



川源(中国)机械有限公司  
GSD (China) Co., Ltd.



# QW

## 沉水式污物(泥)泵

**QW submersible solid handling pump**

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## QW submersible solid handling pump



### 用途 Application

- 废水扬升站
- 都市废水处理厂
- 化粪池排水系统
- 医院、学校、社区等生活废水处理系统
- 食品、造纸、采矿、纺织、皮革、化学工厂等工业之废水处理系统
- 净水处理系统

- Wastewater lift station.
- Municipal wastewater treatment plant.
- Building wastewater treatment system.
- Hospital, school, community, etc. wastewater treatment system.
- Food, paper, mining, textile, leather, chemical industry, etc. wastewater treatment system.
- Water purification system.

### 特点 Features

#### ■ 电动机

鼠笼式感应电动机，F级绝缘，防护等级IP68。

#### ■ 机械密封

机械密封的作用是阻绝抽送介质与电动机部分接触，双机械密封串联相互独立工作，为电动机提供双重保护。

#### ■ 自动着脱装置（选用配备）

使泵浦安装、保养、修护迅速容易，毋须先清除桶槽污水。

#### ■ 测漏检知器

在油室内加装测漏检知器，可检测因密封不良或机械密封损坏造成之洩漏(≤11kW选用配备，>11kW标准配备)。

大功率水泵在接线盒和电机腔内加装测漏检知器，可对接线盒和电机腔内的洩漏发出报警信号，使控制系统对泵实施保护(非标准配备，≥11kW可选配)。

#### ■ Motor

Squirrel-cage, induction motors are F class insulation, motor protection grade is IP68.

#### ■ Mechanical seal

The mechanical seals protect the motor from contacting the pumping liquids. Two seals are in series with each other and individually work to provide the motor with a dual protection.

#### ■ Auto-setter (options)

To allow pump for easy installation, maintenance & reparation, as it is no need to empty the tank first.

#### ■ Leakage detector

Built-in leakage detector in the oil chamber can detect leakage from the damage of the mechanical seal. (Less than 11 kW options, No less than 11kW standard).

Built-in leakage detector in the wiring box and motor cavity of large power pumps can check if a leakage in it. The leakage detector offers pump an automatic protection (Not standard, No less than 11 kW options).



### ■ 过热保护器

在电动机中加装过热保护器，对过载、温升等状况自动进行检测，避免由于电动机过热造成电机烧毁（≤11kW选用配备，>11kW标准配备）。

在轴承中加装过热保护器，当轴承温度升至断开温度时，保护器自动切断电源，起到保护轴承的作用（非标准配备，≥11kW可选配）。

### ■ 水冷夹套（选用配备）

泵工作时利用泵腔内压力使液体连续进入水冷夹套与电动机外壳的空间以带走电动机产生的热量，从而保证水泵在低水位正常工作（≥11kW可选配）。

### ■ 智能潜污泵说明

川源从服务用户出发，≥11kW可安装智能潜污泵系统--实现水泵智能化运行和健康管理。

智能潜污泵系统比传统用泵可节省40-60%的运维人力投入。

智能潜污泵系统可有效降低40%以上的设备备品备件数量。

智能潜污泵系统通过优化运行工况参数，节省30%以上的设备能耗。

### ■ Heat-protector

Built-in heat protector in motor, can prevent the motor from burning out, overload & overheating. (Less than 11 kW options, No less than 11 kW standard).

Built-in heat protector in bearing, when the bearing is abnormal and the temperature rises to disconnecting temperature, the protector automatically cut off power supply to protect the bearing. (Not standard, no less than 11 kW options).

### ■ Cooling house (options)

Pumps make use of inner pressure of pump cavity to make liquid continually entering in space between cooling house and motor outer, to take away the heat of the motor, to make sure the regular work of the pump in low water level (No less than 11 kW options).

### ■ Intelligent submersible pump description

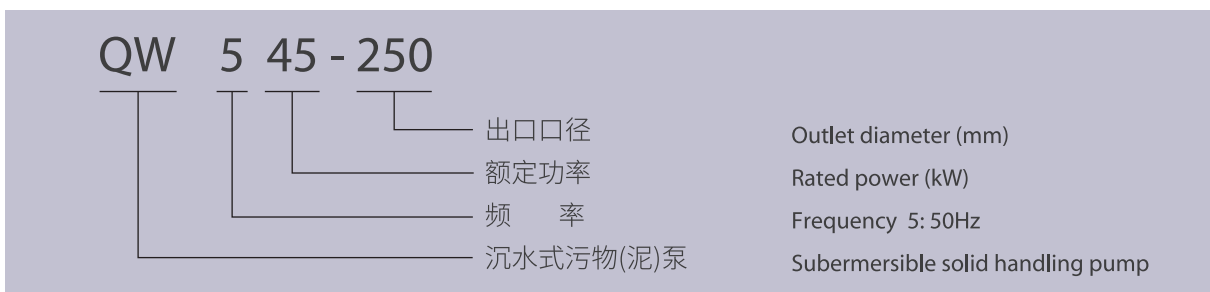
GSD starts from serving customers, the submersible pumps ≥ 11kW can be installed with intelligent submersible pump system - realizing intelligent operation and health management of pumps. Intelligent submersible pump system can save 40-60% of operation and maintenance labor investment than traditional pumps. Intelligent submersible pump system can effectively reduce the number of equipment spare parts by more than 40% through the potential failure warning. Intelligent submersible pump system can save more than 30% of equipment energy consumption by optimizing the operating condition parameters.

