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QWH GAS-LIQUID MIXING MAGNETIC VORTEX PUMP

Wide Temperature Resistance | Self-Priming Structure |
Gas-Liquid Mixed Conveying



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

GUANGDONG QEEHUA INDUSTRY EQUIPMENT CO., LTD.

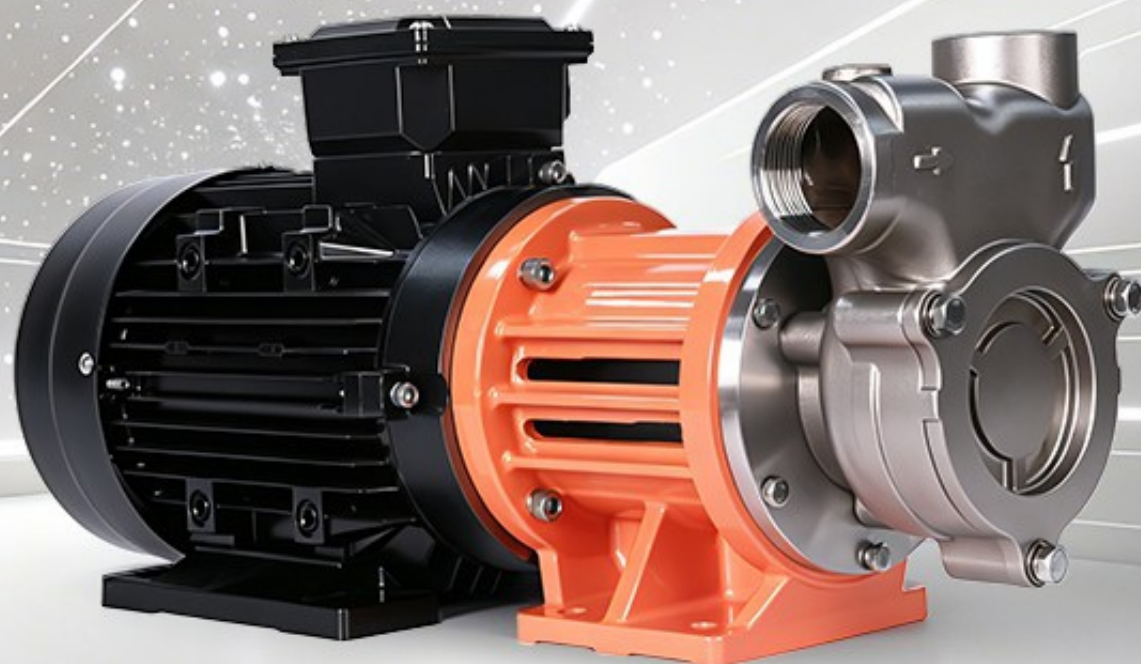
Engineered for Gas-Liquid Mixed Service

QWH Gas-Liquid Mixing Magnetic Vortex Pump

Wide Temperature Capability

Self-Priming Design

Custom-Built Solutions



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



High Head,
Zero Leakage



304 / 316
Stainless Steel
Construction



Self-Priming Configuration,
Gas-Liquid Mixed Working

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

Magnetic Drive Vortex Pump Engineered for High and Low Temperature Gas-Liquid Service

The QWH Series magnetic drive vortex pump is constructed from stainless steel, with wetted parts available in standard 304 or 316 stainless steel.

Designed with a highly durable construction and a high-head self-priming configuration, the QWH Series provides reliable gas-liquid handling capability for mixed-phase transfer applications. The standard operating temperature range is from -120°C to +350°C, with custom configurations available for extreme conditions from -196°C to +400°C.

The pump is rated for 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.



Universal G-Threaded Connection

- Standard G-threaded ports for easy installation.
- Rc-threaded connections is also available upon request for applications requiring enhanced sealing performance.



