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QLL SERIES STAINLESS STEEL VERTICAL MAGNETIC DRIVE PUMP

Wide Temperature Resistance | High Head |
Compact Design | Low Vibration



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

GUANGDONG QEEHUA INDUSTRY EQUIPMENT CO., LTD.

Pump for Skid-Mounted Systems

QLL Series Stainless Steel Vertical Magnetic Drive Pump

Wide Temperature Resistance

High Head Performance

High Flow Capacity



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



High Head,
Zero Leakage



304 / 316
Stainless Steel
Construction



High Reliability &
Versatile Applications

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

Stainless Steel Vertical Magnetic Drive Pump Designed for High and Low Temperature Media

The QLL series stainless steel vertical magnetic drive 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 QLL 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 Flanged Connections

- The inlet and outlet flanges are precision-cast from 304/316 stainless steel;
- Easy installation, safer, more secure, and reliable connection;



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;



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

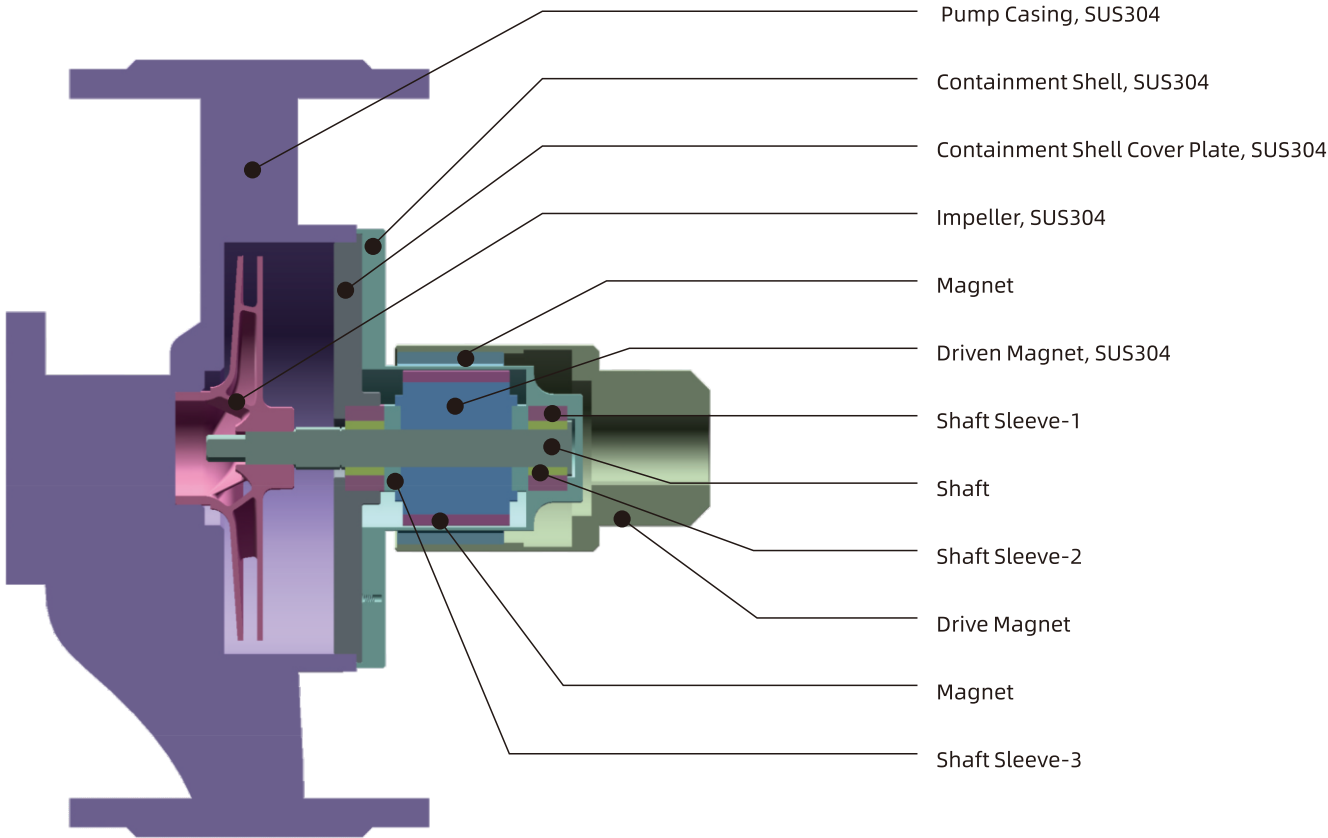
- Vortex impeller design with a standard pressure rating of 40 bar;
- Maximum head up to 84.5 m;
- Customized high-pressure versions available up to 7 MPa, delivering over 200 m head;



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	Shaft Sleeve-1	SSIC
2	Containment Shell	SUS304	8	Shaft	SUS304
3	Containment Shell Cover Plate	SUS304	9	Shaft Sleeve-2	SSIC
4	Impeller	SUS304	10	Drive Magnet	SUS304
5	Magnet	SUS304	11	Magnet	---
6	Driven Magnet	---	12	Shaft Sleeve-3	SSIC

Note 1
Magnet: high-temperature SmCo permanent magnetic steel
Shaft 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.



