

大连宏亚泵业有限公司

Dalian Hongya Pump Industry Co.,LTD

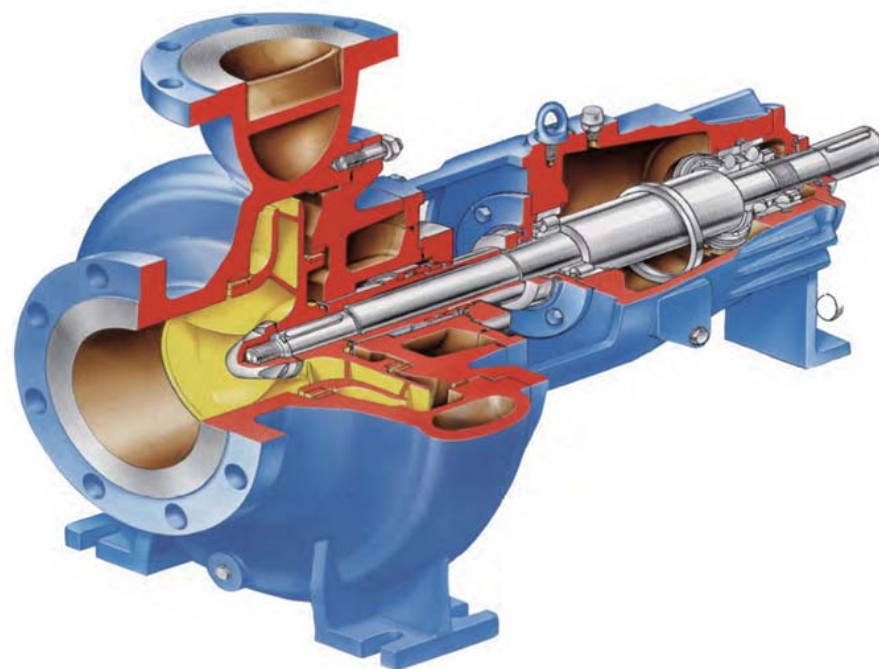
这本样本只是个梗概介绍，它不提供任何种类的授权和担保。如果想要获得我们产品授权和担保的描述，请与我们联系。此中的所有信息在没有通知的情况下会随时更改。

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SY石油化工流程泵(OH1)

SY Petro-Chemical Process Pumps API 610(OH1)



The Heart Of Your Process

大连宏亚泵业有限公司 您泵送解决方案的合作伙伴 Dalian Hongya Pump Industry Co.,LTD Your Partner for Pumping Solutions

大连宏亚泵业有限公司是提供先进的泵解决方案的国内领导者之一。结合工程和应用的专业知识，我们的解决方案提升了客户竞争力。大连宏亚泵业有限公司由制造工厂、销售办事处、服务中心和驻地代表所组成的全国网络，能够对客户需求做出快速响应。

大连宏亚泵业有限公司是以下领域的知名供应商

- 石油及天然气
- 石油化工
- 纸浆造纸
- 电力
- 水
- 通用工业
- 化工流程工业

应用范围 Application Ranges

SY API 610 流程泵适合输送清洁或含有颗粒、低温或高温、化学中性或有腐蚀性的液体。主要应用于

- 炼油厂、石油化工、煤加工工业和低温工程
- 化工、纤维和通用工业，即纸浆造纸、制糖业
- 水厂，特别是海水淡化厂
- 供暖和空气调节系统
- 火电和核电厂
- 环境保护工程
- 船舶及海上工业



Dalian Hongya Pump Industry Co.,LTD is one of the domestic leaders in state-of-the-art pumping solutions. Combining engineering and application expertise, our solutions add value and strengthen the competitive position of our customers. Thanks to a global network of manufacturing facilities, sales offices, service centers and representatives, we can provide fast responses to customer needs. Stations in environmental protection engineering in ship and offshore industries

