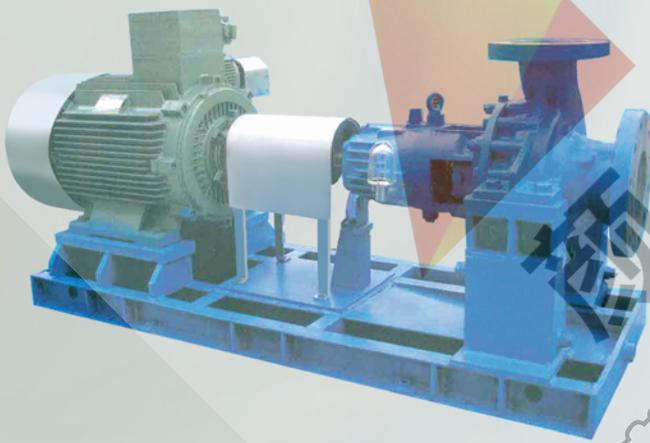




国内同行业首家通过 ISO9001 国际质量管理体系认证
国内同行业首家通过 ISO14001 环境管理体系认证
国内同行业首家潜水电泵通过欧洲 CE 认证

ZE 石油化工流程泵

ZE Petro Chemical Process Pump



YANSHAN

山东颜山泵业有限公司

Shandong yanshan pumps Co.,Ltd



公司概况

山东颜山泵业有限公司是一家集科研开发、设计咨询、生产、销售、服务于一体的研制生产各类水泵、罗茨鼓风机及相关成套设备的重点骨干企业，国家高新技术企业。

主导产品有井用潜水电泵、潜水渣浆泵、潜水排污泵、长轴深井泵、矿用隔爆潜水电泵、矿用耐磨多级离心泵、渣浆泵、锅炉给水泵、化工流程泵、消防泵、罗茨转子泵、单级双吸中开离心泵、自动变频供水设备、管道静音给水设备、清淤疏浚设备及罗茨鼓风机等 46 个系列 520 个品种 3300 多个规格型号。

公司率先在全国同行业中通过了国际质量管理体系认证、环境管理体系认证、测量管理体系认证、职业健康安全管理体系认证、标准化良好行为 3A 级认证和欧洲 CE 产品认证，建立有完善的质量保证体系，拥有国家 1 级精度的泵类产品检测检验中心，对产品实行严格的质量控制，确保产品的实物质量充分满足顾客需求。公司生产的“颜山”牌产品荣获山东名牌产品称号，“颜山”牌注册商标荣获山东省著名商标。

公司科研技术力量雄厚，拥有“山东省水力设备工程技术研究中心”和省级企业技术中心，具有自主研发各种水泵、潜水电机、罗茨鼓风机及成套给排水设备的能力，还可根据用户特殊要求，制作各种非标规格的潜水泵、离心泵、潜水电机和罗茨鼓风机等产品及相关成套设备。同时长期与中国科学院、中国农机院、中国煤炭科学研究院、江苏大学、山东大学、山东理工大学等科研院所合作，开发适应用户不同需求的高新技术产品。

“颜山”牌产品，素以工艺精湛、性能稳定可靠、质量优良享誉国内外市场，能够满足城市给排水、抗旱排涝、采暖制冷、消防供水、水利工程、石油化工、冶金矿山、核电火电、纺织印染、污水处理、景观喷泉、河道清淤等行业的取排水和送排风需要。产品畅销全国各地，同时还出口到美国、墨西哥、日本、澳大利亚、伊拉克、伊朗、孟加拉等几十个国家和地区。国内外许多大型企业和知名工程应用“颜山”牌产品，如大亚湾核电站、南水北调工程、黄河清淤工程、北京奥运会、温哥华冬奥会、云南抗旱工程、胜利油田、齐鲁石化、中国神华集团、河南神火集团、莱芜钢铁集团、济南钢铁集团、青岛五四广场百米喷泉、江西南昌红谷滩广场 148 米喷泉、淄博自来水公司污水处理工程等。

颜山泵业愿真诚与国内外新老用户精诚合作，共同发展！



以精湛的技术 优质的产品 竭诚为用户服务

颜山泵业



ZE石油化工流程泵,是根据API 610和VDMA242 97A级(重型)规范进行设计。

应用范围:

本泵适合输送清洁或含有颗粒的液体, 低温或高温的液体, 中性或有腐蚀性的液体。

主要用于:

■ 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、海水淡化厂。

■ 供暖和空气调节系统。

■ 发电厂。

■ 环境保护工程。

船舶及海上工业等。

性能参数:

口径 (DN) 25-400mm

流量 (Q) 可达2600m³/h

扬程 (H) 可达300m

工作压力 (P) 可达 5.0MPa

工作温度 (t) -80°C~+450°C

结构特点:

泵为单级、卧式、径向剖分式蜗壳泵。泵体为中心支撑, 单吸径向叶轮。轴向吸入, 径向排出。

根据使用条件采用前、后口环及平衡孔进行水力平衡。泵盖具有冷却或加热管接头。轴封采用填料密封, 也可以采用单端面串联或双端面机械密封。并配有冷却、冲洗或密封液系统。

标准管路按API规范设计, 可对中心支撑的泵支座进行冷却。

Centrifugal pumps in process design, seriesZE, according to API610 VDMA 24297 requirement stage A (heavy duty)

Application ranges

For pumping clean or slightly polluted, color hot, chemically neutral or aggressive liquids.

* in refineries, petrochemical industry, coal processing and low temperature engineering.

* in chemical industry, fibre and general processing industries, particularly in paper and pulp industries, sugar industry.

* in water industry, particularly seawater desalination plants.

* in heating and air-conditioning.

* in fossil and nuclear power stations.

* in environmental protection engineering.

* in ship and offshore industries

Operating data

Sizes DN 25up to -- 400 mm

Capacities Q up to 2600m³/h

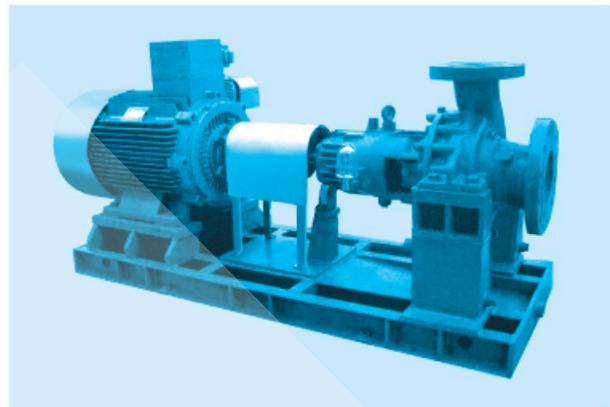
Heads H up to 300m

Operating pressures P up to 5.0MPa
Operating temperatures t -80°C up to +450°C

Design

Single stage, horizontal, radially split volute casing pumps with feet on centreline and single entry radial impeller, end suction branch radially upwards discharge branch. Depending on operating conditions hydraulic balance provided by front or rear wear rings and balance holes. Casing cover with cooling or heating connections, shaft sealing by packings or mechanical seals of any design (single or double working), connections for cooling, flushing or sealing liquid. Standardized pipework according to API plans.

Cooling of baseplate pedestal possible. Flanges possible according to GB, DIN or ANSI. Same nominal pressure for suction and discharge flanges. Direction of rotation clockwise seen from driven end.



