



*Where there is Kaiquan*

*There is water*

# Enterprise Outline

## Enterprise Outline



Kaiquan Shanghai Headquarters



Zhejiang Industrial Park



Shanghai Kaiquan Pump Group Co., LTD. is the largest pump manufacturer in China and leads the Chinese pump industry. The registered capital of Kaiquan is 15 million USD and the total assets are 100 million USD.

Kaiquan has held 9 enterprises and 5 industrial parks in Shanghai, Zhejiang, Jiangsu, Hebei, Liaoning, with the total area of 3.7 hectares and plant area of 120 thousand square meters of production.

The high-quality employee teams are always our main source, which makes Kaiquan develop fast and steadily. There are more than 4,100 professional employees working in Kaiquan, 70% of whom hold



Huangdu Industrial Park

at least the bachelor's degree including 200+ technical engineers, 2 university professors, 22 senior engineers with the professor degree, 31 masters in engineering and management & administration field etc.

With high start point, investment and quality as our technology developing strategy, Kaiquan established his own technical center, which has been recognized as "Shanghai Municipal Enterprise Technology Center", and investing USD 4 million annually on R & D. Besides, Kaiquan has introduced advanced software system for research and management such as CIMATRON 3D CAD, CAM, CAE, FMS etc. Furthermore, there are more than 400 advanced machineries in Kaiquan for production

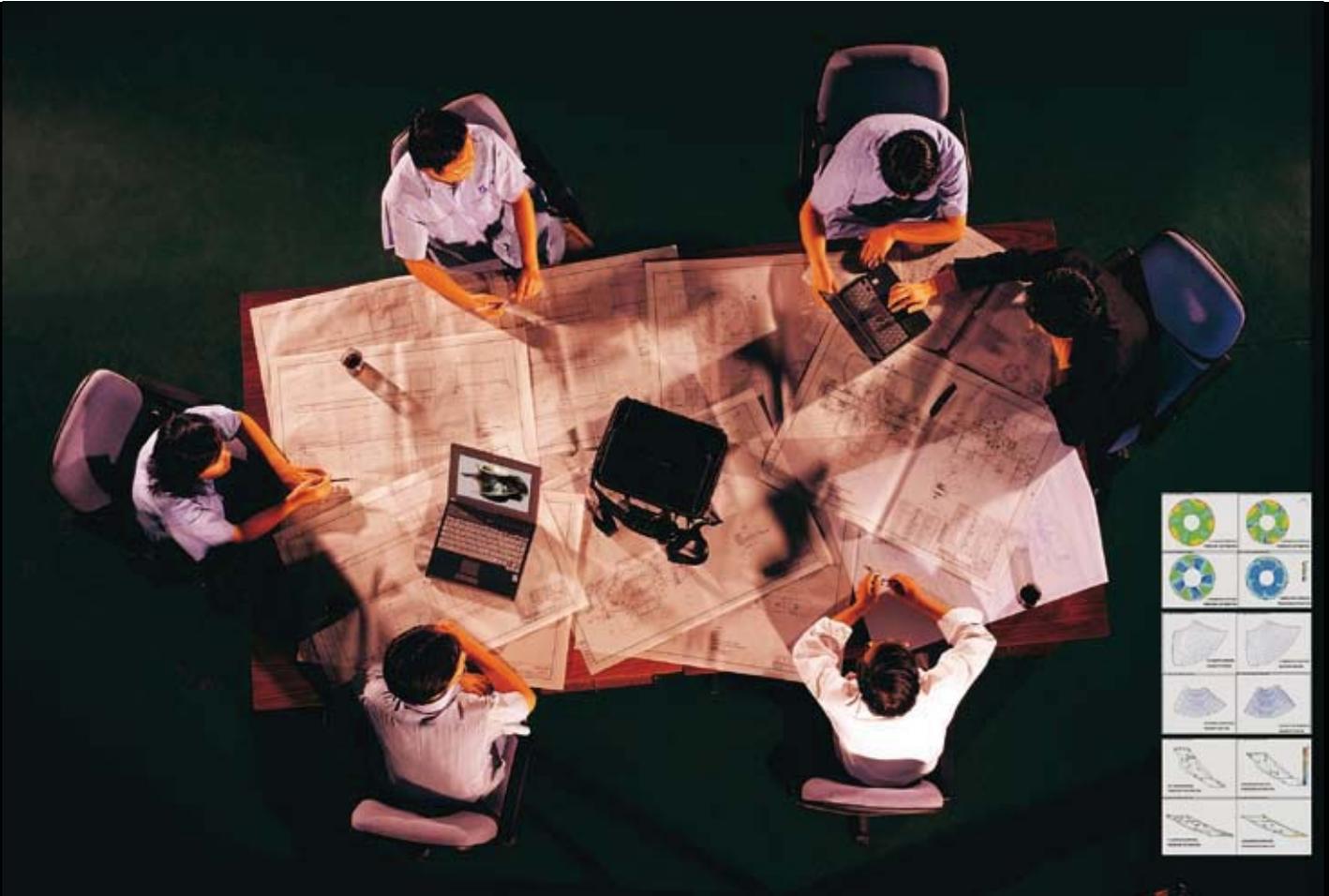
and inspections. The yield of Kaiquan is 260,000 pcs per year, and the products contain 23 series and more than 20,000 types.

