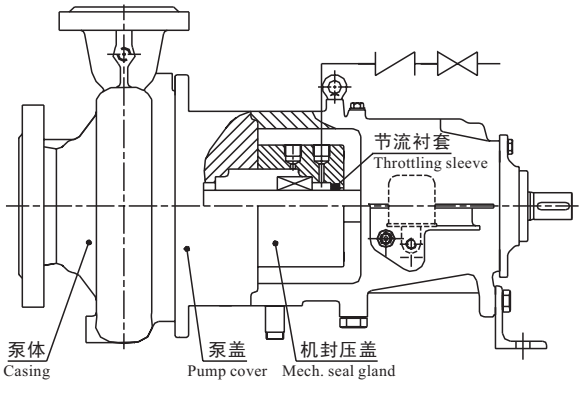
API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan31		液体从泵出口经过流量控制孔板再到旋液分离器把洁净的液体输送到密封腔的循环过程，固体颗粒被送到泵的入口管线； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The sealing liquid gets to the seal room via the flow control orifice and the cooler from the pump exit. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.
Plan32		从外供液源来的冲洗液注入密封室里并进入泵腔，要正确选择密封冲洗液，避免冲洗液的汽化发生，避免冲洗液污染泵输送的介质。 通常用于单端面机械密封。 The cycling liquid gets to the seal cavity via the filter, the flow control orifice and the cooler from the pump exit. The filter is not recommended to use in case of a normal condition, as it may cause the seal to be out of work if it is possibly blocked. Usually used for the mechanical seal with a single end-face.
Plan41		液体从泵出口经过流量控制孔板再到旋液分离器把洁净的液体经冷却器输送到密封腔，固体颗粒被送到泵的入口管线； 当 △P＜0.2MPa时，不加孔板； 通常用于单端面机械密封。 The cycling liquid is fed out by the pump feed-ring and, via the cooler, returns to the seal room. This plan can be used with a higher temperature and, through cooling only some cycling liquid, lower the heat load of the cooler to the utmost extent. When △P < 0.2MPa, no orifice is used. Usually used for the mechanical seal with a single end-face.

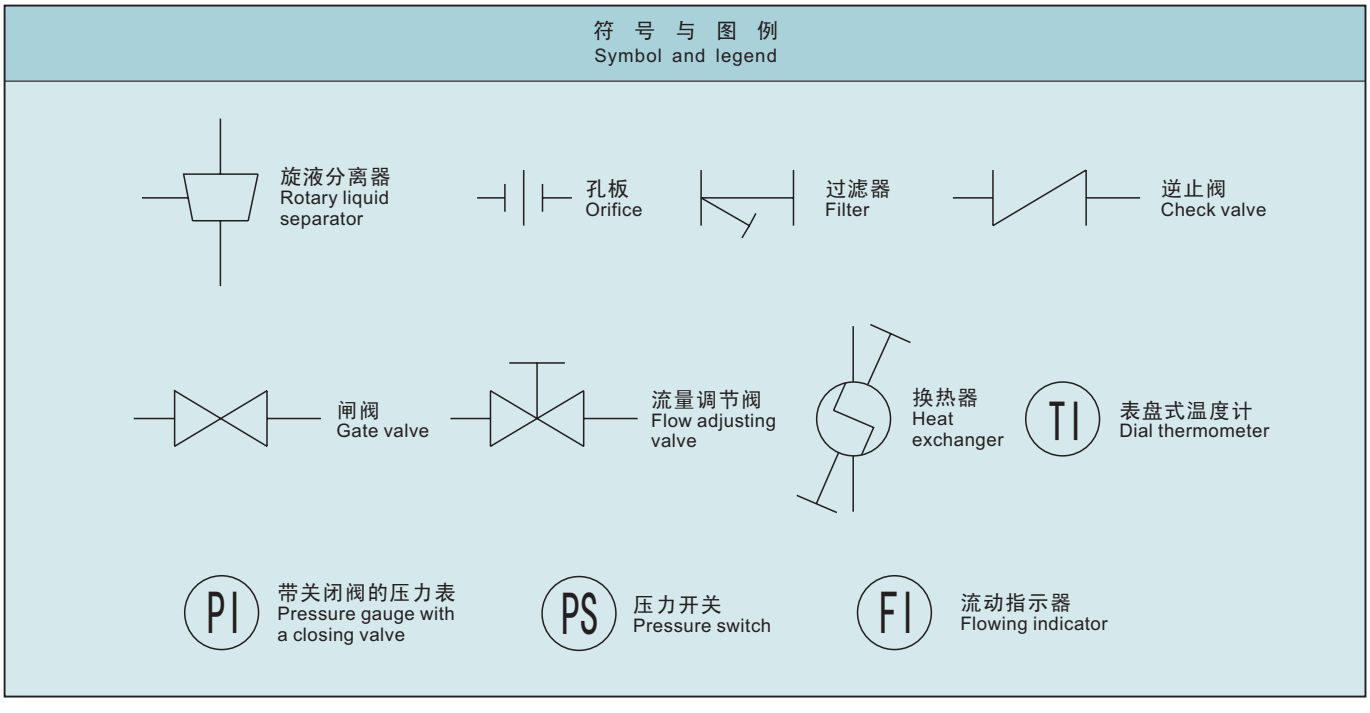
API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan51		外部容器提供顶端封死的液体保护并通往压盖上的急冷接口，排液孔堵住。 The liquid provided by an external vessel for sealing the top deadly protects and goes towards to the urgent cooling interface on the gland, making the draining hole blocked.
Plan52		外部容器为串联密封的外侧密封提供缓冲液体，当正常运行时，循环液体通过泵送环循环来维持，容器通常连续　蒸汽回收系统排气并且维持压力低于密封腔压力， 压力表PS和流动指示仪FI无要求时不加入； 通常用于串联式机械密封； The external vessel provides the seal outside of the cascade seal with buffering liquid and, at the normal work, the cycling liquid is maintained through the circulation of the pump feed-ring and the vessel usually continues exhausting to the steam recovery system and keeps the pressure to be lower than that of the seal cavity. No pressure gauge PS and flowing indicator FI are used if not so required. Usually used with the cascade mechanical seal.
Plan53a		有压的外部隔离液容器　密封腔提供清洁介质，隔离液通过内部泵送循环，隔离液压力大于所要密封的流程压力； 通常和有压的双端面机械密封一起用； 压力表PS和流动指示仪FI无要求时不加入； A pressured external isolating liquid vessel provides the seal cavity with clean medium, the isolating liquid is cycled via an internal pump and the pressure of it is bigger than that of the flow path required to be sealed. Usually used with a pressured mechanical seal with double end-faces. No pressure gauge PS and flowing indicator FI are used if not so required.