吸入及排出管法兰的额定压力等级相同。

从电机端看, 泵为顺时针转动。

输送介质

■ 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, 以及其他有腐蚀性的原料和产品。

目前我公司的耐腐蚀材料, 能满足上述各种材料的要求。订货时, 请用户提供所要输送介质的详细情况。

型号说明:

ZE 100 - 2 315

叶轮名义直径 (mm)

轴承支架号

出口直径DN (mm)

泵系列代号

Pumping medium

* Sulphuric acid, nitric acid hydrochloric acid, phosphoric acid for organic acid and inorganic acid which at various temperature and concentration.

* Sodium hydroxide, sodium carbonate and alkaline liquid at various temperature and concentration.

* All kinds of salt solution.

* Various liquid petrochem chemical products, organic compound as well as raw materials with corrosion behaviors and the products.

At present, anti-corrosive materials, for pumps provided by our company can meet all the requirements of the medium mentioned above.

Please provide the detail service conditions for the pump to us, when you order.

Pump designation

ZE100-2315

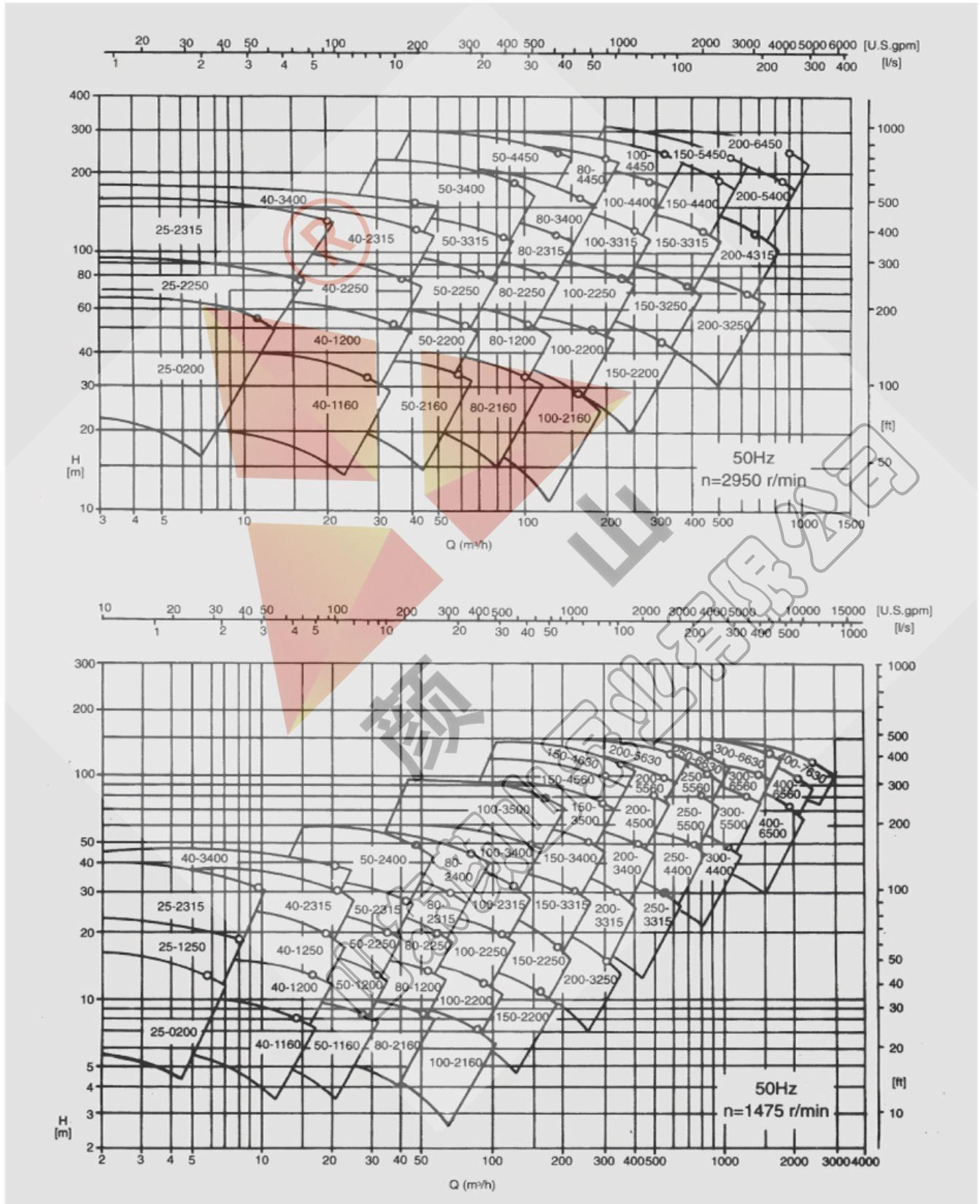
Nominal impeller diameter (mm)

Bearing bracket size

Discharge branch DN (mm)

Series

型谱图 Performance Range



设计特点

设计特点	优点	经济效益
按API610标准设计采用组件装配, 联轴器带有加长段	保证执行流程工业的结构和维修标准 拆装泵时无须拆下管道和电机, 易于拆装, 便于维修	可靠性高 互换性好 停工时间短 维修费用低
不同规格泵的基本部件可以互换	53种规格泵只需8种规格的轴承部件, 对于轻/中工位的ZE、ZF、ZU型泵有具有相同水力部件(叶轮)和轴承部件	备件少 易保管 费用低
双蜗壳泵体(口径80mm以上) 进出口口径大 腐蚀余量大 装有泵体垫片	径向力小, 轴挠度小。轴承处挠度小于0.05mm。 泵进出口流速低, 噪音小 叶轮和泵体壁厚增加了腐蚀余量 泵体止口面不易损坏	轴套和耐磨轴承使用寿命长 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, 使用可靠
叶轮结构 闭式叶轮(标准件) 开式叶轮(ZE0)型	闭式叶轮, 对于工况适应性强, 效率高, 汽蚀值低 开式叶轮用于输送气液及固液两相	本系列泵, 结构合理, 便于维修, 能耗低。稳定可靠, 价格便宜。
磨损件可以更换 叶轮和泵体口环, 轴封处轴套, 泵口环可以冲洗	当泵体、叶轮上的口环和轴套磨损后, 更换之, 泵体、叶轮和轴仍可以继续使用。	节省维修和备件费用 维修简便迅速
整体重型轴承支架 油润滑球轴承, 自动控制油位 当温度 $T \leq 250^{\circ}\text{C}$ 时, 无须冷却 当温度 $T > 250^{\circ}\text{C}$ 时, 用风冷却或水冷却 迷宫环密封(标准件), 也可以用径向密封环	轴与轴承支架同轴度好, 稳定性高, 刚性好, 挠度小。 $n_k > n$, 零件少, 轴承拆检次数少 轴承不发热, 不需冷却, 不额外增加轴承温度	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
填料函尺寸适宜	可采用填料密封和各种结构的机械密封, 并可互换	互换性好, 改型时填料函不必另行加工