QLL

Stainless Steel Vertical Magnetic Drive Pump

- Zero Leakage
- Stainless Steel
- Low Noise
- Low Vibration
- High-Temperature Resistant
- Low-Temperature Resistant



QLL-40

Max Head: 248 m
Max Flow: 163 m³/h

QLL Series adopts a seal-less magnetic drive design with no shaft seal, eliminating the risk of leakage. 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;
- High head, large flow rate, stable operation, and long service life;
- 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;

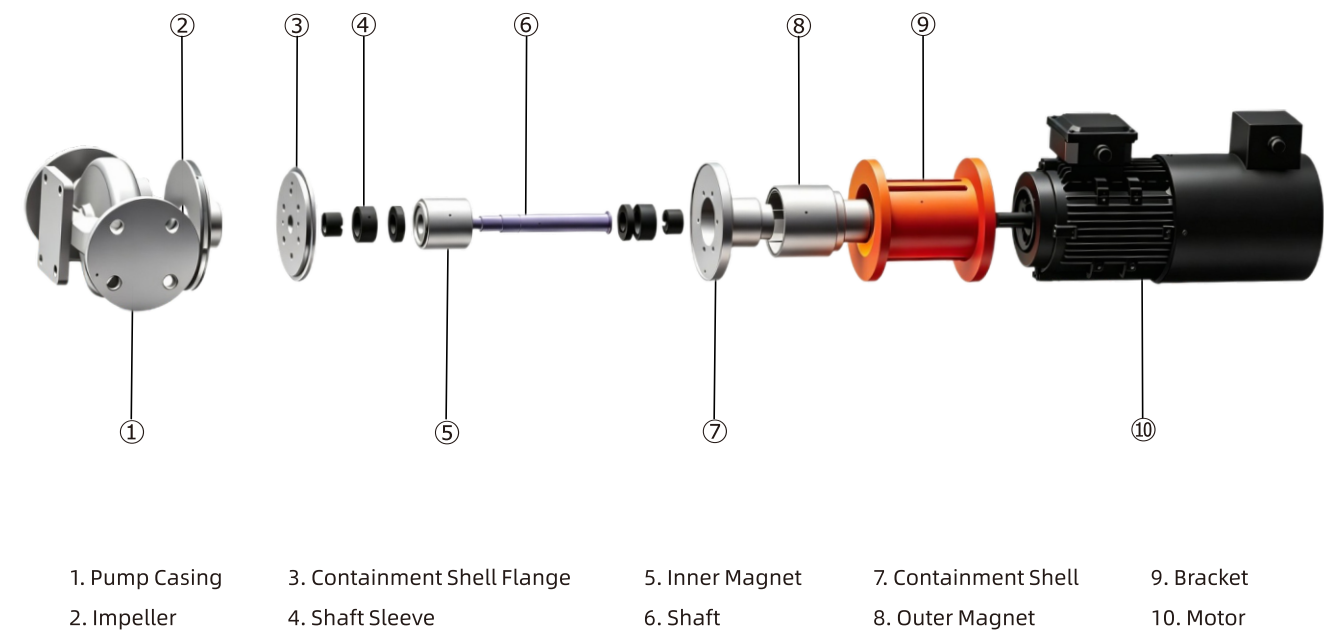
Applications

- 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

QLL Exploded View



Model Definition

QLL - 32 - 2 - 5 - S4 - 160 - V38 - A - F - A - A - S
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

- ① Model No.: QLL
- ② Inlet/Outlet Caliber: 25-25 mm; 32-32 mm; 40-40 mm; 50-50 mm; 65-65 mm; 80-80 mm; 100-100 mm; 125-125 mm
- ③ Power: 1-1 HP; 2-2 HP; 3-3 HP; 4-4 HP; 5.5-5.5 HP; 7.5-7.5 HP; 10-10 HP; 15-15 HP; 20-20 HP; 30-30 HP; 40-40 HP; 50-50 HP; 75-75HP; 102-102 HP
- ④ Frequency: 5-50 Hz; 6-60 Hz
- ⑤ Materials of Pump Head: S4-SUS304; S6-SUS316
- ⑥ Impeller Nominal Diameter: 125 mm; 160 mm; 200 mm; 250 mm; 315 mm; 350 mm
- 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 Normal Motor; B-IE4 Normal Motor; C-IE5 Normal Motor; D-Variable Frequency 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 Frequency 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

QLL 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

QLL Specification

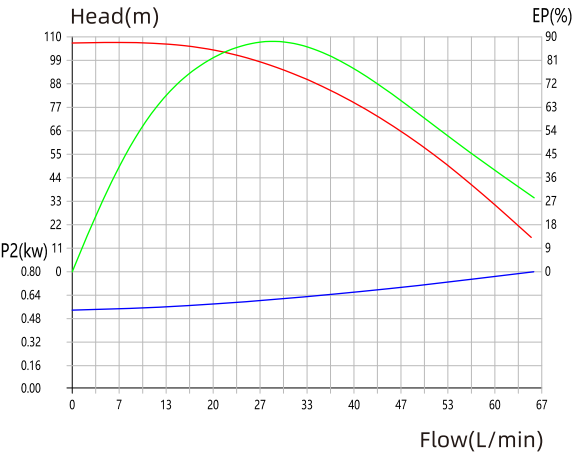
Model	Caliber		Performance Data		Motor	
	Inlet	Outlet	50HZ		Power (kW)	
	mm	mm	Head (m)	Flow (m³/h)	kW	HP
QLL25-1	25	25	105.7	3.9	0.75	1
QLL25-2	25	25	158.9	3.9	1.5	2
QLL32-2	32	32	159.5	5	1.5	2
QLL32-4	32	32	100.2	4.5	3	4
QLL40-2	40	40	100.5	6.3	1.5	2
QLL40-3	40	40	160.9	6.2	2.2	3
QLL40-5.5	40	40	96.7	6.2	4	5.5
QLL40-10	40	40	153.8	6.3	7.5	10
QLL50-2	50	50	96.1	12.6	1.5	2
QLL50-4	50	50	63.4	12.4	3	4
QLL50-7.5	50	50	97.4	12.5	5.5	7.5
QLL50-15	50	50	157.5	12.5	11	15
QLL50-30	50	50	217.3	24.1	22	30
QLL65-4	65	65	41.6	26.2	3	4
QLL65-5.5	65	65	63.3	26	4	5.5
QLL65-10	65	65	98.7	25.8	7.5	10
QLL65-20	65	65	157.2	26.5	15	20
QLL65-40	65	65	242.6	26.2	30	40
QLL80-20	80	80	101.5	51	15	20
QLL80-30	80	80	151.5	51.6	22	30
QLL80-75	80	80	291.3	50.3	55	75
QLL100-30	100	100	119	102.4	22	30
QLL100-50	100	100	160.3	102.1	37	50
QLL100-102	100	100	248.6	101.4	75	102
QLL125-20	125	125	41.1	163.1	15	20
QLL125-30	125	125	65.6	162.3	22	30
QLL125-50	125	125	108.6	162.2	37	50
QLL125-75	125	125	164.3	160.4	55	75

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.