## 叶轮说明 Impeller description

- 水力采用CFD技术优化，效率高，高效区宽
- 先进的铸造工艺，精工铸造，品质升级
- 流道宽阔，污物通过性好
- 叶轮经过严格的动平衡检测，振动小，使用寿命长
- CFD technology is used for hydraulic optimization, high efficiency.
- Advanced foundry technology, precision casting, quality upgrade.
- The impeller flow path is wide and the impurity flow is good.
- The impeller has been strictly tested for dynamic balance, with small vibration and long service life.



## 型号说明 Type description



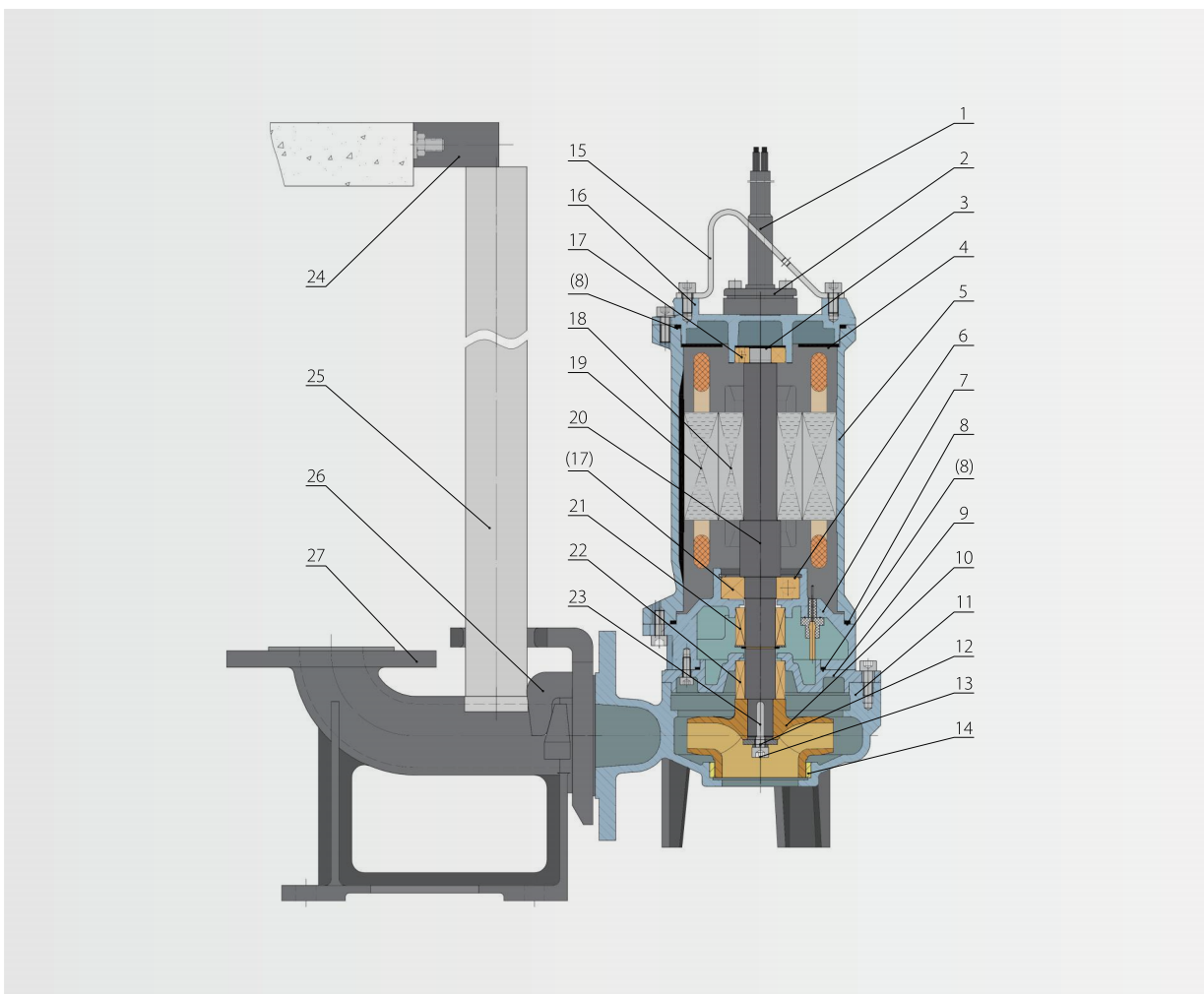
## 7.5kW(含)以下结构简图 Construction

NO.	名称	Name	材质	
			GB	JIS
1	动力电缆	Power cable	NBR	NBR
2	电缆压盖	Cable cover	06Cr19Ni10	SUS304
3	波形弹簧	Wave spring	65Mn	65Mn
4	电木板	Electric board	-	-
5	马达本体	Motor casing	HT200	FC200
6	挡圈	Retaining ring	65Mn	65Mn
7	中承座	Bracket	HT200	FC200
8	O型圈	O-ring	NBR	NBR
9	油箱盖	Oil cover	HT200	FC200
10	叶轮	Impeller	HT200	FC200
11	泵体	Pump casing	HT200	FC200
12	垫圈	Washer	20Cr13	SUS420J1
13	螺栓	Bolt	06Cr19Ni10	SUS304
14	密封环	Seal ring	ZCuSn10Pb5	LBC2

NO.	名称	Name	材质	
			GB	JIS
15	把手	Handle	06Cr19Ni10	SUS304
16	马达盖	Motor cover	HT200	FC200
17	轴承	Bearing	-	-
18	转子	Rotor	-	-
19	定子	Stator	-	-
20	主轴	Shaft	20Cr13	SUS420J1
21	机械密封	Mechanical seal	C-SiC	C-SiC
22	机械密封	Mechanical seal	SiC-SiC	SiC-SiC
23	键	Key	20Cr13	SUS420J1
24	固定架	Fixed frame	Q235A	SS400
25	引导管	Pail piping	06Cr19Ni10	SUS304
26	配合凸缘	Flange setter	HT200	FC200
27	着脱本体	Duckfoot	HT200	FC200

不同机型结构略有不同，可根据需求采用不同材质。

Different model has a little difference, materials can be selected according to the requirement of the customer.

