

LAIKO

WQ



**Submersible Electric Pump
for Sewage and Sewage**

LAIKO

WQ

SUBMERSIBLE ELECTRIC PUMP FOR SEWAGE AND SEWAGE

PUMP AND SYSTEM SOLUTION PROVIDER



Superior in Pump, Superior in Energy-Saving.

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LAIKO Laiko Pump
Pump and System Solution Provider

LAIKO Pump(Zhejiang) Co., Ltd. is a subsidiary of Zhejiang Dayuan Pumps Industrial Co., Ltd. (Stock code: 603757), focusing on the research and manufacturing of energy-saving pumps.

LAIKO's applications cover the fields of construction, municipal, and industrial sectors. Currently, we have product lines including Inline Multistage Pumps, Inline Circulation Pumps, Horizontal Multistage Pumps, Cold and Hot Water Circulation Pipeline Pumps, Single-Stage Centrifugal Pumps, Standard Centrifugal Pumps, Stainless steel Horizontal Single-Stage Centrifugal Pumps, Submersible Sewage Pumps, and Immersed Multistage Centrifugal Pumps. Our products are exported to many countries and regions in Europe, America, and Asia, meeting local legal requirements and obtaining recognition from clients.

A standard research and development, production, sales, and service system has laid the core competitiveness and sustainable development space for LAIKO. Reliable product quality and thoughtful after-sales service have earned LAIKO widespread reputation.

LAIKO maintains a pioneering spirit, always adheres to the concept of technological innovation, and never stops exploring energy-saving endeavors!

Research and manufacturing of energy-saving pumps, providing pump and system solutions

With over 34 years of accumulated strength, we have formed an alliance with top domestic water pump research and development, production, sales, and technical teams, Established Zhejiang Laiko Pump Industry Co., Ltd. (referred to as Zhejiang Leike), with comprehensive strength ranking among the top in the industry.

The second-generation green intelligent factory of Industry 4.0 standard covers an area of nearly 200 acres, with an annual output of over 7 million units and a total investment of over 1 billion yuan.

Zhejiang Laiko has established a comprehensive sales and service network nationwide, with direct offices in major cities. Our products are exported to multiple countries and regions in Europe, America, and Asia. China Laiko pumps globally.





R&D STRENGTH

346	29	242	75	6
Domestic patents	Invention Patent	New utility patent	Appearance patent	Overseas patents

As a brand under Dayuan Pump Group, we have a strong foundation with over 177 R&D personnel and more than 352 patents. Our products have been honored with titles such as "Zhejiang Famous Brand Product" and "Zhejiang Export Famous Brand," and are exported to multiple countries and regions across Europe, America, and Asia. Our comprehensive strength ranks among the top in the industry. Through years of continuous investment in research and development, we have established a significant technological innovation advantage.



SERVICE COOPERATION

We have established offices in major cities across the country, supported by a professional and efficient service team. From consultation, purchase, after-sales, to maintenance, we provide high-quality, professional, timely, and attentive services at every stage.

Guided by the principle of "wholehearted dedication and customer-first," we respond quickly to customer needs, offering precise product recommendations and tailored solutions. Our comprehensive and full-cycle services ensure a worry-free experience for our customers.

SERVICE TENET: With all our heart and soul, Putting customers first

SERVICE TENET: Rapid response, Precise solution

SERVICE OBJECTIVES: Efficient O&M, Win-Win Cooperation



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LAIKO Laiko Pump (Zhejiang) Co., Ltd.

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Submersible Electric Pump for Sewage and Sewage

Special cable manufacturing process can completely prevent water from entering the motor through small gaps between wires when the cable skin is damaged or when the front end of the cable is immersed in water; Specially designed submersible motor, IPX8 protection, F-class insulation allows for temperature rise, while the submersible cooling effect is good, the actual temperature rise is low, the motor insulation life is long, and it can ensure that the motor can automatically cut off the power supply in case of abnormal conditions;

Adopting a dual end mechanical seal and an external skeleton oil seal, the oil chamber at the installation of the mechanical seal is specially designed to provide sufficient lubrication even when the oil level is low, extending the service life of the seal and making its sealing performance more reliable, effectively ensuring the safe and continuous operation of the product; The impeller adopts a dual channel design with closed and open shapes, which has good balance, smooth operation, low vibration, and increases the service life of the product. The flow channel has strong ability to pass through, and the measured efficiency is higher than the national standard, saving energy and reducing consumption;

Multiple materials are available, suitable for various media working conditions.

Power supply: 50Hz, three-phase 380V

The temperature of the medium is $\leq 40^{\circ}\text{C}$ in liquid state, the volume ratio of solid material in the conveying medium is $< 2\%$, and the density of the medium is $< 1200\text{kg/m}^3$

During operation, the minimum liquid level should not be less than $2/3$ of the motor's capacity

The diameter of solid objects in the medium shall not exceed the maximum allowable solid diameter

APPLICATION FIELD

Domestic Sewage

Construction/Municipal Sewage Discharge

Enterprise Sewage Treatment and Circulating Water Transportation

Pumping of Slag Slurry from Factories and Mining Enterprises

Livestock Pumping

TECHNICAL DATA

Structure: In addition to conventional sewage pump structures, cutting or mixing types can be selected.

Flow range: $7\sim 2800\text{m}^3/\text{h}$

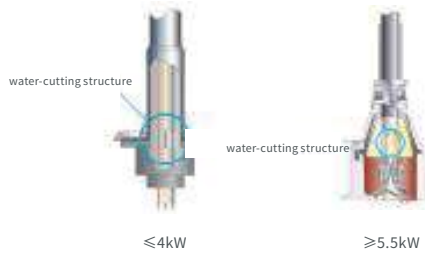
Head range: $7\sim 80\text{m}$

Power range: $0.75\sim 250\text{kW}$

Product Overview

The WQ series submersible sewage pump has the following characteristics:

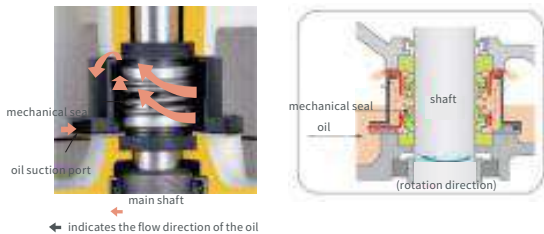
1. Special cable manufacturing process can completely prevent water from seeping into the motor through the tiny gaps between wires when the cable sheath is damaged or the cable end is immersed in water.



2. A specially designed submersible motor with IPX8 protection and Level F insulation. It allows a high temperature rise, and due to the good cooling effect when submerged in water, the actual temperature rise is low, which extends the insulation life of the motor. It can ensure that the power supply is automatically cut off in case of motor abnormalities.



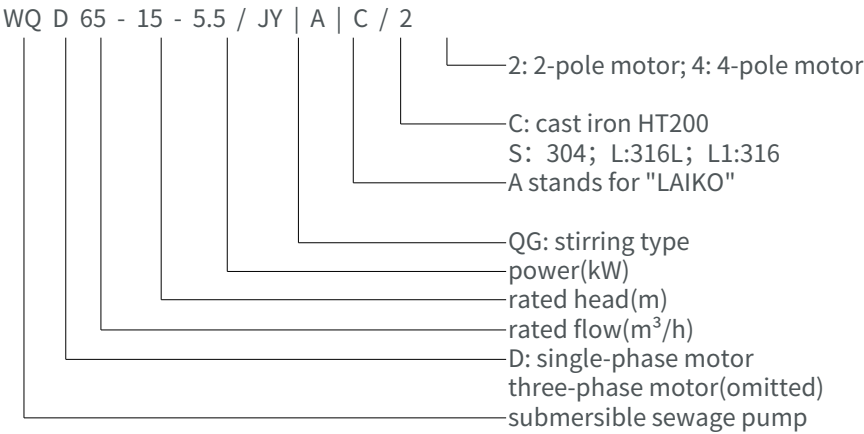
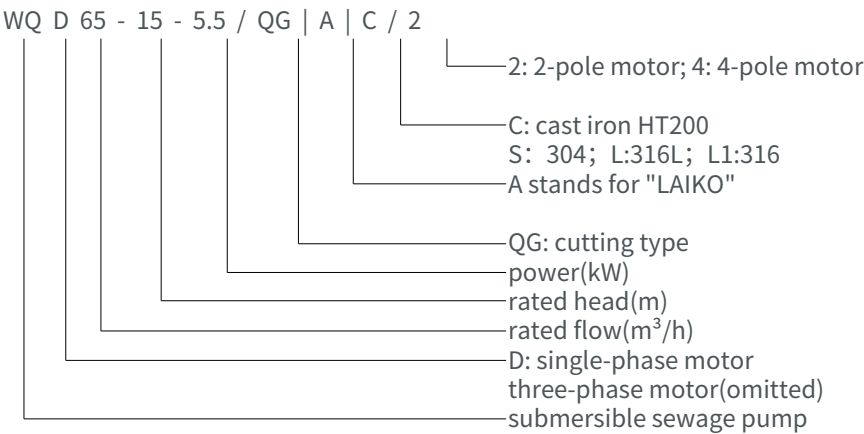
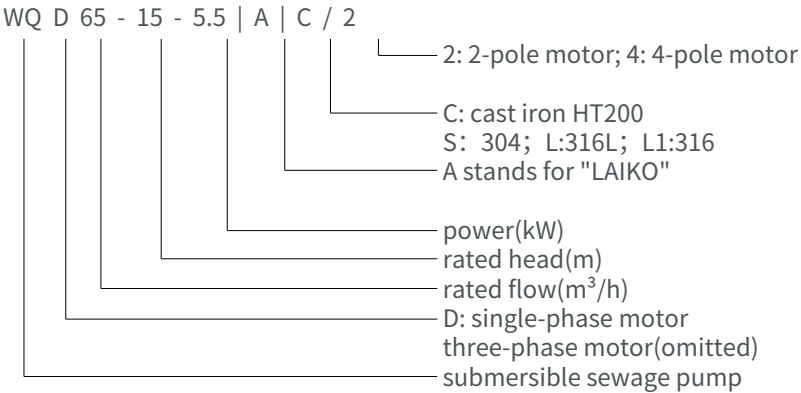
3. It adopts a double-end mechanical seal with an external framework oil seal. There is a special design in the oil chamber where the mechanical seal is installed. Even when the oil level is low, the mechanical seal can still be sufficiently lubricated, which extends the service life of the seal, makes the sealing performance more reliable, and effectively ensures the safe and continuous operation of the product.



4. The impeller adopts a double-flow passage design in both closed and open shapes. Due to the symmetrical flow passages, it has good balance, operates stably, generates less vibration, and increases the service life of the product. The flow passages have strong passing ability, and the measured efficiency is higher than the national standard, which helps to save energy and reduce consumption.