Dalian Hongya Pump Industry Co.,LTD is a well-recognized player in the following industries

- Oil and Gas
- Hydrocarbon Processing
- Pulp and Paper
- Power Generation
- Water
- General Industry
- Chemical Process Industry

The SY series API 610 process pumps are used for pumping clean or slightly polluted, cold or hot, chemically neutral or aggressive liquids. They can be found in various applications such as

- In refineries, petrochemical industry, coal processing and low temperature engineering
- In chemical industry, fiber and general processing industries, i.e. pulp and paper and sugar industries
- In water industry, particularly sea-water desalination plants
- In heating and air-conditioning
- In fossil and nuclear power

SY API 610 流程泵 SY API 610 Process Pumps

设计 Design

- 单级、卧式径向剖分蜗壳泵，泵体为脚支撑。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
- 填料箱体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
- 法兰符合 GB、DIN 或 ANSI 标准
- 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 Pumping medium

- 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
- 目前我公司的耐腐蚀性材料，能满足上述各种介质的要求

注意：订货时，请用户提供所要输送介质的详细情况

- Single-stage horizontal, radially split volute casing pumps with feet below 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 packing or mechanical seals (single or double working), connections for cooling, flushing or sealing liquid
- Standardized pipe work according to API plans
- Flanges possible according to GB, DIN or ANSI
- Same nominal pressure for suction and discharge flanges
- Direction or rotation clockwise seen from driven end

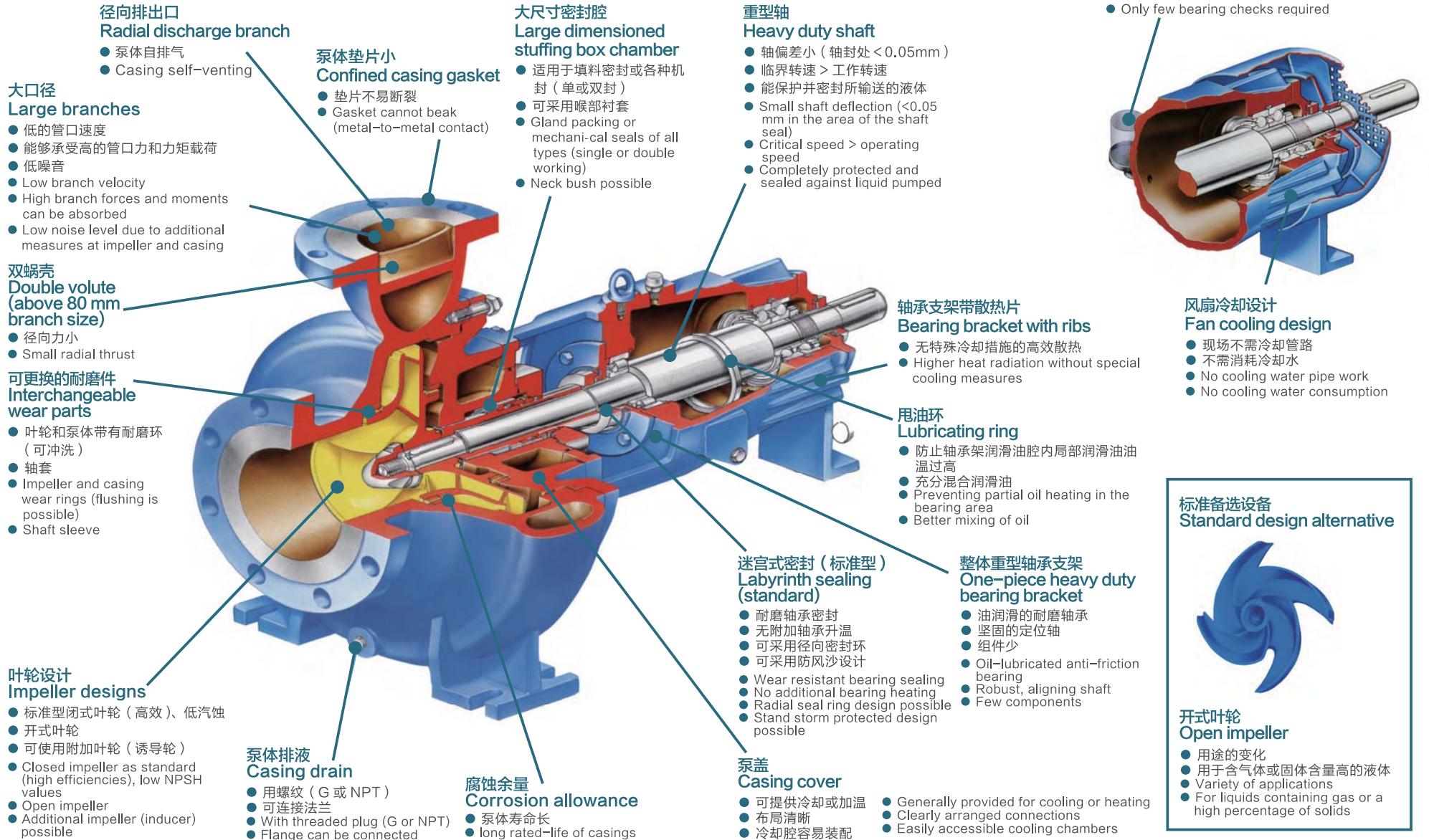
- Sulfuric, nitric, hydrochloric and inorganic acids at various temperature and concentration
- Sodium hydroxide, sodium carbonate and alkaline liquid at various temperature and concentration
- All kind of salt solutions
- Various liquids, petrochemical products, organic compound as well as raw material with corrosion behavior
- Anti-corrosive materials for pumps provided by our company can meet all the requirements of the medium mentioned above