Design Features—Advantages—Economic Considerations

Design features	Advantages	Economic Benefits
<p>Process design API610</p> <p>Assembly unit coupling with spacer</p>	<p>Design and maintenance standard complying with process industry is ensured</p> <p>Rapid disassembly or assembly</p> <p>Disassembly without removal of pipework and driver</p>	<p>High reliability and interchangeability</p> <p>Short shut-downs</p> <p>Low maintenance costs</p>
<p>Interchangeable modular elements for various sizes</p>	<p>Only 8 bearing frames for 53 sizes. Same hydraulics (impellers) and bearing frames as for light or medium duty series ZA and heavy duty series ZF and ZU.</p>	<p>Few components, economic spare part stockkeeping, low stockkeeping costs</p>
<p>Double volute casing (above 80mm branch size)</p> <p>large branches</p> <p>Increased corrosion allowance</p> <p>Enclosed casing gasket</p>	<p>Small radial thrust, small shaft deflection (<0.05mm) in the area of the shaft seal</p> <p>Low branch velocity, low noise level due to additional primary measures at impeller, long rated life of casings, casing joint cannot break</p>	<p>Long rated life of antifriction bearings, long rated life of shaft seals, short shut-downs, low maintenance costs, higher efficiency, low operating costs, low costs for pipework support and sound protection, low spare part and repair costs high reliability</p>
<p>Impeller designs</p> <p>Closed impeller (standard)</p> <p>Open impeller depending on sizes (ZE0)</p>	<p>Optimum compliance with various operating conditions, closed impeller with high efficiencies, low NPSHR values</p> <p>Open impeller for very gaseous liquids, high solids concentrations</p> <p>Extremely low NPSHR values</p> <p>Small suction heads required</p>	<p>High reliability of pumps, low maintenance periods, low energy costs due to careful pump selection</p> <p>Small investment costs for plants</p>
<p>Interchangeable wear parts</p> <p>Impeller and casing wear rings</p> <p>Shaft sleeve in the area of the shaft seal</p> <p>Flushing of casing wear ring possible</p>	<p>When casing and impeller wear rings and shaft seal are subject to wear, casing, impeller and shaft can be reused</p> <p>Small wear of casing and impeller wear rings due to absence of solids</p>	<p>Considerable saving of repair and spare part stockkeeping costs, short repair periods</p>
<p>One-piece heavy duty bearing bracket</p> <p>oil-lubricated antifriction bearings, with automatic lubrication and oil level control</p> <p>$t \leq 250^{\circ}\text{C}$, no cooling</p> <p>$t > 250^{\circ}\text{C}$, air cooling (fan) (water cooling possible)</p> <p>with labyrinth sealing (standard) (radial sealing ring possible)</p>	<p>Stable, aligning shaft position, robust shaft with small shaft deflection, long operation, few components, few bearing checks required.</p> <p>no cooling water pipework</p> <p>no cooling water consumption</p> <p>no increased bearing heating, wear-resistant bearing sealing</p>	<p>Long rated life of packings or mechanical seals</p> <p>short shut-downs</p> <p>Easy maintenance, low operating costs</p> <p>No investment costs for cooling system</p>
<p>Well dimensioned stuffing box chamber</p>	<p>Possibility of replacing packings or mechanical seals of any design</p>	<p>High interchangeability, low modification costs (no machining of stuffing box housing)</p>

性能表 Performance range Type ZE

型号	叶轮型式	泵额定转速n=2950r/min										泵额定转速n=1475r/min													
		流量 Q m³/h	扬程 H m	轴承架 LK	比重r=1.00			比重r=1.35			比重r=1.84			流量 Q m³/h	扬程 H m	轴承架 LK	比重r=1.00			比重r=1.35			比重r=1.84		
					电机功率及型号												电机功率及型号								
					kW			kW			kW						kW			kW			kW		
ZE25-200	A	11.5	49	0	5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	5.8	12	0	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													
	C	9	36		3	Y100L-2	4	Y112M-2	5.5	Y132S1-2	4.6	8.5								4	6.5				
	D	7.5	28		2.2	Y90L-2	3	Y100L-2	4	Y112M-2	4	6.5								4	6.5				
	E	5.5	16		1.5	Y90S-2	1.5	Y90S-2	2.2	Y90L-2	3	4								3	4				
ZE25-250	A	16	70	2	11	Y160M1-2	15	Y160M2-2	22	Y180M-2	8.1	17.7	1	1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4						
	B	14.5	62		11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	7.7	15.6								2.2	Y100L1-4	3	Y100L2-4		
	C	13.6	42		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	7.2	10.9								2.2	Y100L1-4	3	Y100L2-4		
	D	11.3	24		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	6	6.2								1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
ZE25-315	A	20	128	2	30	Y200L1-2	37	Y200L2-2	55	Y250M-2	10	32.3	2	5.5	Y132S-4	7.5	Y132M-4	7.5	Y132M-4						
	B	18.6	116		30	Y200L1-2	37	Y200L2-2	45	Y225M-2	9.2	29								4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	C	17	99		22	Y180M-2	30	Y200L1-2	37	Y200L2-2	8.3	24.3								3	Y100L2-4	5.5	Y132S-4	5.5	Y132S-4
	D	15.7	87		18.5	Y160L-2	30	Y200L1-2	37	Y200L2-2	7.6	22								3	Y100L2-4	4	Y112M-4	5.5	Y132S-4
	E	14.5	76		15	Y160M2-2	22	Y180M-2	30	Y200L1-2	7.1	19.5								2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4
	F	13	64		11	Y160M1-2	15	Y180M-2	22	Y180M-2	6.4	16								2.2	Y100L1-4	2.2	Y100L1-4	3	Y100L2-4
ZE40-160	A	28	33	1	5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	14	8	1	1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4						
	B	25.6	29		4	Y112M-2	5.5	Y132S1-2	5.5	Y132S1-2	11	5.5								1.1	Y90S-4	1.1	Y90S-4		
	C	22	22		2.2	Y90L-2	3	Y100L-2	4	Y112M-2	9.5	4.5								1.1	Y90S-4	1.1	Y90S-4		
	D	20	16		2.2	Y90L-2	3	Y100L-2	4	Y112M-2	9.5	4.5								1.1	Y90S-4	1.1	Y90S-4		
ZE40-200	A	29	53	1	11	Y160M1-2	15	Y160M2-2	18.5	Y160L-2	14.5	13	1	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								1.5	Y90L-4	2.2	Y100L1-4		
	C	22	39		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	11.5	9								1.1	Y90S-4	1.1	Y90S-4	1.5	Y90L-4
	D	18	20		4	Y112M-2	5.5	Y132S1-2	7.5	Y132S1-2	9.5	7								1.1	Y90S-4	1.1	Y90S-4		
ZE40-250	A	32	78	2	18.5	Y160L-2	22	Y180M-2	30	Y200L1-2	16	19.5	1	3	Y100L2-4	4	Y112M-4	5.5	Y132S-4						
	B	30	72		15	Y160M2-2	18.5	Y160L-2	30	Y200L1-2	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
ZE40-315	A	42	115	2	37	Y200L2-2	45	Y225M-2	75	Y280S-2	21	29	2	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4						
	B	40	107		30	Y200L1-2	45	Y225M-2	55	Y250M-2	20	26.5								4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4
	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