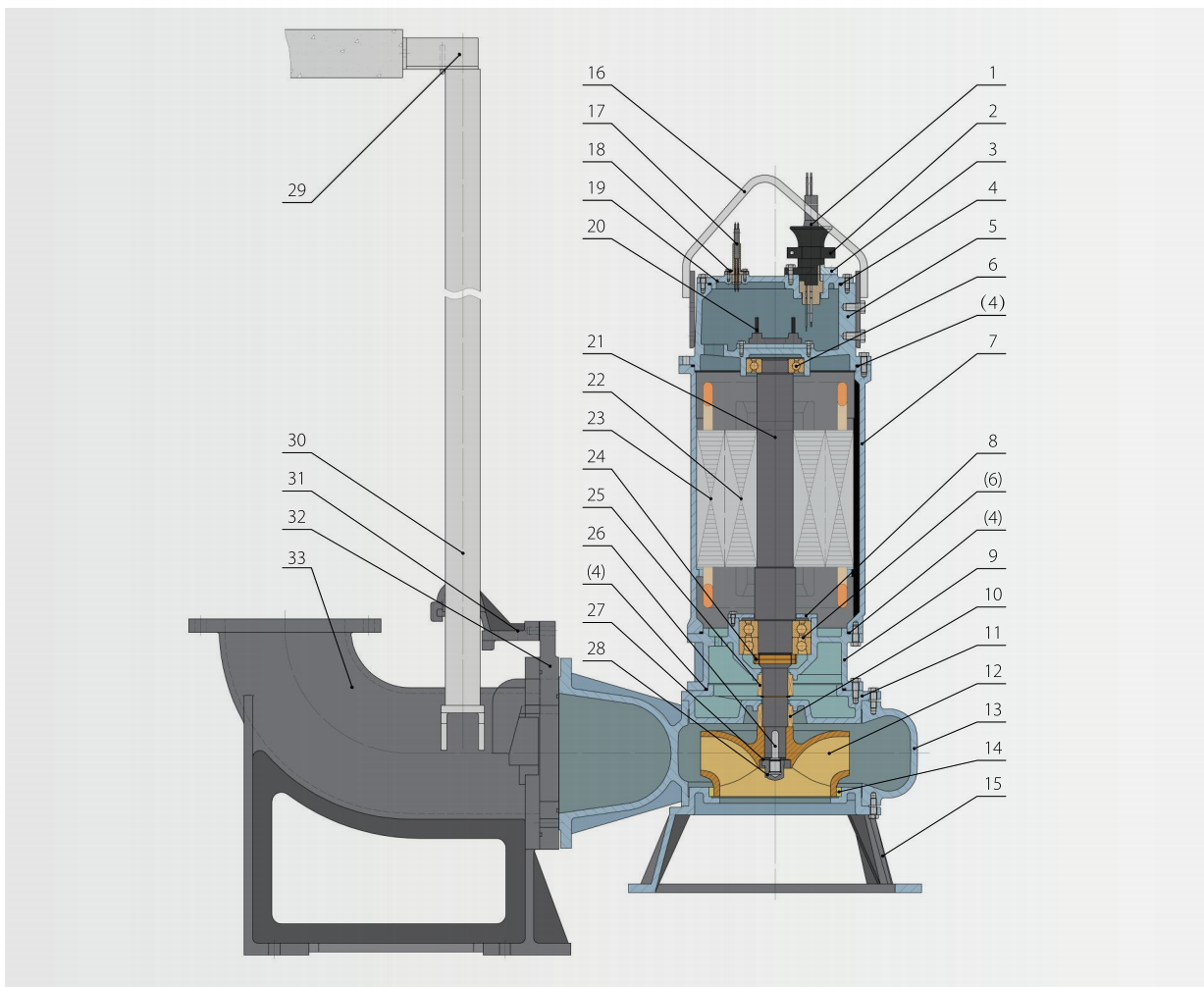


## 11kW(含)以上结构简图 Construction

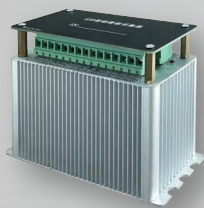
NO.	名称	Name	材质		NO.	名称	Name	材质	
			GB	JIS				GB	JIS
1	动力电缆	Power cable	NBR	NBR	18	电缆压盖	Cable cover	06Cr19Ni10	SUS304
2	电缆压盖	Cable cover	HT200	FC200	19	马达盖	Motor cover	HT200	FC200
3	电缆固定套	Cable fixing sleeves	HT200	FC200	20	接线柱	Terminal block	-	-
4	O型圈	O-ring	NBR	NBR	21	主轴	Shaft	20Cr13	SUS420J1
5	接线盒	Junction box	HT200	FC200	22	转子	Rotor	-	-
6	轴承	Bearing	-	-	23	定子	Stator	-	-
7	马达本体	Motor casing	HT200	FC200	24	圆螺母	Round nut	45	S45C
8	轴承压盖	Bearing cover	HT200	FC200	25	机械密封	Mechanical seal	C-SiC	C-SiC
9	中承座	Bracket	HT200	FC200	26	键	Key	20Cr13	SUS420J1
10	机械密封	Mechanical seal	SiC-SiC	SiC-SiC	27	垫圈	Washer	06Cr19Ni10	SUS304
11	油箱盖	Oil cover	HT200	FC200	28	叶轮螺母	Impeller nut	06Cr19Ni10	SUS304
12	叶轮	Impeller	HT200	FC200	29	固定架	Fixed frame	Q235A	SS400
13	泵体	Pump casing	HT200	FC200	30	引导管	Pail piping	06Cr19Ni10	SUS304
14	密封环	Seal ring	ZCuSn10Pb5	LBC2	31	引导板	Slide	HT200	FC200
15	泵体底盖	Bottom cover	HT200	FC200	32	配合凸缘	Flange setter	HT200	FC200