Note: Please provide complete detail service conditions for the pump when ordering.



SY 特点及优势

SY Features and Benefits



设计特点 - 优点 - 经济效益

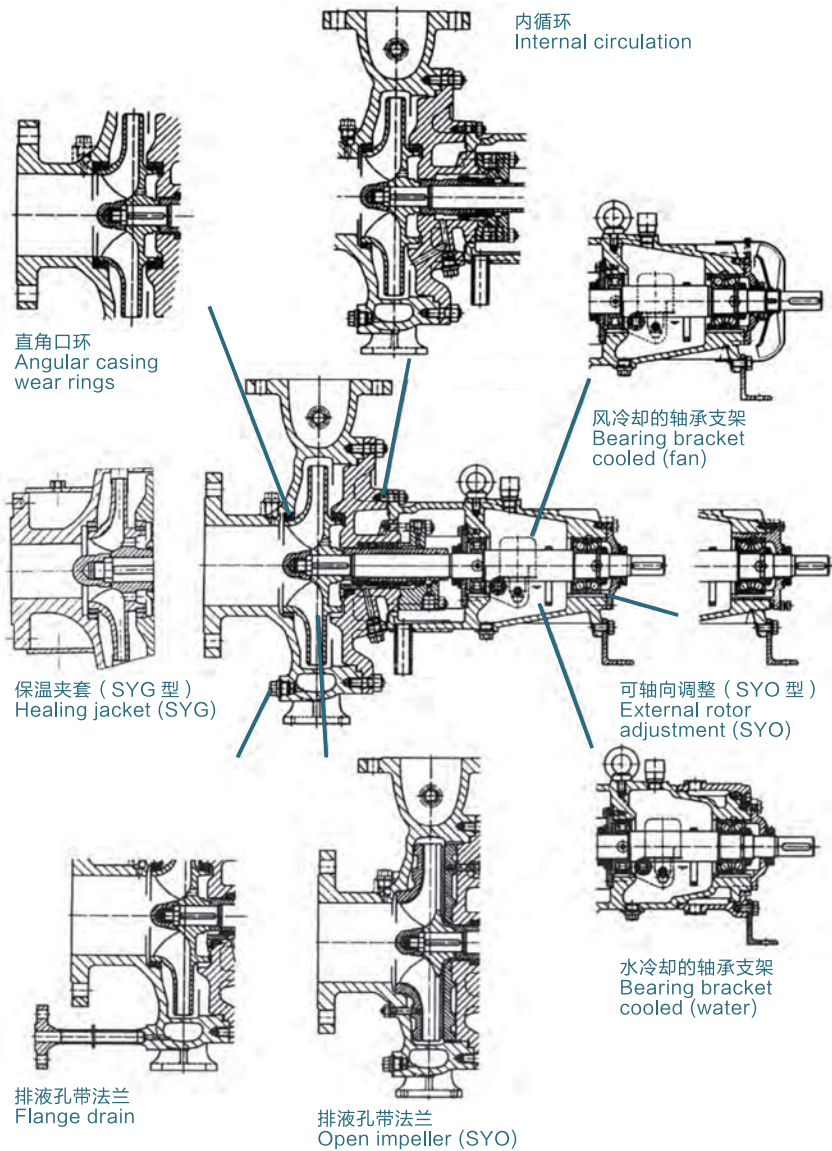
Design Features - Advantages - Economic Benefits