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;



Durable Self-Priming Design for Gas-Liquid Mixed Transfer

- High-wear-resistance surface treatment for the impeller and containment shell, improving strength and durability;
- Special self-priming pump chamber design for reliable handling of complex gas-liquid mixed conditions;
- Stainless steel castings tested for 120 hours in salt spray with no visible rust;
- Samarium-cobalt permanent magnets in both inner and outer magnetic couplings for high-temperature resistance;



High-Pressure Structural Design | Pressure Resistance up to 7 Mpa

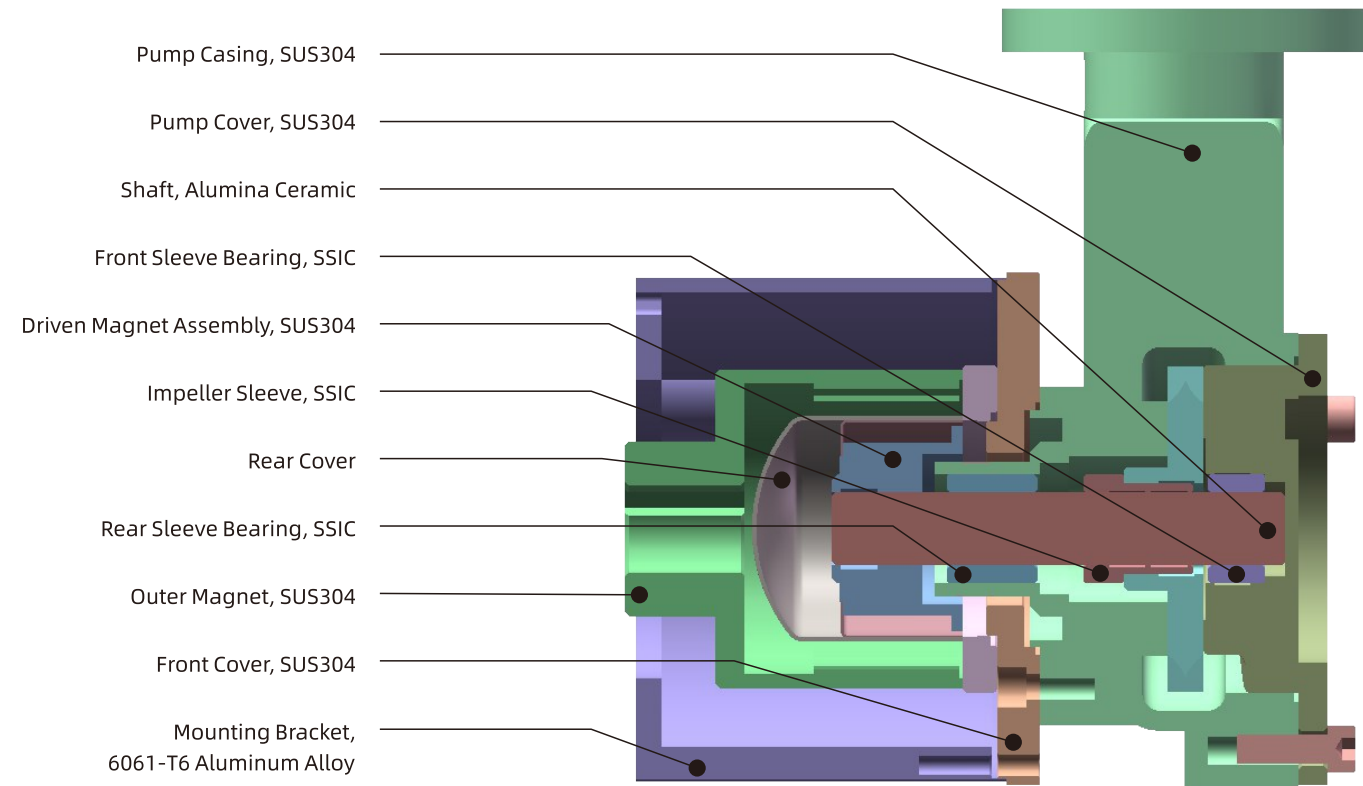
- Vortex impeller design with a standard pressure rating of 40 bar;
- Maximum head up to 80 m;
- Customized high-pressure versions available up to 7 MPa, delivering over 200 m head;



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	Pump Casing	SUS304	7	Rear Cover	SUS304
2	Pump Cover	SUS304	8	Rear Sleeve Bearing	SSIC
3	Shaft	Alumina Ceramic	9	Outer Magnet	SUS304
4	Front Sleeve Bearing	SSIC	10	Front Cover	SUS304
5	Driven Magnet	SUS304	11	Mounting Bracket	6061-T6 Aluminum Alloy
6	Impeller Sleeve	SSIC			

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.

