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QWW SERIES STAINLESS STEEL MAGNETIC DRIVE CENTRIFUGAL PUMPS

Wide Temperature Resistance |
High Flow Capacity | Chemical Process Pump



High and Low Temperature Chemical Pump
(-196°C to +400°C)

HEAD OFFICE IN SOUTH CHINA:
GUANGDONG QEEHUA INDUSTRY EQUIPMENT CO., LTD.
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GUANGDONG QEEHUA INDUSTRY EQUIPMENT CO., LTD.

Chemical Standard Magnetic Drive Pump

QWW Magnetic Drive Centrifugal Pumps for High and Low Temperature Applications

Wide Temperature Resistance

High Flow Capacity

High Head

Stainless Steel



Wide Temperature Range
(-120°C to +350°C)



High Head,
Zero Leakage



High Flow Capacity,
High Head



304 / 316 Stainless Steel
Construction

High and Low Temperature Chemical Pump (-196°C to +400°C)

Chemical Standard Magnetic Drive Pump Designed for High and Low Temperature Media

The QWW Series magnetic drive centrifugal pump is constructed of stainless steel, with wetted parts available as standard in 304 or 316.

Featuring a highly durable construction and high-head design, the QWW Series is suitable for a standard wide operating temperature range from -120 °C to +350 °C. Custom configurations are available for temperatures down to -196 °C and up to +400 °C, meeting the requirements of extreme cryogenic and high-temperature operating conditions.

The pump has a standard working pressure of 40 bar, with higher pressure ratings available upon request.



Standard Models Available in SUS304 and SUS316

- Standard models are available in SUS304 and SUS316 stainless steel to suit different applications.
- SUS316 is recommended for food-grade fluids or high-purity chemical solutions, helping to effectively reduce contamination caused by material leaching.



Standard Chemical Process Flange Connection

- Standard flange connections for chemical process applications;
- The integrated cast design of the inlet and outlet flanges ensures enhanced reliability and structural integrity;



Customizable Explosion-Proof & Variable-Frequency Motor | IE4 Super Premium Efficiency & IE5 Synchronous Permanent Magnet Motor

- BT4/CT4 explosion-proof motors available for hazardous environments;
- Variable frequency motors support adjustable speed operation;
- IE4/IE5 synchronous permanent magnet motors provide energy-saving solutions with superior efficiency;



Robust Construction for Extreme Conditions

- Wear-resistant impeller and containment shell with advanced surface treatment;
- Pump casing rated up to 40 bar pressure;
- Stainless steel castings verified by 120-hour salt spray testing;
- SmCo permanent magnets ensure reliable operation under extreme temperatures;



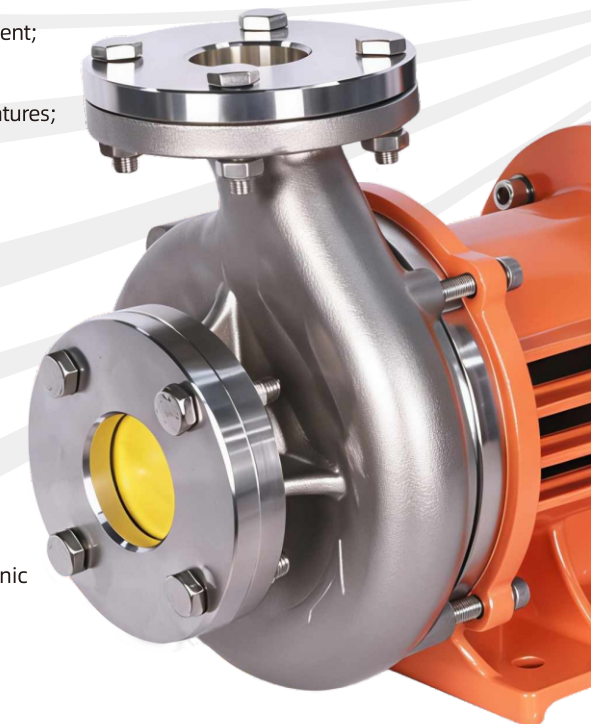
Leak-Free Magnetic Drive Structure with Centrifugal Impeller Design