设计特点 / Design features	优点 / Advantages	经济效益 / Benefits
按API 610标准设计 Process Design API 610 <ul style="list-style-type: none"> ● 采用组件装配 ● 联轴器带有加长段 <ul style="list-style-type: none"> ● Assembly unit ● Coupling with spacer 	<ul style="list-style-type: none"> ● 执行流程工业的设计和维修标准 ● 易于拆装, 便于维修 ● 拆装泵时无须拆下管道和电机 ● Design and maintenance complying with process industry standards ● Rapid disassembly or assembly ● Disassembly without removal of pipe work and driver 	<ul style="list-style-type: none"> ● 高可靠性、互换性 ● 停工时间短 ● 维修费用低 ● High reliability and interchangeability ● Short shut-downs ● Low maintenance costs
不同规格泵的基本部件可互换 Interchangeable Modular Elements for Various Sizes	<ul style="list-style-type: none"> ● 54种规格泵只需8种规格的轴承部件 ● 对于重工位的SW、SF、SU型泵具有相同的水力部件(叶轮)和轴承部件 ● Only 8 bearings frames for 54 sizes ● Same hydraulics (impellers) and bearing frames as for heavy duty series SW, SF and SU 	<ul style="list-style-type: none"> ● 备件少、库存成本低廉 ● Fewer components, lower stock-keeping costs
双蜗壳泵体 (口径80mm以上) Double Volute Casing (above 80 mm branch size) <ul style="list-style-type: none"> ● 进出口口径大 ● 腐蚀余量大 ● Large suction and discharge branches ● Increased corrosion allowance 	<ul style="list-style-type: none"> ● 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; 泵体可自动排气; 管道结构简单、承载力好、寿命长 ● Small radial thrust, small shaft deflection (<0.05 mm) in the area of the shaft seal ● Low branch velocity, low noise level due to addition primary measures at impeller, casing with automatic vent, simple pipework design, better absorption of force, long rated life of casings, casing joint cannot break and casing parts can-not brace 	<ul style="list-style-type: none"> ● 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、消音附件、备件和维修等费用低、可靠性高 ● Long rated life of anti-friction 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
叶轮结构 Impeller <ul style="list-style-type: none"> ● 闭式叶轮(标准件) ● 开式叶轮(SYO型) ● 叶轮用钢丝螺套自锁 <ul style="list-style-type: none"> ● Closed impeller (standard) ● Open impeller depending on sizes (SYO) ● Impeller fastening with automatically controlled threaded insert 	<ul style="list-style-type: none"> ● 闭式叶轮, 适于多种工况, 效率高, 汽蚀值低 ● 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 ● 汽蚀值极低 ● 要求吸入扬程小 ● 轴不与输送的介质接触(干轴) ● Optimum compliance with various operating conditions, closed impeller with high efficiencies, low NPSHreq. values ● Open impeller for very gaseous liquids, high solids concentrations (up to 10% atro) ● Extremely low NPSHreq. values ● Small suction heads required ● Shaft completely protected from liquid pumped (dry shaft) 	<ul style="list-style-type: none"> ● 本系列泵, 稳定可靠、便于维修、能耗低 ● 价格便宜 ● 有腐蚀和磨损保护 ● 易于拆装 ● High reliability of pumps, low maintenance periods, low energy costs due to careful pump selection ● Small investment costs for plants ● Corrosion and wear protection ● Easy assembly/disassembly