QWH

Gas-Liquid Mixing Magnetic Vortex Pump

- Zero Leakage
- Stainless Steel
- Low Noise
- Low Vibration
- Gas-Liquid Service
- Corrosion Resistant
- High-Temperature Resistant
- Low-Temperature Resistant



QWH40-32-4

QWH Series is a sealless magnetic drive vortex pump designed for high and low temperature gas-liquid mixed transfer applications. It features a self-priming pump chamber design, with wetted parts made of 304 or 316 stainless steel.

Equipped with special high-temperature samarium-cobalt magnetic materials, the pump delivers stable operation for over 8,000 hours in media temperatures ranging from -120°C to +350°C. It also provides reliable gas-liquid handling capability for mixed-phase transfer conditions.

A range of customized configurations is available, including explosion-proof design, variable frequency drive control, and IE5 permanent magnet energy-saving motor options, making the pump suitable for applications in pharmaceuticals, chemical processing, laboratory and test equipment, high/low temperature testing, and precision temperature control systems for the semiconductor industry.

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;
- Compact size, low vibration, ultra-quiet operation, stable performance, and long service life;
- Self-priming pump chamber for reliable gas-liquid mixed transfer;
- 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

- Electronics and semiconductor process equipment;
- High-temperature mold temperature control;
- High-/low-temperature testing systems;
- Semiconductor precision temperature control;
- Chemical processing equipment;
- Ultrasonic cleaning systems;
- High-end dyeing and finishing equipment;
- Skid-mounted systems;
- TCU temperature control systems;
- Vacuum distillation;
- Hydrogen generation;
- Ozone generation;
- NMP solution recovery;
- Chemical solvent transfer;