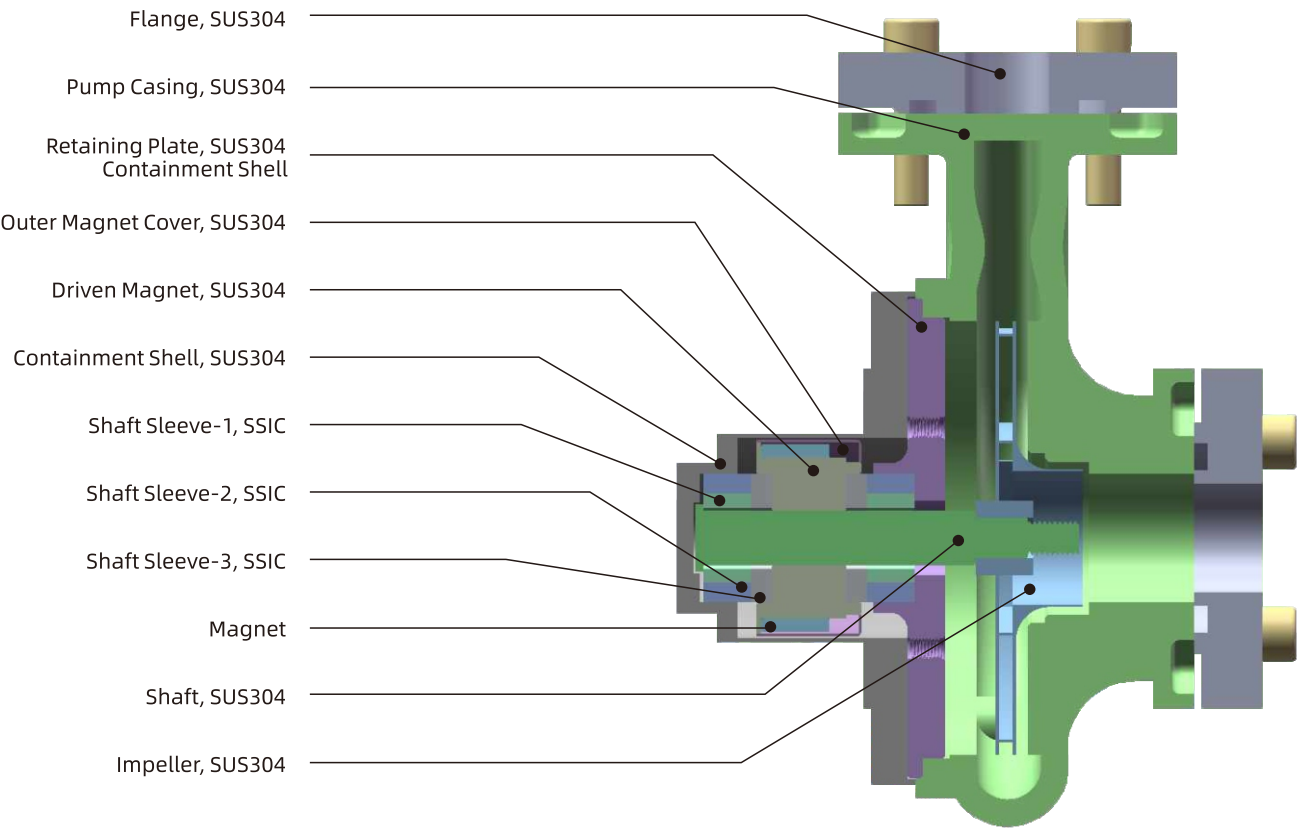
- Centrifugal impeller and magnetic drive design, delivering high flow and high head performance while eliminating leakage risks;
- Flow rates of up to 300 m³/h are available for customized models;
- Standard working pressure rating of 40 bar;
- Higher pressure ratings can be customized upon request;



Extreme Temperature Performance | -196°C to +400°C

- Optimized motor bearing selection and thermal management design;
- Premium stainless steel construction with precision manufacturing;
- SmCo permanent magnets ensure stable magnetic performance under extreme temperatures;
- Advanced magnetic drive technology enables reliable pumping of cryogenic and high-temperature fluids;





No.	Name	Material	No.	Name	Material
1	Flange	SUS304	7	Shaft Sleeve-1	SSIC
2	Pump Casing	SUS304	8	Shaft Sleeve-2	SSIC
3	Containment Shell Retaining Plate	SUS304	9	Shaft Sleeve-3	SSIC
4	Outer Magnet Cover	SUS304	10	Magnet	
5	Driven Magnet	SUS304	11	Shaft	SUS304
6	Containment Shell	SUS304	12	Impeller	SUS304

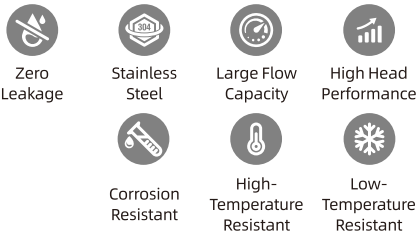
Note 1
Magnet: high-temperature SmCo permanent magnetic steel
Bearing Sleeve & Shaft: SSIC
Special high and low temperature requirements are available upon customization.