16	提升架	Lifting frame	06Cr19Ni10	SUS304	33	着脱本体	Duckfoot	HT200	FC200
17	控制电缆	Control cable	NBR	NBR					

不同机型结构略有不同，可根据需求采用不同材质。

Different model has a little difference, materials can be selected according to the requirement of the customer.



## 智能潜污泵结构图 Intelligent submersible pump structure



GSD3智能数据采集器 GSD3 Intelligent Data Collector

对内部监测项目信号进行收集打包传输，也可单独外接显示屏，现场直接显示水泵运转状态。

The internal monitoring signals are collected, packaged and transmitted and can also be connected to a separate external display to directly show the running status of the pump.



绕组测温 Heat detector in stator

监控电机定子温度情况，防止电机温度过高。

Monitor the temperature of the motor stator to prevent the motor from overheating.



轴承测温 Heat detector in bearing

实现对轴承部位状态实时监测，故障预警，保护轴承及电机安全。

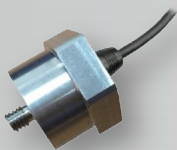
Real-time monitoring of bearing status and fault warning to protect bearing and motor safety.



电机内漏水保护 Leakage detector in motor

对电机腔内泄漏发出报警信号，对电机实施保护。

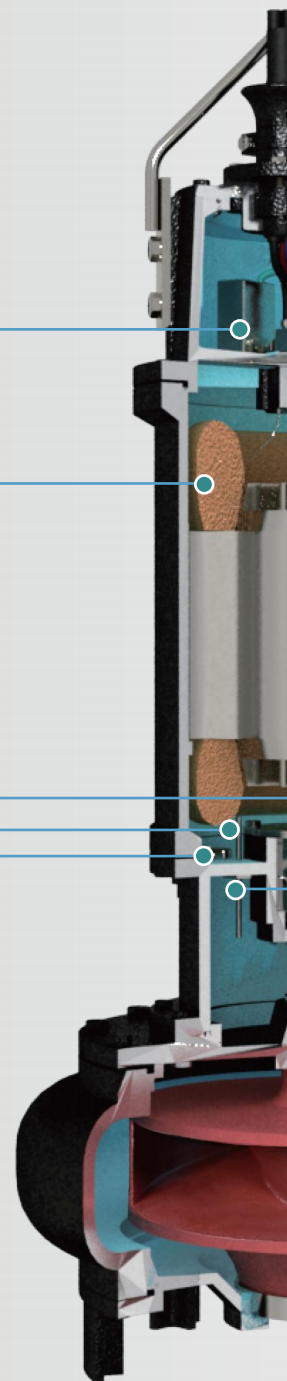
An alarm signal is sent to protect the motor if there is a leak in the motor cavity.

