

上海市嘉定区曹安公路4255号
Address: No. 4255, Cao' an Highway, Jiading District, Shanghai City Shanghai Kaiquan
集团呼叫中心：400-002-6600
The Group' s Call Center: 400-002-6600



DESULPHURIZATION PUMP OF KAIQUAN GROUP
凯泉集团脱硫泵



有凯泉的地方就有水！
Where Kaiquan is, there is water there！

YB/KAIQUAN TLB-20170601



KAIQAUN GROUP PROFILE

凯泉集团简介

Shanghai Kaiquan Group is a large-scale comprehensive pump company integrating the design, production and sales of pumps, water supply equipment and control equipment for pump and is the leading company in China pump industry. The Group has over 5,000 existing employees and 80% of them have college degrees or above, of which there are more than 750 engineering technicians composed by the national well-known water pump experts and professors, doctors and masters and senior and middle-level engineers to form the innovative echelon talent structure. Its total assets reach RMB 2.5 billion and it has 7 enterprises in Shanghai, Zhejiang, Hebei, Liaoning, Anhui and other cities and provinces and 5 industrial zones, with total cover area of 1,000 mu and productive construction area of 350,000 m². Shanghai Kaiquan Group has been granted many honorable titles, such as "Shanghai Gold Award for Quality", "No. 4 of Top 100 Private Enterprises of Shanghai", "Top 100 Science-and-Technology Enterprises of Shanghai", "Chinese Quality Credit Rating AAA", "National Contract Credit Rating AAA", "Excellent Enterprise in Quality, Credit and Service", "Chinese Most Competitive Commodity Trademark", and "National Advanced Enterprise in Enterprise Cultural Development", and it is selected into national top 500 mechanical enterprises for the third year in a row and takes the first place in the pump industry.

上海凯泉集团是集设计、生产、销售泵、给水设备及泵用控制设备于一体的大型综合性泵业公司，是中国泵行业的龙头企业。集团现有员工 5000 多人，80% 员工具有大专以上学历，其中工程技术人员 750 多名，主要由全国知名水泵专家教授、博士硕士、中高级工程师构成，形成了具有创新思维的梯队人才结构。总资产达 25 亿元，在上海、浙江、河北、辽宁、安徽等省市拥有 7 家企业，5 个工业园区，总占地面积近 1000 亩，生产性建筑面积 35 万平方米。上海凯泉集团获得了“上海市质量金奖”、“上海市私营企业百强第四名”、“上海市科技百强企业”、“中国质量信用 AAA 级”、“全国合同信用等级 AAA 级”、“质量、信誉、服务三优企业”、“中国最具竞争力的商品商标”、“全国企业文化建设先进单位”等光荣称号，2013 年凯泉连续第 3 年入选全国机械 500 强，并名列泵行业之首。



SHIJIAZHUANG KAIQUAN IMPURITY PUMP CO.,LTD

石家庄凯泉杂质泵有限公司

Shijiazhuang Kaiquan Impurity Pump Co., Ltd. is a wholly-owned subsidiary of Kaiquan Group, which engages in the scientific research and development and production of the impurity pump and relevant products. The Company was founded in May, 2005 and is located at Zhengding Science and Technology Industrial Park, Shijiazhuang, with total cover area of 65 mu and construction area of 22,000 m².

The Company integrates the scientific research and development and production and has the design, casting, machining and assembly of water pump, and heat treatment, physical and chemical analysis, water pump test center and other complete scientific research, production, detection and test means to provide strong supports for the production of first-class products.

The Company owns the modern casting workshop, advanced international level of resin sand production line, advanced continuous mixer and other equipment, and the water passing parts adopt the resin sand. 3-ton and 1-ton medium frequency furnaces are set to make the alloy casting which can weigh 8 tons. The furnace is equipped with the spectrum analyzer in the front to ensure the accuracy of material compositions.

The comprehensive machining plant covers an area of 11,200 m² and has over 200 sets of various equipment, such as 4M vertical lathe, 2.5M vertical lathe, universal borer, CNC milling machine and CNC lathe. Its annual output value reaches RMB 200 million.

石家庄凯泉杂质泵有限公司，是凯泉集团所属从事科研开发、生产制造杂质泵及相关产品的全资子公司。公司成立于 2005 年 5 月，位于石家庄市正定科技工业园，总占地面积 65 亩，建筑面积 22000 平方米。

公司集科研开发、生产制造为一体，拥有水泵设计、铸造、机械加工、装配，以及热处理、理化分析、水泵测试中心等完整的科研、生产、检测和试验手段，为生产一流的产品提供了强有力的支撑。

公司拥有现代化的铸造车间，拥有国际先进水平的树脂砂生产线和先进的连续式混砂机等设备，过流部件全部采用树脂砂造型；设有 3 吨、1 吨中频电炉，可铸单件达 8 吨重的合金铸件；配备有炉前光谱分析仪，确保材料成分的准确性。

机加工综合厂房 11200 平方米，拥有 4M 立式车床、2.5M 立式车床、万能镗床、数控铣床、数控车床等各种设备 200 余台套，年产值两亿元。



TEST PLATFORM

测试平台



Test Bench for Large Pump
大泵试验台

- The tank capacity reaches 13,000 m³, the height of crane on the test bench is 24 m, the lifting weight of each hook is 200 tons, and the maximum pumping flow measured is 25 m³/s. The voltage is 10kV, the maximum motor power measured is 25,000 kW, and it can test the large pump with the diameter of 3,000 mm. It is the largest water pump test bench in China. It is mainly used to measure the full speed and full flow of the main circulation pump, condensate pump, large double suction pump, etc. in the million-kilowatts-class thermal power and nuclear power conventional.

水池容量达到 13000m³, 测试台行车高 24m, 单钩起吊 200 吨, 最大被测泵流量 25m³/s。电压 10kV, 最大被测电机功率为 25000kW, 可测试口径为 3000mm 的大型泵。为国内最大的水泵测试台。主要用于百万千瓦级火电及核电常规主循环泵、凝结水泵和大型双吸泵等泵的全速、全流量测试。



Thermal Shock Test Bench
热冲击试验台

- The thermal shock test bench of Kaiquan has passed the identification by the domestic experts and reaches the requirements of the thermal shock test. It can carry out the thermal shock test to verify the working conditions and functions of the secondary and triple - stage pumps of 1,000MW nuclear power plant.

凯泉热冲击试验台通过国内专家鉴定, 完全达到热冲击试验的要求。可以进行 1000MW 核电核二、三级泵工况功能验证的热冲击试验、杂质试验和运行试验。



High - Precision Enclosed Test Bench
高精度闭式试验台

- This test bench is mainly used for the test of model pump of the excellent hydraulic model developed by the Company, and it is the multi-function four - quadrant in-situ calibration test bench for water pump research and reaches the world advanced level. With the comprehensive precision of 0.25%, it can accurately test the all performance parameters of the model pump.

主要用于公司研发的优秀水力模型的模型泵试验, 该试验台为多功能四象限、原位标定的水泵研究试验台, 达到世界先进水平, 综合精度为 0.25%, 可以精确的试验模型泵的全性能参数。



High - Voltage Test Bench at a High - Temperature
高温高压试验台

- It can carry out the full speed test of the high-temperature and high-pressure vacuum machine of the main water supply pumps in the million-kilowatts-class thermal power and nuclear power conventional. Simulating the working condition of the pump in-service use by the test bench verifies the various performance indexes and liability indexes of the pump.

可以进行百万千瓦级火电及核电常规主给水泵的高温高压真机全速试验, 通过测试台模拟泵实际使用时的工况, 验证泵的各项性能指标和可靠性指标。

TEST PLATFORM

测试平台



Test Center for Large Water Pump
大型水泵测试性能中心

- The tank capacity reaches 2,000 m³, the voltages are 380 V, 6 kV and 10 kV, the maximum pumping flow measured is 9 m³/s and the maximum motor power measured is 2,200 kW. It can test the water pump with the diameter of 1,200 mm and is mainly used for the type test and full performance test of various kinds of large products of the Company.

水池容量达到 2000m³, 电压为 380V、6kV、10kV, 最大被测泵流量 9m³/s, 最大被测电机功率为 2200kW, 可测试口径为 1200mm 的水泵, 主要用于公司各类大型产品的型式试验和全性能试验。



Test Bench of Hefei Plan
合肥工厂测试台

- It uses the cofferdam test method, the maximum pumping flow measured reaches 20 m³/s, the voltages are 380V, 600V, 3kV, 6kV and 10KV, and the maximum motor power measured is 6,000 KW. It is mainly applied to the large high-pressure submersible electric pump.

采用围堰式测试方法, 最大被测泵流量可达 20m³/s, 电压为 380V、600V、3kV、6kV、10kV, 最大被测电机功率为 6000kW, 主要用于测试大型高压潜水电泵。



Automatic Open Test Bench
开式全自动试验台

- The tank capacity reaches 800 m³, the voltages are 380 V, the maximum pumping flow measured is 4000 m³/h and the maximum motor power measured is 315 kW. It can test the water pump with the diameter of 600 mm and is mainly used for the type test and full performance test of various kinds of products of the Company.