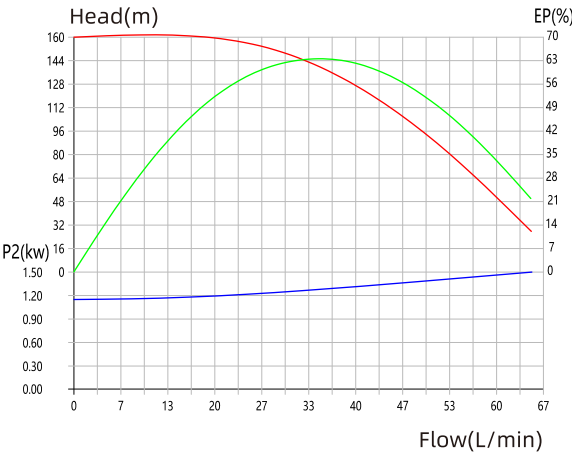
Performance Curve (50 Hz)

Head/Flow Efficiency Shaft Power

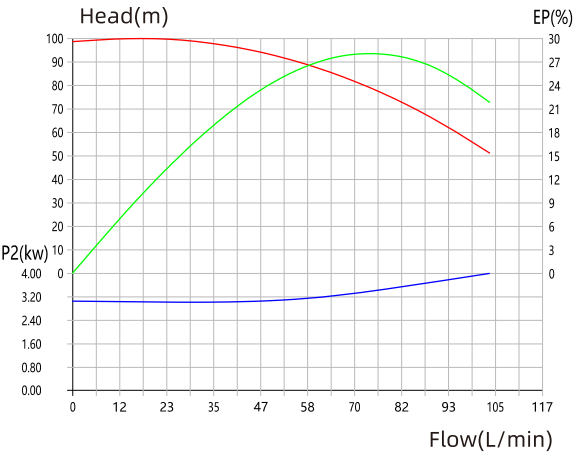
QLL-25-1



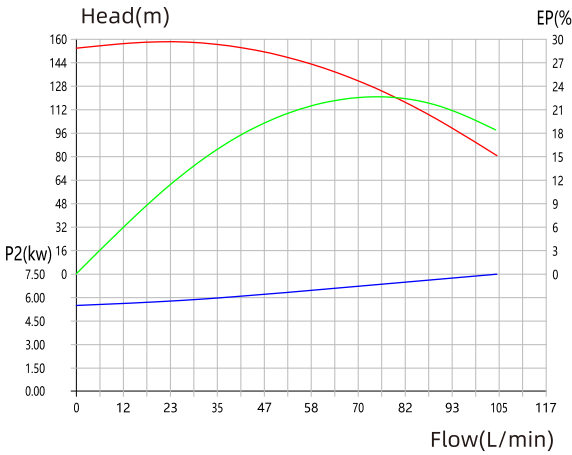
QLL-25-2



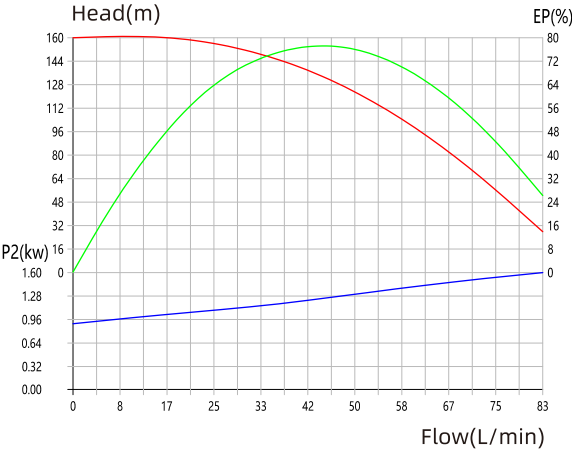
QLL-40-5.5



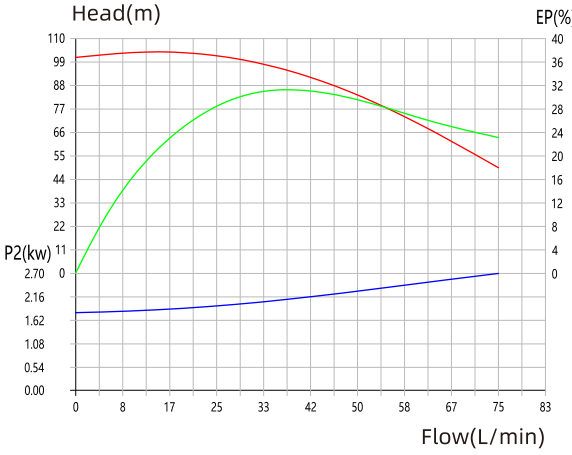
QLL-40-10