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

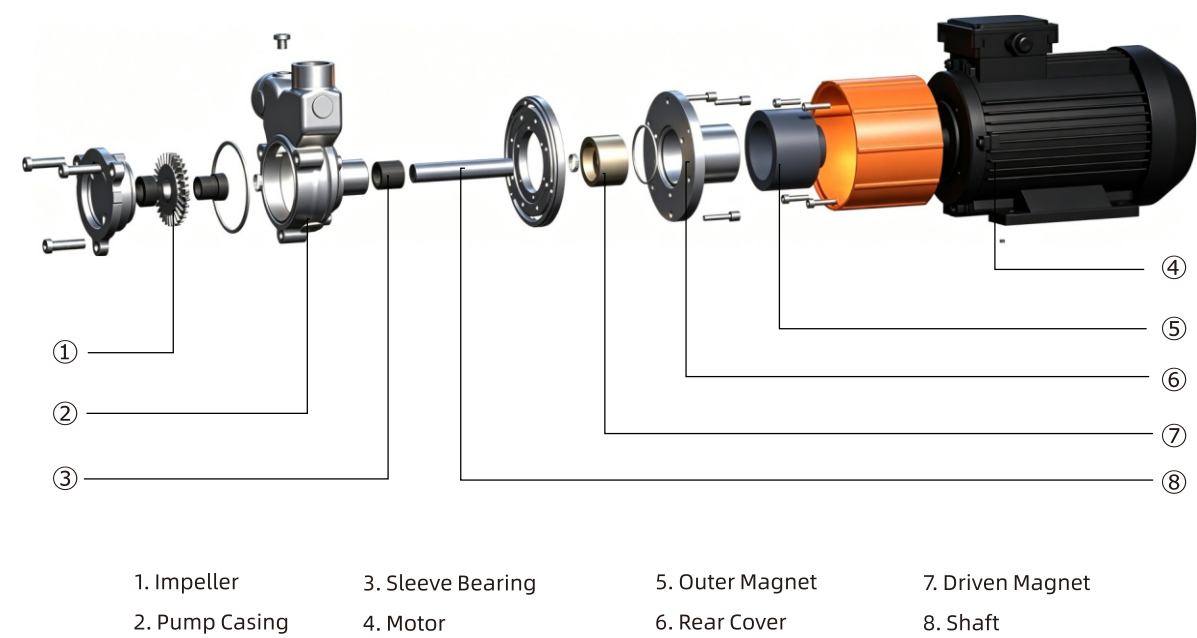


QWH25-20



QWH40-32

QWH Exploded View



QWH 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

QWH Specification

Model	Caliber (mm)		Max. Flow				Max. Head (m)		Specific Gravity	Motor		Net Weight (kg)
			50 Hz		60 Hz		50 Hz	60 Hz		Power		
	Inlet	Outlet	(L/min)	(m³/h)	(L/min)	(m³/h)				kW	HP	
QWH20-15-07	20	15	40	2.4	43.3	2.6	46.4	45.2	< 1.2	0.5	0.7	15.2
QWH20-15-1	20	15	40	2.4	45	2.7	54.7	50.2	< 1.2	0.75	1	16.5
QWH25-20-1.5	25	20	56.7	3.4	60	3.6	54.4	54.2	< 1.2	1.1	1.5	17.6
QWH32-25-2	32	25	93.3	5.6	100	6	63.3	42.3	< 1.2	1.5	2	21.3
QWH40-32-3	40	32	131.7	7.9	146.7	8.8	67.4	45.3	< 1.2	2.2	3	25.2
QWH40-32-4	40	32	138.3	8.3	161.7	9.7	80.4	66.5	< 1.2	3	4	33.7
QWH50-40-5	50	40	256.7	15.4	246.7	14.8	56.5	42.3	< 1.2	4	5	36.2
QWH50-40-7.5	50	40	296.7	17.8	286.7	17.2	68.8	46.3	< 1.2	5.5	7.5	60
QWH50-40-10	50	40	296.7	17.8	320	19.2	78.7	70.1	< 1.2	7.5	10	64.1

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.

Model Definition

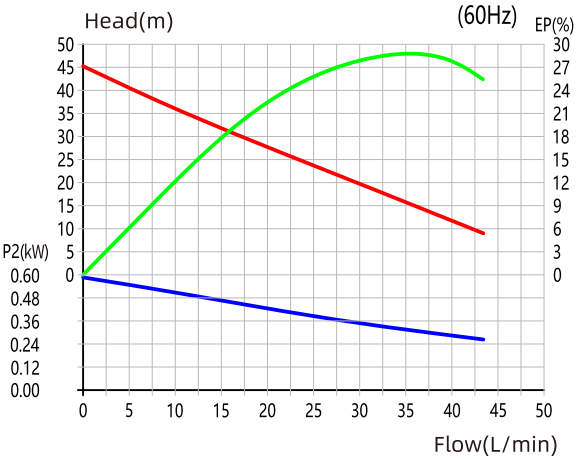
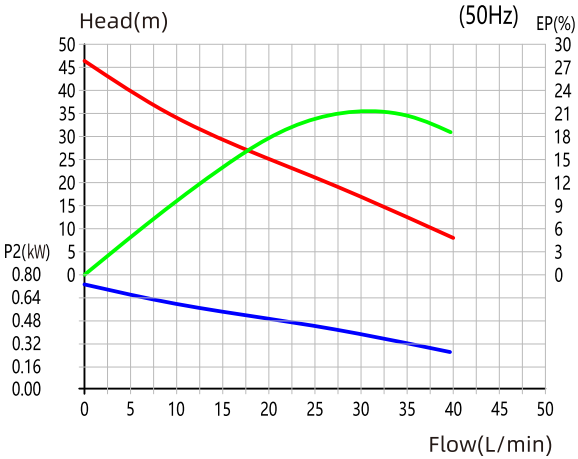
QWH - 25 - 20 - 1 - 5 - S4 - V38 - A - F - A - A - S