Note 2: The above material list is based on the standard SUS304 configuration as an example.
SUS316 material configuration is also available.



QWW

Stainless Steel Magnetic Drive
Centrifugal Pumps



Chemical Process Magnetic Drive Pump
QWW-50-32-3

QWW Series adopts a sealless magnetic drive system combined with a centrifugal impeller design. The wetted components are constructed from 304/316 stainless steel, while the magnets are made of special high-temperature samarium cobalt (SmCo) permanent magnets.

The pump delivers stable and reliable operation for over 8,000 hours under extreme temperature fluids ranging from -120°C to +350°C. Customized configurations including explosion-proof motors, variable frequency drive (VFD) motors, and IE5 permanent magnet synchronous motors are available to meet the requirements of applications in pharmaceutical, chemical processing, laboratory equipment, high/low temperature testing, and semiconductor precision temperature control industries.

Features

- Sealless magnetic drive design for zero leakage: Stable operation for more than 8,000 hours under high and low temperature conditions;
- 304/316 stainless steel construction: Stainless steel castings pass a 120-hour salt spray test without rusting;
- Centrifugal Impeller Design: Optimized to meet demanding requirements for high flow rates and high heads.

- Impeller and isolation sleeve are treated with a highly wear-resistant surface treatment process for enhanced strength and durability;
- Advanced high-temperature and high-pressure technology: Wide temperature resistance from -120°C to +350°C;
- Customizable options available: Explosion-proof motor, variable-frequency motor, IE4 high-efficiency energy-saving motor, and IE5 synchronous permanent magnet motor;

Applications

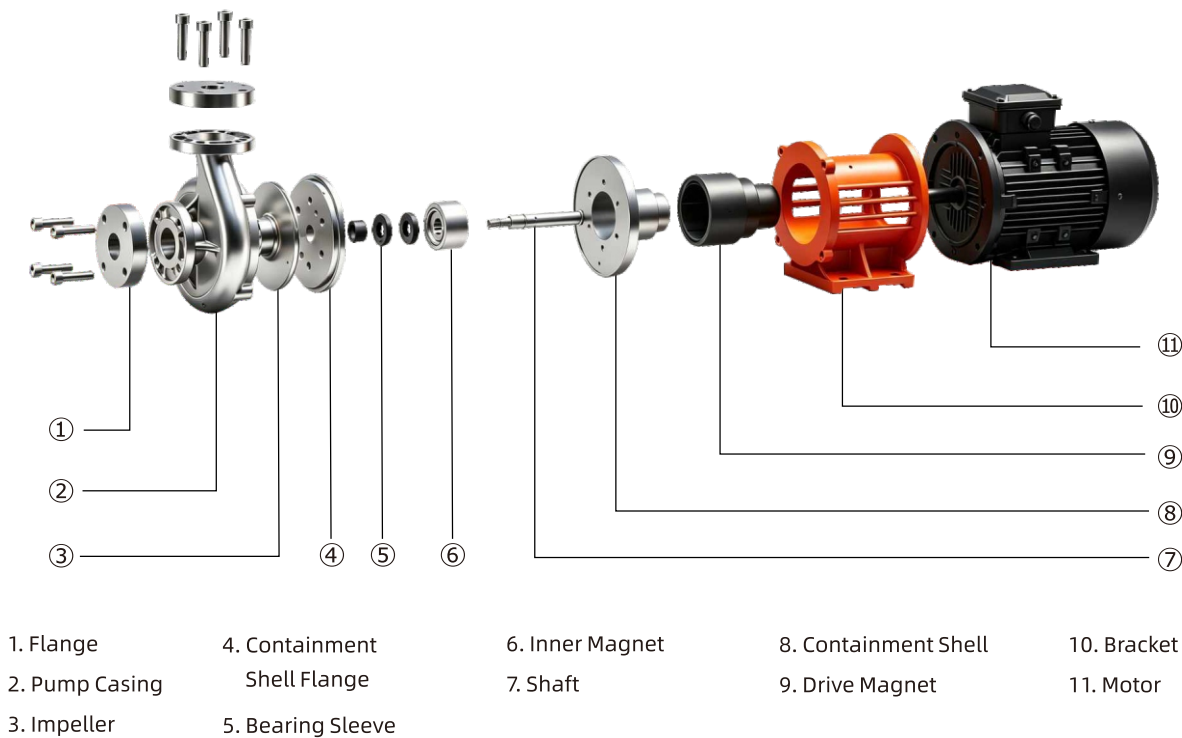
- Electronic and semiconductor manufacturing processes
- High-temperature mold temperature control systems
- High and low temperature test equipment
- Semiconductor precision temperature control systems
- Chemical processing equipment
- Mold temperature control systems
- Ultrasonic cleaning equipment
- Advanced textile dyeing and finishing equipment
- Skid-mounted systems
- TCU (Temperature Control Unit) systems