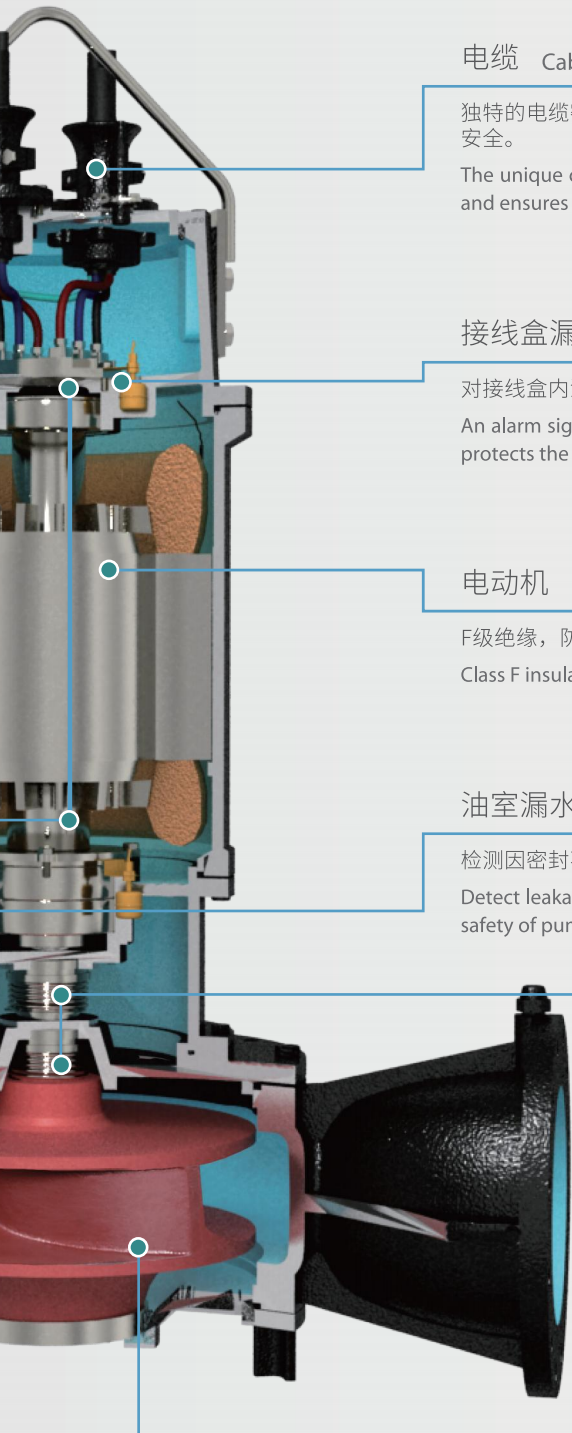


振动 Vibration detector

使用振动规实时振动指标的监测，提供设备运行状态和专家诊断的专业数据。

Use vibration gauges to monitor vibration indicators in real time, providing equipment operating status and diagnostic professional data.





### 电缆 Cable

独特的电缆密封设计，排除了电缆漏水的隐患，能确保可靠的防水及运行安全。

The unique cablesealing design excludes the hidden danger of cable leakage and ensures reliable waterproofing and operational safety.

### 接线盒漏水保护 Leakage detector in junction box

对接线盒内泄漏发出报警信号，控制系统对泵实施保护。

An alarm signal is sent for leakage in the junction box, and the control system protects the pump.



### 电动机 Motor

F级绝缘，防护等级IP68。

Class F insulation, protection class IP68.

### 油室漏水保护 Leakage detector in oil chamber

检测因密封不良或机械密封损坏造成之泄漏，保护水泵运行安全。

Detect leakage caused by poor seal or mechanical seal damage to protect the safety of pump operation.



### 机械密封 Mechanical seal

双机械密封串联相互独立工作，为电动机提供双重保护。

Dual mechanical seals work independently in series to provide double protection for the motor.