API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan

API 密封 冲洗方案 Seal rinsing plan	图 例 Legend	说 明 Description
Plan54		有压的外部隔离液容器或系统　密封腔提供清洁介质，循环液通过外部泵或压力系统循环，隔离液压力大于所要密封的流程压力； 通常和有压的双端面机械密封一起用； A pressured external isolating liquid vessel or system provides the seal cavity with clean medium, the cycling liquid is cycled via an external pump or a pressure system and the pressure of the isolating liquid is bigger than that of the flow path required to be sealed. Usually used with a pressured mechanical seal with double end-faces.
Plan61		堵上的丝孔接头供买方使用，通常在买方打算　辅助密封系统装置提供流体（如：蒸汽，气体或水）时采用本布置方案。 The blocked screw hole interface is used for the buyer and this plan of arrangement is usually used when the buyer is intending to provide the auxiliary seal system with a fluid (as: steam, gas or water).
Plan62		外供流体急冷，为阻止固体堆积在密封大气侧而需要急冷，通常与带有精确间隙的节流衬套一起使用； 急冷液的排放可能需现场配防溅罩。 Externally supplied fluid urgent cooling is needed to prevent the solids from piling up on the side of the sealing atmosphere and usually used with the throttle bush of an accurate space. It may be required to wear a spray-proof cover when to drain the urgent cooling liquid.

API密封冲洗方案示意说明图 Schematic diagram of API seal rinsing plan



订货须知 Notice at order

- ■ 根据使用条件决定泵的规格、材料、轴封形式及电机。
- ■ 配用特殊电动机时，要指出防爆等级、功率、电压、频率等。
- ■ 若选用填料密封，订货时请特殊注明。
- ■ 本样本内所列性能参数，用户可在其范围内任选，并指定叶轮型式(半开式或闭式)。
- ■ 订货时泵头不包括按API 610方案里的各种外接冲洗冷却系统，如需要必须另外加价并在合同中注明。

- ☐ Decide the pump's norm, material, axle seal type and motor up on the conditions of use.
- ☐ For fitting with a special motor, please indicats the explosion-proof class, power, voltage, frequency etc.
- ☐ Make a special note at order if selecting packing seal.
- ☐ Users may select the performance parameters within the range listed in this catalog and indicate the impeller type (half-opened or closed).
- ☐ At order, the various external rinsing and cooling systems upon the API610 plan are not included with the pump head and, if needed, please note it in the contract, with the price separately added.

供货范围 Range of supply

本公司该产品标准出厂配置为：泵头、电机、底座、联轴器及联轴器罩。如需其它附件，订货时需另加价。

The standard allocation of the pump at ex-works includes pump head, motor, foundation, clutch and clutch cover. Additional charge is necessary at order if other accessories are required.