Model Description

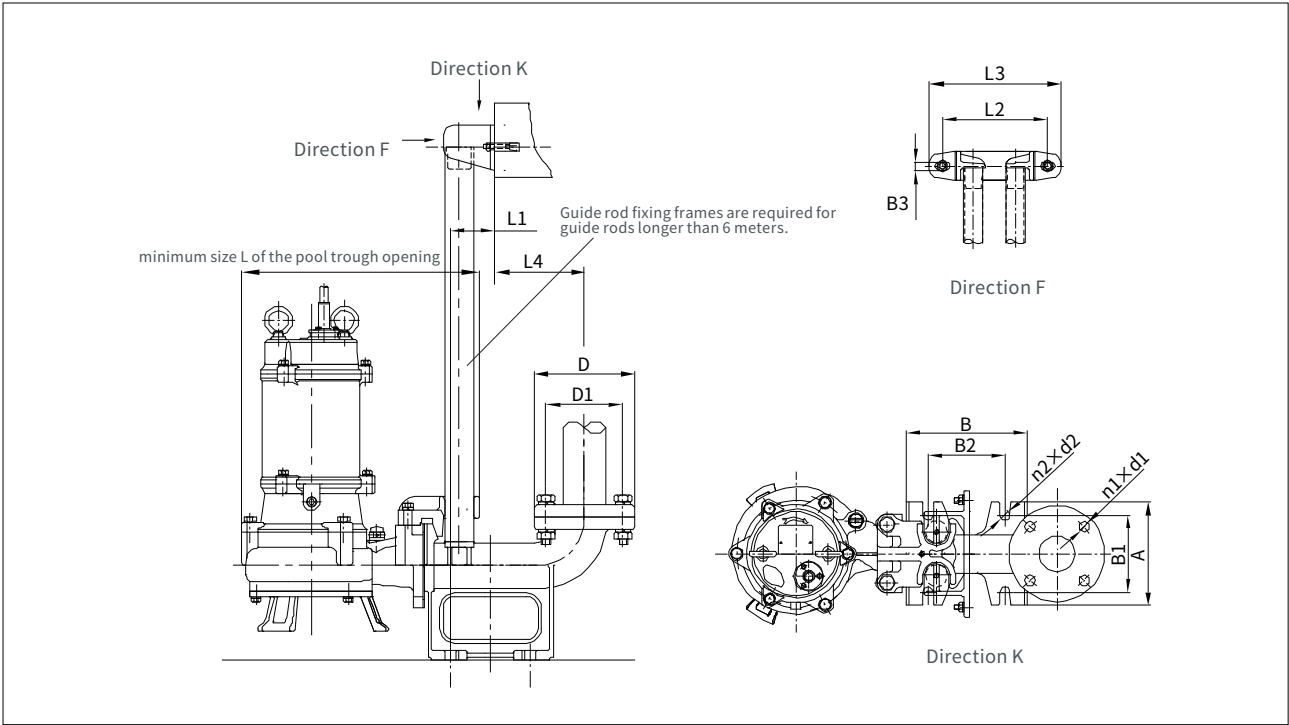


The Function of The Self-coupling Device for Submersible Sewage Pump

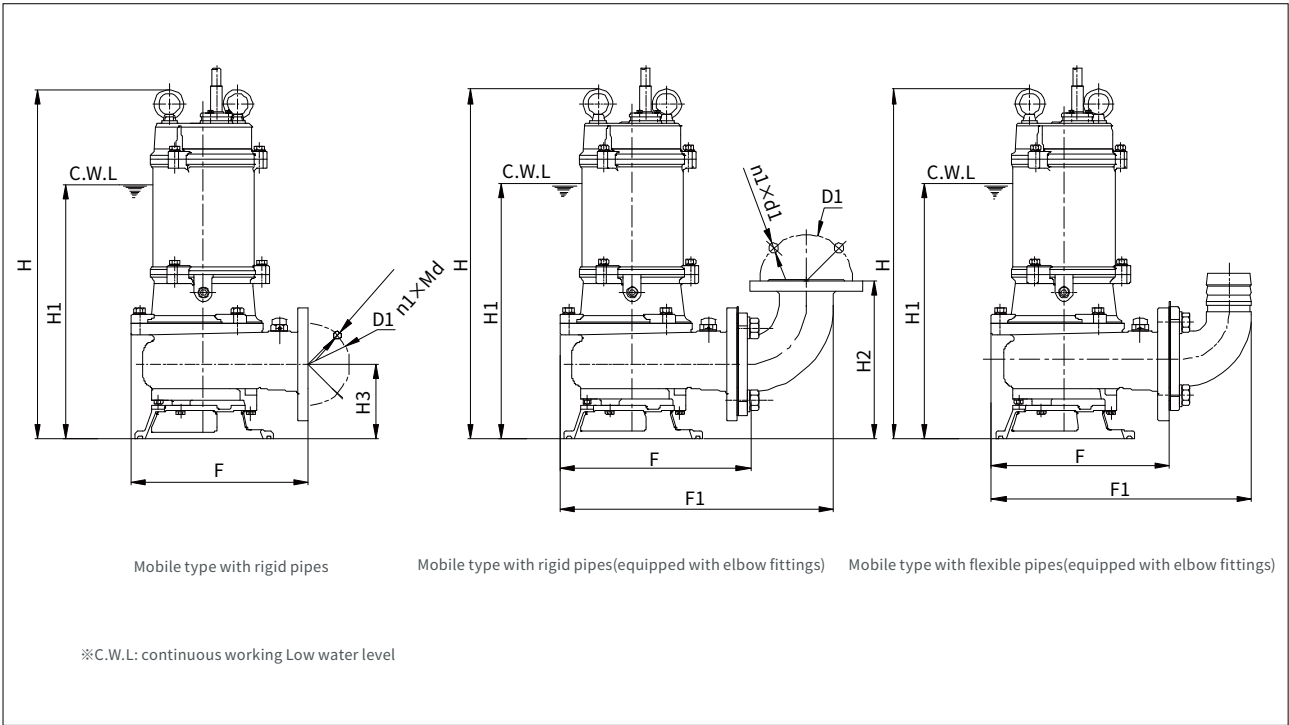
- 1. When the pump malfunctions, it can be lifted out of the medium along the slide rails of the automatic coupling device for maintenance, which facilitates the operation.
- 2. The self-coupling sealing and automatic engagement function of the automatic coupling device enable the rapid connection and sealing between the pump and the pipeline interface.
- 3. Submersible sewage pumps are used in poor water quality and harsh installation environments. The automatic coupling device can solve the problem of underwater installation, saving time and effort.



Fixed Automatic Coupling Installation Diagram



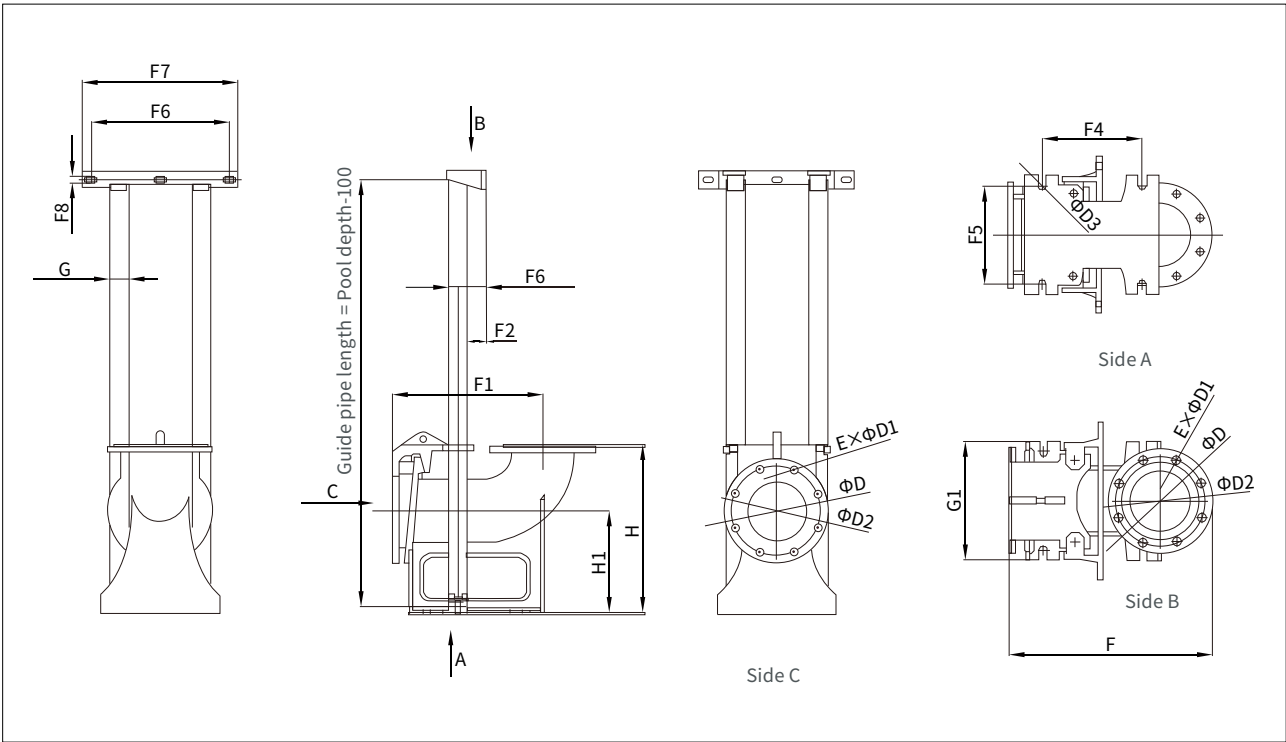
Mobile Installation Diagram



Coupling



Coupling Installation Dimensions



Cast Iron Coupling Dimensions

Model	D (mm)	D1(mm) (6/10)	D2 (mm)	D3 (mm)	E (6/10)	F (mm)	F1 (mm)	F2 (mm)	F3 (mm)	F4 (mm)	F5 (mm)	F6 (mm)	F7 (mm)	F8 (mm)	G (outer diameter*wall thickness)	G1 (mm)	H (mm)	H1 (mm)
DN50	149	14/none	110	16	4/none	216	225	148.5	61	164	138	213.5	258	12	32*2.5	163	211	128
DN65	163	14/18	130	16	4/4	242	245	159	64	185	172	235	280	14	32*2.5	202	243	150
DN80	190	18/18	150	20	4/8	235	260	160	72	155	215	266	321	14	48*3	257	306	183
DN100	212	18/18	170	20	4/8	262	298	193	73	176	262	308	368	14	48*3	293	348	225
DN150	285	18/22	225	22	8/8	405	480	291	82	300	285	250	388	13	48*3	360	485	300
DN200	330	18/22	280	25	8/8	446	518	325	82	340	298	250	388	14	48*3	397	555	324
DN250	395	18/22	335	26	12/12	555	608	396	82	428	360	250	388	14	48*3	455	667	345
DN300	450	22/22	395	26	12/12	570	617	394	111	410	410	305	480	15	58*3	550	738	397
DN350	505	22/22	460	26	12/16	615	666	433	113	402	420	318	500	15	58*3	580	858	488
DN400	565	22/26	515	26	16/16	680	714	478	113	510	490	318	500	15	58*3	627	958	562
DN500	675	none/26	620	28	none/20	752	817	564	116	550	570	658	748	20	76*4	732	1158	652

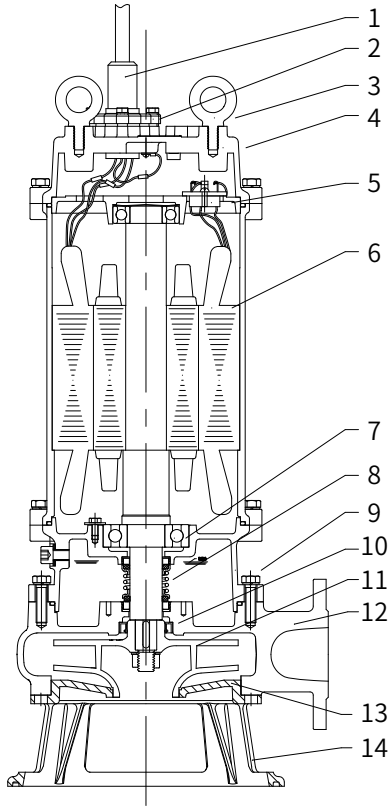
Note: D1 and E correspond to the maximum working pressures of 6 bar and 10 bar respectively.

Stainless Steel Coupling Dimensions

Model	D (mm)	D1 (mm)	D2 (mm)	D3 (mm)	E (6/10)	F (mm)	F1 (mm)	F2 (mm)	F3 (mm)	F4 (mm)	F5 (mm)	F6 (mm)	F7 (mm)	F8 (mm)	G (outer diameter*wall thickness)	G1 (mm)	H (mm)	H1 (mm)
DN50	140	14	110	16	4	268	198	124	73	117	113	182	217	13	32*2.5	130	210	133
DN65	160	14	130	16	4	293	213	128	77	135	130	215	255	13	32*2.5	158	245	148
DN80	190	18	150	18	4	344	249	146	99	160	155	265	315	14	48*3	185	280	165
DN100	210	18	170	20	4	388	283	166	114	192	160	305	355	14	48*3	208	330	195
DN150	265	18	225	20	8	518	386	219	94	255	255	350	392	14	48*3	300	428	262
DN200	320	18	280	20	8	595	435	291	98	303	300	400	446	14	48*3	360	520	300
DN250	375	18	335	26	12	703	515	325	130	364	364	243	436	14	60*3	400	547	290
DN300	450	22	400	32	12	848	623	396	127	448	437	290	520	14	60*3	480	656	350
DN350	505	22	460	22	16	836	583	452	127	600	600	164	380	14	60*3	650	969	430

Structure Diagram

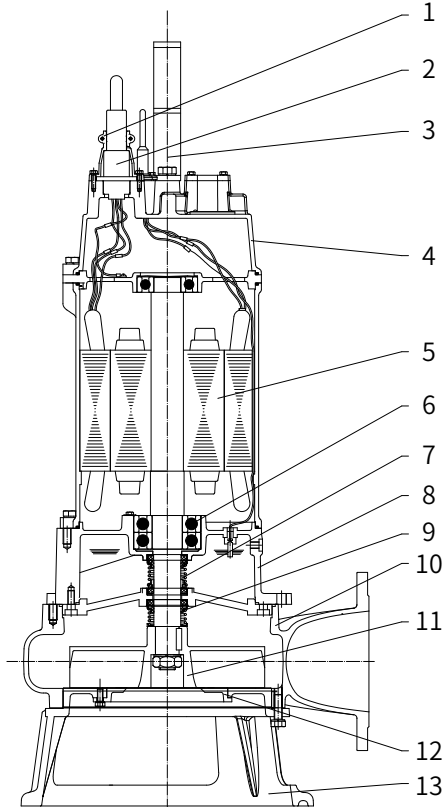
WQ-type submersible sewage pump
2-pole motor submersible sewage pump sectional view



NO.	Parts	Material	GB	AISI/ASTM
1	Cable	/	/	/
2	Cable gland	/	/	/
3	Lifting eye bolt	/	/	/
4	Upper end cover	Cast iron	GB/T 9439-HT200	ASTM25B
5	Thermal protector	/	/	/
6	Motor	/	/	/
7	Bearing	/	/	/
8	Mechanical seal	/	/	/
9	Lower end cover	Cast iron	GB/T 9439-HT200	ASTM25B
10	Skeleton oil seal	NBR	/	/
11	Impeller	Cast iron	GB/T 9439-HT200	ASTM25B
12	Pump body	Cast iron	GB/T 9439-HT200	ASTM25B
13	Inlet port cover	Cast iron	GB/T 9439-HT200	ASTM25B
14	Inlet port base	Cast iron	GB/T 9439-HT200	ASTM25B