Compatible Fluids

Suitable for transferring clean fluids without particles or fibers, including:

- Water
- Ethylene Glycol
- Alcohol
- Heat Transfer Oil
- Hydrocarbon Solutions
- Silicone Oil
- Refrigerants
- Gasoline
- Dyes
- Chemical Solutions
- Liquid Nitrogen
- Electronic Fluorinated Liquids

QWW Exploded View



Model Definition

QWW - 32 - 25 - 2 - 5 - S4 - V38 - A - F - A - A - S
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

- ① Model No.: QWW
- ② Inlet Caliber: 32-32 mm; 50-50 mm
- ③ Outlet Caliber: 25-25 mm; 32-32 mm; 40-40 mm
- ④ Power: 1-1 HP; 2-2 HP; 3-3 HP; 4-4 HP; 5-5 HP; 6-6 HP; 7.5-7.5 HP; 10-10 HP; 15-15 HP
- ⑤ Frequency: 5-50 Hz; 6-60 Hz
- ⑥ Materials of Pump Head: S4-SUS304; S6-SUS316
- ⑦ Voltage: V38-3Ø / 380 V; V41-3Ø / 415 V; V44-3Ø / 440 V; V48-3Ø / 480 V; V32-3Ø / 220 V; V22-1Ø / 220 V
- ⑧ Liquid Specific Gravity: A-1.0-1.2; B-1.3; C-1.4; D-1.5; E-1.6; F-1.7; G-1.8; H-1.9; I-2.0
- ⑨ Connection Type: F- Welded Flange; T- Female Thread
- ⑩ Motor Requirements:
- A-IE3 Norma Motor; B-IE4 Normal Motor; C-IE5 Normal Motor; D-Variable Frequeny Motor; E-IE3, BT4 Ex-Proof Motor; F-IE4, BT4 Ex-Proof Motor; G-IE5, BT4 Ex-Proof Motor; H-IE3, CT4 Ex-Proof Motor; I-IE4, CT4 Ex-Proof Motor; J-IE5, CT4 Ex-Proof Motor; K-Permanent Magnet Variable Frequeny Motor; L-BT4 Ex-Proof Variable Frequency Motor; M-CT4 Ex-Proof Variable Frequency Motor
- ⑪ Motor Protection Level: A-IP55; B-IP56; C-IP65
- ⑫ S-Standard; N-Non-Standard

QWW Operating Conditions

Liquid Temperature	Liquid Specific Gravity	Ambient Temperature	Max. Altitude	Max. Pressure
(°C)		(°C)	(m)	(bar)
-120~+350	06~2.0	-50~+70	1000	40

QWW Specification

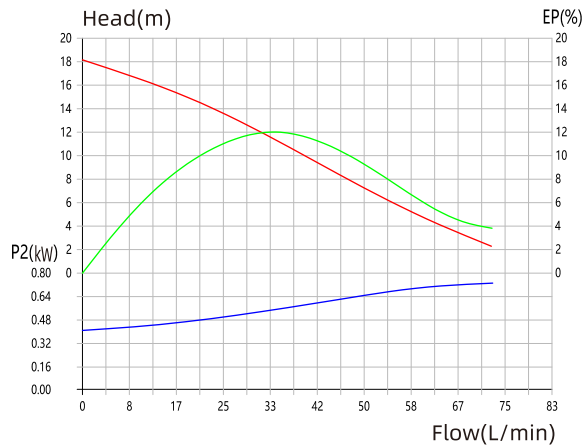
Model	Caliber (mm)		Motor		Performance Parameters		Net Weight (kg)
			Power		50 Hz		
	Inlet	Outlet	kW	HP	Max. Head (m)	Max. Flow (m³/h)	
QWW32-25-1	DN32	DN25	0.75	1	15	4.2	28
QWW32-25-2	DN32	DN25	1.5	2	18	6	30
QWW50-32-3	DN50	DN32	2.2	3	30	6.8	42
QWW50-32-4	DN50	DN32	3	4	35	9.5	45
QWW50-40-5	DNS0	DN40	4	5	30	25	60
QWW50-40-6	DN50	DN40	4.5	6	35	25	65
QWW50-40-7.5	DN50	DN40	5.5	7.5	35	26	87
QWW50-40-10	DN50	DN40	7.5	10	35	32	118
QWW50-40-15	DN50	DN40	11	15	40	35	148

The above performance data is based on clean water at 20°C and normal operating speed. Performance and parameter tolerances are within ±10%. Actual pump performance may vary depending on the specific gravity and density of the liquid being pumped.