Our target is to make every customer satisfaction. The sales of Kaiquan were USD 300million in 2007, and Kaiquan was ranked No.1 on sales in continuous 8 years in China from 1999 in the field of pump business. The market share of the building service pump is about 30% in China. Kaiquan is also an ISO9001 company and we got the USA RAB certificate and CE certificate as well.

Facing the new century, our strategy is to be one of the top 10 pump manufacturers around the world in 2011.

# Individualistic technical design center

Office of Technical Center



Fast-molding Equipment



Technical Center

# *P*roduct manufacturing



Large NC Digital displayed Vertical Lathe



Advanced CNC Machining Center

# Product testing

## Product testing

Text Desk for Large Pump



Close Test Desk for Full Performance



Open Full Automatic Test-bed

# Product introduction

## Single-stage Single-suction Centrifugal Pump Series

Applied to send non-corrosive cold and warm water used in air-condition, heating, sanitary water, water treatment, cooling & freezing system, liquid circulation, water supply, boosting and irrigation.



Speed: 2,960r/min 1,480r/min or 980r/min  
 Capacity: 1.8~1,400m<sup>3</sup>/h  
 Head: ≤127m  
 Medium Temperature: -10℃~80℃, 120℃  
 Ambient Temperature: Max. +40℃  
 Max. Pressure:  
 1.6MPa (suction and discharge diameter ≤200mm)  
 1.0MPa (suction and discharge diameter ≥250mm)



Speed: 2,960r/min 1,480r/min 980r/min or 740r/min  
 Capacity : 1.6~3,600m<sup>3</sup>/h  
 Head: ≤127m  
 Medium Temperature: -10℃~80℃, 120℃  
 Ambient Temperature: Max. +40℃  
 Max. Pressure:  
 1.6MPa (suction and discharge diameter ≤200mm)  
 1.0MPa (suction and discharge diameter ≥250mm)



Speed: 360r/min 1,420r/min  
 Capacity : 2.0~680m<sup>3</sup>/h  
 Head : 3~80m  
 Medium Temperature: -10℃~130℃  
 Ambient Temperature: Max. +40℃  
 Max. Pressure:  
 1.6MPa (suction and discharge diameter ≤200mm)  
 1.0MPa (suction and discharge diameter ≥250mm)



KQM Series Vertical Tandem Pump  
 Speed: 2,960r/min or 1,480r/min  
 Capacity : 2.2~900m<sup>3</sup>/h  
 Head: ≤87m  
 Medium Temperature: -10℃~80℃, 120℃  
 Ambient Temperature: Max. +40℃  
 Max. Pressure: 1.6MPa