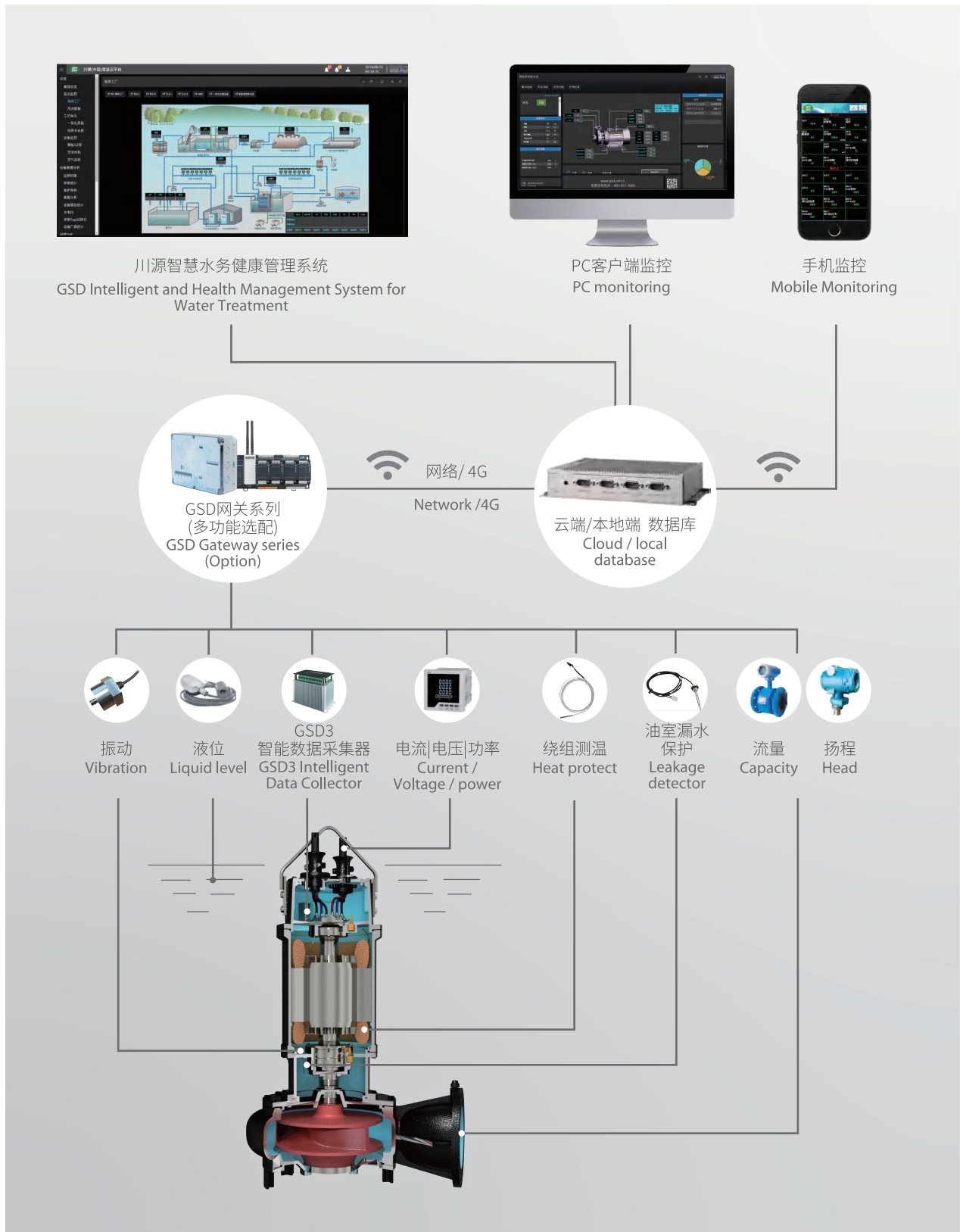
### 不阻塞叶轮 Non-clog impeller

CFD技术优化，效率高，高效区宽，流道设计宽大，污物通过性好。

CFD technology is used for hydraulic optimization, high efficiency, the impeller flow path is wide and the impurity flow is good.