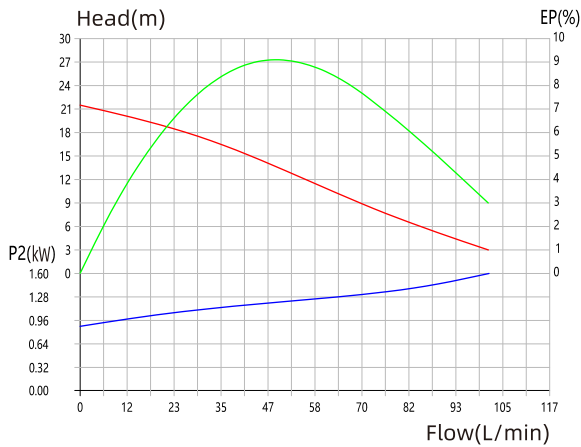
Performance Curve (50 Hz)

Head/Flow Efficiency Shaft Power

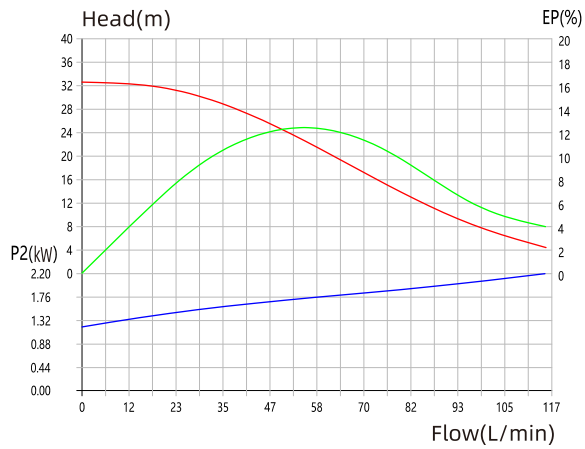
QWW32-25-1



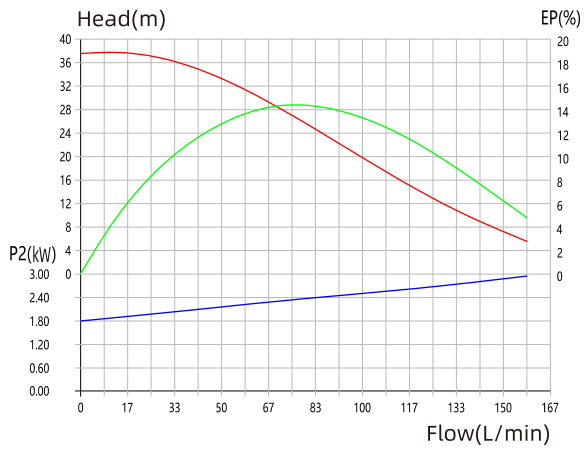
QWW32-25-2



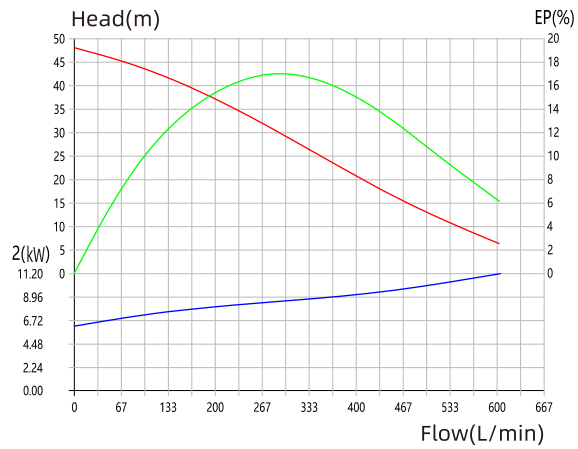
QWW50-32-3



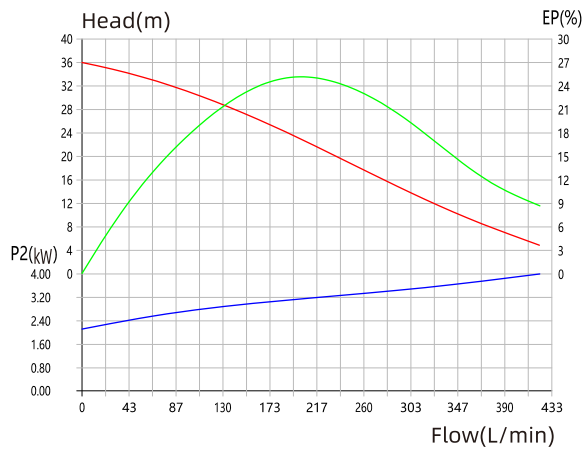
QWW50-32-4



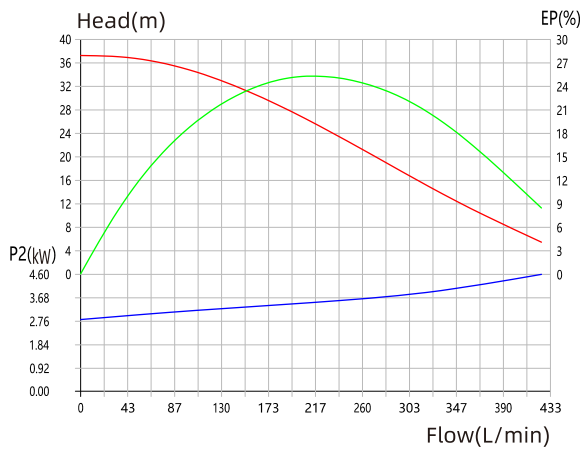
QWW50-40-15



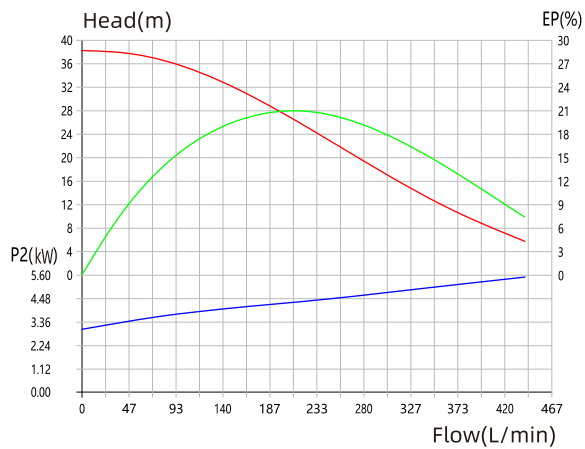
QWW50-40-5



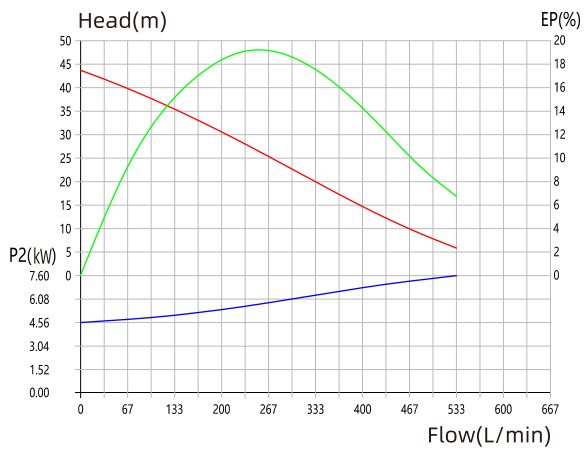
QWW50-40-6



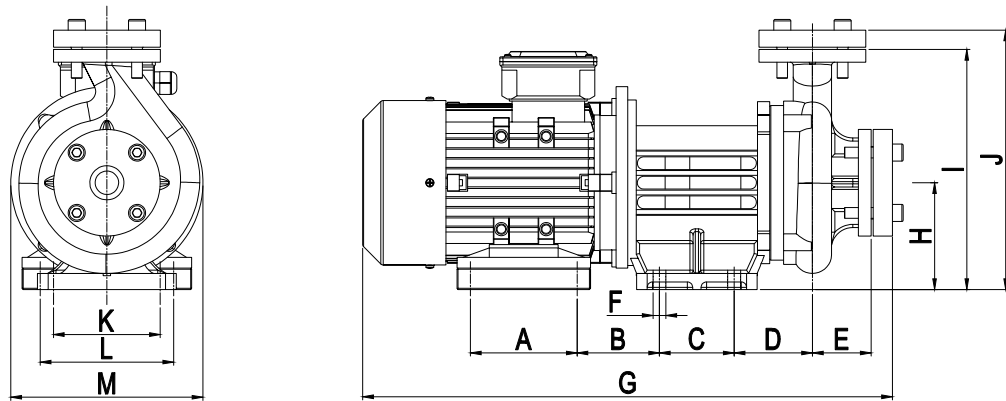