Capacity : 1.4~1,400m<sup>3</sup>/h      Head: ≤187m  
 Medium Temperature: -10℃~80℃, 120℃  
 Ambient Temperature: Max. +40℃  
 Max. Pressure:  
 1.6MPa (suction and discharge diameter ≤200mm)  
 1.0MPa (suction and discharge diameter ≥250mm)  
 (Please marked the suction pressure when ordering)

## Full Automatic Water-feeding Equipment



### WFY Series Automatic Water-feeding Equipment

Water Supply Pressure: 20~160mH<sub>2</sub>O

Boosting Range:

30%~100% Pump Head

(Full Variable-frequency Control)

70%~100% Pump Head

(Partial Variable-frequency Control)

Water Supply Capacity: 6~400 m<sup>3</sup>/h

Accuracy of Constant Pressure: ≤2mH<sub>2</sub>O

Stabilization Time:

≤40s (Single Variable-frequency Control);

≤20s (Full Variable-frequency Control);

## KQK Series Electrical Control Panel



### KQK Series

Functions:

short-circuit protection for main circuit, phase defect and overload protection and protection for pump leakage and stator winding overheating.

Applications:

water-feeding of living, fire-fighting, spraying, boosting, stabilizing, cooling or heating water circulating systems (air-conditioning integrated control and boiler circulation systems), pumps for industrial control and discharge of waste water, etc.

Main electric components manufacturer:

ABB, Schneider, Omron.

## Multi-stage Single-suction Centrifugal Pump Series

Applied for water feeding and boosting in municipal, domestic, industrial, as well as air-conditioning, heating, freezing, cooling circulation systems.



### KQDW, KQDL, KQDG Series Multi-stage Pump

Speed: 1,480r/min or 2,950r/min

Capacity: 3.7~324 m<sup>3</sup>/h

Head: 12.1~240m

Max. Operating Pressure:

KQDL, KQDW Suction Pressure + Maximum

Pressure of Pump ≤2.5MPa

KQDG Suction Pressure + Maximum Pressure of

Pump ≤2.0MPa

Liquid: Clean water or the liquid whose physical and chemical properties is similar to water

Liquid Temperature: ≤120°C



### KQDP, KQDQ Series Light Stainless-steel Multi-stage Pump

Speed: 1,480r/min or 2,950r/min

Capacity: 1~100 m<sup>3</sup>/h

Head: 16~208m

Liquid Temperature: -20~120°C

Max. Operating Pressure: Suction Pressure + Maximum

Pressure of Pump ≤2.5MPa

Liquid: Clean water or the liquid whose physical and chemical properties is similar to water

## Fire-fighting Water Feeding Pump Series

Fire-fighting Pump:

excellent performance and reliable operation.

Fire-fighting variable-frequency water feeding equipment:

ensuring water pressure and capacity for fire-fighting,  
convenient operating and improving automation level.

Tangent Pump for Fire-fighting:

starting reliably at any time.



### XBD Series Fire-fighting Pump

Speed: 980r/min, 1,480r/min or 2,950r/min

Capacity: 2.5~200L/s

Pressure: 0.11~2.6MPa

Liquid Temperature:  $\leq 80^{\circ}\text{C}$  clear water



### XBD-DN Series Multi-stage Fire-fighting Pump

Speed: 2,950r/min

Capacity: 10~45L/s

Pressure: 0.5~1.8MPa

Liquid Temperature:  $\leq 80^{\circ}\text{C}$  clear water



### XBC Diesel Fire-fighting Pump

Capacity: 10~800L/s

Pressure: 0.2~2.2MPa

Speed: 1,500r/min, 1,800r/min

Ambient Temperature:  $5^{\circ}\text{C}$ ~ $40^{\circ}\text{C}$

Relative Air Humidity:  $\leq 80\%$

The power of diesel engine can't reach the rate power under abnormal conditions. To ensure normal working, higher power diesel engine should be used to match pumps.

## WQ Submersible Sewage Pump Series

Applied for municipal engineering projects, buildings, industry waste release and waste water treatment, which can pump dirty water, wastewater, and rainwater with solid and long fiber wastes.