水池容量达到 800m³. 电压为 380V, 最大被测泵流量 4000m³/h, 最大被测电机功率为 315kW, 可测口径为 600mm 的水泵, 主要用于公司各类产品的型式试验和全性能试验。



The vacuum pump test stand has been changed to the desulphurization pump test stand
脱硫泵测试台

- 10kV High Voltage Test Stand with Automatic Control and Data Acquisition 12000m³/h Maximum Test Flow 12000m³/h Maximum Test Motor Power 800kW It can be used to test the performance of a large scale desulphurization pump with a diameter of 900 mm

10kV高压测试台, 全自动控制和数据采集, 最大测试流量12000m³/h, 最大被测电机功率800kW, 可对900口径以下的大型脱硫泵进行全性能测试。

MANUFACTURING CAPACITY

制造能力

MANUFACTURING CAPACITY

制造能力



• WFT Five-axis four-linkage horizontal boring and milling machining center (Country: Czech)
WFT13 五轴四联动卧式镗铣加工中心 (捷克)



• AC46TM-4000 heavy high-precision vertical turn-milling center (Country: Italy)
AC46TM-4000 重型高精立式车铣中心 (意大利)



• Nine-axis five-linkage floor-type boring and milling machining center
九轴五联动落地镗铣加工中心



• Numerical control floor-type boring and milling lathe
数控落地镗铣床



• KVL-1600ATC+CII CNC vertical turn-milling center
KVL-1600ATC + C-II型数控立式车铣中心



• Heat treatment workshop
热处理车间



• TRT314HS six-axis five-linkage (Country: Italy)
TRT314HS 六轴五联动 (意大利)



• Profimill4000/100-T six-axis five-linkage gantry boring and milling machining center (Country: Germany)
ProfilMill 4000/100-T 六轴五联动龙门铣镗加工中心 (德国)



• 5 m CNC vertical lathe
5 米数控立式车床



• Five-axis five-linkage machining center
5 轴 5 联动加工中心



• 8 m large digital vertical lathe
8 米大型数显立车



• 10 m CNC vertical lathe
10 米数控卧式车床

TECHNICAL ADVANTAGES

技术优势

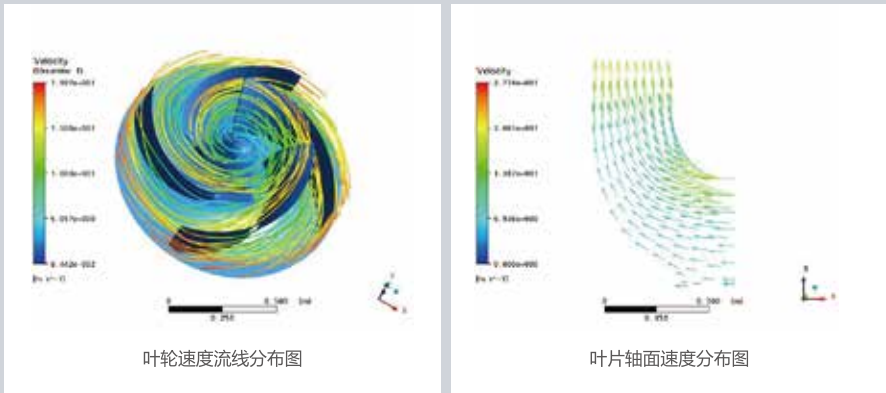
- At present, Shijiazhuang Kaiquan Impurity Pump Co., Ltd. has over 30 engineering technicians, 6 hydraulic machinery experts and 3 senior engineers and owns powerful technology R&D strength.

目前石家庄凯泉杂质泵有限公司拥有工程技术人员 30 余名,水力机械专家 6 人,高级工程师 3 名,拥有雄厚的技术研发实力。



- The international advanced CFD software system is adopted for the hydraulic test and analysis of all pumps, research the flow state of the fluid of the medium in details to optimize the product design scheme and exactly grasp hydraulic performance of the product.

所有泵型均采用国际先进的 CFD 软件系统进行水力测试分析,详细研究介质的流体流态,进而优化产品的设计方案,从而能够准确把握产品的水力性能。



CASTING ABILITY

铸造能力



Casting Pouring
铸件浇铸

Heat Treatment of Casting
铸件热处理

Modeling of Casting
铸件造型

INSPECTION EQUIPMENT

检测设备



XJG-05 Metalloscope
XJG-05 金相显微镜

German OBLF Direct-reading Spectrometer
德国 OBLF 直读式光谱仪

GPL-2 Carbon and Sulfur Analyzer
GPL-2 型碳硫分析仪

MECHANICAL PROCESSING
ABILITY

机械加工能力



• XJVertical Processed Desulfurization Pump Impeller
立车加工脱硫泵叶轮



• Desulfurization Pump Guard Plate Processed through Vertical Lathe with Numerical Control
数控立车加工脱硫泵护板



• Processed Desulfurization Pump Processed through Boring Lathe with Numerical Control
数控镗床加工脱硫泵泵体

QUALITY ASSURANCE
质量保障



• Test of the desulfurization pump with the diameter of 800
800 口径脱硫泵测试



• Finished all metal desulfurization pump with the diameter of 800
800 口径全金属脱硫泵成品



• Body of the desulfurization pump (2605N dual-phase steel)
脱硫泵泵体 (双相钢材质)



上海凯泉泵业(集团)有限公司
泵性能试验报告

报告编号: Q2701049
制 造 单 位: 上海凯泉泵业(集团)有限公司
型 号: KQL600-26
制 造 年 份: 2017
测 试 日 期: 07-1-31

流量 (m³/h): 2700
扬程 (m): 104.202
轴功率 (kW): 321.43
效率 (%): 82.69
配用电机 (kW): 355

测 试 数 据

序 号	流 量 (m³/h)	扬 程 (m)	轴 功 率 (kW)	效 率 (%)	测 试 日 期	备 注
1	213.470	105.342	321.43	82.69	07-1-31	16.20
2	2700.762	104.202	321.43	82.69	07-1-31	16.20
3	3375.726	103.402	321.43	82.69	07-1-31	16.20
4	4050.690	102.602	321.43	82.69	07-1-31	16.20
5	4725.654	101.802	321.43	82.69	07-1-31	16.20
6	5400.618	101.002	321.43	82.69	07-1-31	16.20
7	6075.582	100.202	321.43	82.69	07-1-31	16.20
8	6750.546	99.402	321.43	82.69	07-1-31	16.20

合 格

WEAR - RESISTANT AND CORROSION - RESISTANT MATERIALS FOR DESULPHURIZATION

脱硫用耐磨耐腐材料

Material Code 材料代号	Main Compositions% 主要成分 %				Mechanical Performance 机械性能		Performance Introduction 性能介绍	Similar Mark 类似牌号
	C	Cr	Ni	Mo	δb(MPa)	HRC		
A49	1-2	26-30	2-3	2-3	≥610	HB≥400	Good corrosion resistance of dual phase steel; high corrosion resistance of white iron cadmium; a good using effect in chloride environment. 具有双相钢的良好耐腐蚀性，同时具有高铬白口铁的耐磨性，在含氧离子的环境中中具有很好的使用效果	Cr26Ni2Mo2Cu1.5 (F30%CrMo)
2605N	≤0.03	26-28	4.5-6.5	3-5	≥670	HB≥270	Duplex stainless steel; good corrosion resistance and abrasion resistance; equivalent to CD4MCu (American corrosion resistant metal materials); in the desulfurization environment the using effect can be better. 双相不锈钢，耐腐蚀耐磨综合性能好，相当于美国的CD4MCu，在脱硫环境中使用效果较好	1.4460
2507	≤0.03	24-26	6-8	3-5	≥730	HB≥270	Excellent pitting corrosion, crevice corrosion and well-distributed corrosion resistance. 具有极好的抗点腐蚀，缝隙腐蚀和均匀腐蚀的能力	1.4410
2205	≤0.03	22-23	4.5-6.5	3-5	≥670	HB≥270	Excellent stress corrosion cracking resistance, especially in chloride environment 具有优异的耐应力腐蚀破裂的能力，尤其在含氧离子的环境中	1.4462
MM-4	≤0.03	24-26	4-6	1.5-2.5	≥588	HB≥220	In the case of solid phase, there is relatively good abrasion and corrosion resistance; good corrosion resistance in nitric acid, sulfuric acid and organic acid environment 在有固相的情况下，有较好的耐磨性和耐腐蚀性，在硝酸、硫酸及有机酸中有较好的耐蚀性能	00Cr25Ni6Mo2
904	≤0.03	19-21	24-26	4-5	≥485	HB≥115	In sulfuric acid, acetic acid, formic acid and phosphoric acid environment there is excellent corrosion resistance; because of low carbon content, high chromium and molybdenum content, there is also strong pitting corrosion resistance. 在硫酸、醋酸、甲酸、磷酸等有极好的耐蚀性，由于碳含量低，铬和钼含量高，因此有较强的抗点蚀能力	1.4539

MAIN DESULPURIZATION SLURRY CIRCULATING PUMP

脱硫主浆液循环泵

PRODUCT OVERVIEW

产品概述

KQTL(R) desulphurization pumps are horizontal centrifugal pumps of single-stage and single-suction, developed and researched by our company for desulphurization purification plant of coal-fired device in the thermal power plant, and mainly as absorber recirculation pumps of the wet FGD device to transport the limestone and gypsum slurry. Using the features of domestic and foreign similar products, the product has the advantages of broad flow range, safe and liable operation, easy to maintain, efficient and energy saving, long service life, etc.