QWW50-40-7.5



QWW50-40-10



Dimensional Drawing



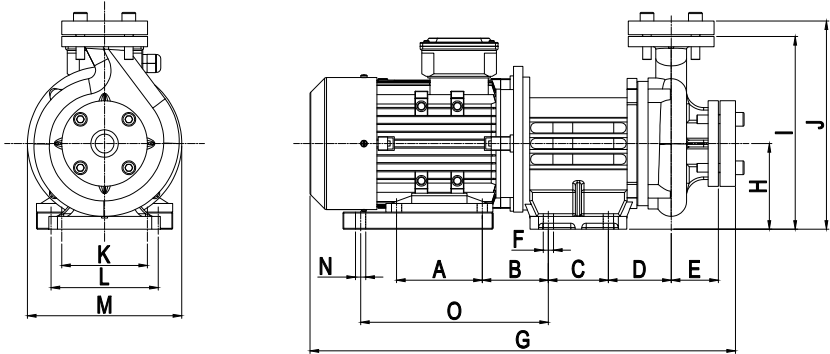
I

Dimension I

Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M
QWW32-25-1	100	77	70	73	55	4-Ø12	496	100	225	243	100	125	180
QWW32-25-2	100	78	70	74	55	4-Ø12	497	100	225	243	100	125	180

Dimensional Drawing



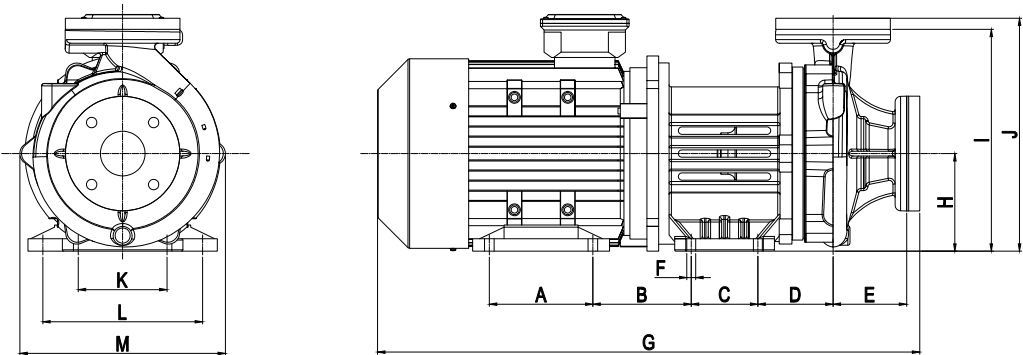
II

Dimension II

Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
QWW50-32-3	121	90	70	79	56	4-Ø12	545	110	240	256	100	138	190	2-Ø10	257