### KWFB Series Packingless Automatic Self-priming Pump

Speed: 2,960 or 1,480r/min

Discharge Diameter: 40mm-350mm

Rated Capacity: 5.6-1200m<sup>3</sup>/h

Rated Head: 10-125m

Self-priming Head: 3.5m-5.5m

Ambient Temperature:  $\leq 40^{\circ}\text{C}$



**WQ2000, WQ4000 Series Submersible Sewage Pump**

Capacity: 8~8,980m<sup>3</sup>/h      Head: 5~80m  
 Motor Power: 0.75~315kW      Voltage: 380V  
 Discharge diameter: 50~900mm  
 Medium Temperature: ≤40℃  
 Medium Density: ≤1,050kg/ m<sup>3</sup>  
 PH: 4~10

**Submersible Mixer, Submersible Reflux Pump Series**

This series is used to mix liquid containing suspended particles in the field of waste water treatment, industrial process, and biochemistry treatment, buildings and mining industry.



**WJ Submersible Mixer and WH Submersible Reflux Pump Series**

<b>WJ</b>	<b>WH</b>
Speed: 17r/min~1,450r/min	Capacity: 430~4,500 m <sup>3</sup> /h
Pushing Force: 125~4,800N	Head: 0.6~1.3m
Power: 0.75~30kW	Speed: 360, 480, 680, 700, 710, 720, 730, 735r/min
Impeller Diameter: 210mm~2,500mm	Power: 1.5~30kW
Depth under water ≤15m	



**WL Series Vertical Sewage Pump**

Capacity: 8~4,600 m<sup>3</sup>/h  
 Head: 3~55m  
 Motor Power: 0.75~355kW  
 Voltage: 380V  
 Discharge diameter: 50~600mm  
 Medium Temperature: ≤40℃  
 Medium Density: ≤1,050kg/m<sup>3</sup>  
 PH: 5~9



**KQQ Submersible Electric Pump**

Capacity: 50~3,000 m<sup>3</sup>/h  
 Head: 10~100m  
 Power: 11~560kW  
 Depth under water: ≤20m  
 Discharge diameter: 80~600mm



**YW Series Submerged Sewage Pump**

**Tolerance Design, Tremendously Reliable**

Medium Temperature: ≤80℃  
 Medium Density: <1.2kg/dm<sup>3</sup>  
 If > 1.2kg/dm<sup>3</sup>, the supporting power should be increased correspondingly.  
 PH: 5~11



#### WQ3000, WQ5000 Series Submersible Sewage Pump

Capacity: 14~1,500 m<sup>3</sup>/h    Head: 8~80m  
 Motor Power: 3~220kW    Voltage: 380V  
 Discharge diameter: 50~900mm  
 Medium Temperature: ≤40°C  
 Medium Density: ≤1,050kg/ m<sup>3</sup>  
 PH: 4~10



#### WQ/C Series Mini Sewage Pump

Power Supply: 380V, Three phase, 50Hz  
 Medium Density: ≤1,050kg/ m<sup>3</sup>  
 Medium Temperature: normally not exceed 40°C, PH: 4~10  
 The lowest level must be in accordance with ▽ in the dimensional drawings.  
 The diameter of the solids in medium cannot exceed 80% of the minimum diameter of flow channel.



#### WQ/S Mincing Pump

Diameter: 50~100mm    Motor Rated Power: 1.5~37kW  
 Speed: 940~1,475r/min, 2,800~2,935r/min  
 Max. Dimension of Mince: 32~65mm  
 Pump Weight: 90~624kg

### Single-stage Double-suction Centrifugal Pump Series:

The pumps are widely used in city's water supply and drain-off, water supply for cities and towns; water supply and drain-off for central heating system; water supply and drain-off for steel plant and metallurgical industry enterprises, oil refinery for petrol chemistry, paper mill, oil field, heat and power plant, airport construction, chemical fiber factory, textile factory, sugar factory, chemicals factory and power station; water supply of fire-fighting system for factories or mines, water supply for air-conditioning system; farmland flood-drain and irrigation and various water conservancies.