性能表 Performance Chart

型号 Sizb	叶轮 型式	泵额定转速n=2950r/min										泵额定转速n=1475r/min													
		流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84			流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84		
					电机功率及型号												电机功率及型号								
					kW			kW			kW						kW			kW			kW		
ZE50-160	A	50	34	2	11	Y160M1-2	15	Y160M2-2	15	Y160M2-2	25	8.4	1	1.5	Y90L-4	2.2	Y100L1-4	2.2	Y100L1-4						
	B	45	29		7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	22.5	7		1.5	Y90L-4	1.5	Y90L-4	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	1.1	Y90S-4						
	D	31	17		3	Y100L-2	4	Y112M-2	5.5	Y132S1-2	16.5	4		1.1	Y90S-4	1.1	Y90S-4	1.1	Y90S-4						
ZE50-200	A	62	52	2	18.5	Y160L-2	22	Y180M-2	30	Y200L1-2	31	13	1	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	2.2	Y100L1-4	3	Y100L2-4						
	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						
ZE50-250	A	70	82	2	30	Y200L1-2	37	Y200L2-2	55	Y250M-2	35	20	2	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4						
	B	66	75		45	Y225M-2	45	Y225M-2	55	Y250M-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						
ZE50-315	A	87	115	3	55	Y250M-2	75	Y280S-2	110	Y315S-2	44	28	2	11	Y160M-4	11	Y160M-4	15	Y160L-4						
	B	80	100		45	Y225M-2	45	Y225M-2	55	Y250M-2	40	24		7.5	Y132M-4	7.5	Y132M-4	11	Y160M-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	30	Y200L1-2	37	Y200L2-2	30	14		3	Y100L2-4	4	Y112M-4	5.5	Y132S-4						
ZE50-400	A	82	194	3	110	Y315S-2	160	Y315L1-2	160	Y315L1-2	41	48	2	15	Y160L-4	22	Y180L-4	30	Y200L-4						
	B	78	175		90	Y280M-2	132	Y315M-2	160	Y315L1-2	39	43		18.5	Y180M-4	22	Y180L-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						
ZE50-450	A	93	248	4	132	Y315M-2																			
	B	87	233		132	Y315M-2																			
	C	75	195		110	Y315S-2	132	Y315M-2																	
	D	56	141		55	Y250M-2	75	Y280S-2	110	Y315S-2															
ZE80-160	A	94	94	2	15	Y160M2-2	18.5	Y160L-2	30	Y200L1-2	47	8	2	2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4						
	B	85	85		11	Y160M1-2	11	Y160M1-2	15	Y160M2-2	42	7		2.2	Y100L1-4	2.2	Y100L1-4	3	Y100L2-4						
	C	77	76		5.5	Y132S1-2	7.5	Y132S2-2	11	Y160M1-2	38	5.5		1.5	Y90L-4	1.5	Y90L-4	2.2	Y100L1-4						
	D	66	66		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						
ZE80-200	A	103	54	1	30	Y200L1-2	37	Y200L2-2			51	13.5	1	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	54	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						

性能表 Performance Chart

型号 Size	叶轮 型式	泵额定转速n=2950r/min									泵额定转速n=1475r/min																																
		流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84			流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84																				
					电机功率及型号												电机功率及型号																										
					kW			kW			kW						kW			kW			kW																				
ZE80-250	A	127	82	2	45	Y225M-2	75	Y280S-2	90	Y280M-2	64	20	2	7.5	Y132M-4	11	Y160M-4	15	Y160M-4	2	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4																	
	B	120	76				55	Y250M-2	75	Y280S-2	60	19				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																	
ZE80-315	A	141	127	2	90	Y280M-2	160	Y315L1-2	75	Y280S-2	66	30	2	11	Y160M-4	15	Y160L-4	18.5	Y180M-4	22	Y180L-4	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4																
	B	135	121																									55	Y250M-2	75	Y280S-2	56	24	11	Y160M-4	15	Y160L-4						
	C	115	97																									37	Y200L2-2	45	Y225M-2	75	Y280S-2	45	18	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4		
	D	90	74																									75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-4		
ZE80-400	A	171	187	3	160	Y315L1-2	90	Y280M-2	132	Y315M-2	65	33	2	15	Y160L-4	18.5	Y180M-4	30	Y200L-4	45	Y225M-4	7.5	Y132S-4	11	Y160M-4	15	Y160L-4	18.5	Y180M-4														
	B	159	170																											75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	C	135	130																											75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-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
ZE80-450	A	206	238	4	110	Y315S-2	132	Y315M-2	132	Y315M-2	65	33	2	15	Y160L-4	18.5	Y180M-4	30	Y200L-4	45	Y225M-4	7.5	Y132S-4	11	Y160M-4	15	Y160L-4	18.5	Y180M-4														
	B	196	221																											75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	C	175	185																											75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
	D	140	129																											75	Y280S-2	90	Y280M-2	132	Y315M-2	53	25	11	Y160M-4	15	Y160L-4	18.5	Y180M-4
ZE100-160	A	162	29	2	22	Y180M-2	30	Y200L1-2	37	Y200L2-2	81	7.2	2	3	Y100L2-4	4	Y112M-4	5.5	Y132S-4	2.2	Y100L1-4	3	Y100L2-4	4	Y112M-4																		
	B	150	24																							11	Y160M1-2	15	Y160M1-2	18.5	Y160L-2	63	4.3	1.5	Y90L-4	2.2	Y100L1-4	3	Y100L2-4				
	C	130	17																							7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	55	3	1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4				
	D	110	12																							7.5	Y132S2-2	11	Y160M1-2	15	Y160M2-2	55	3	1.1	Y90S-4	1.5	Y90L-4	2.2	Y100L1-4				
ZE100-200	A	193	50	2	45	Y225M-2	55	Y250M-2	75	Y280S-2	95	12.5	2	5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-4																		
	B	180	44																							37	Y200L2-2	45	Y225M-2	90	10.5	4	Y112M-4	5.5	Y132S-4	7.5	Y132M-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	4	Y112M-4				



ZE系列石油化工流程泵 ZE Petro Chemical Process Pumps

性能表 Performance Chart

型号 size	叶轮 型式	泵额定转速n=2950r/min								泵额定转速n=1475r/min											
		流量 Q m ³ /h	扬程 H m	轴 承 架 LK	比重r=1.00		比重r=1.35		比重r=1.84		流量 Q m ³ /h	扬程 H m	轴 承 架 LK	比重r=1.00		比重r=1.35		比重r=1.84			
					电机功率及型号									电机功率及型号							
		kW		kW		kW		kW		kW		kW		kW		kW		kW			
ZE100-250	A	230	79	2	75	Y280S-2	90	Y280S-2			115	20	2	11	Y160M-4	15	Y160L-4	18.5	Y180M-4		
	B	218	73								110	18				11	Y160M-4			15	Y160L-4
	C	190	58		45	Y225M-2	75	Y280S-2	90	Y280M-2	100	14		7.5	Y132M-4					11	Y160M-4
	D	170	44		37	Y200L ₂ -2	45	Y225M-2	75	Y280S-2	90	10		5.5	Y132S-4	7.5	Y132M-4	7.5	Y132M-4	7.5	Y132M-4
ZE100-315	A	250	126	3	132	Y315M-2					125	31	2	18.5	Y180M-4	30	Y200L-4	37	Y225S-4		
	B	240	120				160	Y315L ₁ -2				119		29			22	Y180L-4	30	Y200L-4	
	C	203	97		90	Y280M-2	132	Y315M-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		
ZE100-400	A	300	194	4							150	48	3	37	Y225S-4	45	Y225M-4	75	Y280S-4		
	B	290	180								145	44		30	Y200L-4			55	Y250M-4		
	C	260	145								130	36		22	Y180L-4	30	Y200L-4	45	Y225M-4		
	D	224	105		100	Y315S-2	160	Y315L ₁ -2			115	26		15	Y160L-4	22	Y180L-4	30	Y200L-4		
ZE100-450	A	327	258	4																	
	B	307	241																		
	C	260	200																		
	D	200	145		160	Y315L ₁ -2															
ZE100-500	A										180	75	3	75	Y280S-4	90	Y280M-4	110	Y315S-4		
	B										167	68		55	Y250M-4	75	Y280S-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		
ZE150-200	A	320	44	2	55	Y250M-2	75	Y280S-2			60	11	2	7.5	Y132M-4	11	Y160M-4	15	Y160L-4		
	B	300	39		45	Y225M-2			90	Y280M-2	152	9.5		5.5	Y132S-4	7.5	Y132M-4	11	Y160M-4		
	C	265	30		37	Y200 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	Y100L ₂ -4	4	Y112M-4	5.5	Y132S-4		
ZE150-250	A	390	74	3	110	Y315S-2	160	Y315L ₁ -2			195	18.5	2	15	Y160L-4	22	Y180L-4	30	Y200L-4		
	B	355	62		90	Y280M-2	110	Y315S-2	160	Y315L ₁ -2	180	16				18.5	Y180M-4	22	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																				
ZE150-315	A	442	125	3							220	32.5	3	30	Y200L-4	45	Y225M-4	55	Y250M-4		
	B	430	120								210	30				37	Y225S-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		

