



50Hz

**WQ**

SERIES SUBMERSIBLE SEWAGE PUMP



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E090901

The technical data are subject to amend without notice.



## Company Profile

Hangzhou Nanfang Special Pump Industry Co.,Ltd. is specialized in manufacture of stainless steel multistage pumps, integrating scientific research, production and marketing. Since its establishment nearly 20 years ago, the company has devoted considerable efforts to innovation and management. The company has successfully developed various kinds of pumps which are applicable to industrial and mining enterprises, municipal water supply, farm irrigation, petrochemical engineering, domestic water and fire fighting water supply of high buildings, industrial water treatment, water purification, pharmaceutical industry, boiler, air-conditioning system etc. The main performances of CDL series stainless steel multistage vertical pump, TD in-line circulation pump, SJ series stainless steel multistage deep-well submersible pump, CDLK, CDLKF immersion type multi-stage centrifugal pump, CHL/CHLK/CHLF series stainless steel multistage horizontal pumps and QY series stainless steel pump conveying mixed gas and liquid, ZS series stainless steel horizontal single-stage centrifugal pump, MS series light stainless steel horizontal single-stage centrifugal pump, have fully reached international advanced level.

Besides designing pumps with advanced tools such as three-dimensional CAD and CFD software, the company boasts a complete set of precision manufacturing and inspection equipment. With perfect quality control system, the company has passed ISO9001 Quality System Certification, ISO14001 Environment Management System Certificate, and obtained CE Mark also. The company sell products well not only at home, but also in foreign countries, Europe, America, Southeastern Asia etc, gaining popularity due to their excellent quality, good credit standing and considerate after-sales service.

The company has established a wide sales and service network which has representative offices and service centers. Offices and service centers are set in all large and medium-scale cities, aiming to providing timely and satisfactory service for customers.

Satisfying customers will be eternal pursuit of the company. Looking forward to the future, the company will further keep up its fine tradition and persist in its business principle of "quality first, credit first and clients first" to offer customers products of high quality and more considerate services.

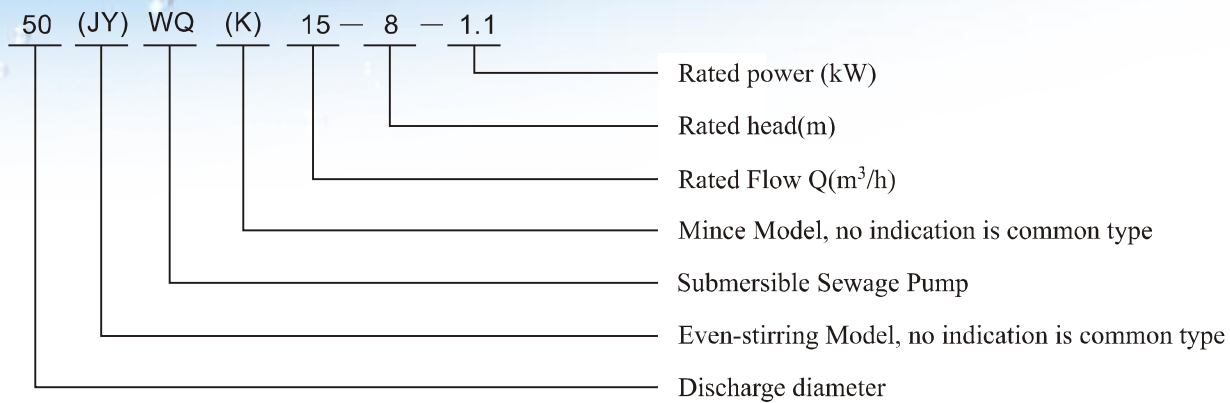
**Nanfang pump, an international brand worthy of your trust!**

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PRODUCTION LICENCE

**DEFINITION OF MODEL**

**PURPOSE**

WQ series submersible sewage pump is mainly used for municipal works, industrial buildings, hotels, hospitals, civil air defence, mines etc. Applied to drain off the sewage, waste water, rainwater and living water in cities containing solid grains and various long fabrics.

**CONDITIONS OF USE**

- 1.The medium temperature should not be over 40°C, the density should be less than 1200kg/m<sup>3</sup>, and the PH value is within5-9.
- 2.During running, the pump must not be lower than the lowest liquid level, see “▼lowest liquid level” in the drawing of installation dimensions▼means lowest liquid level without automatic cooling system.
- 3.Rated voltage 380V, rated frequency 50Hz. The motor can run successfully only under the conditi on the deviations of both rated voltage and frequency are not over ±5%.
- 4.The maximum diameter of the solid grain going through the pump should not be larger then 50% of that of the pump outlet.