#### KQSN Series Double Suction Pump

Speed: 298r/min, 372r/min, 490r/min, 585r/min, 740r/min, 990r/min, 1,480r/min or 2,960r/min  
 Capacity: 68~30,000m<sup>3</sup>/h  
 Head: 6~230m  
 Voltage: 380V, 6kV or 10kV  
 Suction diameter: 150~1,600mm  
 Temperature Range: Max. Liquid temperature ≤100°C, 150°C for special configuration.  
 Ambient Temperature: ≤40°C general.



#### KQSU Series Double Suction Pump

Speed: 900, 1,480r/min  
 Head: 20~100m  
 Capacity: 200~2,000 m<sup>3</sup>/h  
 Suction Diameter: ∅200 - ∅500mm  
 Temperature Range: 0~80°C (130°C for special configuration)  
 Operating Pressure: Suction Pressure +Max. Operating Pressure ≤1.6MPa (2.0MPa for special requirements)  
 Pumping Medium: Clean water or the liquid whose physical and chemical properties is similar to water  
 Operation Mode: Continuous Operating



### KQSNL Series Vertical Double Suction Pump

Speed: 990r/min, 1,480r/min or 2,960r/min  
 Capacity: 120~3,975m<sup>3</sup>/h  
 Head: 6~200m  
 Voltage: 380V, 6kV or 10kV  
 Temperature Range: ≤80℃  
 Ambient Temperature: ≤40℃



### LDTNT, LDTNA, LDTNB Series Hot Well Pump

Capacity: 85~1,940 m<sup>3</sup>/h  
 Head: 48~360m  
 Medium Temperature:  
 Normal temperature~80℃ (120℃ for special requirements)

### Axial, Mixed Flow Pump

Used in city's water supply, diversion works, municipal sewage, rainwater drain-off, and pivot diversion, irrigation and drainage, aquaculture, salt field, as well as industrial water supply and drain-off and pumping recycled water etc.



### ZQ, HQ Submersible Axial Flow Pump , Mixed Flow Pump Series

Pump Diameter: 300~1,600mm Capacity: 400~42,000 m<sup>3</sup>/h  
 Head: 2.5~22m Power: 7.5~710kW  
 Protection Class: IP68 Cooling System: 1C0041  
 Insulation Class: F Rated Frequency: 50Hz  
 Voltage: 380V, 660V, 6kV, 10kV



### ZL, HL Vertical Axial Flow Pump, Mixed Flow Pump

Unit Capacity: 0.2~11 m<sup>3</sup>/s Head: 2~22m  
 Discharge Diameter: 350~1,600mm  
 Pumping Medium: Clear water, river water, wastewater, rainwater, sewage and other liquid whose physicochemical property is similar to water.  
 Voltage: 380V, 660V, 6,000V, 10,000V Frequency: 50Hz  
 Protection Class: IP23, IP44 Insulation Class: B, F  
 Ambient Temperature: 40℃; Reduce the Power, when the ambient temperature exceeds 40℃.



### H Type Vertical Diagonal Flow Pump

Capacity: 0.17~7.5 m<sup>3</sup>/h Head: 5~95m  
 Permitted Pumping Medium:  
 Clear water, seawater, rainwater, sewage etc.  
 Medium Temperature: Below 55℃  
 Operation Mode: Continuous Operating



**LC Long-axle Pump**

Medium Temperature:  $\leq 80^{\circ}\text{C}$   
 When suspended material is contained, instead of fiber material, the quantity of suspended material:  $< 150\text{mg/L}$ ;  
 When the medium is the solid-containing industrial wastewater, the maximum solid cannot exceed 2mm.  
 Pump Diameter: 100~800mm Capacity: 60~5,100  $\text{m}^3/\text{h}$   
 Head: 13~69m Max. Axial Length:  $\leq 14\text{m}$