Structure Diagram

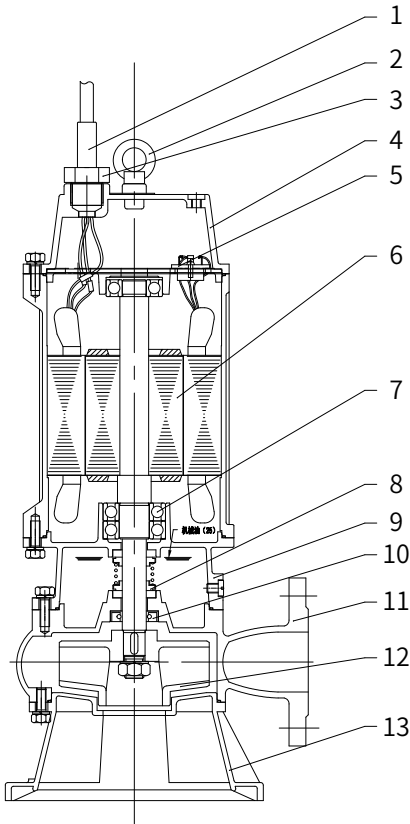
WQ(QG)-type submersible sewage pump
4-pole motor submersible sewage pump sectional view



NO.	Parts	Material	GB	AISI/ASTM
1	Cable gland	Cast iron	GB/T 9439-HT200	ASTM25B
2	Cable	/	/	/
3	Lifting eye bolt	/	/	/
4	Upper end cover	Cast iron	GB/T 9439-HT200	ASTM25B
5	Motor	/	/	/
6	Bearing	/	/	/
7	Mechanical seal	/	/	/
8	Lower end cover	Cast iron	GB/T 9439-HT200	ASTM25B
9	Single end face mechanical seal	/	/	/
10	Pump body	Cast iron	GB/T9439-HT200	ASTM25B
11	Impeller	Cast iron	GB/T 9439-HT200	ASTM25B
12	Cutterhead	Cast iron	GB/T 3077-20CrNiMo	ASTM8620
13	Base	Cast iron	GB/T9439-HT200	ASTM25B

Structure Diagram

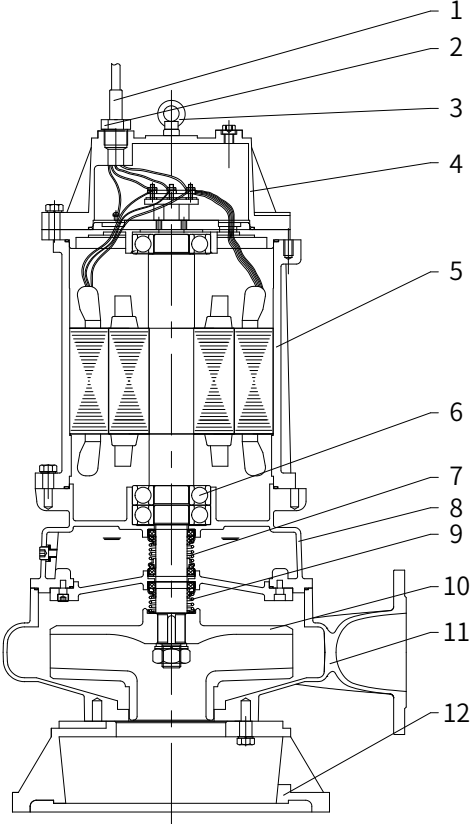
WQ(S)-type submersible sewage pump
2-pole motor submersible sewage pump sectional view



NO.	Parts	Material	GB	AISI/ASTM
1	Cable	/	/	/
2	Lifting eye bolt	/	/	/
3	Cable gland	/	/	/
4	Upper end cover	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
5	Thermal protector	/	/	/
6	Motor	/	/	/
7	Bearing	/	/	/
8	Mechanical seal	/	/	/
9	Lower end cover	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
10	Skeleton oil seal	NBR	/	/
11	Pump body	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
12	Impeller	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
13	Inlet port cover	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304

Structure Diagram

WQ(S)-type submersible sewage pump
4-pole motor submersible sewage pump sectional view



NO.	Parts	Material	GB	AISI/ASTM
1	Cable	/	/	/
2	Cable gland	/	/	/
3	Lifting eye bolt	/	/	/
4	Upper end cover	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
5	Motor	/	/	/
6	Bearing	/	/	/
7	Mechanical seal	/	/	/
8	Lower end cover	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
9	Single end face mechanical seal	/	/	/
10	Impeller	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
11	Pump body	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304
12	Inlet port base	Stainless steel	GB/T 20878-06Cr19Ni10	AISI304

Cutting Type Submersible Sewage Pump



Large flow



High head



Safe and durable



Product Overview

1. The WQ(D)-QG submersible sewage pump with a cutting device adopts an alloy cutterhead and impeller made of 20CrNiMo material. Through heat treatment, its toughness has been enhanced. The semi-open impeller design features a reasonable cutting structure and hydraulic characteristics, which can, to the greatest extent, avoid the blockage of the pump, prevent winding, and has the advantages of strong passage capacity of the flow channel, large flow, high head, and excellent cutting performance. It can cut and discharge impurities in the sewage, such as long fibers, plastics, paper, strips, cloth strips, straws, ropes, etc.
2. The designed submersible motor features an IP68 protection level and F-class insulation. It also has excellent submersible cooling performance, resulting in a low actual temperature rise, which extends the insulation service life of the motor. For motors with a power of 7.5kW or less, a protector is installed to ensure that the power supply can be automatically cut off in case of abnormal conditions of the motor.

3. The pump adopts a double mechanical seal. For pumps with a power of 7.5kW or less, an external skeleton oil seal is used. For motors with a power of 11kW or more, two to three mechanical seals are connected in series for the shaft seal, forming multiple reliable sealing barriers. One seal is located in the medium inside the pump, effectively preventing water from entering the oil chamber. The other two seals are in the oil chamber, preventing oil from entering the motor cavity. The oil chamber is filled with appropriate mechanical oil, which lubricates and cools the friction surfaces of the two independent mechanical seals simultaneously, making the mechanical seals work more reliably. In addition, it can also dissipate the heat generated by the lower bearing and some heat from the motor.

4. Some pumps adopt a special cable manufacturing process, which can completely prevent water from seeping into the motor through the tiny gaps between the wires when the cable sheath is damaged or the cable end is immersed in water.

Usage Conditions

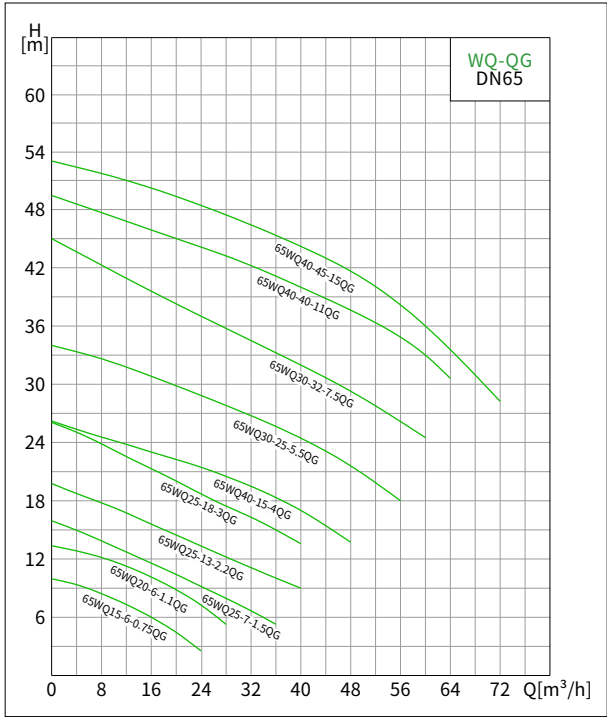
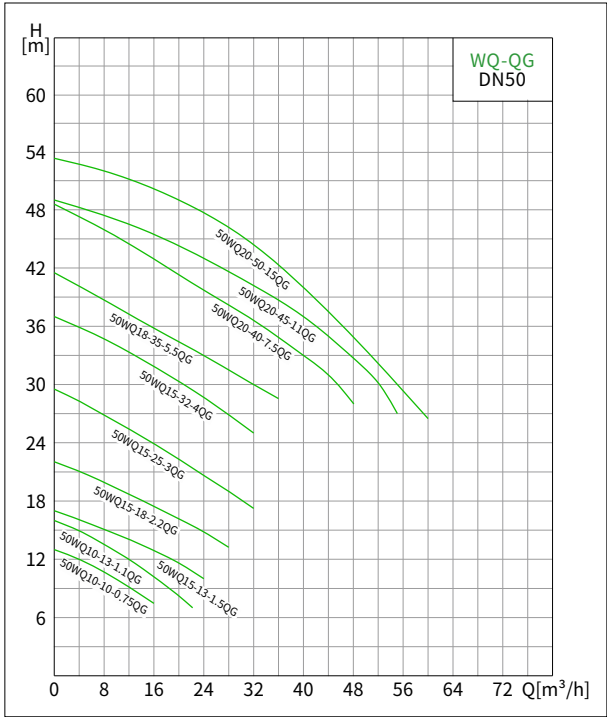
1. Power supply: 50Hz, three-phase 380V.
2. The temperature of the medium in a liquid state is $\leq 40^{\circ}\text{C}$. The volume ratio of solid substances in the conveyed medium is less than 2%. The density of the medium is less than 1200kg/m^3 .
3. During operation, the minimum liquid level shall not be lower than two-thirds of the motor.
4. It cannot be suitable for corrosive fluids and media containing corrosive particles.
5. The diameter of solid substances in the medium shall not be larger than the maximum allowable diameter of solids that can pass through.

Application Range

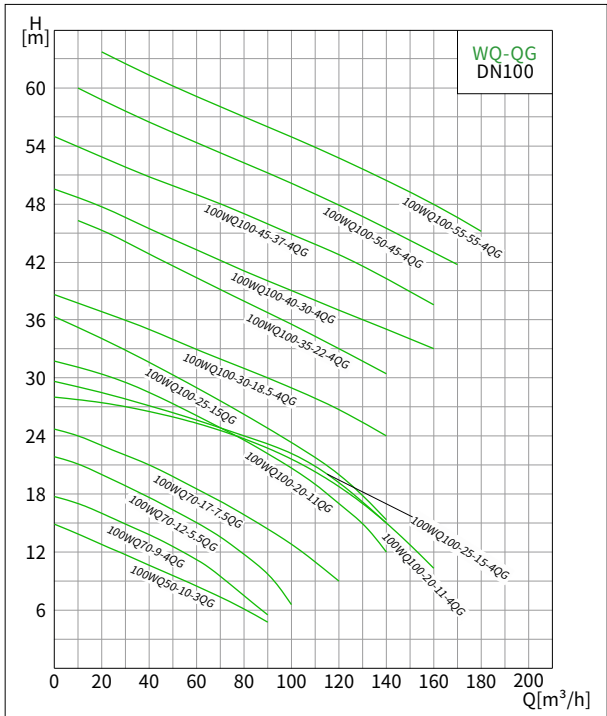
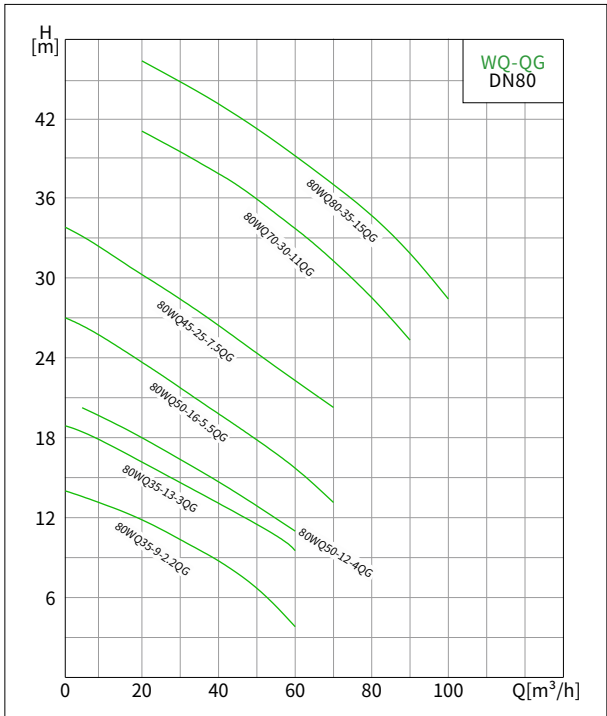
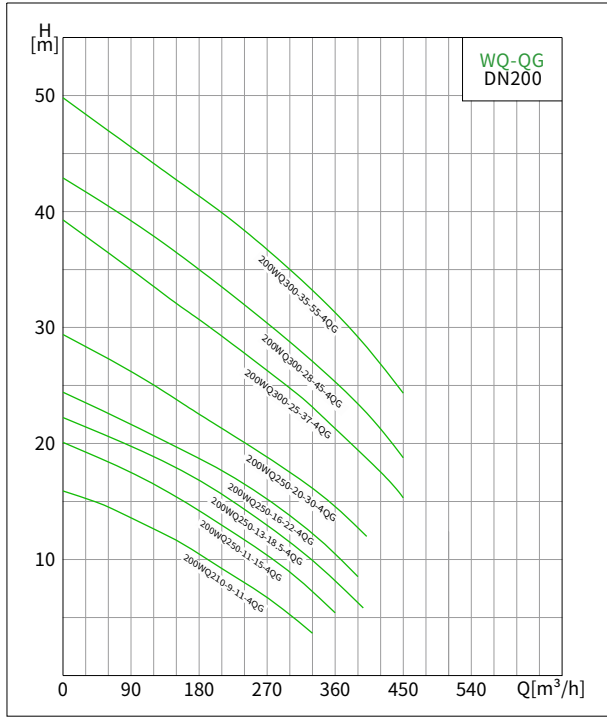
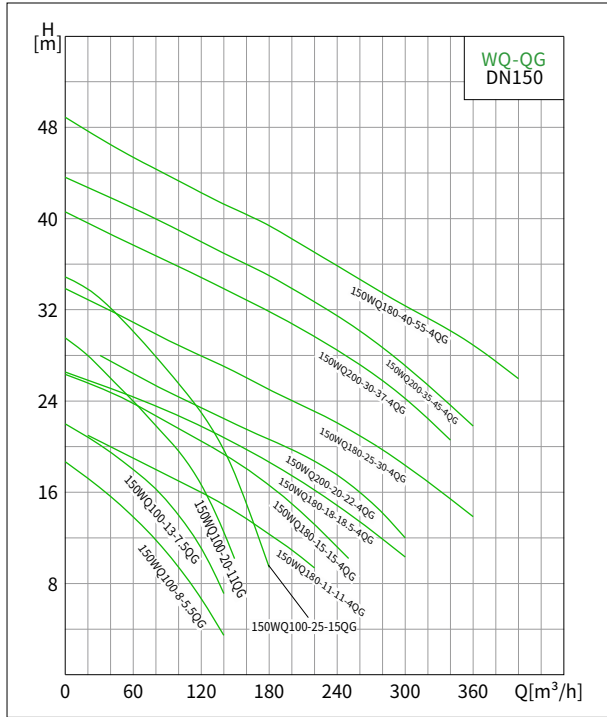
The WQ-QG submersible sewage pump with a cutting device is mainly used in the following scenarios:

1. Construction sites, engineering foundation construction, and municipal facilities.
2. Sewage discharge from basements of high-rise buildings, civil air-defense shelters, subways and other underground levels.
3. Sewage treatment and circulating water transportation in small and medium-sized enterprises.
4. Pumping of slag slurry in factories and mines such as food, paper, brewing, iron and non-ferrous metals, leather, textile, pharmaceutical, and cement plants.
5. In various livestock farming industries like chicken farms and pig farms, it can be used for pumping water from ponds and pumping human and animal excrement from septic tanks and other places.

性能曲线 Performance Curves



性能曲线 Performance Curves



Performance Parameters Form

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
50WQD10-10-0.75QG	10	10	0.75	220	50	2850
50WQ10-10-0.75QG	10	10	0.75	380	50	2850
50WQD10-13-1.1QG	10	13	1.1	220	50	2850
50WQ10-13-1.1QG	10	13	1.1	380	50	2850
50WQD15-13-1.5QG	15	13	1.5	220	50	2850
50WQ15-13-1.5QG	15	13	1.5	380	50	2850
50WQD15-18-2.2QG	15	18	2.2	220	50	2850
50WQ15-18-2.2QG	15	18	2.2	380	50	2850
50WQ15-25-3QG	15	25	3	380	50	2850
50WQ15-32-4QG	15	32	4	380	50	2900
50WQ18-35-5.5QG	18	35	5.5	380	50	2900
50WQ20-40-7.5QG	20	40	7.5	380	50	2900
50WQ20-45-11QG	20	45	11	380	50	2900
50WQ20-50-15QG	20	50	15	380	50	2900
65WQD15-7-0.75QG	15	7	0.75	220	65	2850
65WQ15-7-0.75QG	15	7	0.75	380	65	2850
65WQD15-10-1.1QG	15	10	1.1	220	65	2850
65WQ15-10-1.1QG	15	10	1.1	380	65	2850
65WQD25-10-1.5QG	25	10	1.5	220	65	2850
65WQ25-10-1.5QG	25	10	1.5	380	65	2850
65WQD25-13-2.2QG	25	13	2.2	220	65	2850
65WQ25-13-2.2QG	25	13	2.2	380	65	2850
65WQ25-18-3QG	25	18	3	380	65	2850
65WQ40-15-4QG	40	15	4	380	65	2900
65WQ30-25-5.5QG	30	25	5.5	380	65	2900
65WQ30-32-7.5QG	30	32	7.5	380	65	2900
65WQ40-40-11QG	40	40	11	380	65	2900
65WQ40-45-15QG	40	45	15	380	65	2900
80WQD35-9-2.2QG	35	9	2.2	220	80	2850
80WQ35-9-2.2QG	35	9	2.2	380	80	2850
80WQ35-13-3QG	35	13	3	380	80	2850
80WQ50-12-4QG	50	12	4	380	80	2900
80WQ50-16-5.5QG	50	16	5.5	380	80	2900
80WQ45-22-7.5QG	45	22	7.5	380	80	2900
80WQ60-30-11QG	60	30	11	380	80	2900
80WQ60-40-15QG	60	40	15	380	80	2900
100WQ50-10-3QG	50	10	3	380	100	2850

Performance Parameters Form

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
100WQ70-9-4QG	70	9	4	380	100	2900
100WQ70-12-5.5QG	70	12	5.5	380	100	2900
100WQ70-17-7.5QG	70	17	7.5	380	100	2900
100WQ80-25-11QG	80	25	11	380	100	2900
100WQ80-35-15QG	80	35	15	380	100	2900
150WQ100-8-5.5QG	100	8	5.5	380	150	2900
150WQ140-8-7.5QG	140	8	7.5	380	150	2900
150WQ100-20-11QG	100	20	11	380	150	2900
150WQ100-25-15QG	100	25	15	380	150	2900
100WQ100-20-11QG	100	20	11	380	100	1450
100WQ100-25-15QG	100	25	15	380	100	1450
100WQ100-30-18.5QG	100	30	18.5	380	100	1450
100WQ100-35-22QG	100	35	22	380	100	1450
100WQ100-40-30QG	100	40	30	380	100	1450
100WQ100-45-37QG	100	45	37	380	100	1450
100WQ100-50-45QG	100	50	45	380	100	1450
100WQ100-55-55QG	100	55	55	380	100	1450
150WQ180-11-11QG	180	11	11	380	150	1450
150WQ180-15-15QG	180	15	15	380	150	1450
150WQ180-18-18.5QG	180	18	18.5	380	150	1450
150WQ200-20-22QG	200	20	22	380	150	1450
150WQ180-25-30QG	180	25	30	380	150	1450
150WQ200-30-37QG	200	30	37	380	150	1450
150WQ200-35-45QG	200	35	45	380	150	1450
150WQ180-40-55QG	180	40	55	380	150	1450
200WQ210-9-11QG	210	9	11	380	200	1450
200WQ250-11-15QG	250	11	15	380	200	1450
200WQ250-13-18.5QG	250	13	18.5	380	200	1450
200WQ250-16-22QG	250	16	22	380	200	1450
200WQ250-22-30QG	250	22	30	380	200	1450
200WQ300-25-37QG	300	25	37	380	200	1450
200WQ300-30-45QG	300	30	45	380	200	1450
200WQ300-35-55QG	300	35	55	380	200	1450
250WQ500-9-30QG	500	9	30	380	250	1450
250WQ500-12-37QG	500	12	37	380	250	1450
250WQ500-15-45QG	500	15	45	380	250	1450
250WQ500-18-55QG	500	18	55	380	250	1450

Submersible Sewage Pump(High-temperature models can be customized.)



Large flow



High head



Safe and durable



The stirring device
can be installed.



Application Range

1. It is suitable for the sewage treatment systems of construction engineering, industrial and mining enterprises, municipal engineering, etc.
2. Sewage discharge and treatment in urban environmental protection systems.
3. Auxiliary machines for prospecting and mining.
4. Agricultural irrigation, fish farming, water spraying, etc.

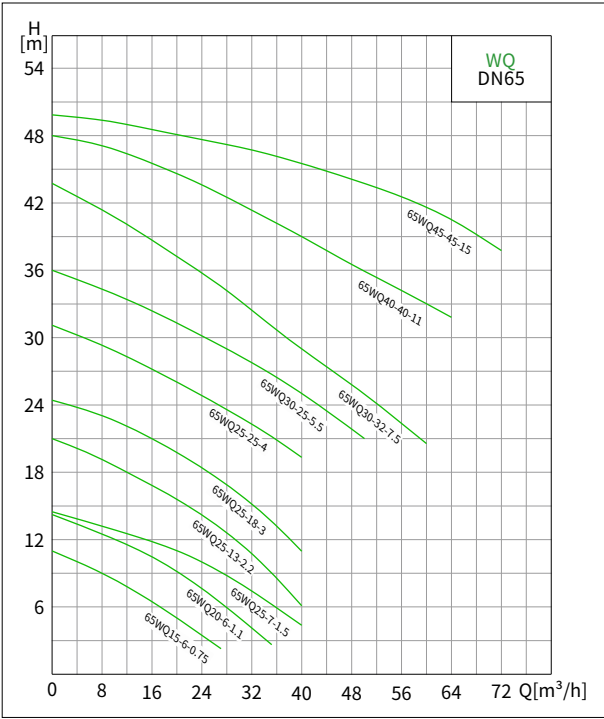
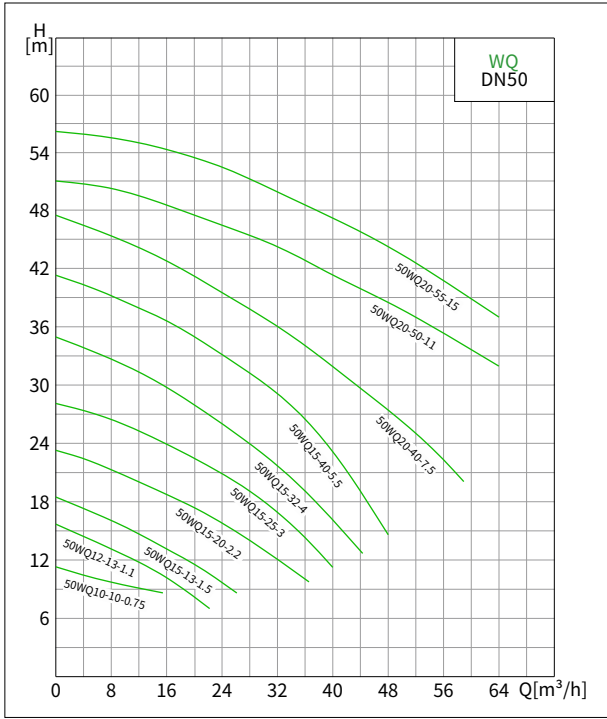
Product Overview

1. The impeller of the WQ(D) submersible sewage pump adopts a double-flow passage design in a closed shape. Due to the symmetrical flow passages, it has good balance, runs stably, generates less vibration, and thus prolongs the service life of the product. The flow passages have strong passing ability, and the measured efficiency is higher than the national standard, achieving energy conservation and consumption reduction.
2. The designed submersible motor features an IP68 protection level and F-class insulation. It also has excellent submersible cooling performance, resulting in a low actual temperature rise, which extends the insulation service life of the motor. For motors with a power of 7.5kW or less, a protector is installed to ensure that the power supply can be automatically cut off in case of abnormal conditions of the motor.
3. The pump adopts a double mechanical seal. For pumps with a power of 7.5kW or less, an external skeleton oil seal is used. For motors with a power of 11kW or more, two to three mechanical seals are connected in series for the shaft seal, forming multiple reliable sealing barriers. One seal is located in the medium inside the pump, effectively preventing water from entering the oil chamber. The other two seals are in the oil chamber, preventing oil from entering the motor cavity. The oil chamber is filled with appropriate mechanical oil, which lubricates and cools the friction surfaces of the two independent mechanical seals simultaneously, making the mechanical seals work more reliably. In addition, it can also dissipate the heat generated by the lower bearing and some heat from the motor.
4. Some pumps adopt a special cable manufacturing process, which can completely prevent water from seeping into the motor through the tiny gaps between the wires when the cable sheath is damaged or the cable end is immersed in water.