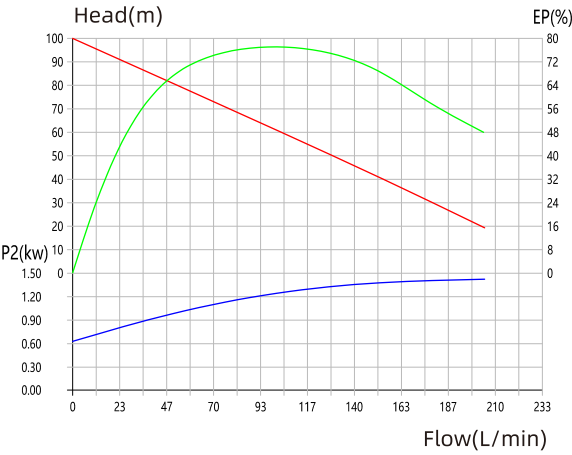
QLL-32-2



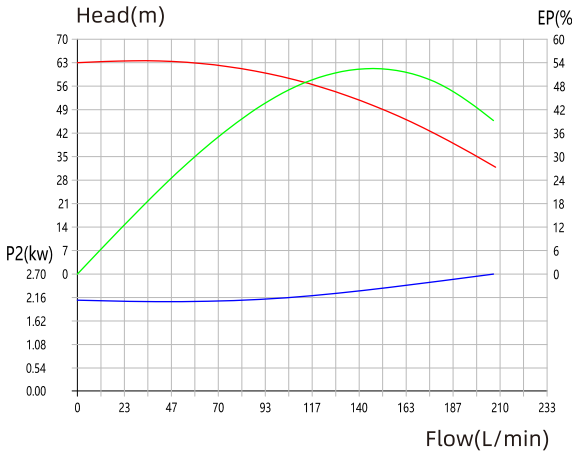
QLL-32-4



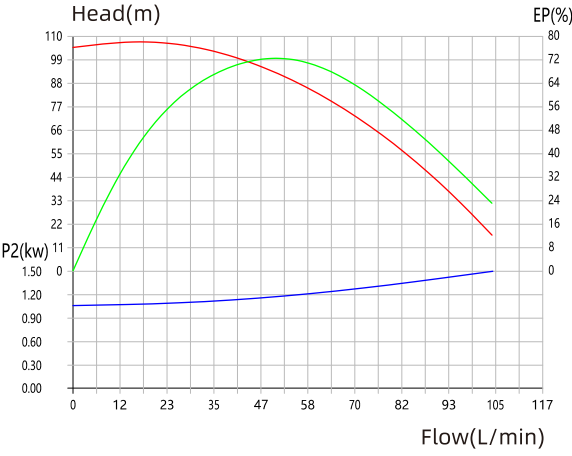
QLL-50-2



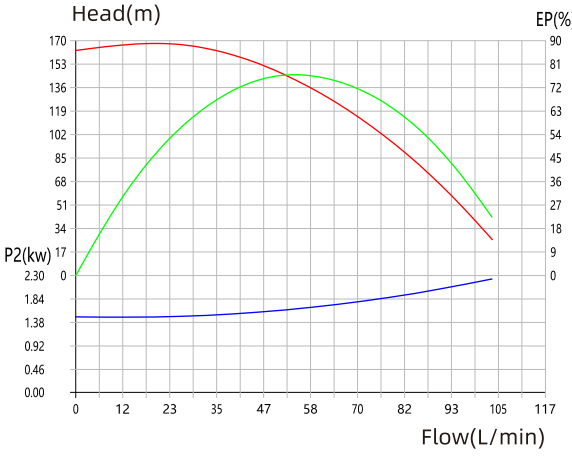
QLL-50-4



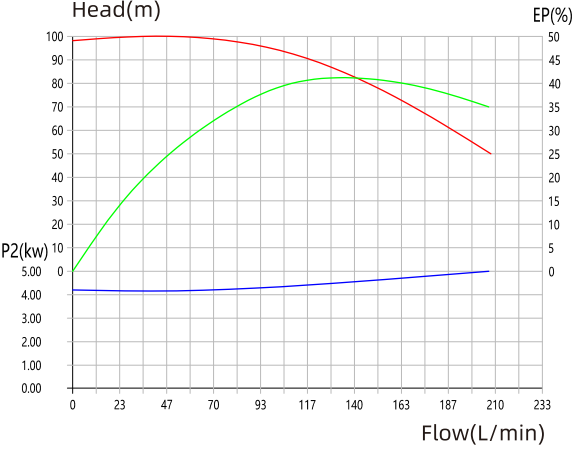
QLL-40-2



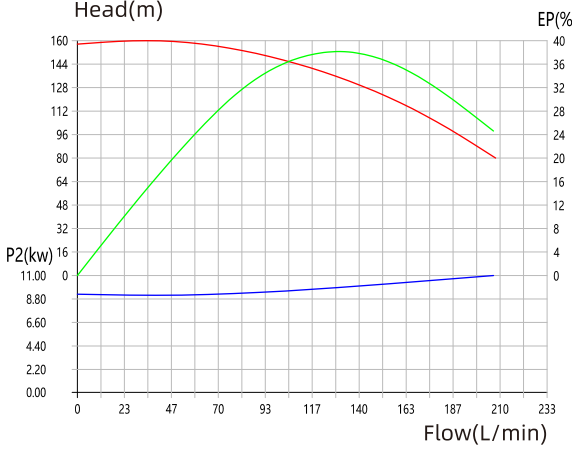
QLL-40-3



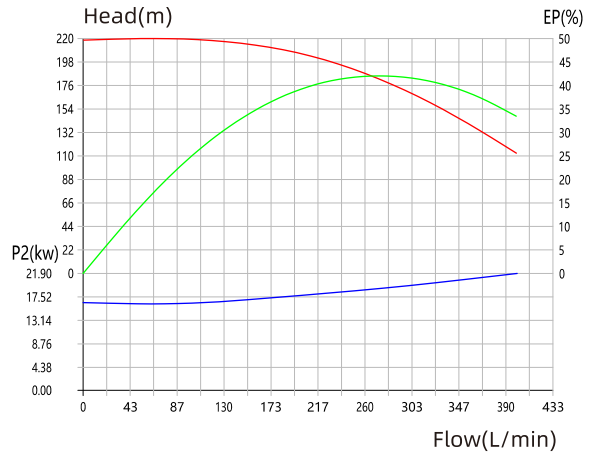