KQTL（R）系列脱硫泵为单级单吸卧式离心泵，是我公司针对火电厂燃煤机组脱硫净化装置而开发、研制的，主要作为湿法FGD 装置中吸收塔循环泵使用，输送石灰石与石膏浆液。产品借鉴了国内、外同类产品的特点，具有流量范围宽、运行安全可靠、检修方便、高效节能、使用寿命长等优点

PRODUCT FEATURES

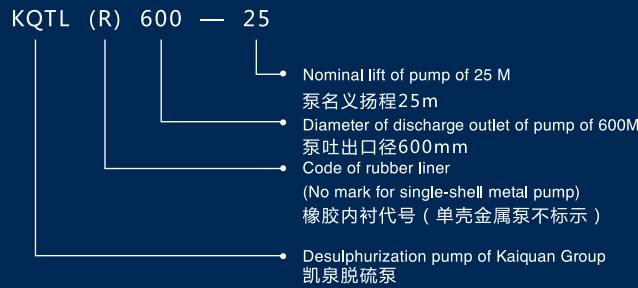
产品特点

- It adopts the two-phase flow theoretical design and its impeller adopts hydraulic model design optimized by CFD, with reasonable structure, good entire performance, steady operation and high efficiency.
- It uses the bearings with high load-bearing capacity and diluted oil lubrication in large oil pool to ensure the long service life of the bearing. And for the temperature rise, the bearing uses the platinum thermistor for temperature control and online measurement of bearing temperature.
- The shaft seal uses the cartridge mechanical seal specially designed for desulphurization (various flushing plans, flushing and intermittent flushing), with convenient and accurate disassembly, high reliability and long service life.
- The water passing part is made of the special desulphurization material A49 or dual-phase steel, with good abrasion resistance and corrosion resistance performance and long service life.
- The pump is connected with the motor or reducer by the diaphragm coupling, with good dynamic balance, strong resistance to shock, large transmission torque, steady pump running and safety and reliability.
- The pump structure is rear dismountable, simple and easy to maintain. There is no need to disassemble the suction and rising pipes.
- The unique stainless split type impeller disassembly ring can easily realize the impeller disassembly.
- The rotor part is equipped with the axial regulating structure to make the pump machine in the efficient operating state always.

- 采用两相流理论设计，叶轮经 CFD 优化水力模型设计，结构合理，整体性能优良运行稳定，效率高。
- 轴承采用高承载能力的轴承，大油池稀油润滑，可以保证轴承的长使用寿命轴承的温升采用铂热电阻进行温度监控，在线检测轴承温度。
- 轴封采用专门为脱硫设计的集装式机械密封（多种冲洗方案，冲洗或间断性冲洗）拆装方便、准确，可靠性高、使用寿命长。
- 过流件采用脱硫专用材质 A49 或双相钢，耐磨耐腐蚀性能优良，使用寿命长。
- 泵与电机或减速机采用膜片联轴器连接，动平衡性好，抗冲击能力强，传递扭矩大，泵运转平稳，安全可靠。
- 泵为后拆式结构，结构简单，维修方便，无需拆卸泵的进水管路。
- 独特的不锈钢分瓣式叶轮拆卸环，轻而易举实现了叶轮的拆装。
- 转子部件设有轴向调节结构，使泵机组始终处于高效运行状态