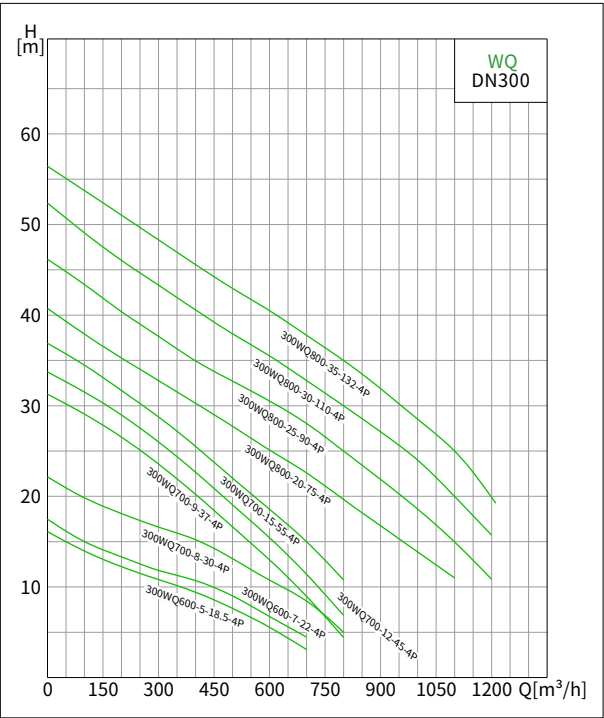
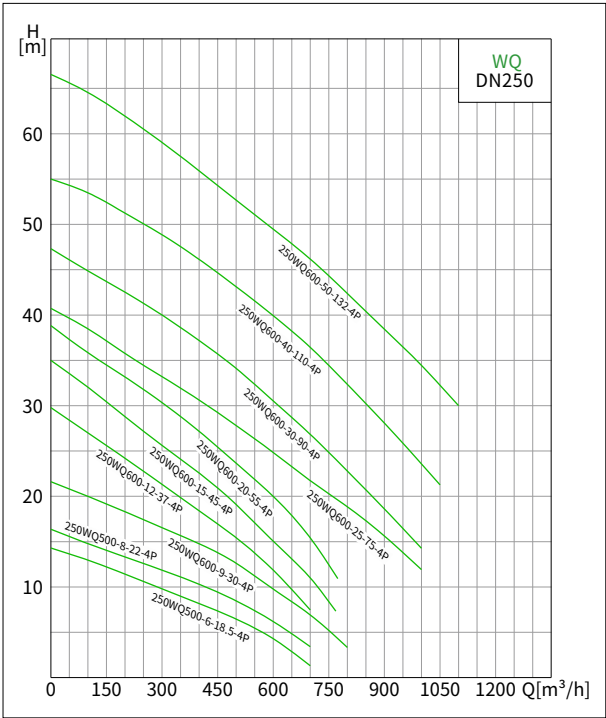
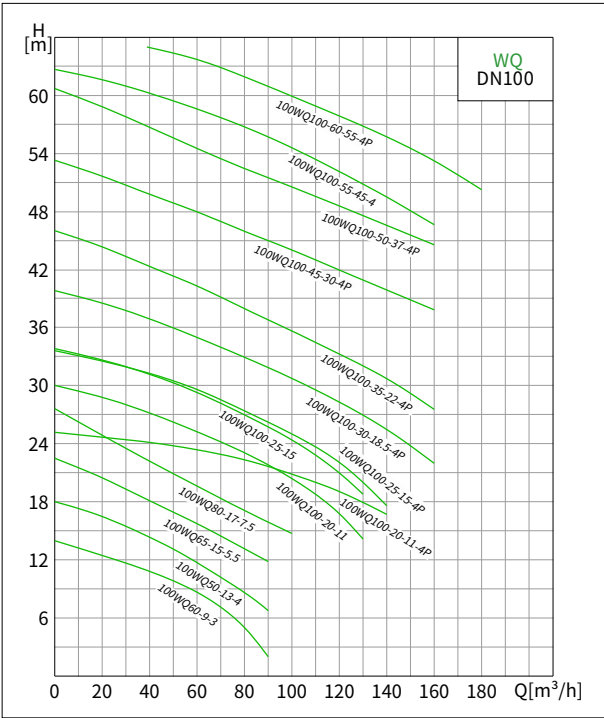
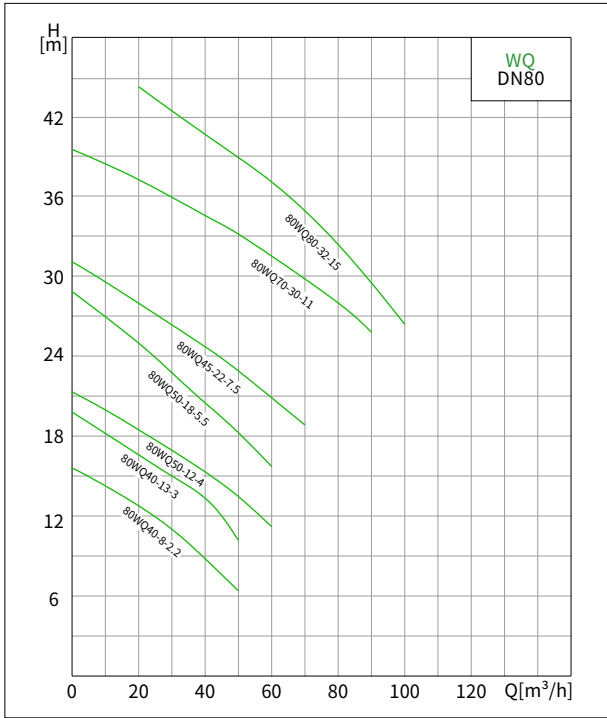
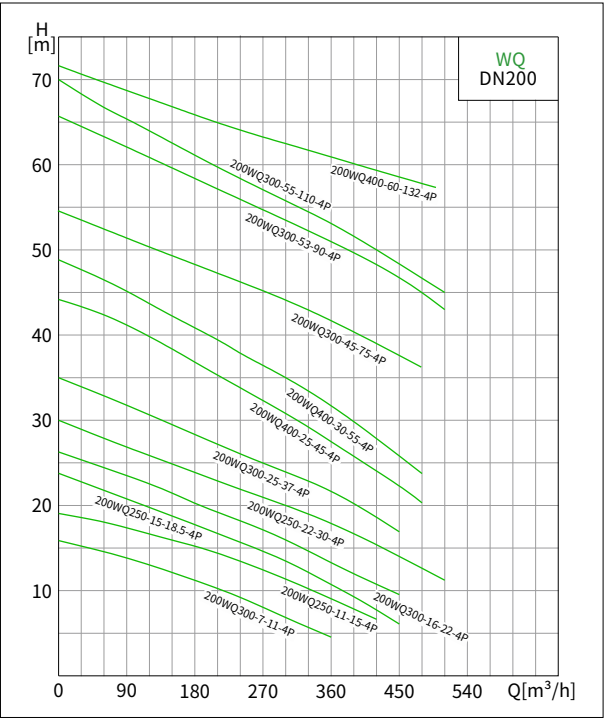
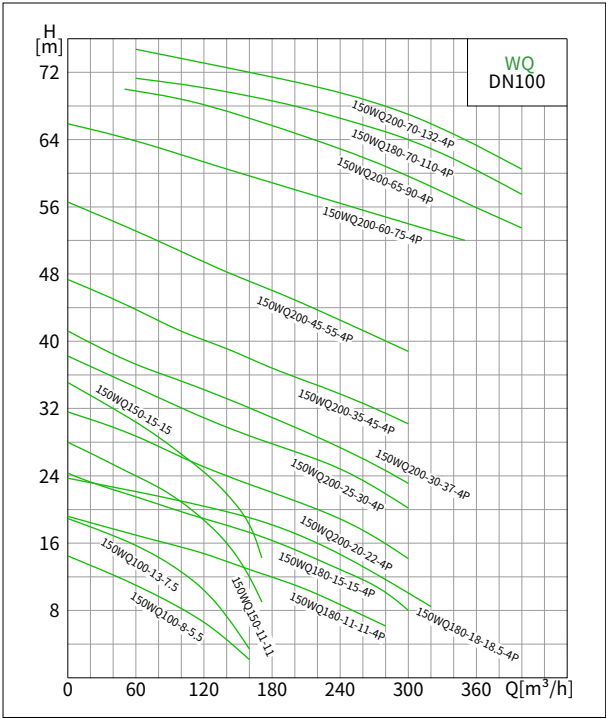
使用条件 Usage Conditions

1. Power supply: 50Hz, three-phase 380V.
2. The temperature of the medium in a liquid state is $\leq 40^{\circ}\text{C}$. The volume ratio of solid substances in the conveyed medium is less than 2%. The density of the medium is less than 1200kg/m^3 .
3. During operation, the minimum liquid level shall not be lower than two-thirds of the motor.
4. It cannot be suitable for corrosive fluids and media containing corrosive particles.
5. The diameter of solid substances in the medium shall not be larger than the maximum allowable diameter of solids that can pass through.

Performance Curves



Performance Curves



Performance Parameters Form

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
50WQD10-10-0.75	10	10	0.75	220	50	2850
50WQ10-10-0.75	10	10	0.75	380	50	2850
50WQD10-13-1.1	10	13	1.1	220	50	2850
50WQ10-13-1.1	10	13	1.1	380	50	2850
50WQD15-15-1.5	25	25	1.5	220	50	2850
50WQ15-15-1.5	15	15	1.5	380	50	2850
50WQD15-20-2.2	15	20	2.2	220	50	2850
50WQ15-20-2.2	15	20	2.2	220	50	2850
50WQ15-25-3	15	25	3	380	50	2850
50WQ15-32-4	15	32	4	380	50	2900
50WQ15-40-5.5	15	40	5.5	380	50	2900
50WQ20-40-7.5(I)	20	40	7.5	380	50	2900
50WQ20-40-7.5	20	40	7.5	380	50	2900
50WQ20-50-11	20	50	11	380	50	2900
50WQ20-55-15	20	55	15	380	50	2900
65WQD15-6-0.75	15	6	0.75	220	65	2850
65WQ15-6-0.75	15	6	0.75	380	65	2850
65WQD20-6-1.1	20	6	1.1	220	65	2850
65WQ20-6-1.1	20	6	1.1	380	65	2850
65WQD25-7-1.5	25	7	1.5	220	65	2850
65WQ25-7-1.5	25	7	1.5	380	65	2850
65WQD25-15-2.2	25	15	2.2	220	65	2850
65WQ25-15-2.2	25	15	2.2	220	65	2850
65WQ25-20-3	25	20	3	380	65	2850
65WQ25-25-4	25	25	4	380	65	2900
65WQ30-25-5.5	30	25	5.5	380	65	2900
65WQ30-32-7.5(I)	30	32	7.5	380	65	2900
65WQ30-32-7.5	30	32	7.5	380	65	2900
65WQ40-40-11	40	40	11	380	65	2900
65WQ45-45-15	45	45	15	380	65	2900
80WQD40-9-2.2	40	9	2.2	220	80	2850
80WQ40-9-2.2	40	9	2.2	220	80	2850
80WQ40-15-3	40	15	3	380	80	2850
80WQ40-18-4	40	18	4	380	80	2900
80WQ50-18-5.5	50	18	5.5	380	80	2900
80WQ45-22-7.5(I)	45	22	7.5	380	80	2900
80WQ45-22-7.5	45	22	7.5	380	80	2900

Performance Parameters Form

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
80WQ60-30-11	60	30	11	380	80	2900
80WQ80-32-15	80	32	15	380	80	2900
100WQ50-10-3	50	10	3	380	100	2850
100WQ50-13-4	50	13	4	380	100	2900
100WQ70-15-5.5	70	15	5.5	380	100	2900
100WQ80-18-7.5(I)	80	18	7.5	380	100	2900
100WQ80-18-7.5	80	18	7.5	380	100	2900
100WQ100-20-11	100	20	11	380	100	2900
100WQ100-25-15	100	25	15	380	100	2900
150WQ100-8-5.5	100	8	5.5	380	150	2900
150WQ100-13-7.5(I)	100	13	7.5	380	150	2900
150WQ100-13-7.5	100	13	7.5	380	150	2900
150WQ150-11-11	150	11	11	380	150	2900
150WQ150-15-15	150	15	15	380	150	2900
200WQ200-8-11	200	8	11	380	200	2900
200WQ220-10-15	220	10	15	380	200	2900
100WQ100-20-11	100	20	11	380	100	1450
100WQ100-25-15	100	25	15	380	100	1450
100WQ100-30-18.5	100	30	18.5	380	100	1450
100WQ100-35-22	100	35	22	380	100	1450
100WQ100-45-30	100	45	30	380	100	1450
100WQ100-50-37	100	50	37	380	100	1450
100WQ100-55-45	100	55	45	380	100	1450
100WQ100-65-55	100	65	55	380	100	1450
150WQ180-11-11	180	11	11	380	150	1450
150WQ180-15-15	180	15	15	380	150	1450
150WQ180-18-18.5	180	18	18.5	380	150	1450
150WQ200-20-22	200	20	22	380	150	1450
150WQ180-30-30	180	30	30	380	150	1450
150WQ200-30-37	200	30	37	380	150	1450
150WQ200-35-45	200	35	45	380	150	1450
150WQ180-50-55	180	50	55	380	150	1450
150WQ200-60-75	200	60	75	380	150	1450
150WQ200-65-90	200	65	90	380	150	1450
150WQ200-75-110	200	75	110	380	150	1450
150WQ200-80-132	200	80	132	380	150	1450
200WQ300-7-11	300	7	11	380	200	1450