设计特点 / Design features	优点 / Advantages	经济效益 / Benefits
磨损件可以更换 Interchangeable Wear Parts <ul style="list-style-type: none"> ● 叶轮和泵体口环(角结构也可) ● 轴封处轴套 ● 泵体口环可以冲洗 <ul style="list-style-type: none"> ● Impeller and casing wear rings (angular design possible) ● Shaft sleeve in the area of the shaft seal ● Casing wear rings flush 	<ul style="list-style-type: none"> ● 当泵体、叶轮上的口环和轴套磨损后, 更换之, 泵体、叶轮和轴仍然可以继续使用 ● When casing and impeller wear rings and shaft seals are subject to wear, casing, impeller and shaft can be reused 	<ul style="list-style-type: none"> ● 节省维修和备件费用, 维修简便迅速 ● Considerable saving of repair and spare part stock-keeping costs, shorter repair periods
整体重型轴承支架 One-Piece Heavy Duty Bearing Bracket <ul style="list-style-type: none"> ● 油润滑球轴承, 自动润滑而且自动控制油位 ● 当温度 $T \leq 250^{\circ}C$ 时, 无须冷却 ● 当温度 $T \geq 250^{\circ}C$ 时, 用风冷或水冷却迷宫环密封(标准件), 也可以用径向密封环 <ul style="list-style-type: none"> ● Oil-lubricated anti-friction bearings, with automatic lubrication and oil level control ● $T \leq 250^{\circ}C$, no cooling ● $T \geq 250^{\circ}C$, air cooling (fan) (water cooling possible) with labyrinth sealing (standard) (radial sealing ring possible) 	<ul style="list-style-type: none"> ● 轴承支架轴度好、稳定性高, 轴的刚性好、挠度小, $nk > n$, 零件少 ● 轴承拆检次数少 ● 无冷却管路 ● 无冷却水消耗 ● 不增加轴承温度, 轴承密封耐磨损 ● Stable, aligning shaft position, ro-bust shaft with small shaft deflection, $nk > n$ operation, few components ● Few bearing checks required ● No cooling water pipework ● No cooling water consumption ● No increased bearing heating, wear-resistant bearing sealing 	<ul style="list-style-type: none"> ● 填料密封或机械密封寿命长 ● 停工时间短 ● 易于维修、运行费用低 ● 不需对冷却系统投资 ● Long rated life of packing or mechanical seals ● Shorter shut-downs ● Easy maintenance, low operating costs ● No investment costs for cooling system
<ul style="list-style-type: none"> ● 密封箱尺寸适宜 ● Well Dimensioned Stuffing Box Housing 	<ul style="list-style-type: none"> ● 可采用填料密封和各种结构的机械密封, 并可互换 ● Possibility of replacing packing or me-mechanical seals 	<ul style="list-style-type: none"> ● 互换性好, 改型成本低廉, 填料箱不必另行加工 ● High interchangeability, low modification costs (no machining of stuffing box housing)