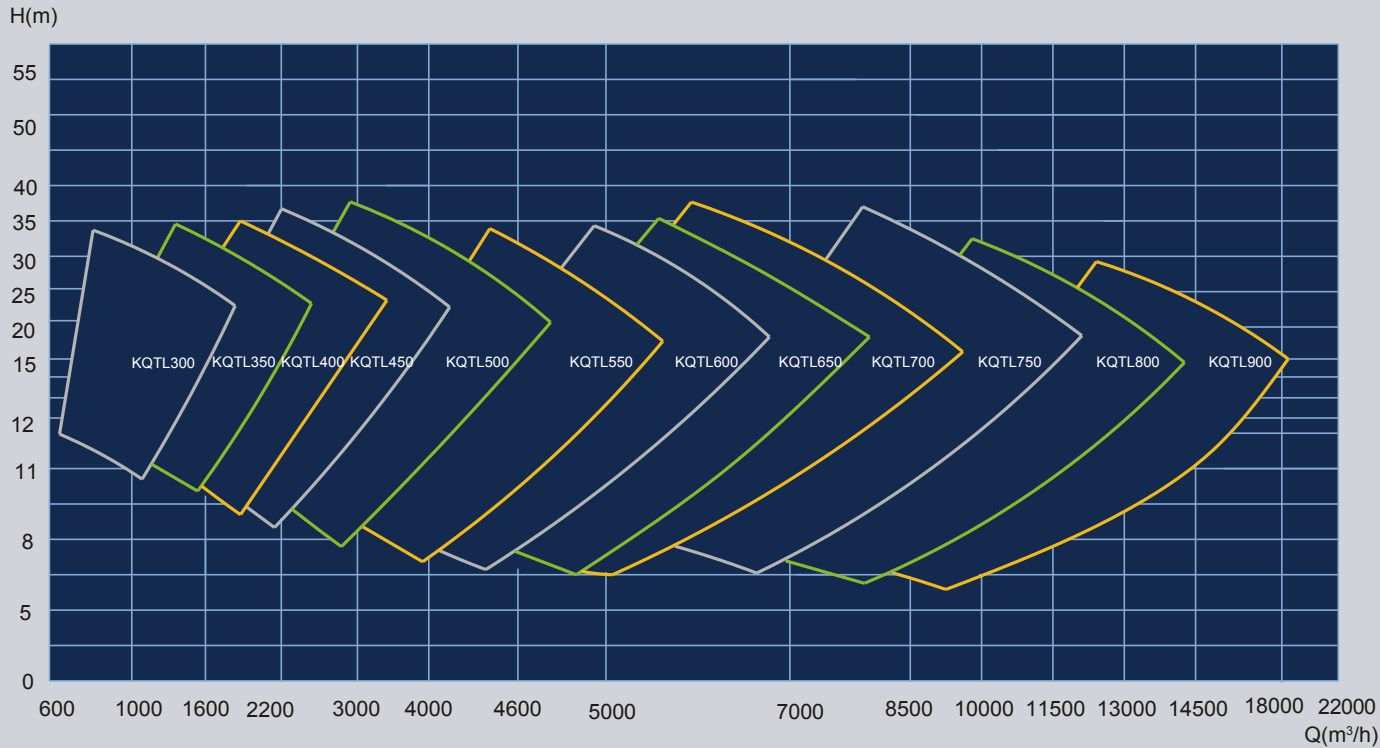
MODEL MEANING

型号意义



SPECTRUM DIAGRAM OF KQTL DESULPHURIZATION PUMP SERIES

KQTL系列脱硫泵型谱图



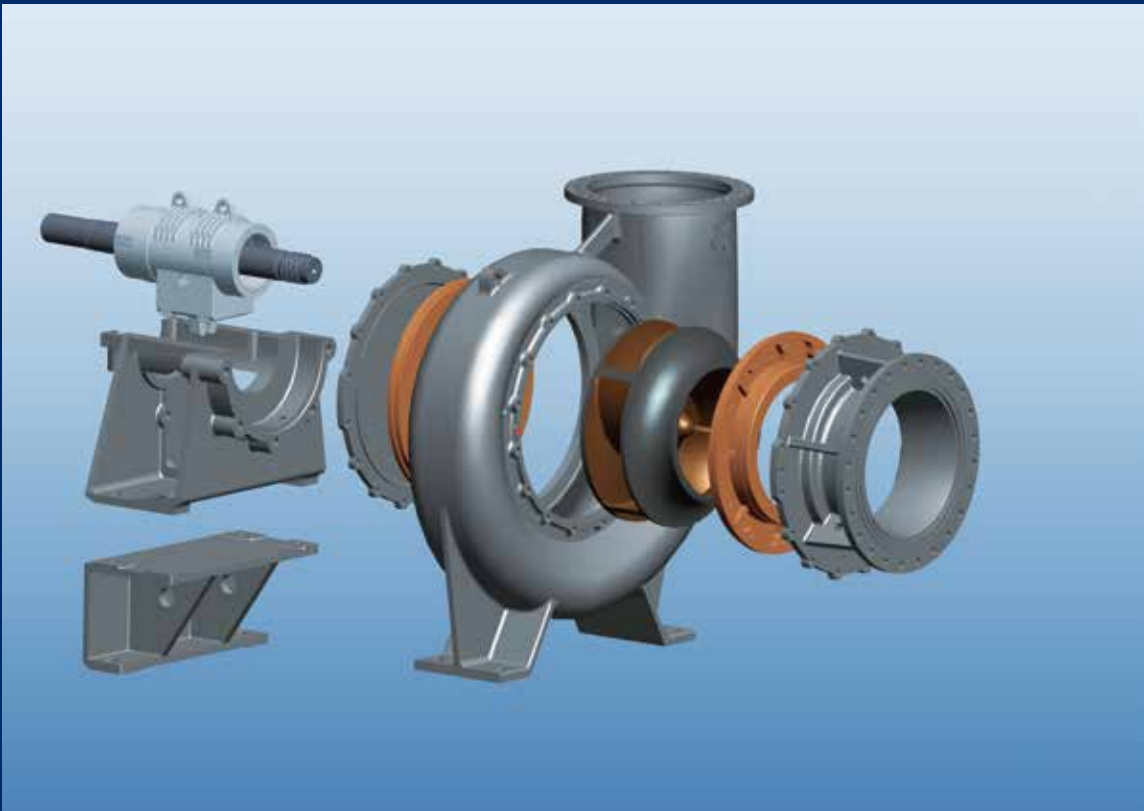
PERFORMANCE PARAMETER TABLE OF KQTL SERIES

KQTL系列脱硫泵性能参数表

Model 型 号	Capacity 流量Q m³/h	Head 扬程H m	Speed 转速n r/min	Efficiency 最高效率η %	必需汽蚀余量 NPSHR m	Export/Entrance Diameter 出口/入口直径 mm
KQTL300-25	900 ~ 2000	20 ~ 33	980	88.2	4.0	300/350
KQTL300-23	830 ~ 1850	17 ~ 28	980	88.0	3.8	
KQTL300-20	720 ~ 1600	13 ~ 21	980	87.8	3.8	
KQTL350-28	1700 ~ 2700	27 ~ 38	980	88.0	4.3	350/400
KQTL350-25	1500 ~ 2400	22 ~ 31	980	88.2	4.2	
KQTL350-23	1380 ~ 2200	19 ~ 26	980	87.6	4.0	
KQTL400-28	1780 ~ 3500	25 ~ 36	980	87.8	4.8	400/400
KQTL400-25	1600 ~ 3200	21 ~ 32	980	88.2	4.5	
KQTL400-23	1470 ~ 2900	14 ~ 28	980	87.6	4.2	
KQTL450-28	2000 ~ 4000	25 ~ 38	740	88.0	4.5	450/450
KQTL450-25	1800 ~ 3600	20 ~ 32	740	88.4	4.2	
KQTL450-23	1650 ~ 3300	17 ~ 26	740	88.0	4.0	
KQTL500-25	2800 ~ 4800	20 ~ 36	740	88.5	4.9	500/500
KQTL500-23	2500 ~ 4420	17 ~ 30	740	88.2	4.7	
KQTL500-20	2240 ~ 3840	13 ~ 23	740	88.0	4.5	
KQTL550-28	4500 ~ 6750	25 ~ 38	740	88.3	5.4	550/550
KQTL550-25	4000 ~ 6000	20 ~ 33	740	89.0	5.2	
KQTL550-23	3680 ~ 5500	17 ~ 28	740	88.5	4.9	
KQTL600-25	4320 ~ 7000	20 ~ 35	590	90.0	5.5	600/600
KQTL600-23	3970 ~ 6440	17 ~ 30	590	89.5	5.3	
KQTL600-20	3450 ~ 5600	13 ~ 22	590	89.0	5.0	
KQTL650-25	5300 ~ 8000	25 ~ 33	590	90.0	5.8	650/650
KQTL650-23	4880 ~ 7360	21 ~ 28	590	89.6	5.5	
KQTL650-20	4240 ~ 6400	16 ~ 21	590	89.2	5.2	
KQTL700-27	6050 ~ 9500	21 ~ 38	590	91.0	5.8	700/700
KQTL700-25	5600 ~ 8800	18 ~ 35	590	90.5	5.6	
KQTL700-22	4930 ~ 7740	14 ~ 29	590	90.2	5.5	
KQTL750-26	7000 ~ 11500	18 ~ 36	490	92.0	6.0	750/750
KQTL750-24	6460 ~ 10600	15 ~ 30	490	91.3	5.8	
KQTL750-22	5920 ~ 9730	13 ~ 26	490	90.8	5.5	
KQTL800-25	9000 ~ 13000	18 ~ 32	490	91.0	7.0	800/800
KQTL800-23	8300 ~ 12000	15 ~ 27	490	90.5	6.7	
KQTL800-20	7200 ~ 10400	12 ~ 21	490	90.0	6.5	
KQTL900-24	12000 ~ 18000	15 ~ 29	425	92.0	7.0	900/900
KQTL900-22	11000 ~ 16500	13 ~ 24	425	91.5	6.8	
KQTL900-20	10000 ~ 15000	11 ~ 20	425	91.2	6.5	

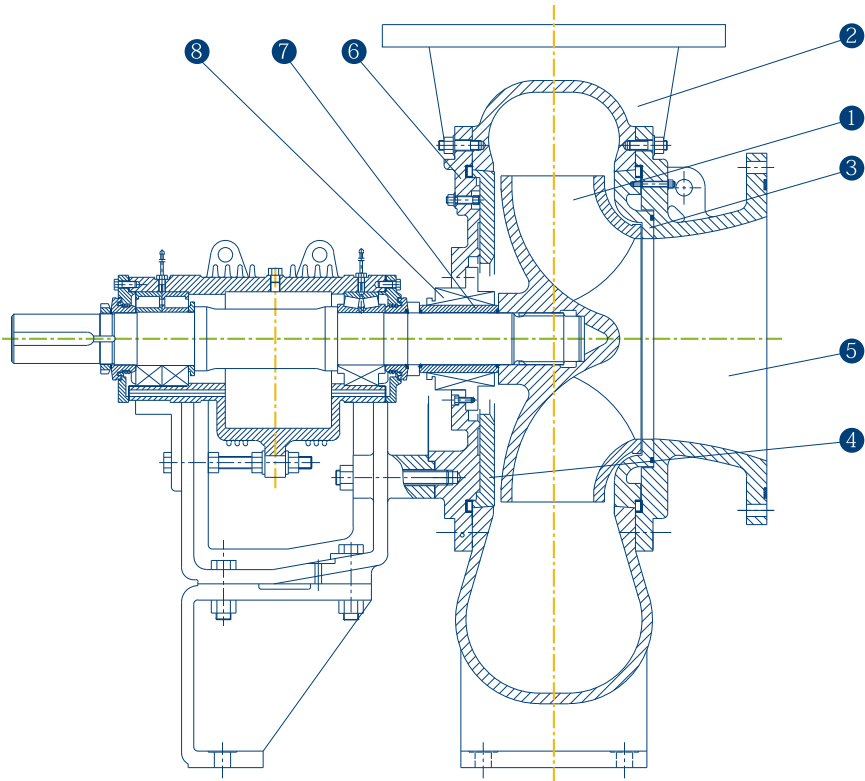
THREE-DIMENSIONAL STEREOGRAM OF DESULPHURIZATION PUMP

脱硫泵三维立体展示图



STRUCTURE 1 SINGLE SHELL ALL - METAL TYPE

结构1.单壳体全金属型

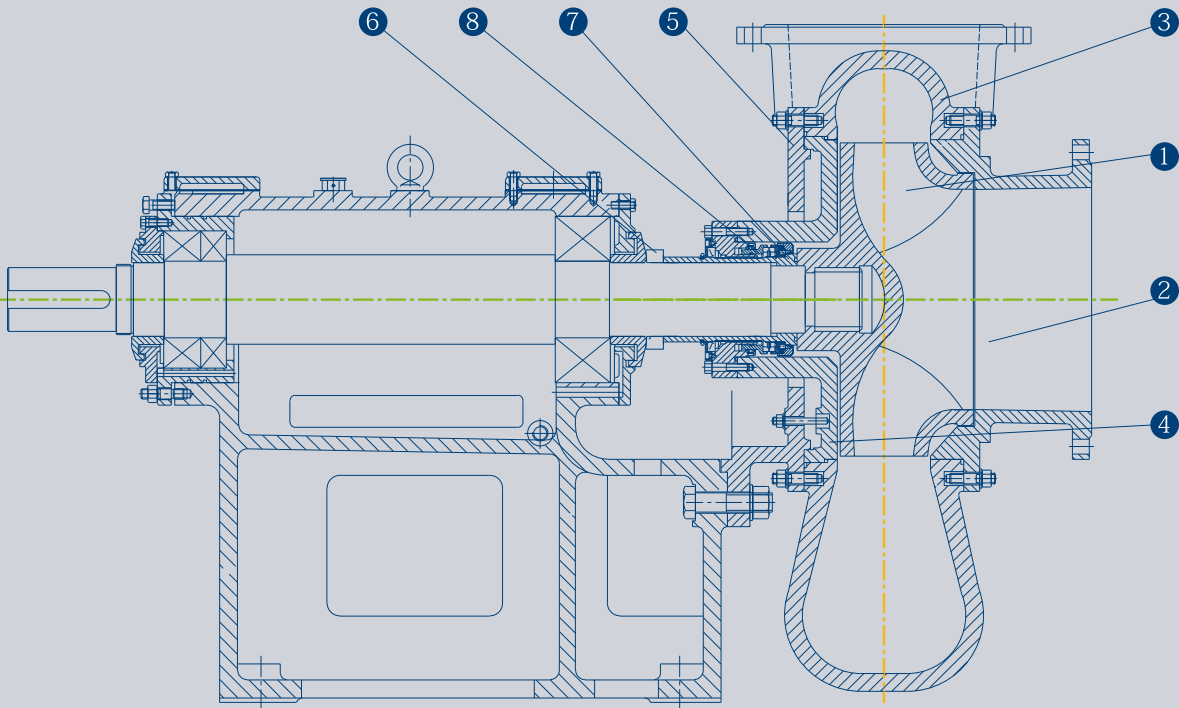


Applicable to: diameters of 550, 600, 700, 750, 800 and 900 适用于：550、600、700、750、800、900口径					
Serial No 序号	Designation 名称	Materials 材料	Serial No 序号	Designation 名称	Materials 材料
1	Impeller 叶轮	A49/Cr30A	5	Suction cover 吸入盖	QT500-7+Rubber QT500-7+ 橡胶
2	Pump body 泵体	2605N	6	Join bar 接合板	QT500-7
3	Front guard board 前护板	A49/Cr30A	7	Shaft housing 轴套	0Cr18Ni12Mo2Ti
4	Back guard board 后护板	A49/Cr30A	8	Machine seal 机械密封	316L+Sic