Performance Parameters Form

Model	Rated flow[m³/h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
200WQ250-11-15	250	11	15	380	200	1450
200WQ250-15-18.5	250	15	18.5	380	200	1450
200WQ300-16-22	300	16	22	380	200	1450
200WQ250-22-30	250	22	30	380	200	1450
200WQ350-25-37	350	25	37	380	200	1450
200WQ400-25-45	400	25	45	380	200	1450
200WQ300-40-55	300	40	55	380	200	1450
200WQ400-30-55	400	30	55	380	200	1450
200WQ300-45-75	300	45	75	380	200	1450
200WQ300-55-90	300	55	90	380	200	1450
200WQ400-50-90	400	50	90	380	200	1450
200WQ400-55-110	400	55	110	380	200	1450
200WQ400-60-132	400	60	132	380	200	1450
250WQ500-6-18.5	500	6	18.5	380	250	1450
250WQ500-8-22	500	8	22	380	250	1450
250WQ600-9-30	600	9	30	380	250	1450
250WQ600-12-37	600	12	37	180	250	1450
250WQ600-15-45	600	15	45	380	250	1450
250WQ600-20-55	600	20	55	380	250	1450
250WQ600-25-75	600	25	75	380	250	1450
250WQ600-30-90	600	30	90	380	250	1450
250WQ600-40-110	600	40	110	380	250	1450
250WQ600-50-132	600	50	132	380	250	1450
300WQ800-7-30	800	7	30	380	300	1450
300WQ800-9-37	800	9	37	380	300	1450
300WQ800-12-45	800	12	45	380	300	1450
300WQ800-15-55	800	15	55	380	300	1450
300WQ800-20-75	800	20	75	380	300	1450
300WQ800-25-90	800	25	90	380	300	1450
300WQ800-30-110	800	30	110	380	300	1450
300WQ800-35-132	800	35	132	380	300	1450
350WQ1000-6-37	1000	6	37	380	350	1450
350WQ1000-8-45	1000	8	45	380	350	1450
350WQ1000-10-55	1000	10	55	380	350	1450
350WQ900-15-75	900	15	75	380	350	1450
350WQ1000-18-90	1000	18	90	380	350	1450
350WQ1000-22-110	1000	22	110	380	350	1450
350WQ1000-28-132	1000	28	132	380	350	1450

Stainless Steel Cutting Submersible Sewage Pump(National Standard Flange)



Large flow



High head



Safe and durable



Product Overview

1. The WQ(D)-QG(S) stainless steel cutting submersible sewage pump adopts a stainless steel precision-cast casing, which has the characteristics of being free from self-contamination and resistant to corrosion, thus expanding the application fields of water supply and drainage. The impeller adopts a double-flow passage design in a semi-open shape, and the water inlet is equipped with a fixed base in the shape of a cyclone sickle. When the impeller rotates, the edges of the blades move in the opposite direction to the cover plate of the sickle-shaped water inlet base, enabling a highly efficient cutting function.
2. The designed submersible motor features an IP68 protection level and F-class insulation. It also has excellent submersible cooling performance, resulting in a low actual temperature rise, which extends the insulation service life of the motor. For motors with a power of 7.5kW or less, a protector is installed to ensure that the power supply can be automatically cut off in case of abnormal conditions of the motor.

3. It adopts a fluororubber double-face bellows mechanical seal. The oil chamber is filled with appropriate mechanical oil, which lubricates and cools the friction surfaces of the two independent mechanical seals simultaneously, making the mechanical seals work more reliably. In addition, it can also dissipate the heat generated by the lower bearing and some heat from the motor.

4. Some pumps adopt a special cable manufacturing process, which can completely prevent water from seeping into the motor through the tiny gaps between the wires when the cable sheath is damaged or the cable end is immersed in water.

Usage Conditions

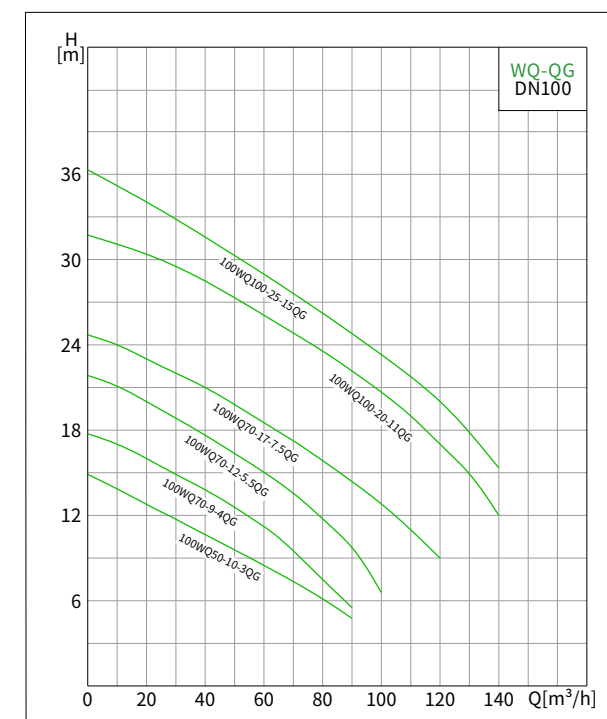
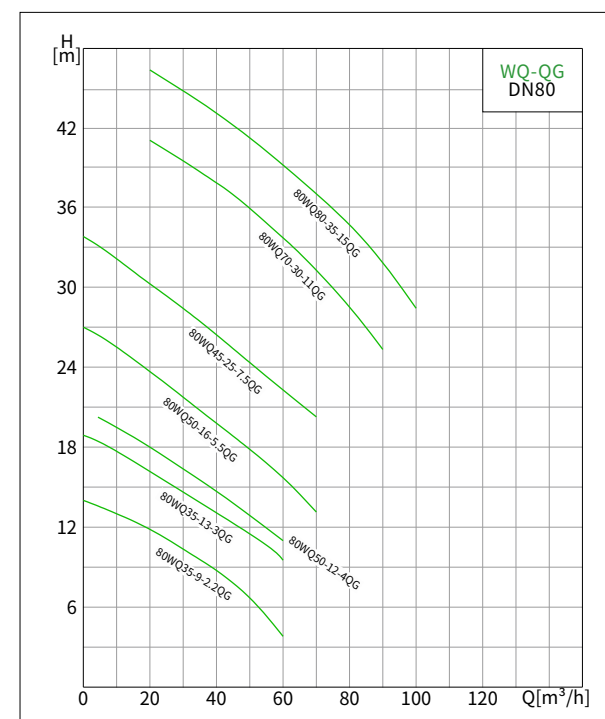
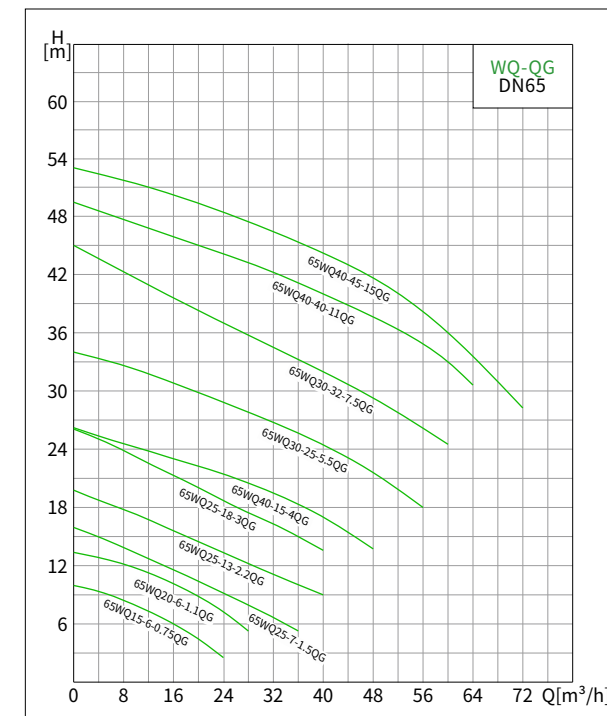
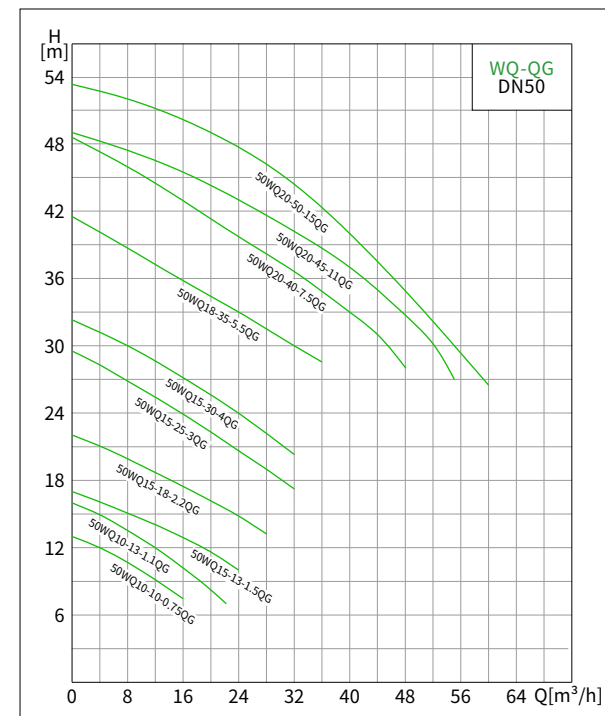
1. Power supply: 50Hz, three-phase 380V.
2. The temperature of the medium in a liquid state is $\leq 40^{\circ}\text{C}$. The volume ratio of solid substances in the conveyed medium is less than 2%. The density of the medium is less than 1200kg/m^3 .
3. During operation, the minimum liquid level shall not be lower than two-thirds of the motor.
4. The diameter of solid substances in the medium shall not be larger than the maximum allowable diameter of solids that can pass through.
5. The pH values of the conveyed medium (temperature-related) are as follows: 4-10 for 304 material, 4-13 for 316 material, and 3-13 for 316L material. These values are for reference only.

Application Range

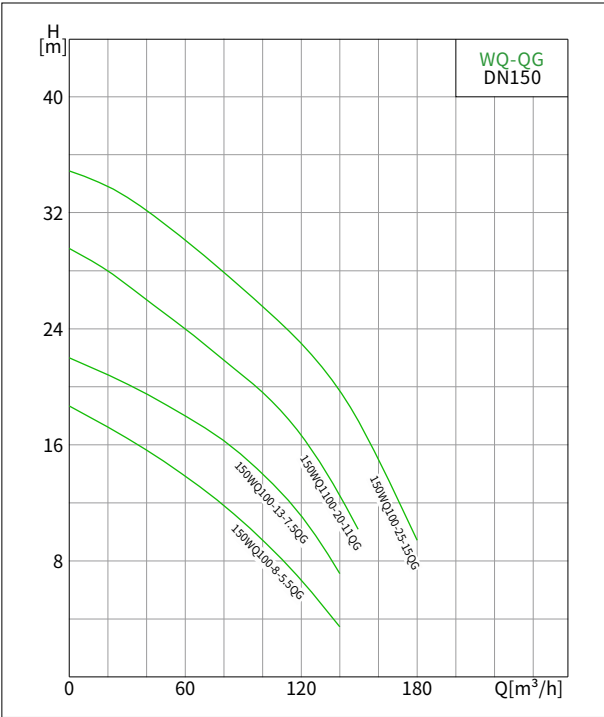
The WQ-QG submersible sewage pump with a cutting device is mainly used in the following scenarios:

1. Engineering sewage and domestic sewage.
2. Applicable to construction sites, engineering foundation construction, municipal facilities, and waterworks.
3. Sewage discharge from basements of high-rise buildings, civil air-defense shelters, subways and other underground levels.
4. Sewage treatment and circulating water transportation in small and medium-sized enterprises.
5. Pumping of slag slurry in factories and mines such as food, paper, brewing, iron and non-ferrous metals, leather, textile, pharmaceutical, and cement plants.
6. In various livestock farming industries like chicken farms and pig farms, it can be used for pumping water from ponds and pumping human and animal excrement from septic tanks and other places.