QLL-50-7.5



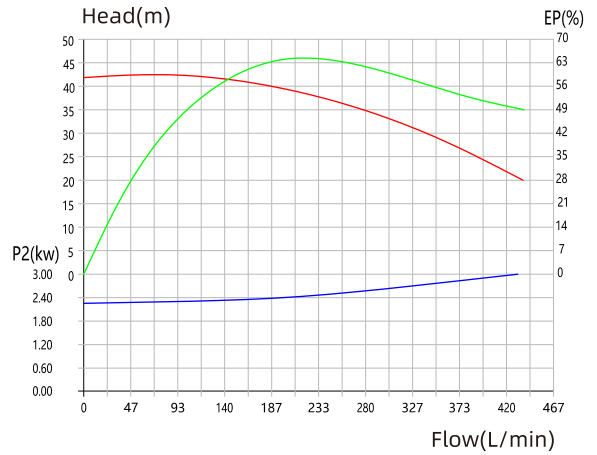
QLL-50-15



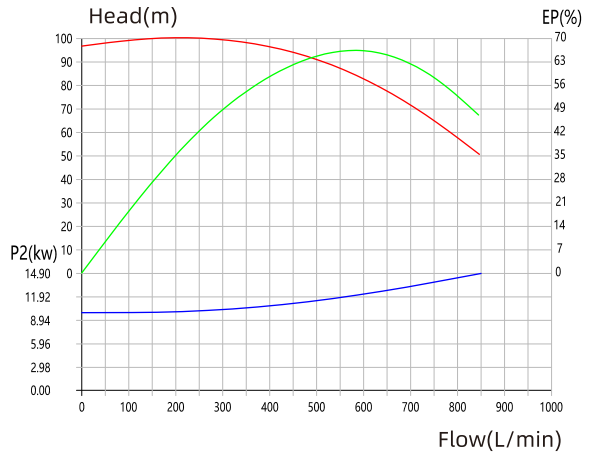
QLL-50-30



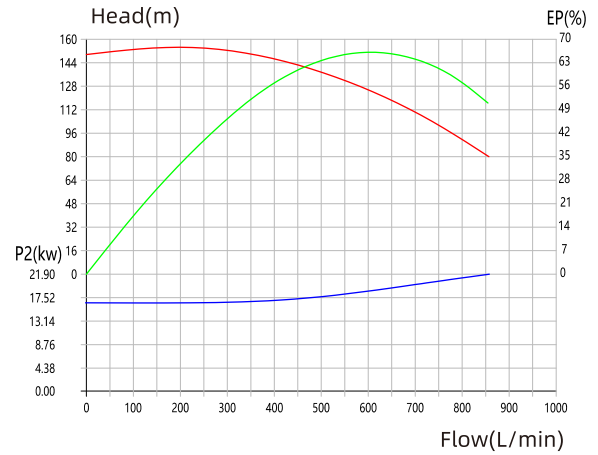
QLL-65-4



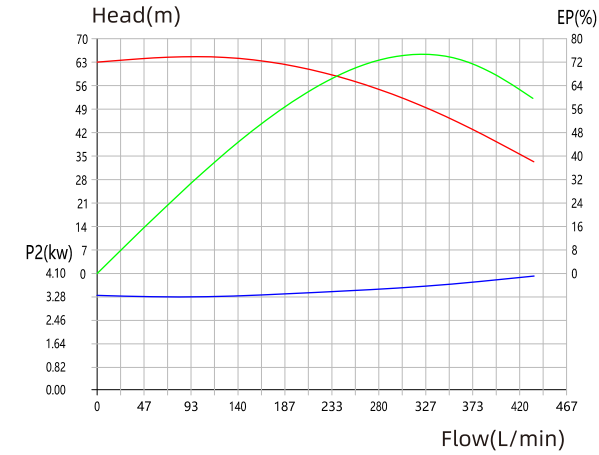
QLL-80-20



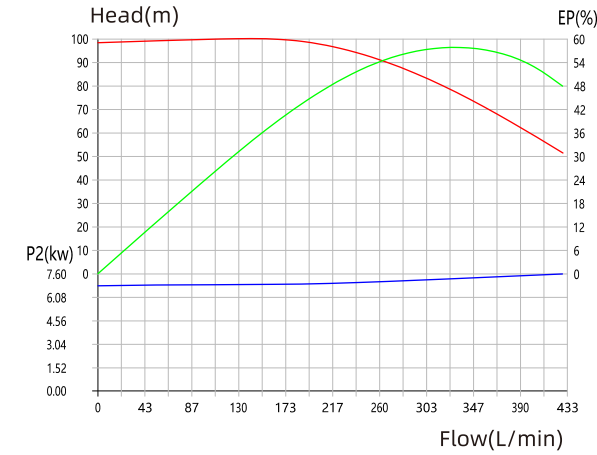
QLL-80-30



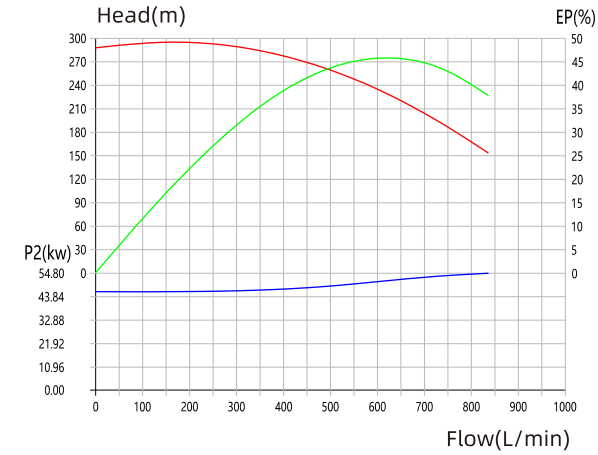