STRUCTURE 2

SINGLE SHELL ALL - METAL TYPE

结构2.单壳体全金属型

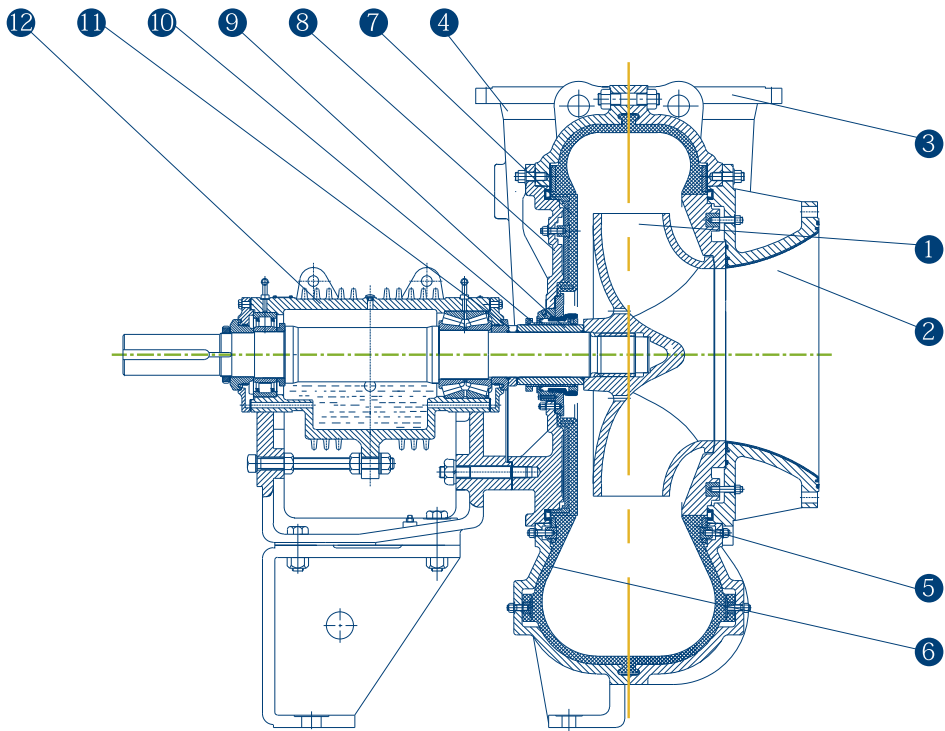


Applicable to: diameters of 300, 350, 400 and 500 适用于：300、350、400、500口径					
Serial No 序号	Designation 名称	Materials 材料	Serial No 序号	Designation 名称	Materials 材料
1	Impeller 叶轮	A49/Cr30A	5	Join bar 接合板	QT500-7
2	Suction cover 吸入盖	A49/Cr30A	6	Impeller disassembly ring 叶轮拆卸环	4Cr13
3	Pump body 泵体	A49/2605N	7	Shaft housing 轴套	0Cr18Ni12Mo2Ti
4	Back guard board 后护板	A49/Cr30A	8	Machine seal 机械密封	316L+Sic

STRUCTURE 3

DOUBLE-SHELL RUBBER LINER TYPE

结构3.双壳体橡胶内衬型

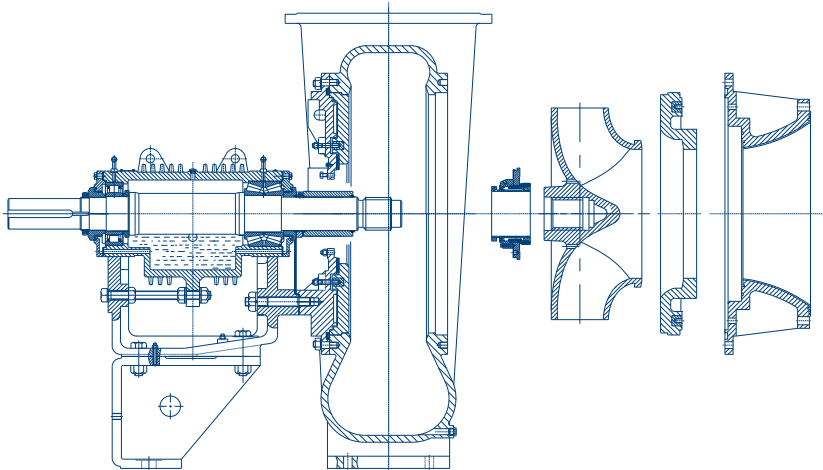


Applicable to: diameters of 600, 700 and 800 适用于：600、700、800口径					
Serial No 序号	Designation 名称	Materials 材料	Serial No 序号	Designation 名称	Materials 材料
1	Impeller 叶轮	A49/Cr30A	7	Back guard board 后护板	Natural caoutchouc 天然橡胶
2	Suction cover 吸入盖	QT500-7+Rubber QT500-7+ 橡胶	8	Join bar 接合板	QT500-7
3	Pump cover 泵盖	QT500-7	9	Shaft housing 轴套	0Cr18Ni12Mo2Ti
4	Pump body 泵体	QT500-7	10	Machine seal 机械密封	316L+Sic
5	Front sheath 前护套	Natural caoutchouc 天然橡胶	11	Impeller disassembly ring 叶轮拆卸环	4Cr13
6	Rear sheath 后护套	Natural caoutchouc 天然橡胶	12	Carriage assembly 托架组件	

DISSASSEMBLY METHOD OF KQTL DESULPHURIZATION PUMP

KQTL脱硫泵拆装方式

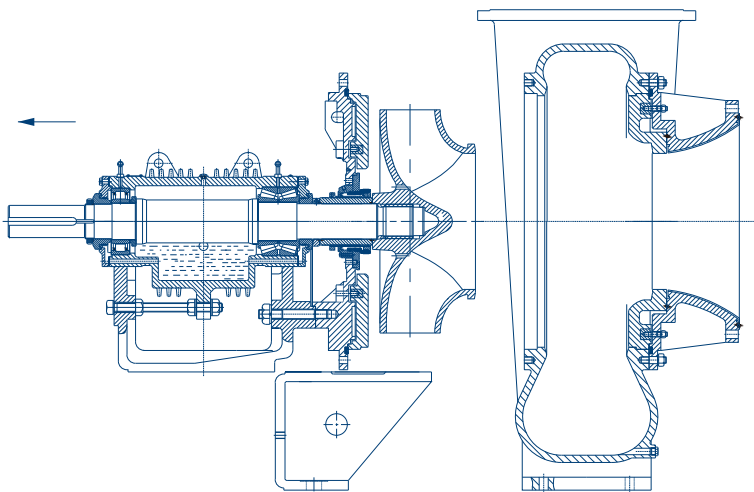
Front dismountable type
前拆式



After dismantling suction cover, the front fender, impeller and mechanical seal and other parts can be dismantled without moving pump body.

拆下吸入盖后，不用移动泵体可将前护板、叶轮、机械密封等件拆下。

Rear dismountable type
后拆式



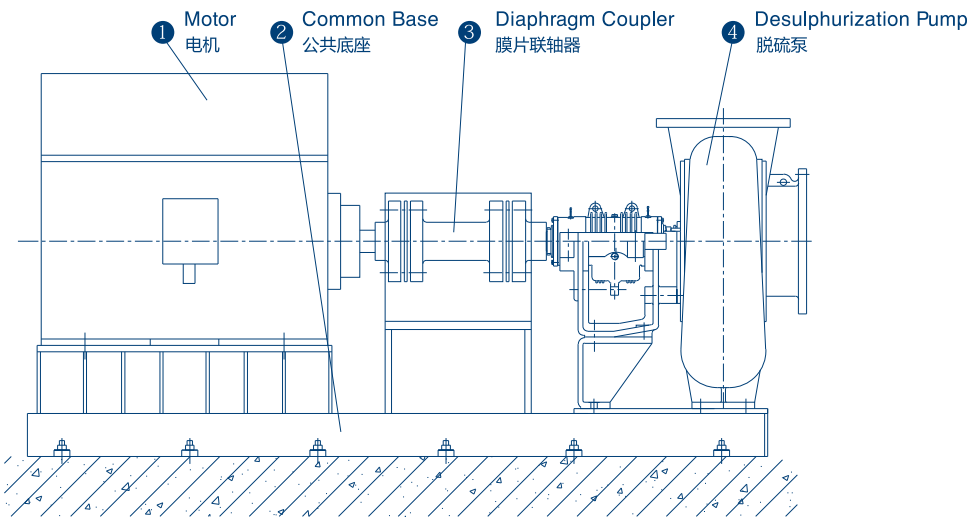
After dismantling lengthened coupler, the rotor can be wholly extracted without moving pump body and support.