**N Type Condenser Pump**

Capacity: 8~120  $\text{m}^3/\text{h}$   
 Head : 38~170m  
 Medium Temperature:  
 $\leq 80^{\circ}\text{C}$  (100N130 and 150N110 Type can pump the liquid below  $120^{\circ}\text{C}$ )



**DG Type Intermediate Pressure Boiler Feed Pump**

Speed: 2,950r/min  
 Liquid: Clear water or other liquid whose physicochemical property is similar to water.  
 Liquid Temperature:  $\leq 160^{\circ}\text{C}$   
 Capacity: 36~180  $\text{m}^3/\text{h}$   
 Head: 500~1,050m



**NW Type LPH Drainage Pump**

The pump is used to pump low heater drainage in heat-engine plant of 125MW~300MW.  
 Medium: saturation water above  $80^{\circ}\text{C}$ ,  
 Temperature: Max.  $160^{\circ}\text{C}$   
 Capacity: 36~200  $\text{m}^3/\text{h}$   
 Head: 120~230m  
 Inlet flange pressure: 1.6MPa  
 Outlet flange pressure: 2.5~4.0MPa.



**KQWR-G Type Hot Water Circulation Pump**

Working Condition: System operation pressure is below 4.0MPa; Pumped Medium is hot water, and the medium temperature is not more than  $230^{\circ}\text{C}$ ; The temperature is below  $400^{\circ}\text{C}$  when the Medium is other organic thermal medium.  
 Capacity: 5~800  $\text{m}^3/\text{h}$   
 Head: 6.8~240m  
 Speed: 1,450r/min and 2,900r/min  
 Power: 0.25~500kW

### KQH Series Chemical Pump

KQH series chemical pump can be used to some extent in chemistry, oil product, food, drinks, medicine, water treatment, environment protection and part of acid, alkali and salt, to pump some corrosive, non-or-few solids containing medium with the viscosity similar to water. It is not recommended to use in poisonous, flammable, explosive and strongly corrosive occasions.



**KQH, KQWH Series Pump**

Capacity: 2.2~480 m<sup>3</sup>/h  
 Head: 2.8~129m  
 Power: 0.12~90kW  
 Speed: 1,480r/min and 2,960r/min  
 Max. Pressure: ≤1.6MPa  
 Medium Temperature: -10~80°C  
 Ambient Temperature: Max. 40°C

### KZA, KZE Petrochemical Process Pump

Pumping Medium: Mineral acid in all temperature and concentration, such as H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, HCl and H<sub>3</sub>PO<sub>4</sub> etc.; all alkaline solution in all temperature and concentration such as NaOH; all salt solution; all liquid petrochemical products, organics, and other corrosive raw materials and products.



**KZA, KZE Process Pump**

Pump Diameter: 25~400mm  
 Capacity: Max. 2,400 m<sup>3</sup>/h  
 Head: Max. 250m  
 Operating Pressure: Max. 2.5MPa  
 Operating Temperature: -80~+450°C



**KCZ Standard Chemical Process Pump**

Max. Operating Pressure: 2.5MPa (250bar)  
 Operating Medium Temperature: -70~180°C  
 Capacity: ~2,000 m<sup>3</sup>/h  
 Head: ~160m  
 Speed: 1,450r/min and 2,900r/min  
 Motor Power: ~315kW

### KQYH Submerged Chemical Pump

Used in Municipal water supply, municipal sewage plant, rainwater drainage, sewage treatment, diversion work, irrigation, flood control and flooded field drainage.