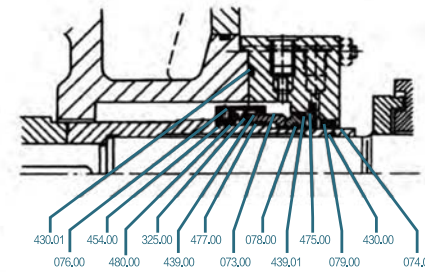
各种设计结构

Various Technical Designs

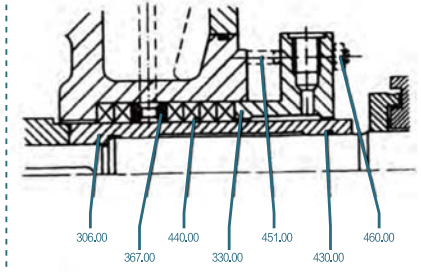


轴封

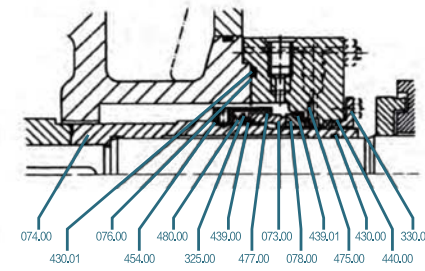
Shaft Seals



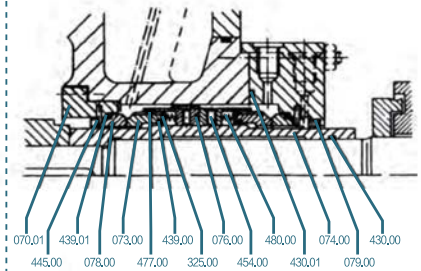
单端面平衡型机械密封
Single mechanical seal, balanced



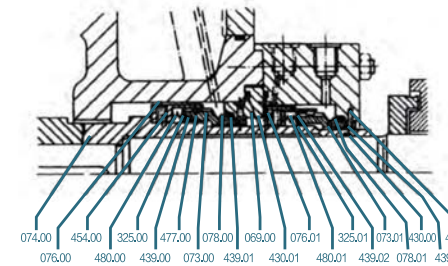
带冷却压盖和水封环的填料密封
Packed stuffing box with lantern ring and gland cooling



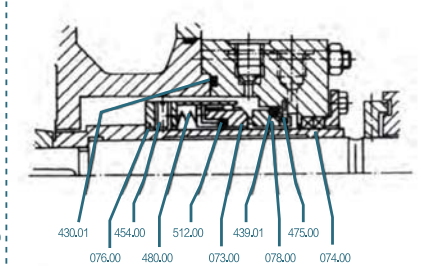
带辅助填料密封的单端面平衡型机械密封
Single mechanical seal, balanced, with auxiliary stuffing box



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



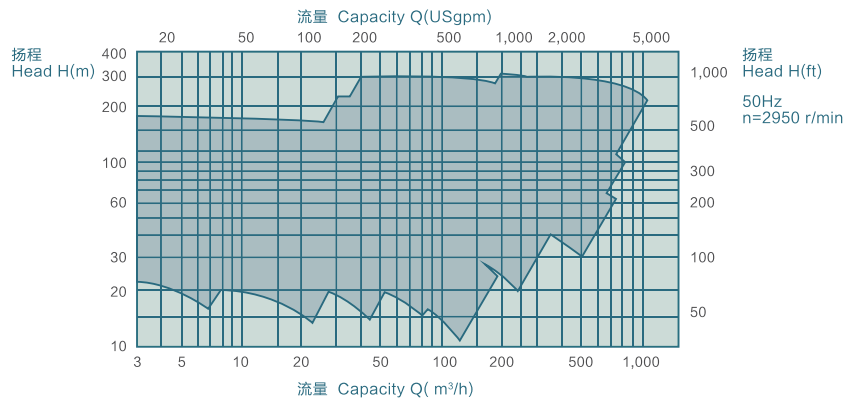
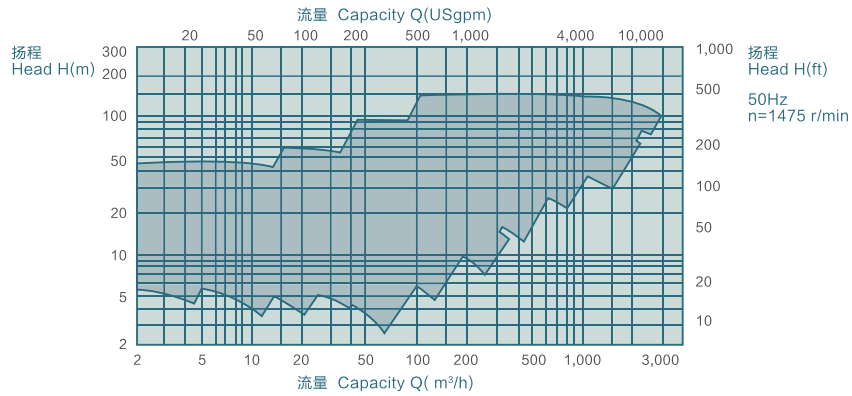
串联式机械密封
Tandem mechanical seal