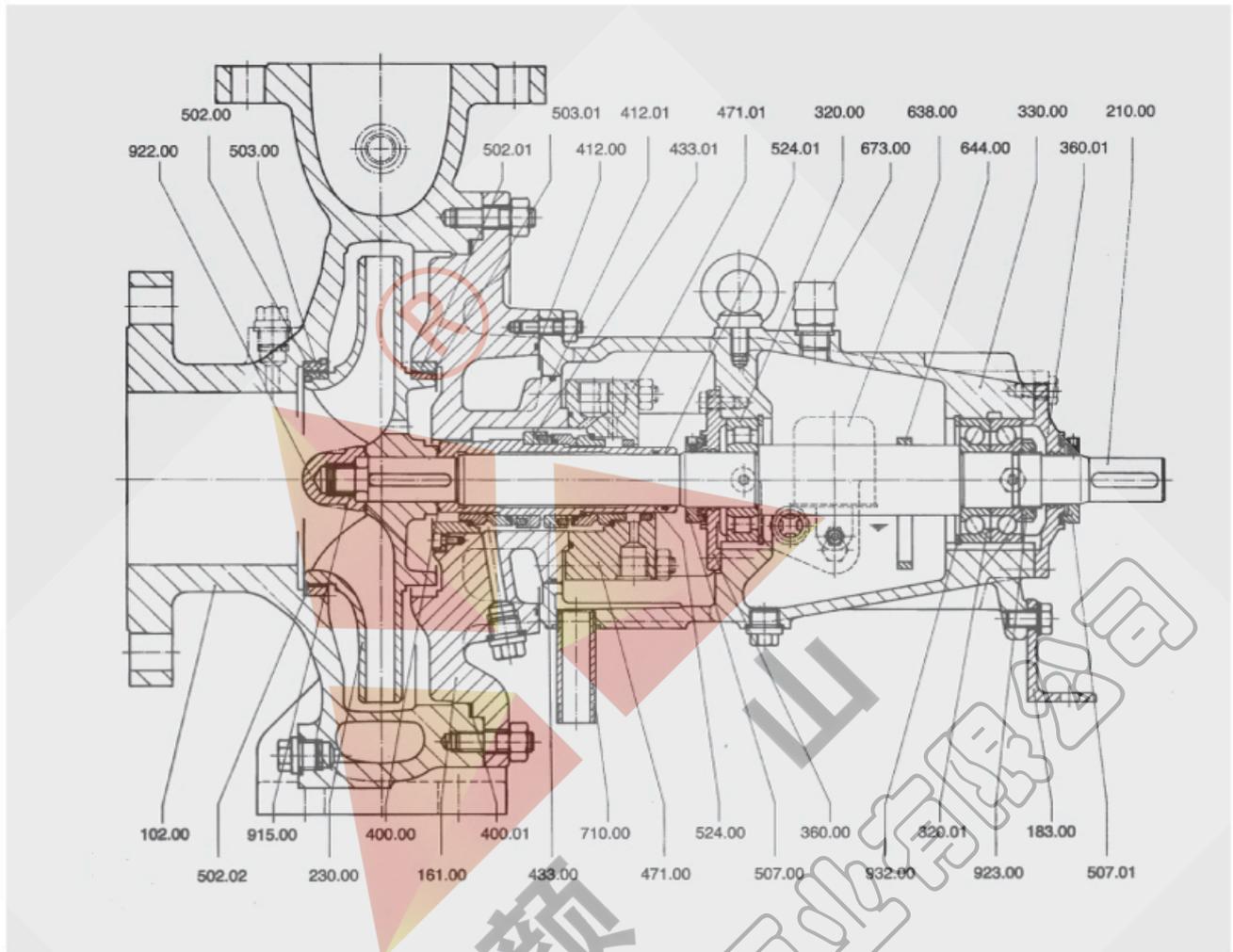
性能表 Performance Chart

型号 size	叶轮 型式	泵额定转速n=2950r/min						泵额定转速n=1475r/min												
		流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00		比重r=1.35		比重r=1.84		流量 Q m³/h	扬程 H m	轴 承 架 LK	比重r=1.00		比重r=1.35		比重r=1.84		
					电机功率及型号									电机功率及型号						
					kW		kW		kW					kW		kW		kW		
ZE150-400	A	520	205	4						260	51	3								
	B	498	190							250	48			55	Y250M-4	75	Y280S-4		110	Y315S-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	
ZE150-450	A	546	260	5						546										
	B	520	246							520										
	C	452	208							452										
	D	347	142							347										
ZE150-500	A									300	77	3	110	Y315S-4	132	Y315M-4				
	B									283	72			90	Y280M-4	132	Y315M-4	160	Y315L1-4	
	C									233	59			75	Y280S-4	90	Y280M-4	110	Y315S-4	
	D									208	45			45	Y225M-4	75	Y280S-4	75	Y280S-4	
ZE150-560	A									335	104	4	160	Y315M2-4						
	B									315	97			132	Y315M1-4					
	C									260	80			90	Y280M-4	132	Y315M-4	160	Y315L1-4	
	D									212	60			75	Y280S-4	90	Y280M-4	110	Y315S-4	
ZE150-630	A									360	115	4								
	B									338	105.5									
	C									274	82			132	Y315M-4	160	Y315L1-4			
	D									220	60			75	Y280S-4	110	Y315S-4	160	Y315L1-4	
ZE200-250	A	610	72	3	160	Y315L1-2				305	17.5	3	22	Y180L-4	30	Y200L-4	45	Y225M-4		
	B	580	65		160	Y315L1-2				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	Y160M-4
ZE200-315	A	710	122	4						350	30	3	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	