**STRUCTURES DESCRIPTION**
**Bearing:**

Use Chinese excellent bearing. The suitable bearing configuration prolong life of pump.

**Cooling:**(It specially means that adding an outer cooling circulation sewage pump)

The built-in cooling system can make pump work normally no matter motor is on the liquid or under the liquid. Part of the pumped liquid brings away the heat caused by motor from casing to cooling cylinder and shell. If needs outer cooling, cooling cylinder is taken apart from casing and it is connected with cooling system separately.

**Motor:**

Insulation class: F, the max. working temperature is 155°C. It is effected sealed. The protection level is IPX8.

**Mechanical seal:**

Use famous mechanical seal, two sets of mechanical seal work separately in series. It takes apart motor and pump with seal, double protect motor.

The material of pump side is WC/SiC, the motor side is C/SiC

**Oil chamber:**

Oil can lubricate and cool mechanical seal, it can also resit liquid soak into motor. The left some amount air can deduce the pressure increment in oil chamber.

**STRUCTURES DESCRIPTION**
**Impeller:**

After optimized design, it can pump liquid with best flow and speed and efficient without block. Every duty point matches a impeller for choosing.

According to the pumped medium, single flow channel, double flow channel, triple impeller can be chosen.

**Casing:**

Use CAD/CAM technology, make pump casing the best efficiency and least wearing.

**Shaft:**

The pump is coaxial with the motor and the sealing device on the end of the shaft prevents shaft from contacting with the medium to protect it from corrosion.

The rotator extention is designed as short as possible, to reduce the deflection and vibration. Prolong the life of mechanical seal and bearing and reduce running noise.

**Monitor system:**

Inside of the stator, there are three inlaid series heat-control switches. At the normal temperature, it is 'OFF'. When the temperature of rotator gets to 125°C, it switches on.

A water-leakage probe is mounted inside the oil chamber to check water leakage and it will give a warning signal(the indicator lights), when the mechanical seal on the pump side leaks and the oil-water ratio in the oil chamber reaches a certain concentration, it will automatically cut off the power to stop the work of the pump.

Serviceman should replace the oil timely and check the mechanical seal on the pump side and replace it when necessary.

All the wiring box of the motor with a power not lower than 30kW is mounted with a leakage probe to check if there is a leak withih the cable seal.

**Float switch:**

The float switch will give a warning signal(the indicator lights), when leakage occurs on the mechanical seal on the motor side, the liquid goes into the switch chamber and reaches a certain height, to stop the pump. Serviceman should check the mechanical seal and replace it if necessary.

The function to check if the motor lack of phase is available with the electric control cabinet so as to prevent it from burning due any lack of phase.

**ROTATION DIRECTION & CABLES**

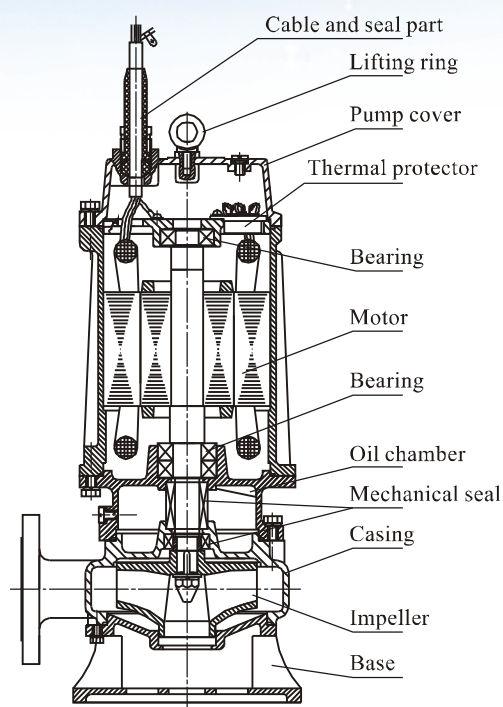
- 1.From the pump suction direction, the impeller turns counter-clockwisely.
- 2.Power supply cable: Azury(U),Black(V), Brown(W) are three phases power cable.  
Signal cable: Purple(12#)-Oil water detector; Pink(13#)-Floater switch; White(14#)- Motor stationary part wiring thermal part.  
Earth cable: Yellow/Green cable(11#)