- ① Model No.: QWH
- ② Inlet Caliber: 20-20 mm; 25-25 mm; 32-32 mm; 40-40 mm; 50-50 mm
- ③ Outlet Caliber: 15-15 mm; 20-20 mm; 25-25 mm; 32-32 mm; 40-40 mm
- ④ Power: 07-0.7 HP; 1-1 HP; 1.5-1.5 HP; 2-2 HP; 3-3 HP; 4-4 HP; 5-5 HP; 7.5-7.5 HP; 10-10 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

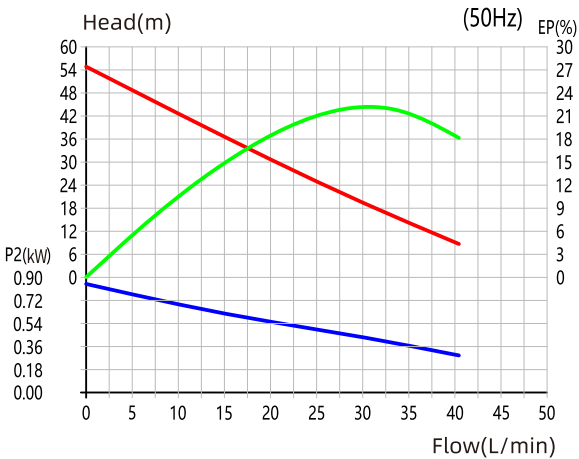
Performance Curve

Head/Flow Efficiency Shaft Power