QWW50-32-4	121	90	70	79	56	4-Ø12	545	110	240	256	100	138	190	2-Ø10	257
QWW50-40-5	140	105	90	97	77	4-Ø12	663	132	316	337	120	170	252	2-Ø10	302
QWW50-40-6	140	105	90	99	77	4-Ø12	665	132	316	337	120	170	252	2-Ø10	302
QWW50-40-7.5	140	106	90	93	103	4-Ø12	676	132	300	324	120	170	278	2-Ø10	303

Dimensional Drawing



III

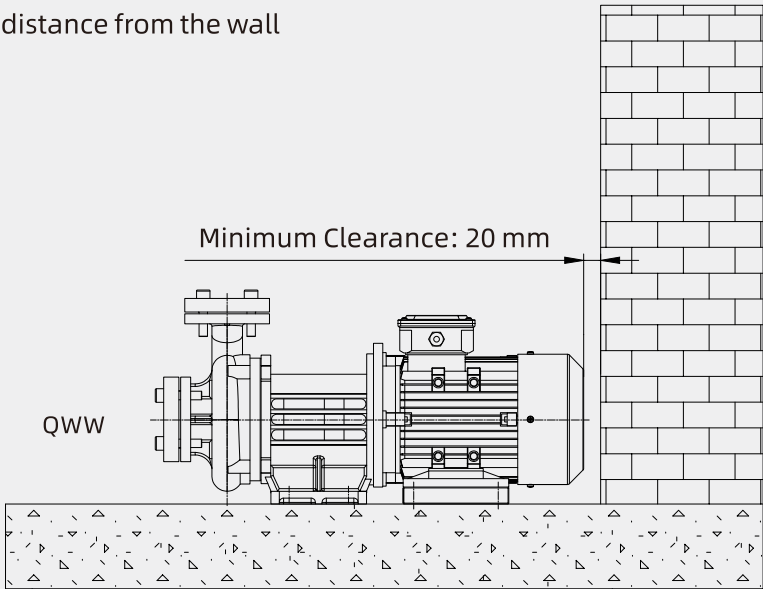
Dimension III

Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M
QWW50-40-10	140	133	90	102	103	4-Ø12	733	132	300	315	120	216	278
QWW50-40-15	140	133	90	102	103	4-Ø12	853	132	300	315	120	216	278