QLL-65-5.5



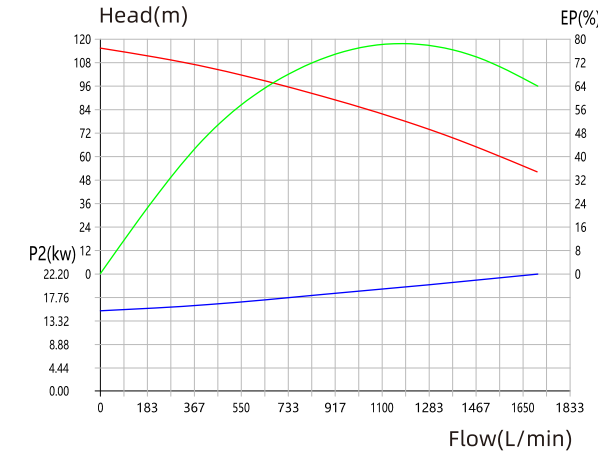
QLL-65-10



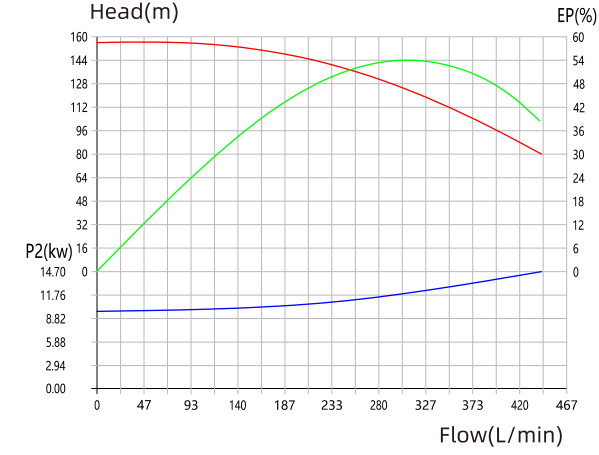
QLL-80-74



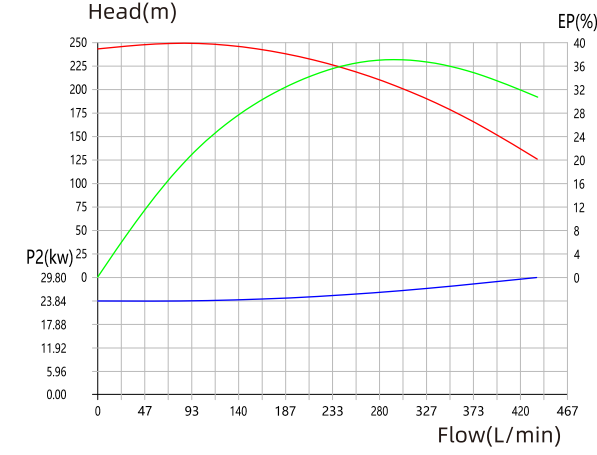
QLL-100-30



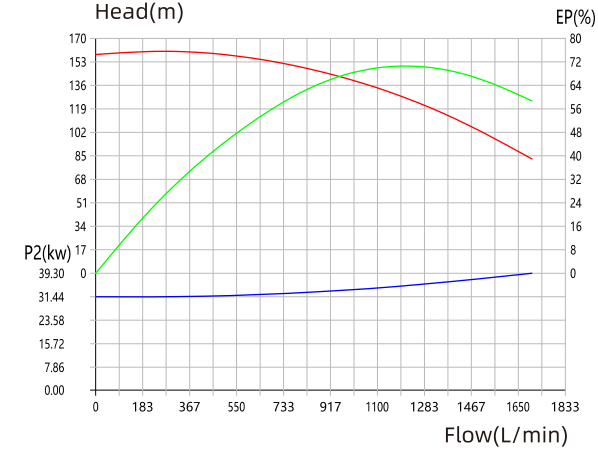
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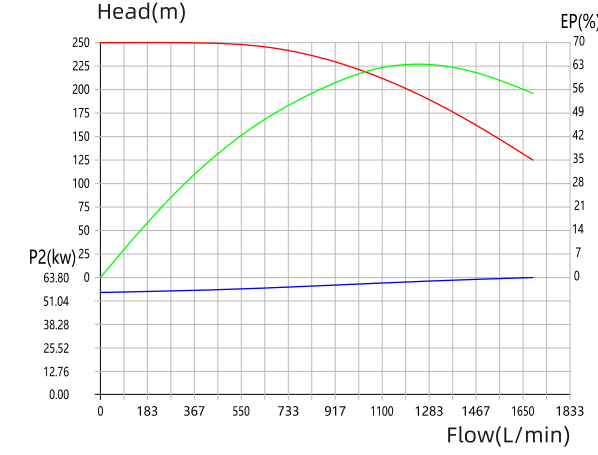
QLL-65-40