性能表 Performance Chart

型号 Size	叶轮型式	泵额定转速n=2950r/min						泵额定转速n=1475r/min															
		流量 Q m ³ /h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84												
					电机功率及型号						流量 Q m ³ /h	扬程 H m	轴 承 架 LK	比重r=1.00			比重r=1.35			比重r=1.84			
		电机功率及型号						电机功率及型号															
kW			kW			kW			kW			kW			kW			kW					
ZE200-400	A	850	203	5							426	50	3	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			
ZE200-450	A	930	257	6							930												
	B	880	240								880												
	C	770	200								770												
	D	580	140								580												
ZE200-500	A										495	84	4										
	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			
ZE200-560	A										540	105	5										
	B										510	98											
	C										440	81			160	Y315L1-4							
	D										350	62			110	Y315S-4	132	Y315M-4					
ZE200-630	A										580	132	5										
	B										550	125											
	C										468	100											
	D										372	75			132	Y315M-4							
ZE250-315	A										545	27	3	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			
ZE250-400	A										660	49	4	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			

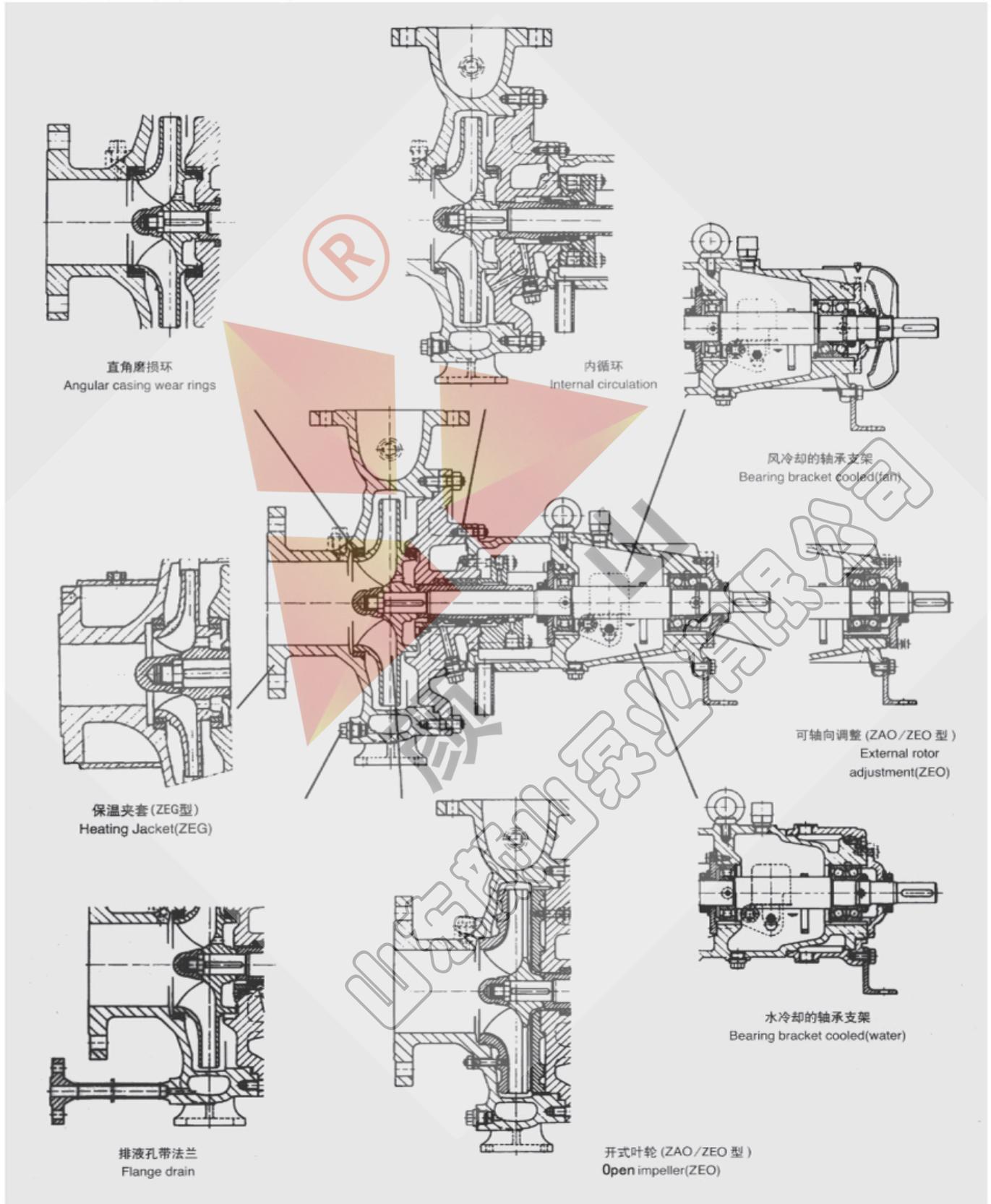
剖面图 Sectional Drawing



102.00 泵体	Volute casing	* 412.00 O形圈	O-ring	507.01 防尘盘	Deflector
161.00 泵盖	Casing cover	* 412.01 O形圈	O-ring	524.00 轴套	Shaft sleeve
183.00 支脚	Supporting foot	433.00 机械密封	Mechanical seal	524.01 轴套	Shaft sleeve
210.00 轴	Shaft	433.01 机械密封	Mechanical seal	638.00 恒位油杯	Constant-level-oiler
* 230.00 叶轮	impeller	471.00 密封压盖	Sealing cover	644.00 甩油环	Lubricating ring
320.00 耐磨轴承	Antifriction bearing	471.01 密封压盖	Sealing cover	673.00 油分离器	Vent filter
320.01 耐磨轴承	Antifriction bearing	* 502.00 泵体口环	Casing wear ring	710.00 排液管	Pipe
330.00 轴承支架	Bearing bracket	* 502.01 泵体口环	Casing wear ring	915.00 钢丝螺套	Threaded insert
360.00 轴承压盖	Bearing cover	* 502.02 泵体口环	Casing wear ring	* 922.00 叶轮螺母	Impeller nut
360.01 轴承压盖	Bearing cover	* 503.00 叶轮口环	impeller wear ring	923.00 圈螺母	Bearing nut
* 400.00 平垫片	Flaat gasket	* 503.01 叶轮口环	impeller wear ring	932.00 卡环	Circlip
* 400.01 平垫片	Flaat gasket	507.00 防尘盘	Defiector		