**KQYH Submerged Chemical Pump**

Pump Diameter: 25~200mm	Capacity: 2~350 m <sup>3</sup> /h
Head: 5~80m	Power: 1.1~90kW
Protection Class: IP68	Cooling System: 1C0041



**AY Type Oil Pump**

Solids are not contained in the pumped medium, and temperature range is -45~+420°C.  
 Capacity: Q=6.25~500 m<sup>3</sup>/h  
 Recommended Head:  
 H=35~330m (Single or Double-stage Pump)  
 H=70~603m (Multi-stage Pump)



**KZJ Series Slurry Pump**

Speed: 2900/1480/980/730/590r/min motor directcoupled driving  
 Pulley indirect-couple driving  
 Medium Temperature: generally  $\leq 80^{\circ}\text{C}$ , in special case:  $110^{\circ}\text{C}$   
 Weight Concentration of Solid-liquid Mixture:  
 MortarConcentration  $\leq 45\%$  Pulp Concentration  $\leq 60\%$   
 Capacity: 30~2,000 m<sup>3</sup>/h Head: 15~130m



**M/AH(R)/HH Series Slurry Pump**

Speed: 2900/1480/980/730/590r/min motor directcoupled driving  
 Medium Temperature: generally  $\leq 80^{\circ}\text{C}$ , in special case:  $110^{\circ}\text{C}$   
 Weight Concentration of Solid-liquid Mixture:  
 MortarConcentration  $\leq 45\%$  Pulp Concentration  $\leq 60\%$   
 Capacity: 12~5400 m<sup>3</sup>/h Head: 6~118m



**2BEK Water Ring Vacuum Pump**

Power: 75~800kW  
 Gas Capacity: 55~630 m<sup>3</sup>/min  
 Pressure: 160hPa~1,013hPa  
 Permitted Medium: the gas, which is non-solids containing and insoluble in water  
 Temperature: Pumping gas temperature -10~40 $^{\circ}\text{C}$   
 Operating Liquid Temperature: 0~35 $^{\circ}\text{C}$



**2BVX, 2BEX Water Ring Vacuum Pump**

Motor Power: 1.1~710kW  
 Gas Capacity: 27~2,700 m<sup>3</sup>/h  
 Pressure: 33hPa~1,013hPa  
 Permitted Medium: the gas, which is non-solids containing and insoluble in water  
 Temperature: Pumping gas temperature -10~40 $^{\circ}\text{C}$   
 Operating Liquid Temperature: 0~35 $^{\circ}\text{C}$