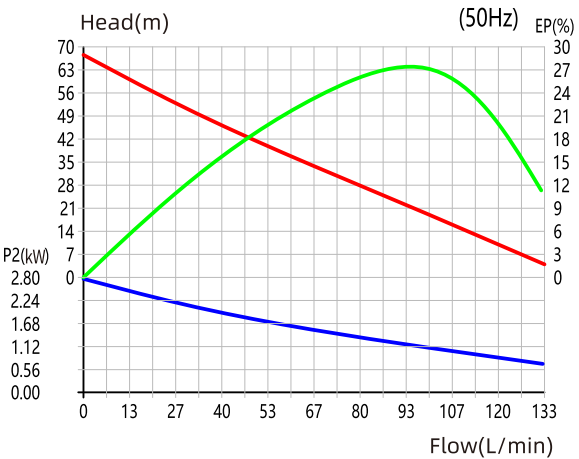
QWH-20-15-07



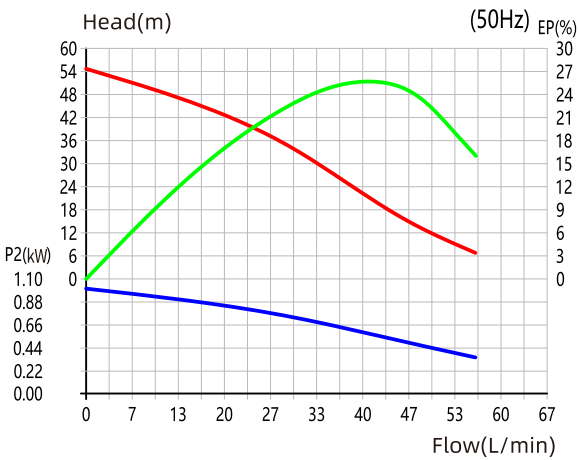
QWH25-20-1



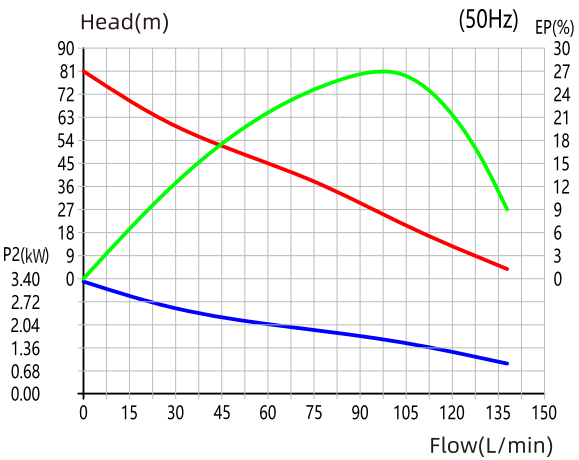
QWH40-32-3



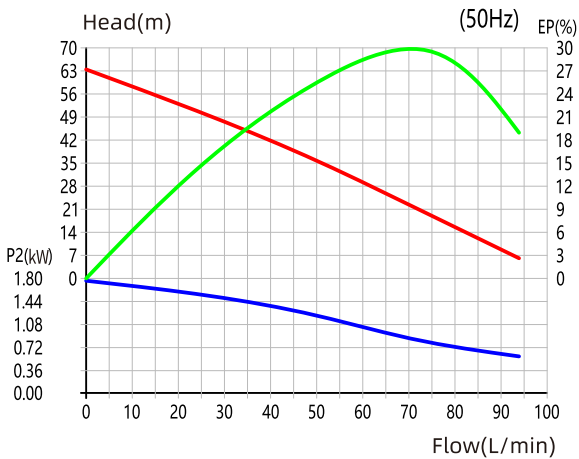
QWH25-20-1.5



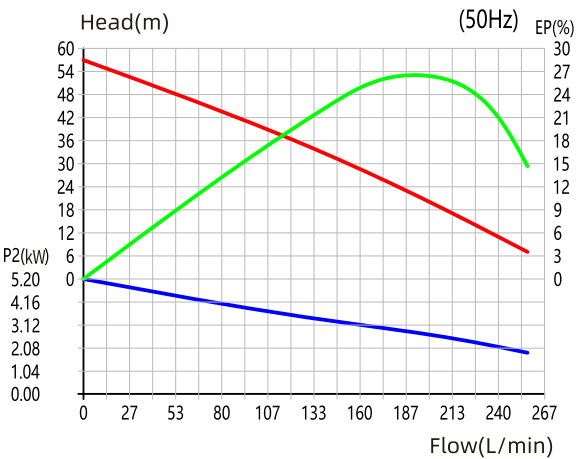
QWH40-32-4



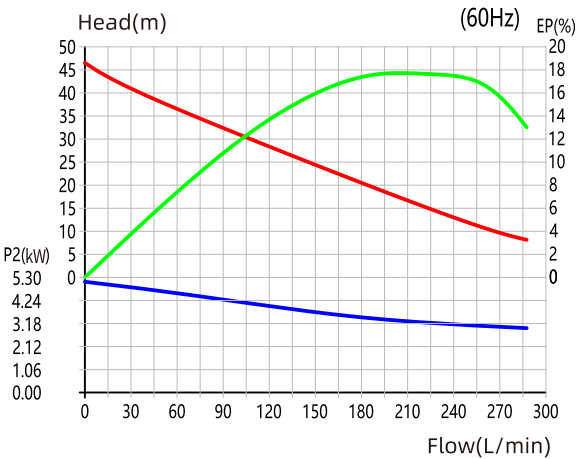
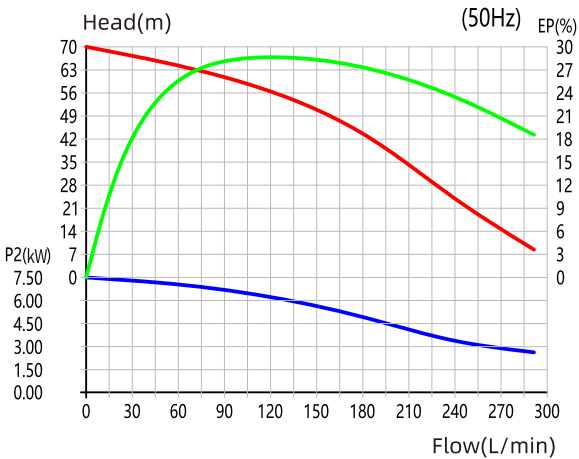
QWH32-25-2