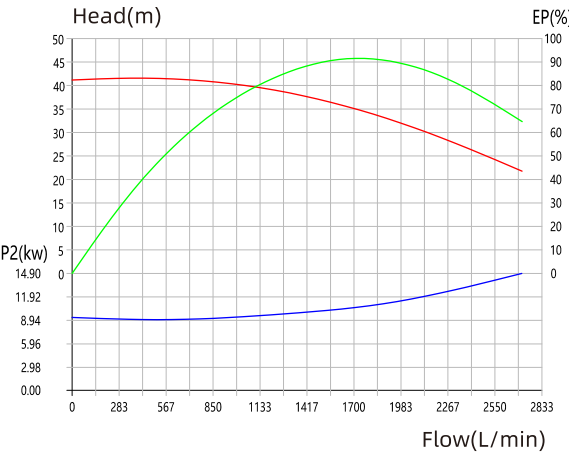
QLL-100-50



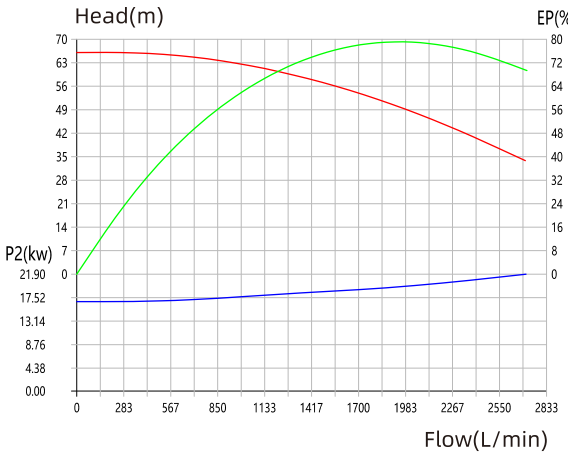
QLL-100-102



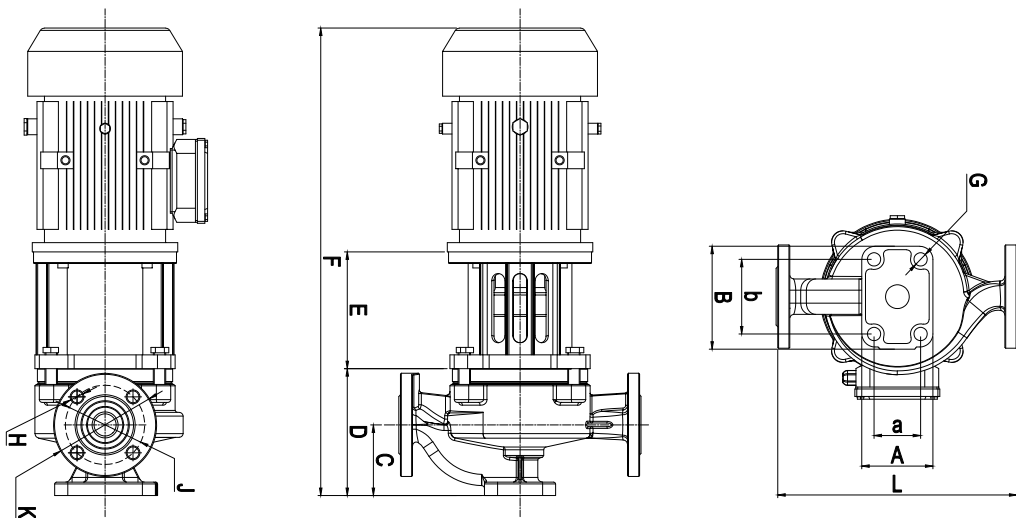
QLL-125-20



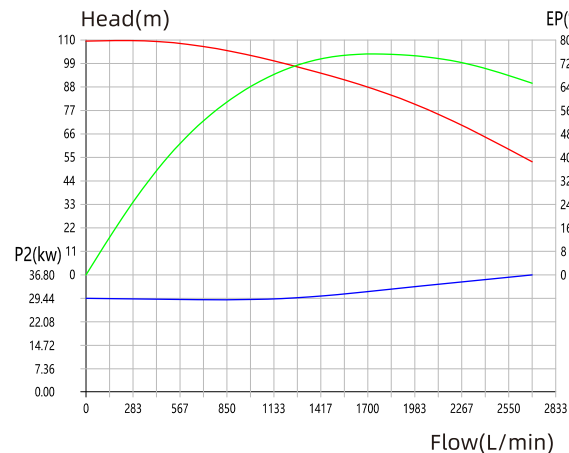
QLL-125-30



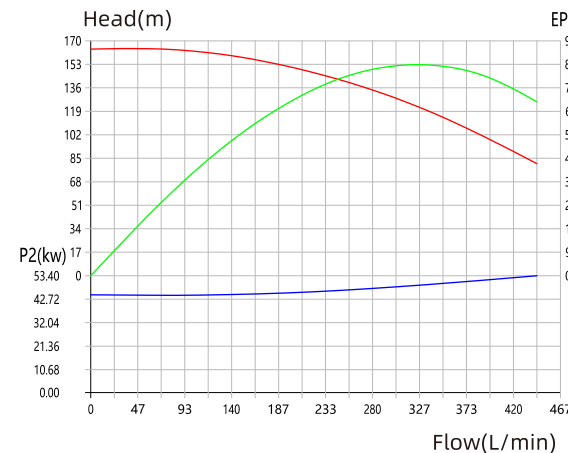
Dimensional Drawing



QLL-125-50



QLL-125-75

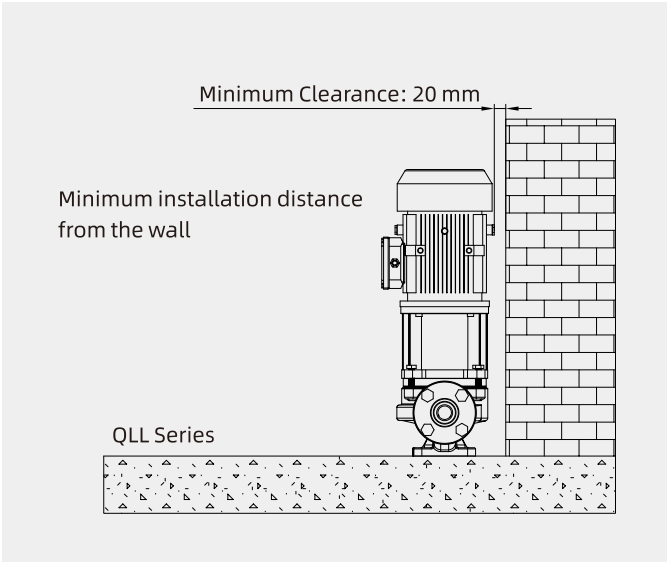


Dimension

Unit: mm

Model	a	b	A	B	C	D	E	F	G	H	J	K	L
QLL25-1	50	80	80	110	75	113	155	482	4×Ø14	8×Ø14	Ø85	Ø115	260
QLL25-2	60	100	90	130	65	98	155	538	4×Ø14	8×Ø14	Ø85	Ø115	300
QLL32-2	70	112	100	150	90	135	155	575	4×Ø14	8×Ø18	Ø100	Ø140	320
QLL32-4	80	135	120	170	95	143	155	608	4×Ø14	8×Ø18	Ø110	Ø150	340
QLL40-2	80	135	120	170	90	135	155	575	4×Ø14	8×Ø18	Ø110	Ø150	300
QLL40-3	80	135	120	170	95	143	155	583	4×Ø14	8×Ø18	Ø110	Ø150	340
QLL40-5.5	80	135	120	170	95	143	195	648	4×Ø14	8×Ø18	Ø110	Ø150	360
QLL40-10	100	160	140	200	105	158	195	788	4×Ø14	8×Ø18	Ø110	Ø150	450
QLL50-2	70	115	100	150	95	143	155	583	4×Ø14	8×Ø18	Ø125	Ø165	300
QLL50-4	80	135	120	170	100	150	155	615	4×Ø14	8×Ø18	Ø125	Ø165	320
QLL50-7.5	80	135	120	170	100	150	195	780	4×Ø14	8×Ø18	Ø125	Ø165	360
QLL50-15	100	160	140	200	105	158	235	828	4×Ø14	8×Ø18	Ø125	Ø165	440
QLL50-30	120	180	160	220	110	165	235	985	4×Ø18	8×Ø18	Ø125	Ø165	550
QLL65-4	100	160	140	200	100	150	155	615	4×Ø18	8×Ø18	Ø145	Ø185	340
QLL65-5.5	100	160	140	200	100	150	195	655	4×Ø18	8×Ø18	Ø145	Ø185	360