**IMPORTANT NOTICE**

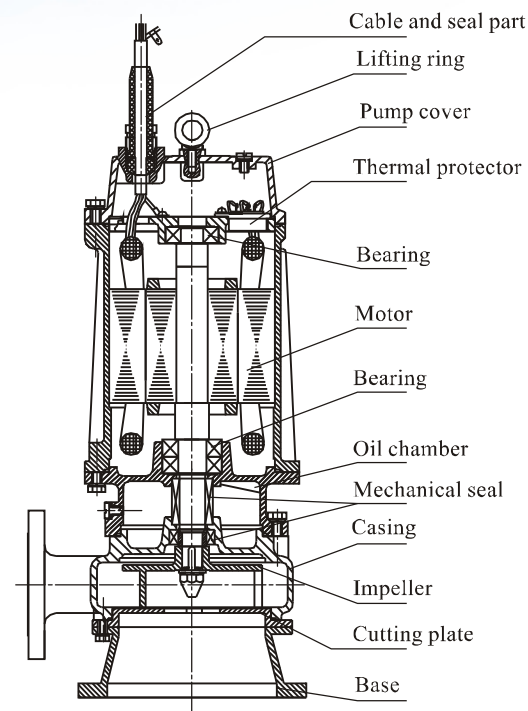
1. There is lifting ring or handle with the pump for movement. It is prohibited to grab the cable(as a lifting ring) when movement It will loose the seal between the cable and the motor cover, which will make motor leak.
2. The curves in the performance curve picture are the recommended range for pump application. The listed models are the typical models. If the performance curve is fulfilled with requirements, the model is available.

**ORDER REMARK**

1. When place order, please note product model, name, performance data(flow, head), installation way, material of wet part, optional part, spare part, etc.;When choose model, consider the density of medium which will affect the motor power, consider the corrosive of medium, wearing which will have special requirement for the mechanical seal of wet part.Welcome to inquiry on this.
2. If have speical requirement for the protection in the pump (Oil probe, float switch, thermal part), need to specify when order. (Model that is below 7.5kW does not have these device.)
3. The standard cable length for the submersible sewage pump is 10m. If needs prolong, needs to specify.
4. Because the excellent design of the guide rod cradle, the guide rod can be the normal tap water pipes or steel pipes. Therefore, the coupling device do not in clude the guide rod. The guide rod is the optional ordering part.
5. The user need to order spare parts if he likes.
6. If needs to order electric control device, please remark controlling way, e.g. controlled pump qty. and liquid level controlling way, etc.

**SECTIONAL DRAWING**


(JY) WQ Submersible Sewage Pump



WQK Cutting Type Submersible Sewage Pump

**MAIN WQ (JYWQ) series coupled installation**

SN	Model	Flange size (mm)			Base plate size (mm)					G	H <sub>2</sub>	H <sub>3</sub>	L	L <sub>1</sub>	m	Φe	E
		D	D <sub>1</sub>	n <sub>1</sub> -Φd <sub>1</sub>	A	A <sub>1</sub>	B	B <sub>1</sub>	n <sub>2</sub> -Φd <sub>2</sub>								
1	50WQ	140	110	4-Φ14	197	168	285	206	4-Φ16	90	250	160	265	220	50	13	550×550
2	65WQ	160	130	4-Φ14	238	200	320	240	4-Φ16	130	265	165	280	235	50	13	650×600
3	80WQ	190	150	4-Φ18	278	238	354	260	4-Φ18	165	285	165	315	260	50	13	650×600
4	100WQ	210	170	4-Φ18	320	260	375	300	4-Φ18	175	305	185	410	315	60	15	750×650
5	150WQ	265	225	8-Φ18	400	300	410	350	4-Φ18	190	480	200	410	260	60	15	1000×800
6	200WQ	320	280	8-Φ18	400	300	450	350	4-Φ18	230	550	200	410	260	60	15	1300×900
7	250WQ	375	335	12-Φ18	460	360	560	430	4-Φ24	230	630	200	410	260	60	15	1600×1300
8	300WQ	440	395	12-Φ18	600	540	600	540	4-Φ24	375	650	250	700	615	150	20	1600×1300
9	350WQ	490	445	12-Φ18	600	540	600	540	4-Φ24	390	700	250	700	615	150	24	1600×1300
10	400WQ	565	515	16-Φ26	700	640	700	640	4-Φ24	390	750	300	880	800	150	24	1600×1300
11	450WQ	615	565	20-Φ26	700	640	700	640	4-Φ24	595	800	350	950	850	150	27	1600×1300
12	500WQ	670	620	20-Φ26	800	740	800	740	4-Φ24	595	875	400	950	850	150	27	1600×1300