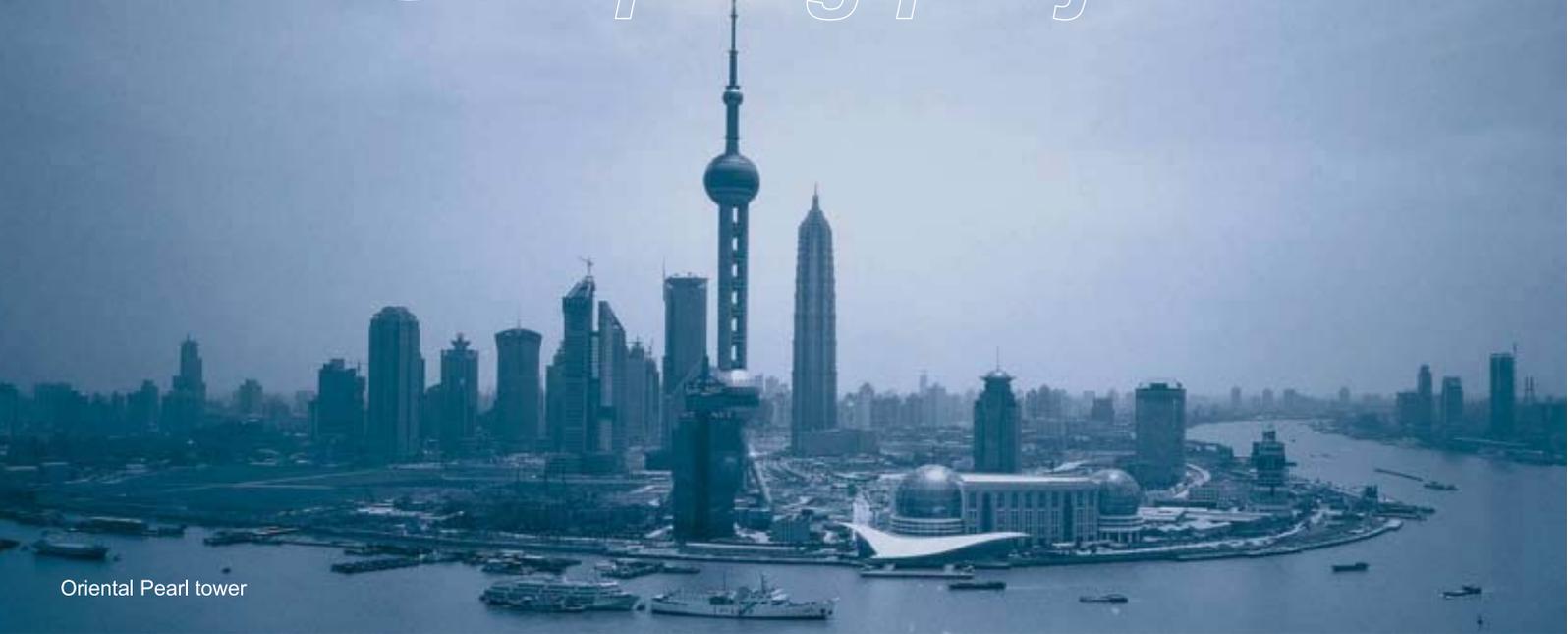


**MD Multi-stage Mine Pump**

Speed: 1,480r/min and 2,950r/min  
 Liquid: Clear water or other liquid whose physicochemical property is similar to water.  
 Liquid Temperature:  $\leq 105^{\circ}\text{C}$   
 Capacity: 6.3~450 m<sup>3</sup>/h  
 Head: 50~660m  
 Max. Pressure: Suction Pressure +Max. Pump Pressure  $\leq 7\text{MPa}$

# Sampling projects

Sampling projects



Oriental Pearl tower



Maglev



Shanghai Pudong International Airport



Lanzhou Thermo-electric Plant



Mao Zedong Memorial Hall



Chongqing WAL-MART



Shanghai Exhibition Hall



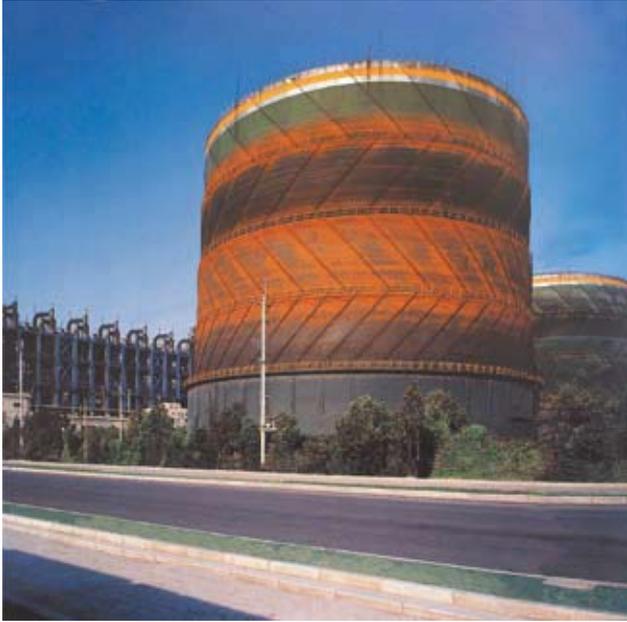
Qingdao Holiday Inn



Sichuan Toyota Motor



Shenzhen Keyuan



Shanghai Cokeoven Plant



Beihai power plant



Baotou Dalate power plant



Gaoqiao Fine Chemicals



Jilin Petrochemical



Shanghai Baosteel



Nanjing Yizheng Chemical Fiber Mill



Hangzhou Sibao Sewage Treatment Plant



Daqing Water Works



Yuhang water supply Group Co.,Ltd.



Jingjiang Sewage Treatment Work



Changshan water conservancy



Liujiaxia Hydro Station



Yanji Rubber Dam Project



Bapanxia Hydroplant



Hangzhou Quyanfenghe Pumping Station



The Second Sewage Treatment Works, Changsha



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