单端面非平衡型机械密封 (特殊设计)
Double mechanical seal, balanced, with (special design)

性能范围

Performance Ranges



运行数据

Operating Data

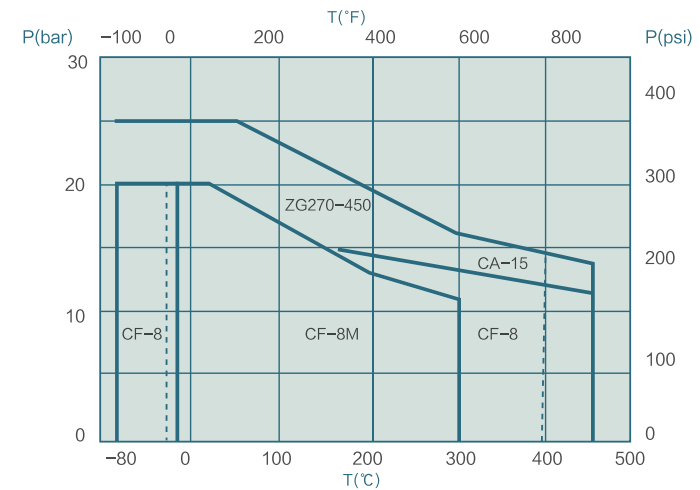
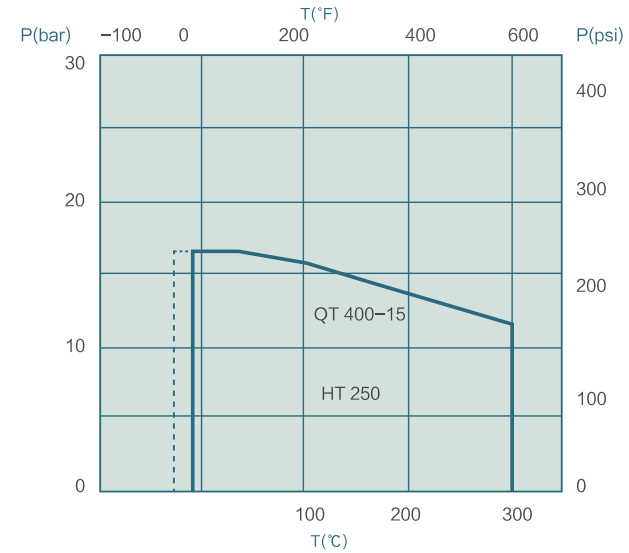
	50Hz
泵型号 / Pump sizes	DN 25–400 mm
流量 / Capacities	up to 2,600 m ³ /h
扬程 / Heads	up to 300 m
压力 / Pressures	up to 2.5 MPa
温度 / Temperatures	-80 to + 300°C