Basic Installation Requirements

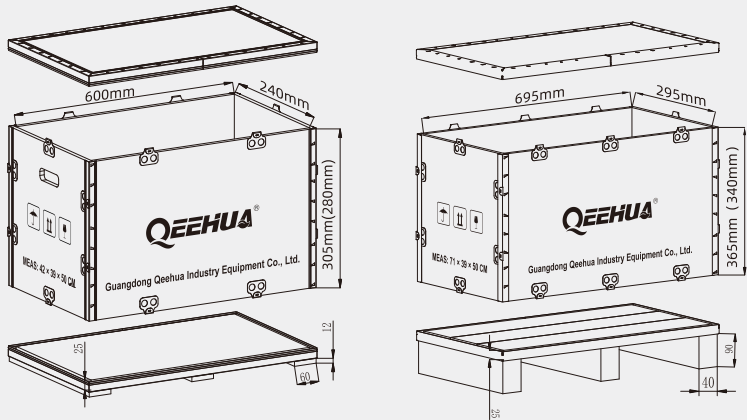
Minimum installation distance from the wall



Basic Installation Requirements

Technical Requirements

- 1. All wood and panel materials used must comply with international inspection and quarantine standards.
- 2. The wood surface shall be clean and free from cracks and stains.
- 3. The load-bearing capacity of the wooden case shall be adjusted according to the pump size.



Manual Handling

Forklift Handling

-196°C to +400°C Extreme Temperature Chemical Pumps

Applications: pharmaceutical, chemical, testing equipment,
dyeing and printing, high and low temperature testing,
semiconductor high-precision temperature control



High and Low Temperature Chemical Pump (-196°C to +400°C)

APPLICATION CASE

Our chemical pumps are widely used in chemical, pharmaceutical, semiconductor, medical, automotive, food, energy storage, and freeze-drying applications. Suitable for -196 °C to +400 °C heat exchange systems, fine chemical and pharmaceutical equipment, they have successfully replaced imported products and gained strong market recognition.



Semiconductor 01



TCU Temperature Control Unit 02



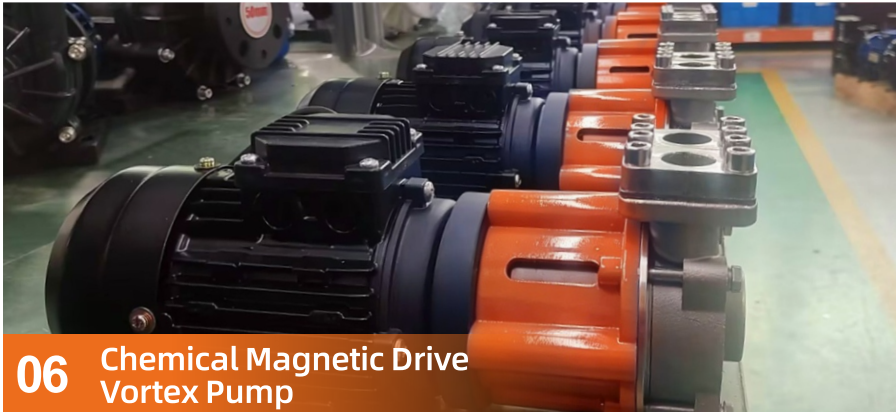
03 Optical Mold Temperature Controller



New Energy Testing 04



05 Hydrogen Production Equipment



06 Chemical Magnetic Drive Vortex Pump



Mining Chemical Dosing Skid 07



New Energy Integrated High and Low Temperature Unit 08

CUSTOMER SERVICE SYSTEM

Pre-Sales
Technical Support



Application
Communication
During Sales



Professional
After-Sales Service



Technical Communication with the Project Management Team | Customer Application Requirement Review | Formulation of Industry Application System Solutions

Project Order Delivery Kickoff | Risk Analysis and Contingency Plan | Execution of the Project Delivery Management Process

Fast-Response and Professional Service | Execution of the Project Initiation Management Process | Installation, Commissioning, Repair and Maintenance Services

SEVEN CORE TECHNOLOGIES |
16 YEARS OF EXPERTISE IN CHEMICAL MAGNETIC
DRIVE PUMPS

01
Magnetic Drive
Centrifugal Pump
Technology

02
Magnetic Drive
Vortex Pump Technology

03
Magnetic Drive
Gear Pump Technology

04
Canned DC / Vortex Pump
Technology

05
Dry-Running Protection
Technology | Liquid Shortage
Dry-Run
Protection Technology

06
Magnet Crack Prevention
and Demagnetization Resistance Technology

07
Ultra-High
Temperature +400°C
Ultra-Low
Temperature -196°C