QLL65-10	100	160	140	200	105	158	195	788	4×Ø18	8×Ø18	Ø145	Ø185	380
QLL65-20	120	180	160	220	110	165	235	900	4×Ø18	8×Ø18	Ø145	Ø185	480
QLL65-40	120	180	160	220	110	165	285	1105	4×Ø18	8×Ø18	Ø145	Ø185	550
QLL80-20	100	160	140	200	125	188	235	923	4×Ø18	8×Ø18	Ø160	Ø200	430
QLL80-30	120	180	160	180	130	195	235	1015	4×Ø18	8×Ø18	Ø160	Ø200	480
QLL80-75	160	220	202	260	130	195	285	1245	4×Ø18	8×Ø18	Ø160	Ø200	630
QLL100-30	120	180	160	220	140	210	235	1030	4×Ø18	8×Ø18	Ø180	Ø220	480
QLL100-50	160	220	190	280	175	263	285	1203	4×Ø18	8×Ø18	Ø180	Ø220	600
QLL100-102	170	260	230	320	165	248	285	1373	4×Ø22	8×Ø18	Ø180	Ø220	640
QLL125-20	160	220	190	280	170	255	235	990	4×Ø22	8×Ø18	Ø210	Ø250	520
QLL125-30	160	220	190	280	175	253	235	1083	4×Ø22	8×Ø18	Ø210	Ø250	520
QLL125-50	210	260	250	300	175	263	285	1203	4×Ø22	8×Ø18	Ø210	Ø250	540
QLL125-75	160	220	200	260	170	255	285	1305	4×Ø22	8×Ø18	Ø210	Ø250	680

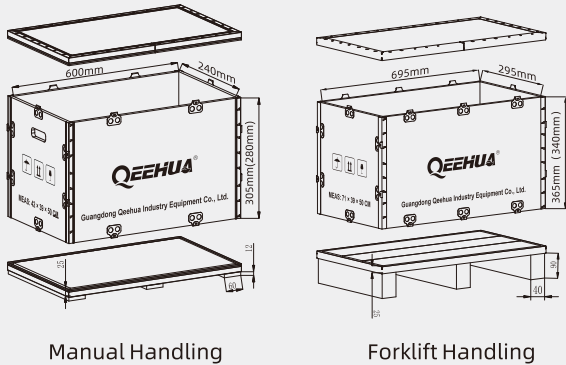
Basic Installation Requirements



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.



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

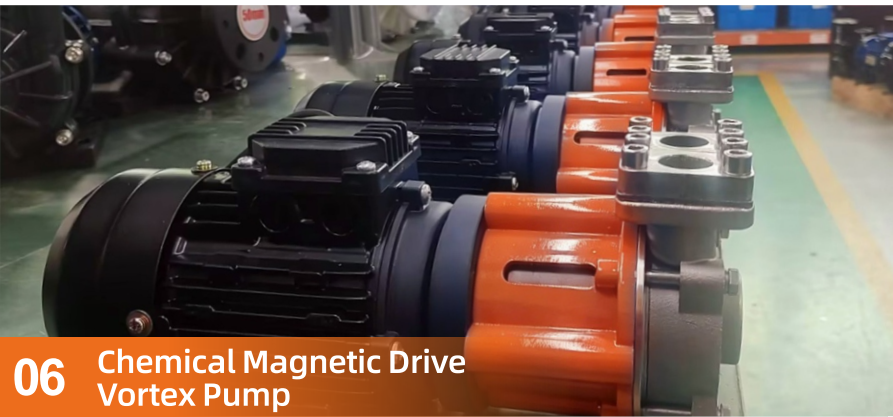
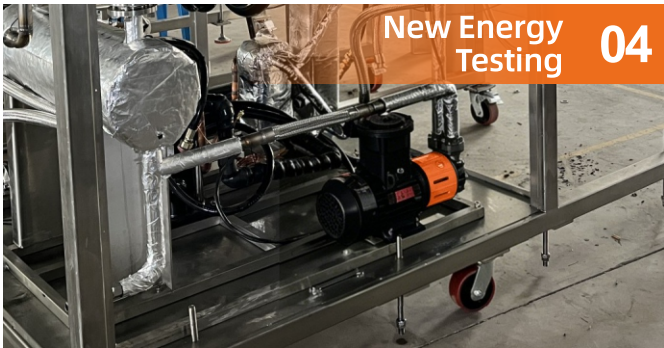
Applications: pharmaceutical, chemical, testing equipment, dyeing and printing, high and low temperature testing, semiconductor high-precision temperature control



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.



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