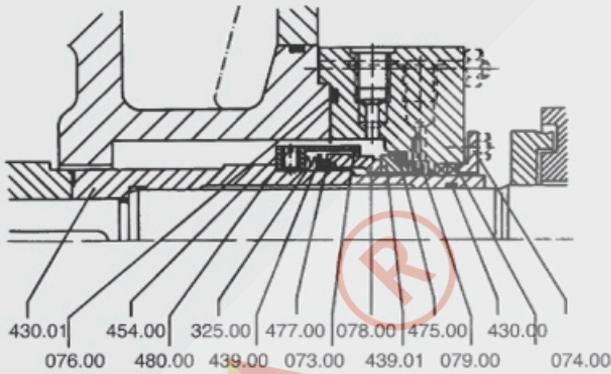
带 * 的零件为易损件 * Being Spare parts

各种设计结构 Various technical designs

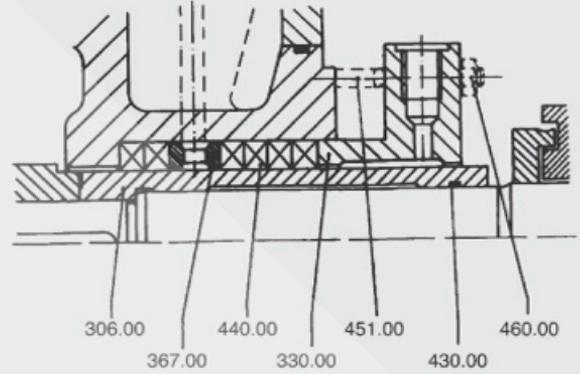


ZE系列泵剖面图

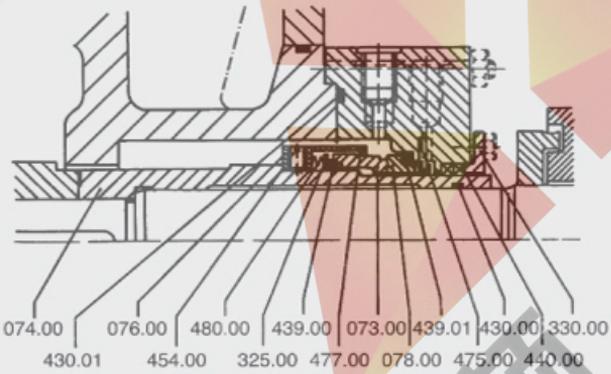
Sectional Drawing Type ZE



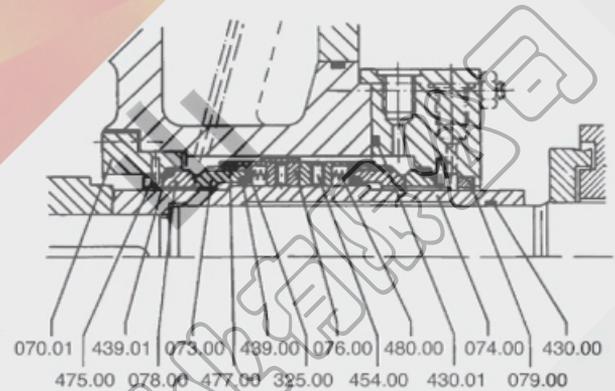
单端面平衡型机械密封
Single mechanical seal, balanced



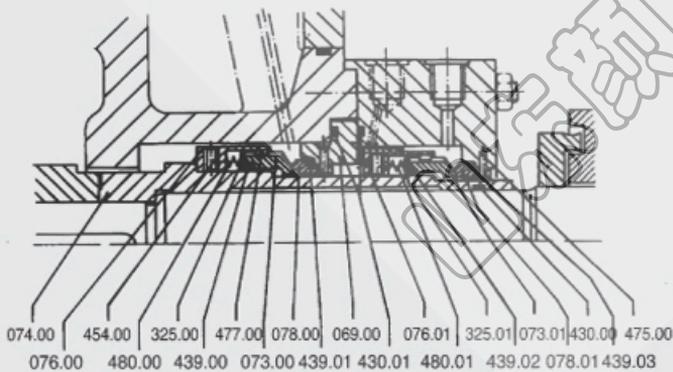
带冷却压盖和水封环的填料密封
Packed stuffing box with lantern ring and gland cooling



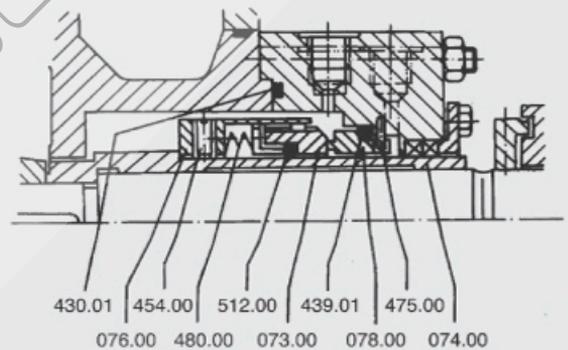
带辅助填料密封的单端面平衡型机械密封
Single mechanical seal, balanced, with auxiliary stuffing box



带加压系统的双端面平衡型机械密封
Double mechanical seal, balanced, with pressurized system



串联式机械密封
Tandem mechanical seal



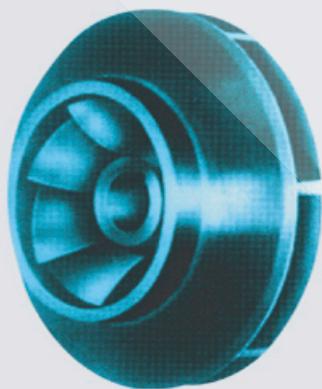
单端面非平衡型机械密封 (特殊设计)
Single mechanical seal unbalanced (Special design)

轴承支架号 Bearing bracket size	机械密封型式 Mechanical seal size			
	单端面平衡型密封 Single balanced	单端面波纹管密封 Single balanced	双端面密封 Double	串联式密封 Tandem
LK0	H74N/28-E ₁ -5Z	MFLWT80/28-E ₁ -5Z	H74N-DF/28-E ₁ -5Z	H74N/28-FTA2
LK1	H74N/33-E ₁ -5Z	MFLWT80/33-E ₁ -5Z	H74N-DF/33-E ₁ -5Z	H74N/33-FTA2
Lk2	H74N/43-E ₁ -5Z	MFLWT80/43-E ₁ -5Z	H74N-DF/43-E ₁ -5Z	H74N/43-FTA2
LK3	H74N/53-E ₁ -5Z	MFLWT80/53-E ₁ -5Z	H74N-DF/53-E ₁ -5Z	H74N/53-FTA2
LK4	H74N/65-E ₁ -5Z	MFLWT80/65-E ₁ -5Z	H74N-DF/65-E ₁ -5Z	H74N/65-FTA2
LK5	H74N/75-E ₁ -5Z	MFLWT80/75-E ₁ -5Z	H74N-DF/75-E ₁ -5Z	H74N/75-FTA2
LK6	H74N/95-E ₁ -5Z	MFLWT80/95-E ₁ -5Z	H74N-DF/95-E ₁ -5Z	H74N/95-FTA2
LK7	无	无	无	无

轴封零件单 Shaftseals part list

069.00 静环圈	Stat. seal ring pick-up cover	306.00 轴套	Shaft sleeve	439.03 O形圈	O-ring
070.01 静环座	cover	325.00 挡圈	Disc	440.00 填料	Packing ring
073.00 动环	Rot. seal ring	325.01 挡圈	Disc	451.00 双头螺栓	Stud bolt
073.01 动环	Rot. seal ring	330.00 填料压盖	Stuffing box gland	454.00 定位螺钉	Setscrew
074.00 轴套	Shaft sleeve	367.00 水封环	Lantern ring	460.00 螺母	Nut
076.00 弹簧座	Sleeve mech. seal	430.00 O型圈	O-ring	475.00 销钉	Pin
076.01 弹簧座	Sleeve mech. seal	430.01 O型圈	O-ring	477.00 销钉	Pin
078.00 静环	Stat. seal ring	439.00 密封垫	Sealing ring	480.00 弹簧	Spring
078.01 静环	Stat. seal ring	439.01 密封垫	Sealing ring	480.01 弹簧	Spring
079.00 节流衬套	Throttling bush	439.02 密封垫	Sealing ring	521.00 推环	Shap ring