拆下加长联轴器后，不用动泵体和支撑，可将转子整体抽出。

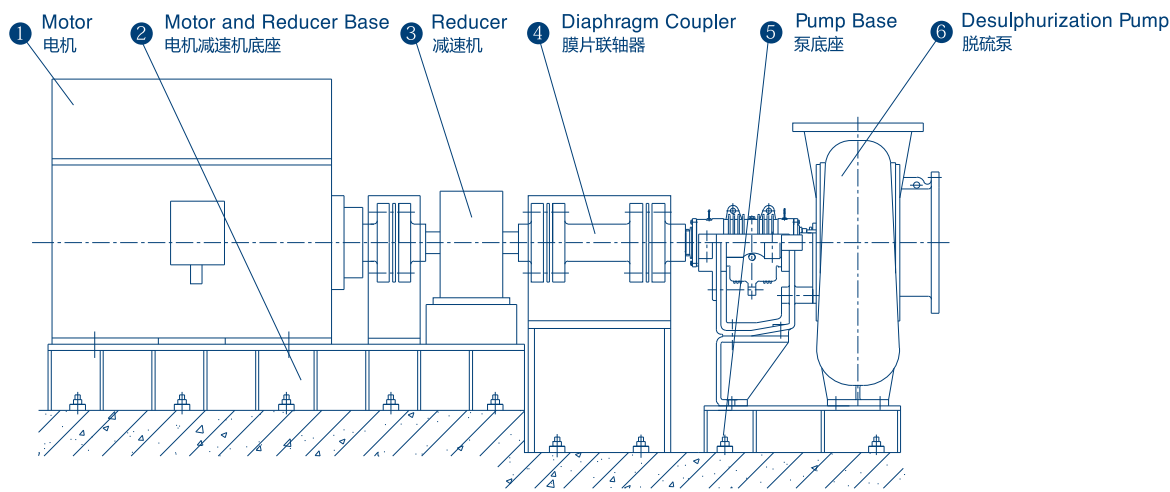
INSTALLMENT METHOD OF KQTL DESULPHURIZATION PUMP

KQTL脱硫泵安装方式

Installation method of common base of pump + motor
泵+电机公共底座安装方式



Installation method of fission base of pump + motor + reducer
泵+电机+减速机分体底座安装方式



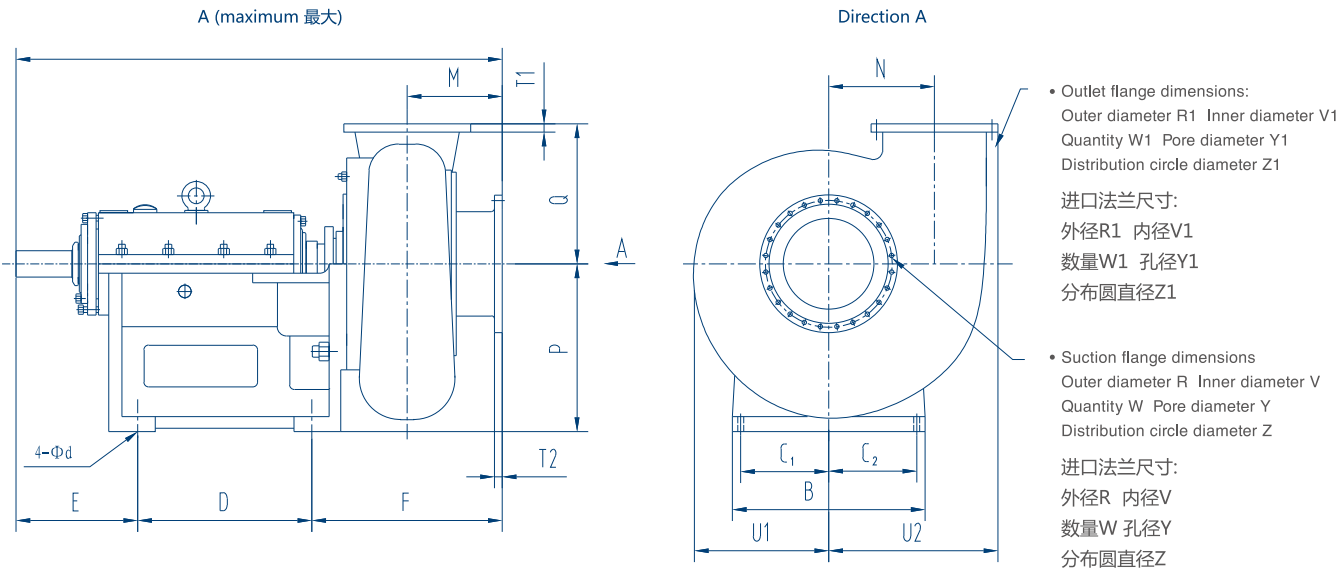
Note: In case of other transmission modes, our company can implement special design according to the user requirement

注：如需其它传动方式，我公司可根据用户要求特殊设计

BOUNDARY DIMENSION

FIGURE 1

外形尺寸 图.1

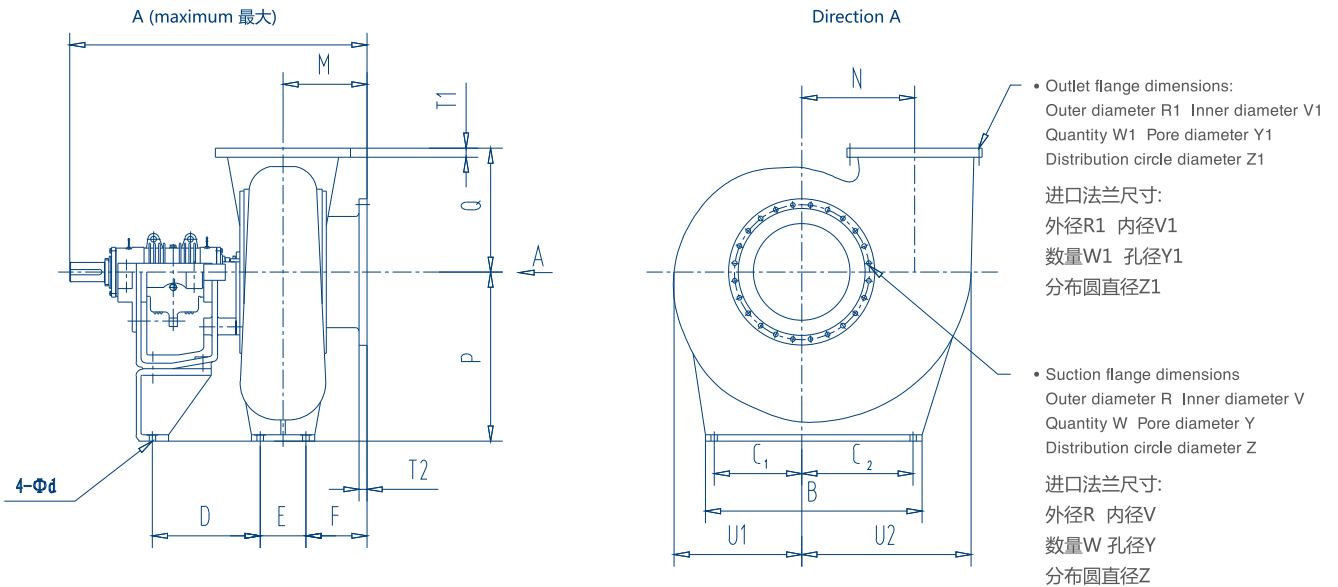


Boundary Dimension Table 外形尺寸表																											
Model 型号	Installation Size 安装尺寸														Suction Flange 进口法兰						Outlet Flange 出口法兰					Anchor Hole 地脚孔	
	A	B	C ₁	C ₂	D	E	F	M	N	P	Q	T ₁	T ₂	U ₁	U ₂	R	V	W	Y	Z	R ₁	V ₁	W ₁	Y ₁	Z ₁	Φd	
KQTL300-25	1680	860	390	390	740	396	579	240	360	580	455	30	30	415	585	505	350	16	23	460	445	300	12	23	400	Φ35	
KQTL350-25	1714	860	390	390	740	396	613	267	380	580	455	32	32	438	633	580	400	16	30	525	505	350	16	23	460	Φ35	
KQTL400-25	1758	860	390	390	740	396	657	288	410	630	500	35	34	465	700	565	400	16	26	515	580	400	16	30	525	Φ35	
KQTL450-25	1754	860	390	390	740	396	618	232	473	630	550	30	34	540	782	615	450	20	26	560	615	450	20	26	560	Φ35	
KQTL500-25	2052	950	425	425	800	497	755	315	520	710	650	32	32	584	855	670	500	20	26	620	670	500	20	26	620	Φ42	

BOUNDARY DIMENSION

FIGURE 2

外形尺寸 图.2



Boundary Dimension Table 外形尺寸表																											
Model 型号	Installation Size 安装尺寸															Suction Flange 进口法兰					Outlet Flange 出口法兰					Anchor Hole 地脚孔	
	A	B	C ₁	C ₂	D	E	F	M	N	P	Q	T ₁	T ₂	U ₁	U ₂	R	V	W	Y	Z	R ₁	V ₁	W ₁	Y ₁	Z ₁	Φd	
KQTL550-25	1664	1050	400	550	721	250	183	308	550	830	620	35	32	601	910	720	550	20	26	670	720	550	20	26	670	Φ40	
KQTL600-25	1685	1250	500	600	637	330	205	370	635	880	725	34	34	695	1025	780	600	20	30	725	780	600	20	30	725	Φ40	
KQTL650-25	1905	1270	500	620	793	330	231	396	692	950	815	35	35	770	1107	830	650	20	30	775	830	650	20	30	775	Φ40	
KQTL700-25	2235	1350	500	650	962	350	230	405	690	1000	770	34	35	746	1138	895	700	24	30	840	895	700	24	30	840	Φ48	
KQTL750-25	2290	1420	565	745	967	400	230	430	780	1060	880	36	36	850	1268	975	750	24	30	920	975	750	24	30	920	Φ48	
KQTL800-26	2331	1600	600	800	969	400	270	470	820	1150	900	36	36	893	1328	1015	800	24	34	950	1015	800	24	34	950	Φ48	