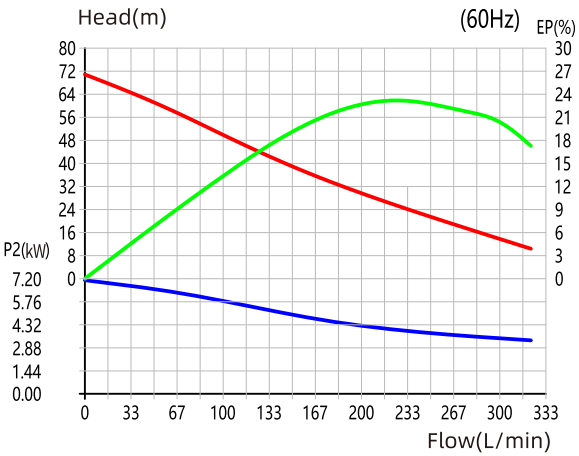
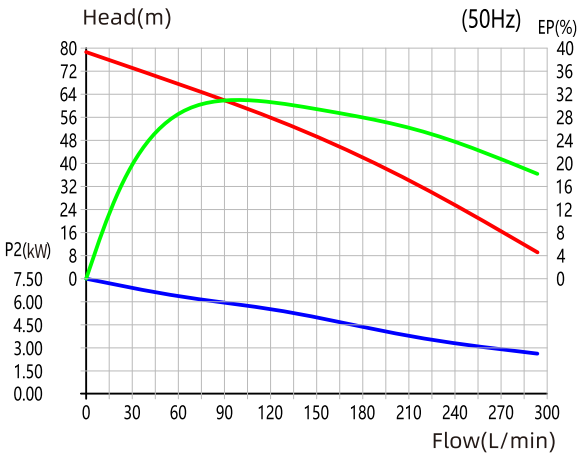
QWH50-40-5