叶轮 Impellers

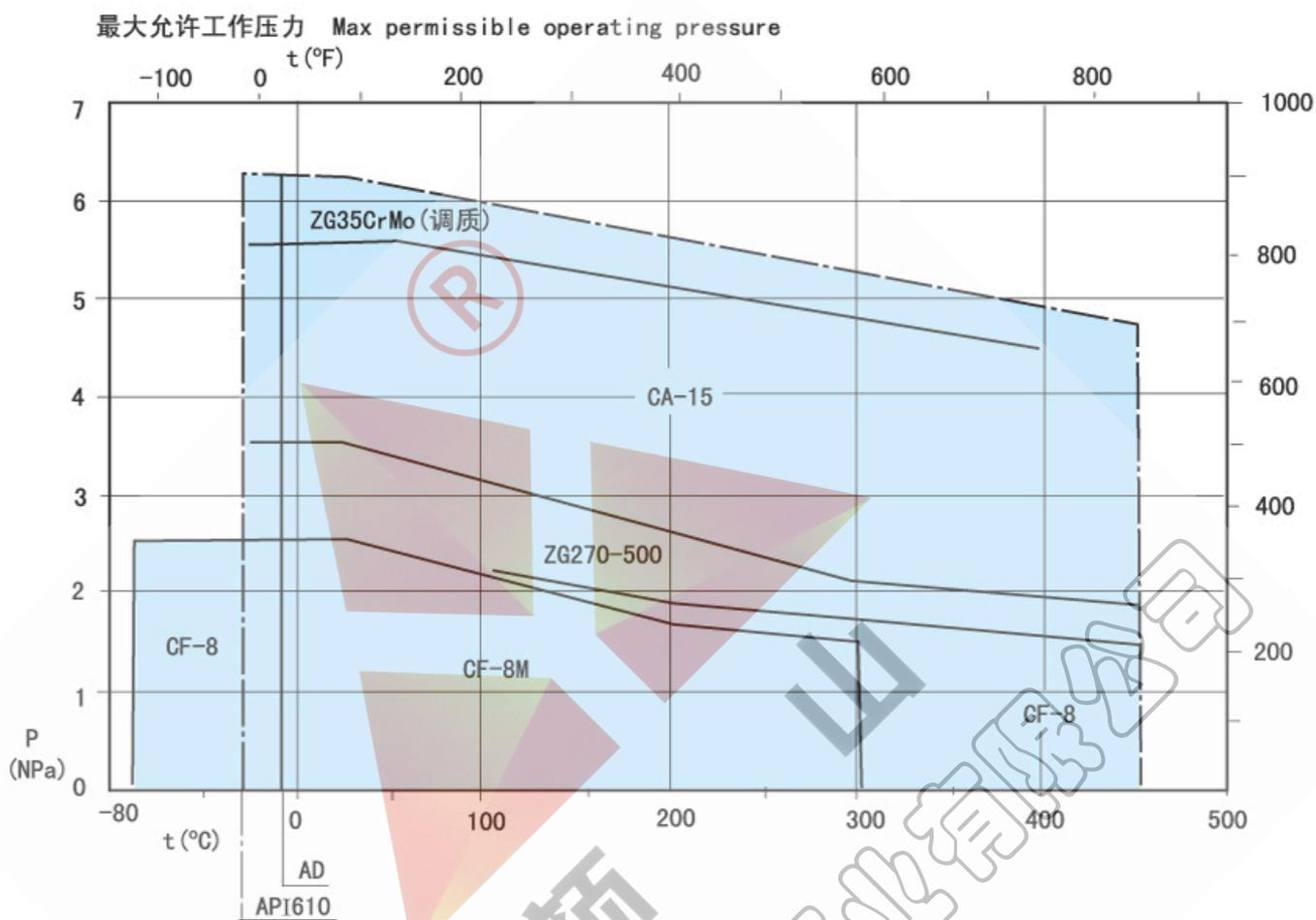


闭式叶轮 Closed impeller



开式叶轮 Open impeller

压力-温度图表 Pressure-Temperature-Diagram



最大容许试验压力 (20°C)

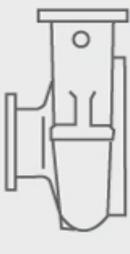
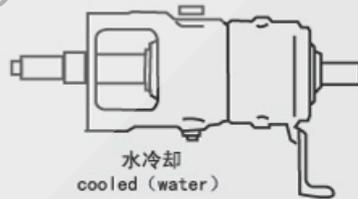
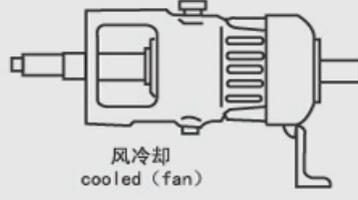
Max permissible test pressure (20°C)

材料 Materials	泵体 Casing	法兰 Flanges					
		GB 9113.5-88 PN40 MPa	DAN 2545 PN40 MPa	ANSI B16.5 Class150 MPa	DAN 2546 PN46 MPa	ANSI B16.5 Class300 MPa	ANSI B16.5 Class600 MPa
泵体 Casing	MPa						
ZG35CrMo (调质)	10.0	6.0	6.0	3.0	9.6	7.8	10.0
CA-150	9.0	6.0	6.0	3.0	9.0	7.8	9.0
ZG270-500	5.5	5.5	5.5	3.0	5.5	5.5	5.5
CF-8M	4.0	4.0	4.0	2.9	4.0	4.0	4.0
CF-8	4.0	4.0	4.0	2.9	4.0	4.0	4.0

各种系列泵的标准部件的互换 Interchangeable Modular Elements for Various Sizes

API610单级流程泵(轻、中和重型)由4个系列组成,系列按压力等级划分。有标准水力部件和轴承架(动力端)因此,该泵保证在最经济的情况下,满足市场的需要。备件少,泵使用范围广,适应性强。有4个系列,每个系列有40~50多种规格,仅用9个重型整体轴承架。叶轮通用,各种规格的轴、轴套、轴承和机械密封也相同。

The new single-stage API 610 process pump programme of SULZER (light, medium or heavy duty) consists of 4 series divided into pressure ranges having standardized hydraulics and bearing bracket design (power end). The programme therefore ensures that market requirements are met in the best economical way, i.e. economic sparepart stockkeeping and rapid adaptation to alternative operating conditions. For 4 series with 40-50 or more sizes in each the same impeller is used and or 9 one-piece heavy duty bearing brackets are required. Shaft, shaft sleeve, mechanical seal and bearings are therefore identical for a variety of sizes.

四个系列的压力范围	不同压力下的泵体结构	四个系列泵的叶轮通用, 开式叶轮适用于ZA/ZE系列	不同压力下的泵盖结构	九种轴承支架的选择, 取决于工作环境是否需要冷却
4 series, divided into pressure ranges	Casing according to desing pressure used	Standardized hydraulics for all 4 series, open impeller design for series ZA/EA	Casing cover according to design pressure used	9 bearing brackets, depending on application conditions cooled or uncooled Cooling achieved by fan as standard though water-cooled design possible
ZA可达2.5MPa 有53个规格  up tu 2.5MPa 53sies		开式  open		 不须冷却 uncooled (ribs)
ZE可达5.0MPa 有53个规格  up tu 5.0MPa 53sies		闭式  closed		 水冷却 cooled (water)
ZF可达7.5MPa 有40个规格  up tu 7.5MPa 40sises				 风冷却 cooled (fan)
ZU可达13.5MPa 有40个规格  up tu 13.5MPa 40sises	