PUMPA FOR DESULPHURIZATION AUXILIARY SYSTEM

脱硫辅助系统用泵

PRODUCT OVERVIEW 产品概述

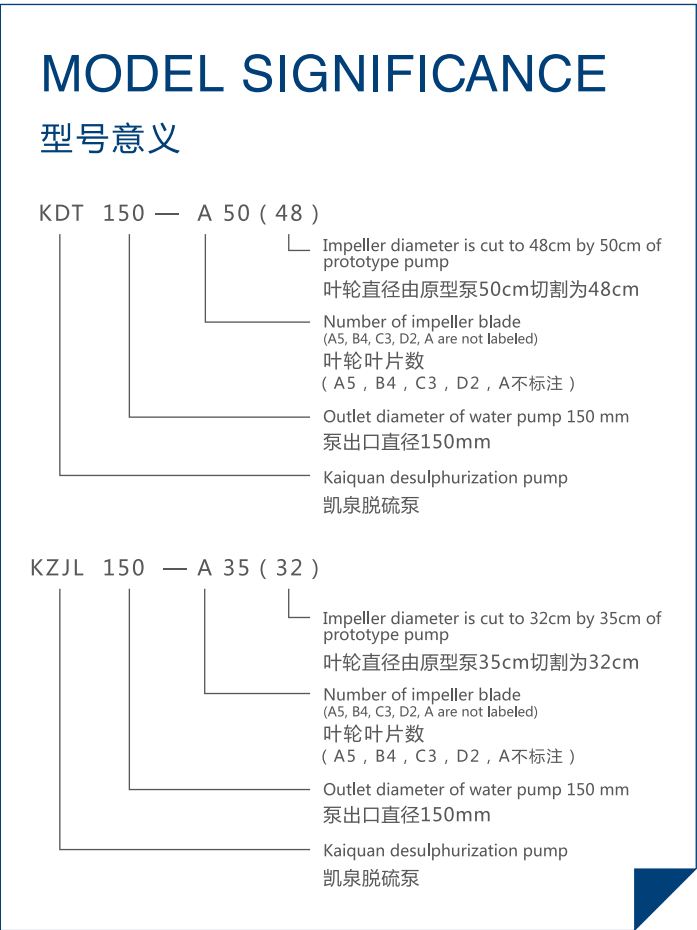
The pump series are mainly as the pumps for auxiliary system in wet desulphurization device to transport the limestone, gypsum slurry, etc. Using the features of domestic and foreign similar products, the product has the advantages of broad flow range, excellent performance, safe and liable operation, easy to maintain, efficient and energy saving, long service life, etc. It adopts the materials of good wear resistance and corrosion resistance, and the structure of pump is compact.

该系列泵主要作为湿法脱硫装置中辅助系统用泵，用于输送石灰石与石膏浆液等。产品借鉴了国内、外同类产品的特点，采用耐磨耐蚀材料，泵结构紧凑，具有流量范围宽、性能优越、运行安全可靠、检修方便、高效节能、使用寿命长等优点。

PRODUCT FEATURES 产品特点

- It adopts the two-phase flow theoretical design and CFD overall optimization and increase the clearance between the baffle tongue and impeller to reduce the wear of baffle tongue, reduce the non-uniform flow of impeller periphery, lower the vibration and noise, improve the efficiency and prolong the service life of pump.
- It adopts the international advanced cartridge mechanical seal, with the long service life and convenient installation and replacement.
- Series, big bracket and large-sized axis diameter design and smooth and reliable running.
- The water passing part is made of the wear resistant and corrosion resistant materials, with long service life.

- 采用两相流设计理论、CFD 全面优化，增加隔舌和叶轮之间的间隙，减小了隔舌磨损，减轻了叶轮外围流动的不均匀性，降低了振动和噪音，效率提高，延长了泵的使用寿命。
- 采用国际领先的集装式机械密封，使用寿命长，安装与更换方便。
- 系列化、大托架、大轴径设计，运转平稳可靠。
- 过流件采用耐磨耐腐材料，使用寿命长。
- 高端配置，轴承采用优质轴承，密封采用国内一流机械密封



PERFORMANCE PARAMETER TABLE 2 OF KDT HORIZONTAL DESULPHU - RIZATION PUMP SERIES

KDT系列卧式脱硫泵性能参数表2

Pump Model 泵型号	Speed 转速 n r/min	Capacity 流量 Q m³/h	Head 扬程 H m	Shaft Power 轴功率 P kW	Efficiency 效率η %	Necessary NPSH 必需汽蚀余量 (NPSH)r m	Supporting Motor 配套电机	
							Model 型 号	Power/Voltage 功率 / 电压 kW/V
KDTX80-36	1480	86	47.1	23.3	47.4	3.2	Y200L-4	30/380
		151	42.0	28.5	60.7		Y225S-4	37/380
		167	39.9	29.3	62.0		Y225S-4	37/380
	970	56	20.2	6.5	47.4	1.5	Y160L-6	11/380
		99	18.0	8.0	60.7		Y180L-6	15/380
		109	17.1	8.2	62.0		Y180L-6	15/380
KDTX100-35	1480	163	45.9	33.5	60.9	4.1	Y225M-4	45/380
		278	41.5	43.7	71.9		Y250M-4	55/380
		323	39.2	47.1	73.2		Y280S-4	75/380
	970	107	19.7	9.4	60.9	1.9	Y180L-6	15/380
		182	17.8	12.3	71.9		Y200L1-6	18.5/380
		212	16.8	13.3	73.2		Y200L1-6	18.5/380
KDTX100-B40	1480	129	61.0	37.7	56.9	3.5	Y250M-4	55/380
		219	56.1	48.7	68.7		Y280S-4	75/380
		268	53.6	55.6	70.4		Y280S-4	75/380
	970	85	26.2	10.7	56.9	1.7	Y180L-6	15/380
		144	24.1	13.8	68.7		Y200L2-6	22/380
		176	23.0	15.7	70.4		Y200L2-6	22/380
KDTX100-45	1480	100	83.5	46.4	49.0	4.6	Y250M-4	55/380
		195	71.6	64.8	58.7		Y280S-4	75/380
		228	66.1	71.4	57.5		Y280M-4	90/380
	980	66	36.6	13.4	49.0	2.2	Y200L1-6	18.5/380
		129	31.4	18.8	58.7		Y225M-6	30/380
		151	29.0	20.7	57.5		Y225M-6	30/380
KDTX150-40	1490	260	61.2	68.8	63.0	6.5	Y280M-4	90/380
		440	53.8	88.2	73.1		Y315S-4	110/380
		503	50.7	95.4	72.8		Y315M-4	132/380
	980	171	26.5	19.6	63.0	2.6	Y225M-6	30/380
		289	23.3	25.1	73.1		Y250M-6	37/380
		331	21.9	27.1	72.8		Y250M-6	37/380
KDTX150-B55	990	280	53.7	64.8	63.2	3.7	Y315M-6	90/380
		517	48.0	88.3	76.5		Y315L1-6	110/380
		630	45.9	100.8	78.1		Y315L2-6	132/380
	740	209	30.0	27.0	63.2	2.3	Y280S-8	37/380
		387	26.8	36.9	76.5		Y315S-8	55/380
		471	25.7	42.2	78.1		Y315S-8	55/380