Performance Curves



Performance Curves



Performance Parameters Form

Model	Rated flow[m³/h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
50WQD10-10-0.75QG	10	10	0.75	220	50	2850
50WQ10-10-0.75QG	10	10	0.75	380	50	2850
50WQD10-13-1.1QG	10	13	1.1	220	50	2850
50WQ10-13-1.1QG	10	13	1.1	380	50	2850
50WQD15-13-1.5QG(I)	15	13	1.5	220	50	2850
50WQ15-13-1.5QG(I)	15	13	1.5	380	50	2850
50WQD15-13-1.5QG	15	13	1.5	220	50	2850
50WQ15-13-1.5QG	15	13	1.5	380	50	2850
50WQ15-18-2.2QG(I)	15	18	2.2	380	50	2850
50WQD15-18-2.2QG	15	18	2.2	380	50	2850
50WQ15-18-2.2QG	15	18	2.2	380	50	2850
50WQ15-25-3QG	15	25	3	380	50	2850
50WQ15-32-4QG(I)	15	32	4	380	50	2900
50WQ15-32-4QG	15	32	4	380	50	2900
50WQ18-35-5.5QG	18	35	5.5	380	50	2900
50WQ20-40-7.5QG	20	40	7.5	380	50	2900
50WQ20-45-11QG	20	45	11	380	50	2900
50WQ20-50-15QG	20	50	15	380	50	2900

Performance Curves

Model	Rated flow[m³/h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
65WQD15-6-0.75QG	15	6	0.75	220	65	2850
65WQ15-6-0.75QG	15	6	0.75	380	65	2850
65WQD20-6-1.1QG	20	3	1.1	220	65	2850
65WQ20-6-1.1QG	20	6	1.1	380	65	2850
65WQD25-7-1.5QG(I)	25	7	1.5	220	35	2850
65WQ25-7-1.5QG(I)	25	7	1.5	380	65	2850
65WQD25-7-1.5QG	25	7	1.5	220	65	2850
65WQ25-7-1.5QG	25	7	1.5	380	65	2850
65WQ25-13-2.2QG(I)	25	13	2.2	380	65	2850
65WQD25-13-2.2QG	25	13	2.2	380	65	2850
65WQ25-13-2.2QG	25	13	2.2	380	65	2850
65WQ25-18-3QG	25	18	3	380	65	2850
65WQ40-15-4QG(I)	40	15	4	380	65	2900
65WQ40-15-4QG	40	15	4	380	65	2900
65WQ30-25-5.5QG	30	25	5.5	380	65	2900
65WQ30-32-7.5QG	30	32	7.5	380	65	2900
65WQ40-40-11QG	40	40	11	380	65	2900
65WQ40-45-15QG	40	45	15	380	65	2900
80WQ35-9-2.2QG(I)	35	9	2.2	380	80	2850
80WQD35-9-2.2QG	35	9	2.2	380	80	2850
80WQ35-9-2.2QG	35	9	2.2	380	80	2850
80WQ35-13-3QG	35	13	3	380	80	2850
80WQ50-12-4QG(I)	50	12	4	380	80	2900
80WQ50-12-4QG	50	12	4	380	80	2900
80WQ50-16-5.5QG	50	16	5.5	380	80	2900
80WQ45-22-7.5QG	45	22	7.5	380	80	2900
80WQ70-30-11QG	70	30	11	380	80	2900
80WQ70-35-15QG	70	35	15	380	80	2900
100WQ70-9-4QG(I)	70	9	4	380	100	2900
100WQ70-9-4QG	70	9	4	380	100	2900
100WQ70-12-5.5QG	70	12	5.5	380	100	2900
100WQ70-17-7.5QG	70	17	7.5	380	100	2900
100WQ100-20-11QG	100	20	11	380	100	2900
100WQ100-25-15QG	100	25	15	380	100	2900
150WQ140-8-7.5QG	140	8	7.5	380	150	2900
150WQ120-15-11QG	120	15	11	380	150	2900
150WQ120-20-15QG	120	20	15	380	150	2900

Stainless Steel Submersible Sewage Pump(National Standard Flange)



Large flow



High head



Safe and durable



Application Range

1. It is suitable for the sewage treatment systems of construction engineering, industrial and mining enterprises, municipal engineering, etc.
2. Sewage discharge and treatment in urban environmental protection systems.
3. Auxiliary machines for prospecting and mining.
4. Sewage discharge for food industry, medical field, seawater suction and discharge, water accumulation in ship cabins, etc.
5. Agricultural irrigation, rural biogas digesters, fish farming, fountains, water spraying, etc.

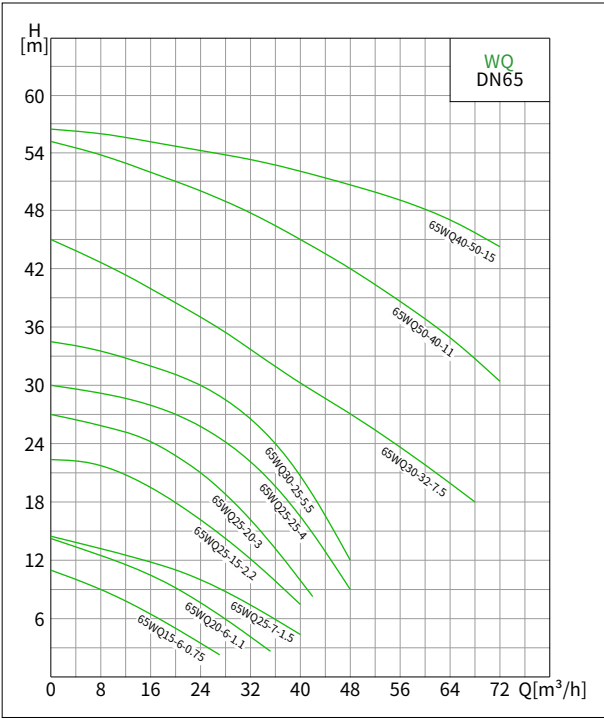
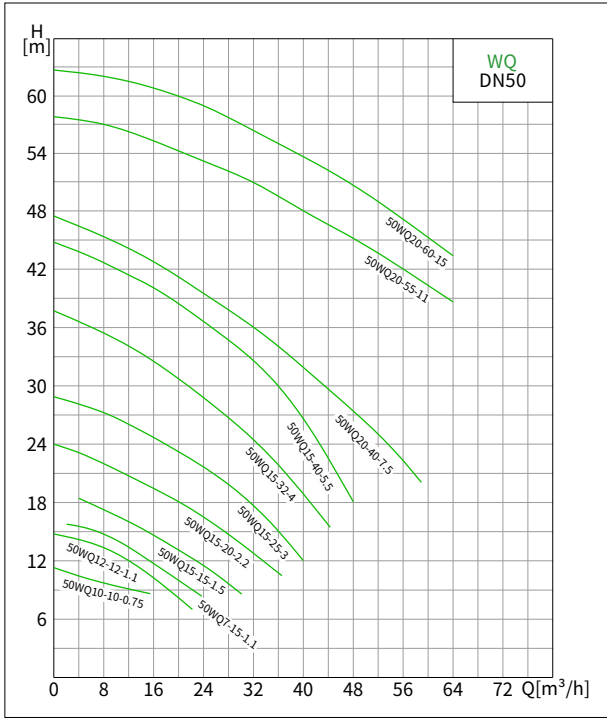
Product Overview

1. The WQ(D)-S stainless steel cutting submersible sewage pump adopts a stainless steel precision-cast casing, which has the characteristics of being free from self-contamination and resistant to corrosion, thus expanding the application fields of water supply and drainage. The impeller adopts a double-flow passage design in a closed shape. Due to the symmetrical flow passages, it has good balance, runs stably, generates less vibration, and thus prolongs the service life of the product. The flow passages have strong passing ability, and the measured efficiency is higher than the national standard, achieving energy conservation and consumption reduction.
2. The designed submersible motor features an IP68 protection level and F-class insulation. It also has excellent submersible cooling performance, resulting in a low actual temperature rise, which extends the insulation service life of the motor. For motors with a power of 7.5kW or less, a protector is installed to ensure that the power supply can be automatically cut off in case of abnormal conditions of the motor.
3. The pump adopts a fluororubber double-face mechanical seal. For pumps with a power of 7.5kW or less, an external skeleton oil seal is used. For motors with a power of 11kW or more, two to three mechanical seals are connected in series for the shaft seal, forming multiple reliable sealing barriers. One seal is located in the medium inside the pump, effectively preventing water from entering the oil chamber. The other two seals are in the oil chamber, preventing oil from entering the motor cavity. The oil chamber is filled with appropriate mechanical oil, which lubricates and cools the friction surfaces of the two independent mechanical seals simultaneously, making the mechanical seals work more reliably. In addition, it can also dissipate the heat generated by the lower bearing and some heat from the motor.
4. Some pumps adopt a special cable manufacturing process, which can completely prevent water from seeping into the motor through the tiny gaps between the wires when the cable sheath is damaged or the cable end is immersed in water.
5. According to the customer's requirements, a stirring device can be equipped. This device generates a very strong stirring force as it rotates along with the motor shaft, stirring the sediments in the sewage tank into suspended substances before discharging them.

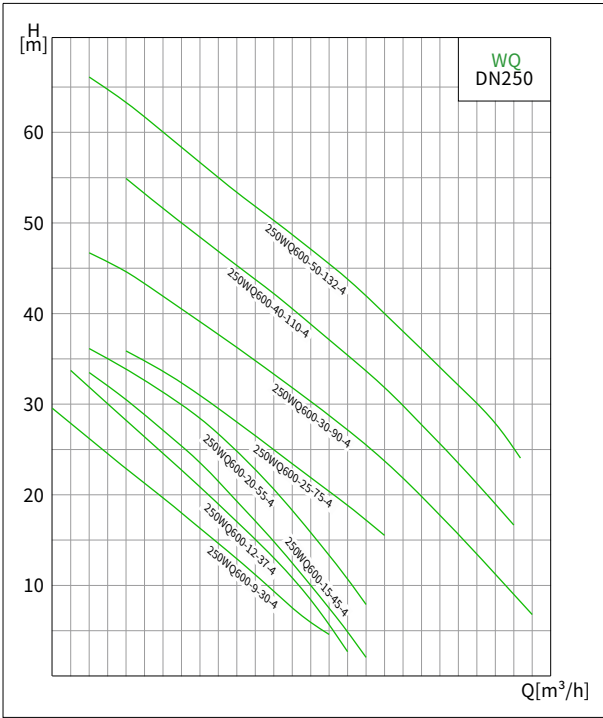
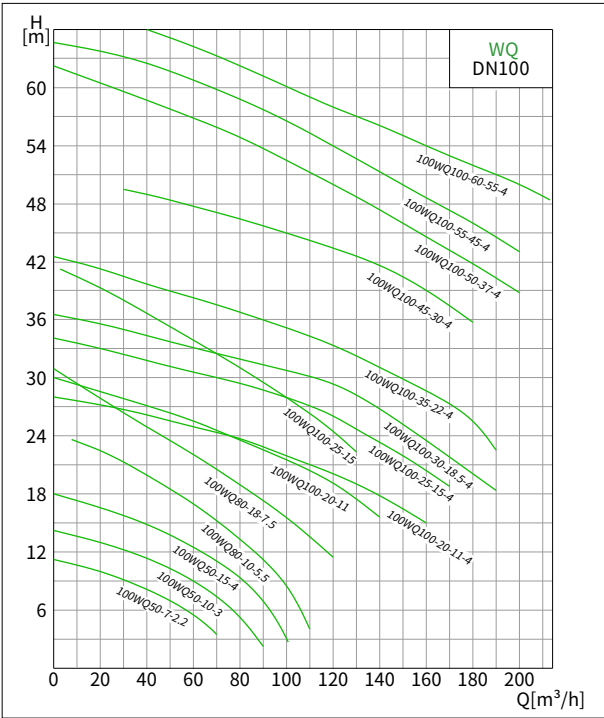
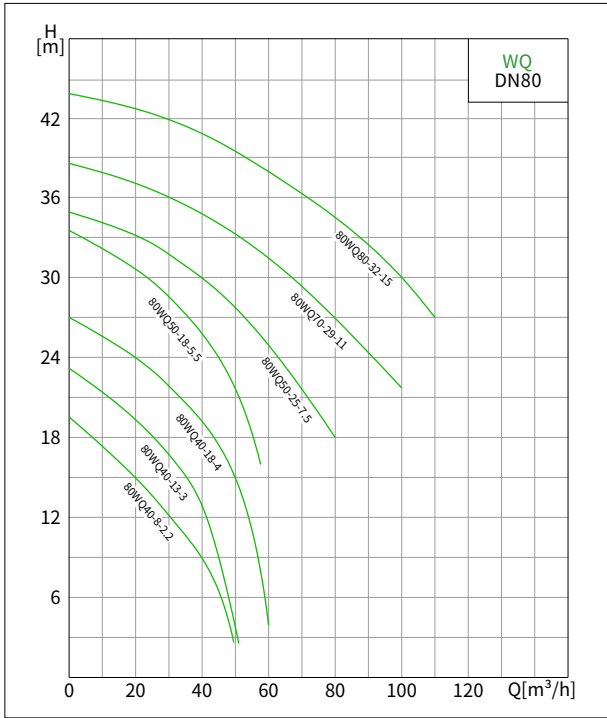
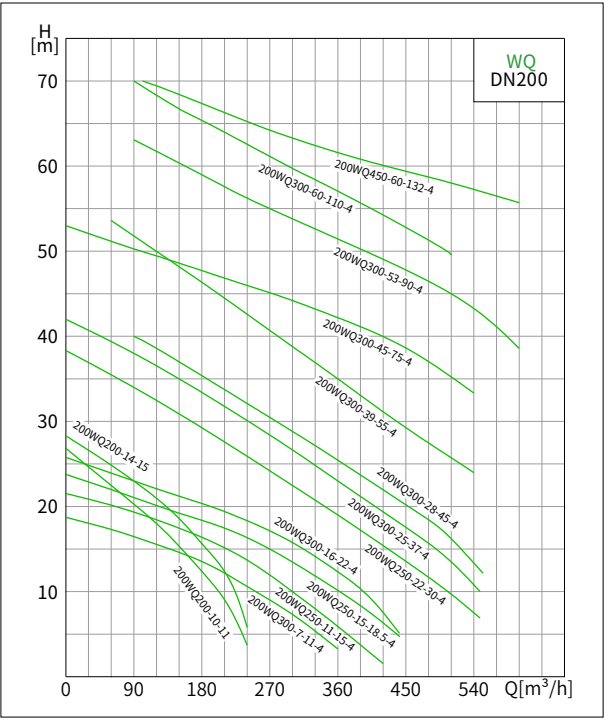
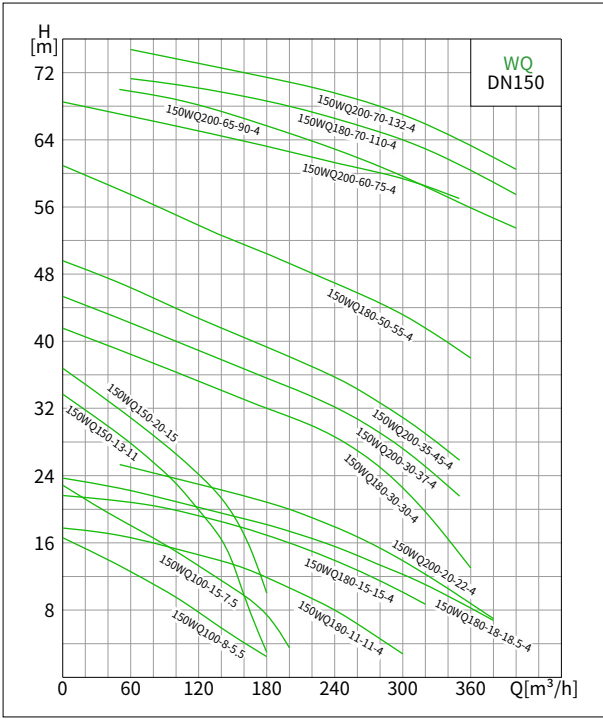
Usage Conditions