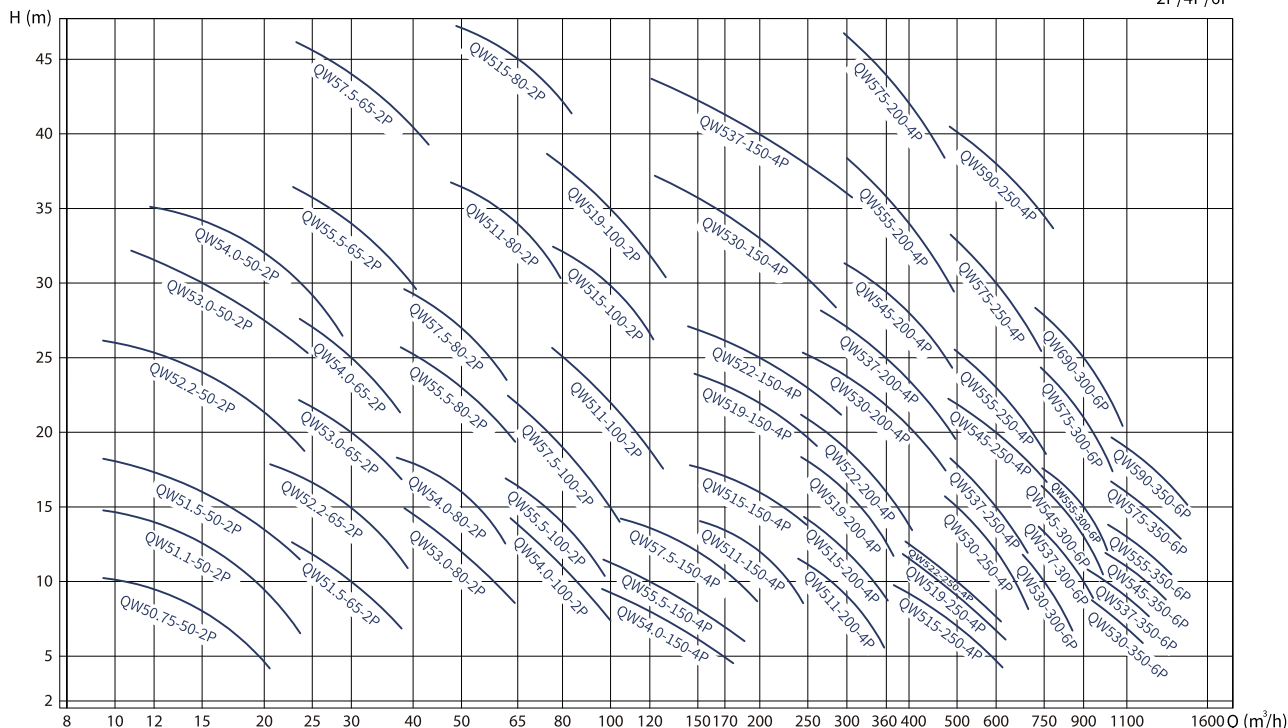
# 系统架构 System architecture





## 型谱图 Performance chart

2P/4P/6P



## 性能参数 Performance parameters

(2P/4P/6P)

泵型号 Pump model	行业型号 Industry model	转速 Speed (r/min)	流量 Capacity (m <sup>3</sup> /h)	扬程 Head (m)	效率 Eff. $\eta$ (%)	电机功率 Motor power (kW)	口径 Dia. (mm)	泵重量 Weight (kg)
QW50.75-50-2P	50QW15-8-0.75	2900	15	8	58	0.75	50	26.5
QW51.1-50-2P	50QW15-12.5-1.1	2900	15	12.5	60	1.1	50	26.5
QW51.5-50-2P	50QW15-16-1.5	2900	15	16	55	1.5	50	33
QW52.2-50-2P	50QW15-24-2.2	2900	15	24	54	2.2	50	38
QW53.0-50-2P	50QW15-30-3.0	2900	15	30	54	3.0	50	50
QW54.0-50-2P	50QW20-32-4.0	2900	20	32	56	4.0	50	50
QW51.5-65-2P	65QW30-10-1.5	2900	30	10	62	1.5	65	36
QW52.2-65-2P	65QW30-15-2.2	2900	30	15	64	2.2	65	36
QW53.0-65-2P	65QW30-20-3.0	2900	30	20	60	3.0	65	50
QW54.0-65-2P	65QW30-25-4.0	2900	30	25	62	4.0	65	50
QW55.5-65-2P	65QW30-34-5.5	2900	30	34	58	5.5	65	71
QW57.5-65-2P	65QW30-44-7.5	2900	30	44	58	7.5	65	73
QW53.0-80-2P	80QW50-12-3.0	2900	50	12	65	3.0	80	50
QW54.0-80-2P	80QW50-16-4.0	2900	50	16	67	4.0	80	52.6
QW55.5-80-2P	80QW50-23-5.5	2900	50	23	63	5.5	80	68
QW57.5-80-2P	80QW50-27-7.5	2900	50	27	66	7.5	80	72
QW511-80-2P	80QW65-34-11	2900	65	34	65	11	80	165
QW515-80-2P	80QW65-45-15	2900	65	45	66	15	80	170



(2P/4P/6P)