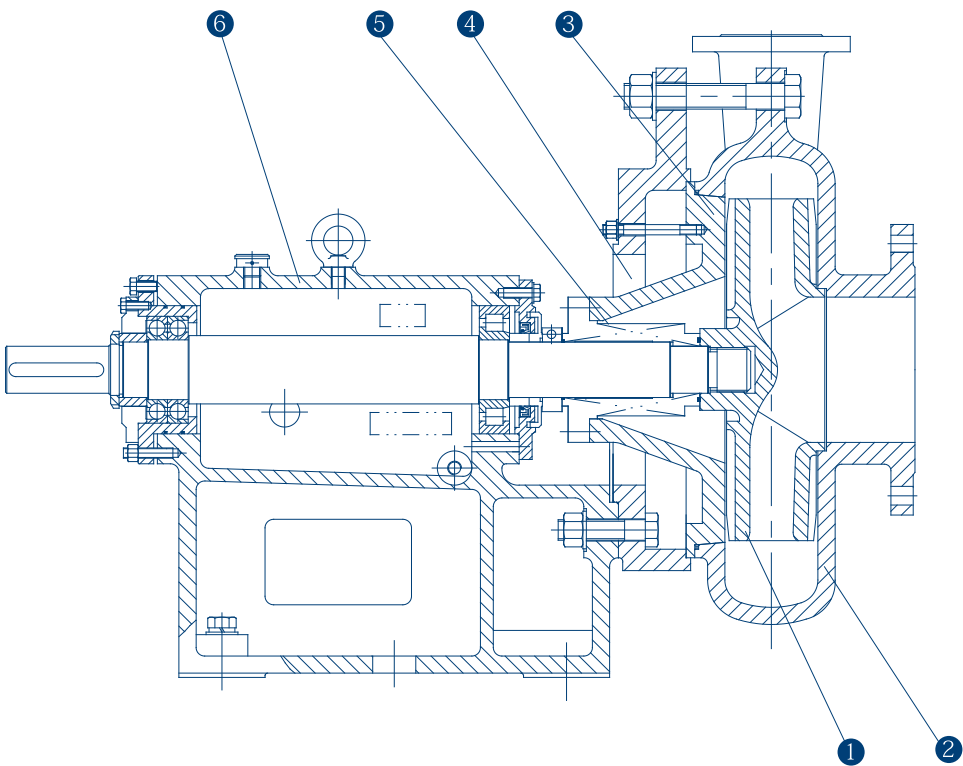
PERFORMANCE PARAMETER TABLE OF KZJL HORIZONTAL DESULPHU - RIZATION PUMP SERIES

KZJL系列立式脱硫泵性能参数表

Pump Model 泵型号	Speed 转速 n r/min	Capacity 流量 Q m³/h	Head 扬程 H m	Shaft Power 轴功率 P kW	Efficiency 效率η %	Necessary NPSH 必需汽蚀余量 (NPSH)r m	Supporting Motor 配套电机	
							Model 型 号	Power/Voltage 功率 / 电压 kW/V
KDTX200-45	990	279	31.0	37.4	62.9	3.3	Y280M-6	55/380
		557	26.1	49.0	80.8		Y315S-6	75/380
		645	23.3	52.6	77.8		Y315S-6	75/380
	730	206	16.9	15.1	62.9	2.0	Y225M-8	22/380
		410	14.2	19.6	80.8		Y250M-8	30/380
		475	12.7	21.1	77.8		Y250M-8	30/380
KDTX200-48	980	480	35.4	63.8	72.5	3.5	Y315M-6	90/380
		600	32.0	65.0	80.4		Y315M-6	90/380
		720	29.8	74.4	78.5		Y315L1-6	110/380
	730	358	19.5	26.2	72.5	2.0	Y280M-8	45/380
		447	17.6	26.6	80.4		Y280M-8	45/380
		536	16.3	30.3	78.5		Y280M-8	45/380
KDTX 250-50	980	640	34.5	84.0	71.5	4.5	Y315L2-6	132 /380
		800	32.0	86.2	80.8		Y315L2-6	132 /380
		960	28.5	95.2	78.3		Y315L2-6	132 /380
	730	477	19.0	34.5	71.5	3.0	Y315S-8	55 /380
		596	17.6	35.4	80.8		Y315S-8	55/380
		715	15.8	39.0	78.3		Y315S-8	55 /380
KDTX 250-52	980	880	35.0	115.2	72.8	4.6	Y355M1-6	160 /380
		1100	32.0	118.3	81.0		Y355M1-6	160 /380
		1320	29.2	133.4	78.7		Y355M2-6	185 /380
	730	656	19.4	47.6	72.8	2.7	Y315M-8	75 /380
		819	17.6	48.5	81.0		Y315M-8	75/380
		983	16.0	54.4	78.7		Y315M-8	90/380
KDTX 250-56	980	582	49.3	116.2	67.2	4.5	Y355M1-6	160/380
		970	45.0	148.5	80.0		Y355M2-6	200/380
		1164	41.2	165.7	78.8		Y355L-6	220/380
	730	440	28.1	50.0	67.2	2.6	Y315M-8	75/380
		732	25.6	63.8	80.0		Y315L1-8	90/380
		879	23.5	71.4	78.8		Y315L2-8	110/380
KDTX300-60	989	1170	53.1	235.6	71.8	6.5	Y400-6	315/6000
		1779	47.1	281.4	81.1		Y400-6	355/6000
		2403	36.1	313.3	75.4		Y400-6	400/6000
	742	878	29.9	99.6	71.8	4	Y355M1-8	132/380
		1335	26.5	118.8	81.1		Y355M2-8	160/380
		1803	20.3	132.2	75.4		Y355M2-8	160/380

STRUCTURE DIAGRAM OF KDT DESULPHURIZATION PUMP SERIES

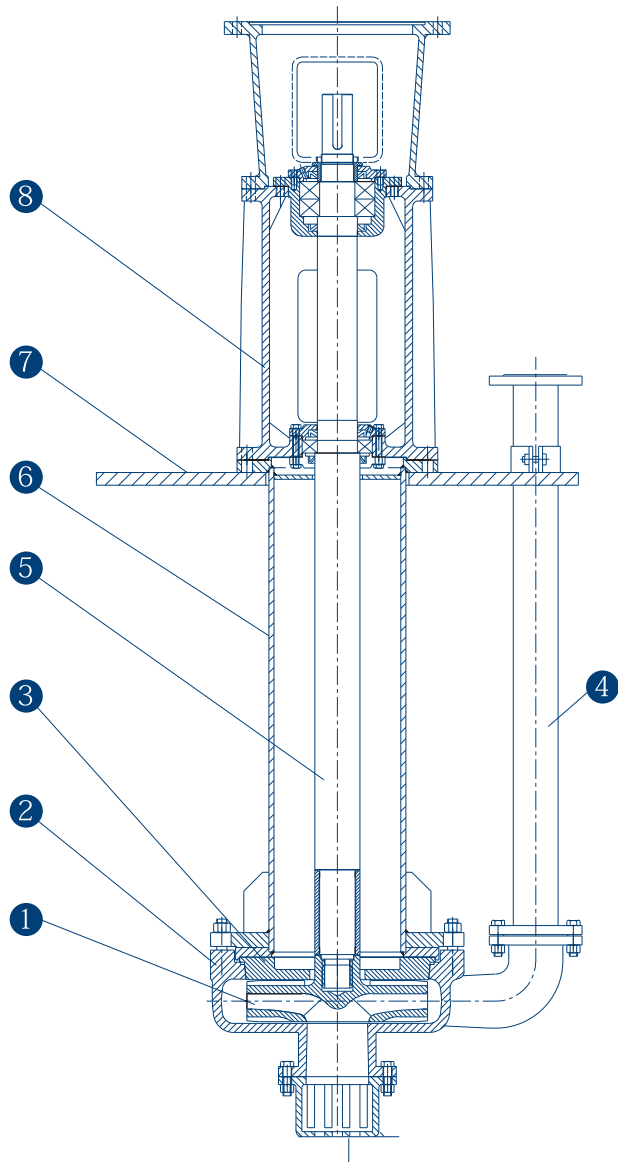
KDT系列脱硫泵结构图



Serial No 序号	Designation 名称	Materials 材料
1	Impeller 叶轮	A49
2	Volute casing 蜗壳	A49
3	Guard board 护板	A49
4	Join bar 接合版	QT500-7
5	Machine seal 机械密封	316L-Sic
6	Bracket 托架	HT200

STRUCTURE DIAGRAM OF KZJL VERTICAL DESULPHURIZATION PUMP SERIES

KZJL系列立式脱硫泵结构图



Serial No 序号	Designation 名称	Materials 材料
1	Impeller 叶轮	A49
2	Volute casing 蜗壳	A49
3	Back guard board 后护板	A49
4	Water outlet pipe 出水管	0Cr18Ni9(304)
5	Pump shaft 泵轴	45 skim coating 挂胶
6	Bracket 支架	Q235-A+ anti-corrosion 防腐
7	Support plate 支撑板	Q235-A
8	Bearing body 轴承体	HT200

PROTOTYPE PROJECT OF DESULPHURIZATION PUMP

样板工程



- 中国华电科工集团有限公司
- 大唐环境科技工程有限公司
- 国电龙源电力技术工程有限责任公司
- 武汉龙净环保工程有限公司
- 浙江菲达环保科技股份有限公司
- 浙江蓝天求是环保股份有限公司
- 浙江浙大网新科技股份有限公司
- 中节能六合天融环保技术有限公司
- 南京海澜环保工程有限公司
- 上海中芬新能源投资有限公司
- 北京峰业电力环保工程有限公司
- 新疆旭日环保股份有限公司
- 江苏一环集团有限公司
- 沈阳远大环保科技有限公司
- 浙江省电力建设有限公司
- 山东山大华特环保工程有限公司
- 辽宁沈煤红阳热电有限公司
- 沈阳市第二热力供暖公司
- 长春市供热（集团）有限公司
- 神华国能宝清电厂

SERVICE COMMITMENT

全国销售服务网络

Wholehearted service, sincere and trustworthy
竭诚服务，至诚守信

The marketing network of Kaiquan is all over the country, including 30 branches and service centers, 170 service districts, 341 offices and 341 service networks. Kaiquan establishes the largest direct marketing system in domestic pump industry, and sincerely provides tailored individual water supply and drainage solution and zero-distance intimate service for users.

凯泉的营销网络遍布全国，拥有 30 家分公司及服务中心、170 个服务片区、341 个办事处及 341 个服务网点，建立了国内泵行业最具规模的直销体系，竭诚为广大用户提供量体裁衣的个性化给排水解决方案和零距离的贴心服务。