1. Power supply: 50Hz, three-phase 380V.
2. The temperature of the medium in a liquid state is $\leq 40^{\circ}\text{C}$. The volume ratio of solid substances in the conveyed medium is less than 2%. The density of the medium is less than 1200kg/m^3 .
3. During operation, the minimum liquid level shall not be lower than two-thirds of the motor.
4. The diameter of solid substances in the medium shall not be larger than the maximum allowable diameter of solids that can pass through.
5. The pH values of the conveyed medium (temperature-related) are as follows: 4-10 for 304 material, 4-13 for 316 material, and 3-13 for 316L material. These values are for reference only.

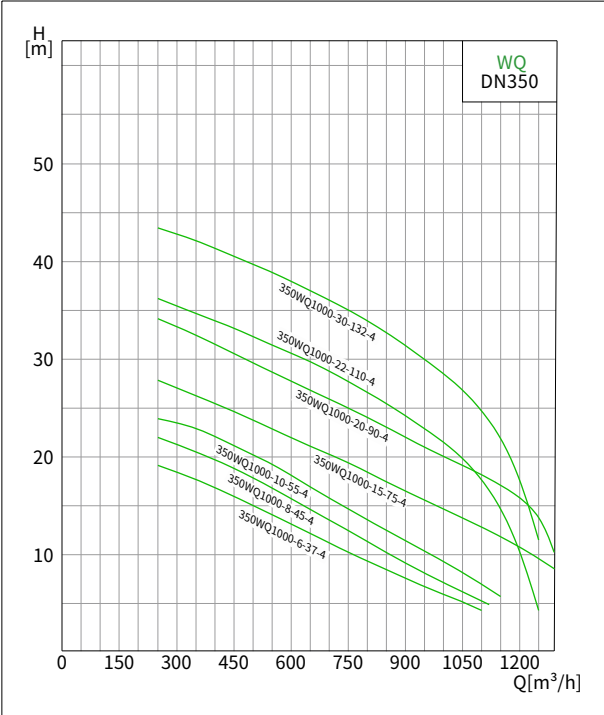
Performance Curves



Performance Curves



Performance Curves



Performance Curves

Model	Rated flow[m³/h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
50WQD10-10-0.75	10	10	0.75	220	50	2850
50WQ10-10-0.75	10	10	0.75	380	50	2850
50WQD7-15-1.1	7	15	1.1	220	50	2850
50WQ7-15-1.1	7	15	1.1	380	50	2850
50WQD15-15-1.5(I)	15	15	1.5	220	50	2850
50WQ15-15-1.5(I)	15	15	1.5	380	50	2850
50WQD15-15-1.5	15	15	1.5	220	50	2850
50WQ15-15-1.5	15	15	1.5	380	50	2850
50WQD15-20-2.2	15	20	2.2	220	50	2850
50WQ15-20-2.2(I)	15	20	2.2	380	50	2850
50WQ15-20-2.2	15	20	2.2	380	50	2850
50WQ15-25-3	15	25	3	380	50	2850
50WQ15-32-4(I)	15	32	4	380	50	2900
50WQ15-32-4	15	32	4	380	50	2900
50WQ15-40-5.5	15	40	5.5	380	50	2900
50WQ20-40-7.5(I)	20	40	7.5	380	50	2900
50WQ20-55-11	20	55	11	380	50	2900
50WQ20-60-15	20	60	15	380	50	2900
65WQD15-6-0.75	15	6	0.75	220	65	2850
65WQ15-6-0.75	15	6	0.75	380	65	2850
65WQD20-6-1.1	20	6	1.1	220	65	2850
65WQ20-6-1.1	20	6	1.1	380	65	2850

Performance Curves

Model	Rated flow[m³/h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
65WQD25-7-1.5(I)	25	7	1.5	220	65	2850
65WQ25-7-1.5(I)	25	7	1.5	380	65	2850
65WQD25-7-1.5	25	7	1.5	220	65	2850
65WQ25-7-1.5	25	7	1.5	380	65	2850
65WQD25-15-2.2	25	15	2.2	220	65	2850
65WQ25-15-2.2(I)	25	15	2.2	380	65	2850
65WQ25-15-2.2	25	15	2.2	380	65	2850
65WQ25-20-3	25	20	3	380	65	2850
65WQ25-25-4(I)	25	25	4	380	65	2900
65WQ25-25-4	25	25	4	380	65	2900
65WQ30-25-5.5	30	25	5.5	380	65	2900
65WQ30-32-7.5(I)	30	32	7.5	380	65	2900
65WQ40-45-11	40	45	11	380	65	2900
65WQ40-50-15	40	50	15	380	65	2900
80WQD40-9-2.2	40	9	2.2	220	80	2850
80WQ40-9-2.2(I)	40	9	2.2	380	80	2850
80WQ40-9-2.2	40	9	2.2	380	80	2850
80WQ40-15-3	40	15	3	380	80	2850
80WQ40-18-4(I)	40	18	4	380	80	2900
80WQ40-18-4	40	18	4	380	80	2900
80WQ50-18-5.5	50	18	5.5	380	80	2900
80WQ45-22-7.5(I)	45	22	7.5	380	80	2900
80WQ70-30-11	70	30	11	380	80	2900
80WQ70-35-15	70	35	15	380	80	2900
100WQD50-7-2.2	50	7	2.2	220	100	2850
100WQ50-7-2.2	50	7	2.2	380	100	2850
100WQ50-10-3	50	10	3	380	100	2850
100WQ50-15-4(I)	50	15	4	380	100	2900
100WQ50-15-4	50	15	4	380	100	2900
100WQ80-10-5.5	80	10	5.5	380	100	2900
100WQ80-18-7.5(I)	80	18	7.5	380	100	2900
100WQ100-20-11	100	20	11	380	100	2900
100WQ100-25-15	100	25	15	380	100	2900
150WQ100-8-5.5	100	8	5.5	380	150	2900
150WQ100-10-7.5(I)	100	10	7.5	380	150	2900
150WQ150-15-11	150	15	11	380	150	2900
150WQ150-20-15	150	20	15	380	150	2900
200WQ220-8-11	220	8	11	380	200	2900
200WQ220-10-15	220	10	15	380	200	2900
100WQ100-20-11	100	20	11	380	100	1450

Performance Curves

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
100WQ100-25-15	100	25	15	380	100	1450
100WQ100-30-18.5	100	30	18.5	380	100	1450
100WQ100-35-22	100	35	22	380	100	1450
100WQ100-45-30	100	45	30	380	100	1450
100WQ100-50-37	100	50	37	380	100	1450
100WQ100-55-45	100	55	45	380	100	1450
100WQ100-65-55	100	65	55	380	100	1450
150WQ180-11-11	180	11	11	380	150	1450
150WQ180-15-15	180	15	15	380	150	1450
150WQ180-18-18.5	180	18	18.5	380	150	1450
150WQ200-20-22	200	20	22	380	150	1450
150WQ180-30-30	180	30	30	380	150	1450
150WQ200-30-37	200	30	37	380	150	1450
150WQ200-35-45	200	35	45	380	150	1450
150WQ180-50-55	180	50	55	380	150	1450
150WQ200-60-75	200	30	75	380	150	1450
150WQ200-65-90	200	65	90	380	150	1450
150WQ200-75-110	200	75	110	380	150	1450
150WQ200-80-132	200	80	132	380	150	1450
200WQ250-7-11	250	7	11	380	200	1450
200WQ250-11-15	250	11	15	380	200	1450
200WQ250-15-18.5	250	15	18.5	380	200	1450
200WQ300-16-22	300	16	22	380	200	1450
200WQ250-22-30	250	22	30	380	200	1450
200WQ350-25-37	350	25	37	380	200	1450
200WQ400-25-45	400	25	45	380	200	1450
200WQ300-40-55	300	40	55	380	200	1450
200WQ400-30-55	400	30	55	380	200	1450
200WQ300-45-75	300	45	75	380	200	1450
200WQ300-55-90	300	55	90	380	1450	1450
200WQ400-55-110	400	55	110	380	200	1450
200WQ400-60-132	400	60	132	280	200	1450
250WQ500-7-18.5	500	7	18.5	380	250	1450
250WQ500-9-22	500	9	22	380	250	1450
250WQ600-9-30	600	9	30	380	250	1450
250WQ600-12-37	600	12	37	380	250	1450
250WQ600-15-45	600	15	45	380	250	1450
250WQ600-20-55	600	20	55	380	250	1450
250WQ600-25-75	600	25	75	380	250	1450
250WQ600-30-90	600	30	90	380	250	1450

Performance Curves

Model	Rated flow[m ³ /h]	Rated head[m]	Power[kW]	Voltage[V]	Diameter[mm]	Rotational speed[r/min]
250WQ600-40-110	600	40	110	380	250	1450
250WQ600-50-132	600	50	132	380	250	1450
250WQ600-60-160	600	60	160	380	250	1450
250WQ600-70-185	600	70	185	380	250	1450
250WQ750-75-200	750	75	200	380	250	1450
300WQ800-7-30	800	7	30	380	300	1450
300WQ800-9-37	800	9	37	380	300	1450
300WQ800-12-45	800	12	45	380	300	1450
300WQ800-15-55	800	15	55	380	300	1450
300WQ800-20-75	800	20	75	380	300	1450
300WQ800-25-90	800	25	90	380	300	1450
300WQ800-30-110	800	30	110	380	300	1450
300WQ800-35-132	800	35	132	380	300	1450
300WQ800-40-160	800	40	160	380	300	1450
300WQ900-40-185	900	40	185	380	300	1450
300WQ1000-45-200	1000	45	200	380	300	1450
300WQ1200-45-250	1200	45	250	380	300	1450
350WQ1000-6-37	1000	6	37	380	350	1450
350WQ1000-8-45	1000	8	45	380	350	1450
350WQ1000-10-55	1000	10	55	380	350	1450
350WQ1000-15-75	1000	15	75	380	350	1450
350WQ1000-18-90	1000	18	90	380	350	1450
350WQ1000-22-110	1000	22	110	380	350	1450
350WQ1000-28-132	1000	28	132	380	350	1450
350WQ1000-35-160	1000	35	160	380	350	1450
350WQ1100-38-185	1100	38	185	380	350	1450
350WQ1300-35-200	1300	35	200	380	350	1450
350WQ1500-36-250	1500	36	250	380	350	1450
400WQ1300-13-75	1300	13	75	380	400	1450
400WQ1300-16-90	1300	16	90	380	400	1450
400WQ1500-17-110	1500	17	110	380	400	1450
400WQ1700-16-132	1700	16	132	180	400	1450
400WQ1600-20-160	1600	20	160	380	400	1450
400WQ1600-25-185	1600	25	185	380	400	1450
400WQ1600-27-200	1600	27	200	380	400	1450
400WQ1600-30-250	1600	30	250	380	400	1450
500WQ2000-16-160	2000	16	160	380	500	1450
500WQ2200-15-185	2200	15	185	380	500	1450
500WQ2500-15-200	2500	15	200	380	500	1450
500WQ2800-15-250	2800	15	250	380	500	1450