泵型号 Pump model	行业型号 Industry model	转速 Speed (r/min)	流量 Capacity (m <sup>3</sup> /h)	扬程 Head (m)	效率 Eff. $\eta$ (%)	电机功率 Motor power (kW)	口径 Dia. (mm)	泵重量 Weight (kg)
QW54.0-100-2P	100QW80-11-4.0	2900	80	11	67	4.0	100	56
QW55.5-100-2P	100QW80-14-5.5	2900	80	14	68	5.5	100	70
QW57.5-100-2P	100QW80-19-7.5	2900	80	19	69	7.5	100	75
QW511-100-2P	100QW100-22-11	2900	100	22	66	11	100	200
QW515-100-2P	100QW100-30-15	2900	100	30	67	15	100	220
QW519-100-2P	100QW100-35-18.5	2900	100	35	68	18.5	100	238
QW54.0-150-4P	150QW120-8-4.0	1450	120	8	72	4.0	150	93
QW55.5-150-4P	150QW120-10-5.5	1450	120	10	73	5.5	150	113
QW57.5-150-4P	150QW120-12-7.5	1450	150	12	74	7.5	150	124
QW511-150-4P	150QW200-12-11	1450	200	12	70	11	150	260
QW515-150-4P	150QW200-16-15	1450	200	16	70	15	150	270
QW519-150-4P	150QW200-22-18.5	1450	200	22	74	18.5	150	295
QW522-150-4P	150QW200-25-22	1450	200	25	70	22	150	303
QW530-150-4P	150QW200-33-30	1450	200	33	71	30	150	430
QW537-150-4P	150QW200-40-37	1450	200	40	72	37	150	469
QW511-200-4P	200QW300-9-11	1450	300	9	73	11	200	260
QW515-200-4P	200QW300-12-15	1450	300	12	74	15	200	280
QW519-200-4P	200QW300-16-18.5	1450	300	16	76	18.5	200	300
QW522-200-4P	200QW300-19-22	1450	300	19	75	22	200	320
QW530-200-4P	200QW360-22-30	1450	360	22	76	30	200	460
QW537-200-4P	200QW360-25-37	1450	360	25	77	37	200	480
QW545-200-4P	200QW400-28-45	1450	400	28	74	45	200	680
QW555-200-4P	200QW400-34-55	1450	400	34	75	55	200	740
QW575-200-4P	200QW400-42-75	1450	400	42	76	75	200	790
QW515-250-4P	250QW500-7-15	1450	500	7	74	15	250	300
QW519-250-4P	250QW500-9-18.5	1450	500	9	74	18.5	250	330
QW522-250-4P	250QW500-10-22	1450	500	10	75	22	250	365
QW530-250-4P	250QW600-12-30	1450	600	12	76	30	250	480
QW537-250-4P	250QW600-15-37	1450	600	15	77	37	250	520
QW545-250-4P	250QW600-20-45	1450	600	20	78	45	250	550
QW555-250-4P	250QW600-23-55	1450	600	23	75	55	250	800
QW575-250-4P	250QW600-30-75	1450	600	30	76	75	250	850
QW590-250-4P	250QW600-38-90	1450	600	38	78	90	250	900
QW530-300-6P	300QW750-10-30	980	750	10	75	30	300	730
QW537-300-6P	300QW900-10-37	980	900	10	76	37	300	780
QW545-300-6P	300QW900-13-45	980	900	13	77	45	300	830
QW555-300-6P	300QW900-15-55	980	900	15	76	55	300	1000
QW575-300-6P	300QW900-21-75	980	900	21	77	75	300	1420
QW590-300-6P	300QW900-25-90	980	900	25	79	90	300	1455
QW530-350-6P	350QW1000-8-30	980	1000	8	79	30	350	760
QW537-350-6P	350QW1000-10-37	980	1000	10	81	37	350	850
QW545-350-6P	350QW1100-11-45	980	1100	11	83	45	350	1000
QW555-350-6P	350QW1100-13-55	980	1100	13	77	55	350	1180
QW575-350-6P	350QW1200-15-75	980	1200	15	78	75	350	1400
QW590-350-6P	350QW1200-18-90	980	1200	18	79	90	350	1470



# 安装示意图 Installation sketch map

未附着脱  
without autosetter











附着脱  
with autosetter



欢迎索取以下产品型录

To find out more about following products, please visit [www.gsd.net.cn](http://www.gsd.net.cn)

	<b>泵系列</b> Pump Series	潜水泵系列   陆上泵系列   特种泵系列 Submersible pump series   On land pump series   Special pump series
	<b>搅拌推流系列</b> Mixing and flow propeller	搅拌机系列   推流器系列 Mixing series   Flow propeller series
	<b>供氧曝气系列</b> Aeration equipment series	曝气机系列   曝气盘系列   曝气管系列 Aerator series   Disc diffusers   Tube diffusers
	<b>风机系列</b> Blower Series	磁悬浮鼓风机   空气悬浮鼓风机   三叶罗茨鼓风机系列 Maglev turbo blower   Turbo blower   Three-lobe Roots Blower blower series
	<b>污泥处理设备</b> Sludge treatment equipment	带式脱水机   厢式压滤机   叠螺式脱水机   污泥干化设备   浅层高效气浮设备 Belt filter press   Box filter press   Screw press   Mud scraper   Dissolved air flotation clarifier
	<b>智能化系列</b> Intelligent series	智能设备   水务设备健康管理   水务系统工艺优化智联管理 Intelligent equipment   Health management for water equipment   Intelligent management for water system process
	<b>反应器及套装设备</b> Reactor and package equipment	芬顿反应系统   MBR生物膜反应器   预制泵站   一体化污水处理设备 Fenton reaction system   MBR biofilm reactor   Prefabricated pumping station   Intelligent Compact Unit
	<b>耗材药剂及相关设备</b> Consumables, reagents and related equipment	生物绳   PAC 聚合氯化铝   PAM 聚丙烯酰胺   泡药设备 Biological rope   PAC polyaluminum chloride   PAM polyacrylamide   Automatic dispensing dissolvers

GSD 的经营理念 Business Philosophy

G-Green 绿色 S-Safe 安全 D-Development 永续经营



川源(中国)机械有限公司  
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水处理系统专业合作伙伴

Professional partners in water treatment systems

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