压力-温度表

Pressure-Temperature Diagram

最大允许工作压力

Max. Permissible Operating Pressure



大连宏亚泵业有限公司化工泵选型方法

第一步：确定具体参数

根据化工系统的具体情况确定如下基本参数：

流量 Q (m^3/h) 扬程 $H(m)$ 介质密度 ρ (kg/m^3)

第二步：流量、扬程修正

当泵送介质粘度 $v \geq 20mm^2/s$ 时，对 Q 、 H 、 η 必须考虑一个修正系数，查找粘度修正表，得到 $H_{修正}$ 或 $\eta_{修正}$ ，一般我们取 $H_{修正}$ 。

第三步：选择合适的性能曲线

根据 Q 和 $H_{修正}$ 来选择合适的性能曲线，确定泵水力效率 η (%) 和泵汽蚀余量 $NPSHr$ ，在选择时一般注意以下两点：一是工作点尽量选在性能曲线上最佳效率区域，或接近最佳效率区域；二是汽蚀曲线相对较平坦的区域。

第四步：计算轴功率（水力功率）

$P_{轴} = (9.8 \times Q \times H_{修正} \times \rho) / (3600 \times \eta)$ (KW)

第五步：选择驱动功率

计算驱动机功率时，在额定流量点下表的最小余量应考虑：

额定功率 (KW)	电机功率 (KW)
≤ 18.5	1.25 余量
> 18.5 至 ≤ 55	1.15 余量
> 55	1.10 余量

当泵送介质比重小于 1 时，应注意所选的电机功率用常温清水做实验时已经不够，这在装置首次开车以水冲洗管路时应串联运行。若泵工作在部分载荷区，根据工况应取较大的余量。

第六步：倒灌高度的确定

$H_{倒灌} (m) \geq NPSHr + \text{泵吸入管路损失} (m) + 0.5 (m)$

第七步：冲洗方案的确定

根据介质特性、实际工况情况、现场公共条件，以 API682 为基础标准，确定冲洗方案的形式。

第八步：监测系统

根据实际工况及客户要求，我们可以对泵安装辅助的监测系统，对泵的安全、高效的运行提供强有力的保障。

欢迎选购大连宏亚泵业有限公司产品

Welcome to order products of Dalian Hongya Pump Industry Co.,Ltd.

请按以下格式填充相应数据，以便于我们为您正确选型

Please fill in the relevant data so that we can select pump type for you correctly

询价单 Inquiry Data Sheet

介质 / Liquid	最小 /min	正常/norm	最大 /max	
温度 / Temperature				°C
密度 / Density				Kg / m ³
粘度 / Viscosity				Cp
汽化压力 / Vapor pressure				Mpa
比热 / Specific heat				KJ / kgk
流量 / Capacity				m ³ / h
扬程 / Differential head				m
泵入口压力 / Press.in suct.branch				Mpa
泵出口压力 / Press.in discharge. branch				Mpa
压差 / Differential pressure				Mpa
倒灌高度 / Suction head geod				m
装置汽蚀余量 / NPSHa				m
颗粒 / Solids	_____no_____yes_____mm_____%			
防爆 / Explosion proof	_____no_____yes			
防爆等级 / Explosion proof class	Ex d II _____ T _____			
防护等级 / Enclosure class	IP_____			
电压 / Voltage	_____V 频率/Frequency _____ Hz			
材质 / Material				

请注意：请提供所有温度下详细的数据！！！！

Please note :values which are related to all the temperature must be given!!!!

这些数据对于选型报价是必须的。

These values are absolutely necessary for a final quotation.

其它需求：需方必须提供材料、法兰形式、排泄装置、控制装置、检测等要求。

Other requirements:material、drains、special flange type、controls、extra testing、etc.to be stated.

以上数据必须由需方确认！！！！

THE ABOVE DATA MUST BE CONFIRMED BY THE CUSTOMER.