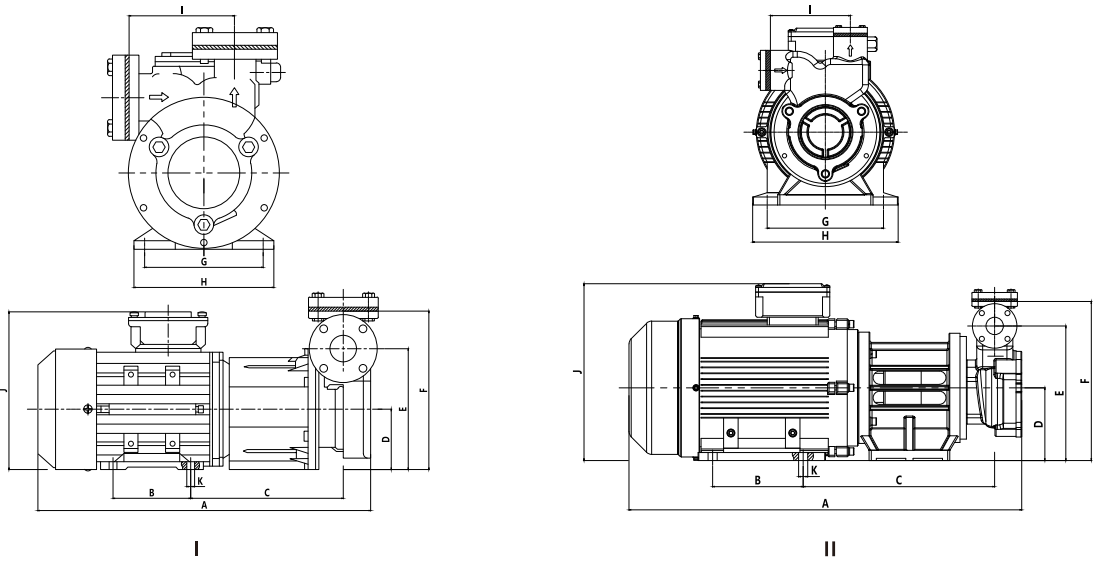
QWH50-40-7.5



QWH50-40-10



Dimensional Drawing



Dimension

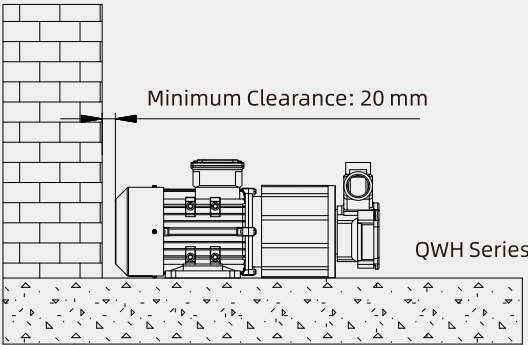
Unit: mm

No.	Model	A	B	C	D	E	F	G	H	I	J	K
I	QWH20-15-07	398	90	185	71	128	158	111	140	76	182	Ø9×13
	QWH25-20-1	402	90	190	71	131	160	111	140	76	179	Ø8×12
	QWH25-20-1.5	405	90	185	71	140	175	111	140	89	180	Ø10×13
	QWH40-32-2	433	100	197	80	150	200	125	158	102	201	Ø11×15
II	QWH40-32-3	433	100	197	80	150	200	125	158	102	201	Ø11×15
	QWH40-32-4	557	138	260	100	184	232	159	200	114	256	Ø14×20
	QWH50-40-5	557	139	260	100	200	255	159	200	125	256	Ø14×20
	QWH50-40-7.5	655	140	308	132	237	286	215	255	124	320	Ø14×20
	QWH50-40-10	655	140	308	132	237	286	215	255	124	320	Ø14×20

Basic Installation Requirements

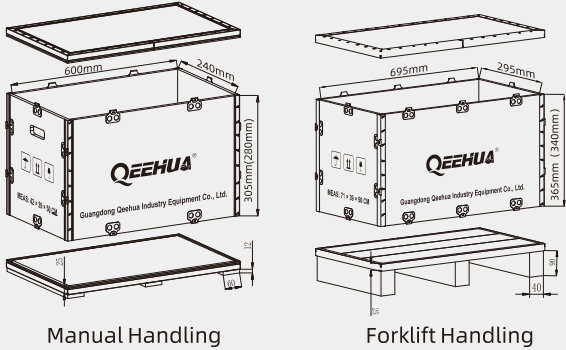
Basic Installation Requirements

Minimum installation distance from the wall



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.



-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



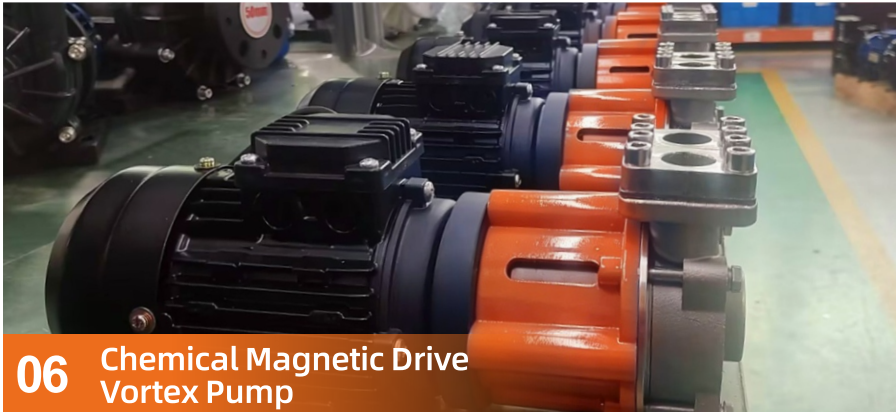
03 Optical Mold Temperature Controller



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