**SUPPLY**

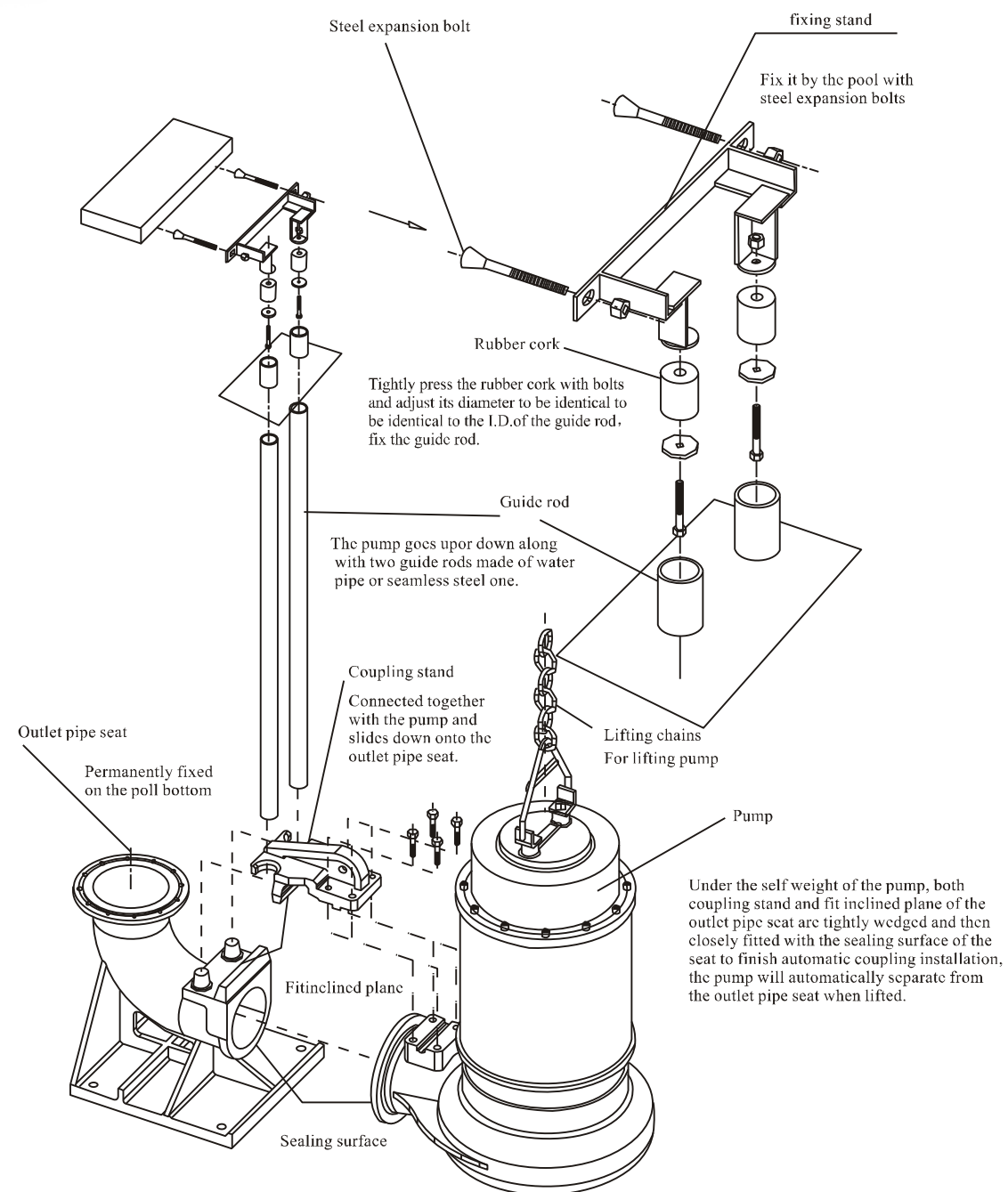
Movable hose installation	Pump, hose joint	Supply one pump with one joint
Movable hard way installation	Pump, flange	1. Supply one pump with one flange. 2. Please remark the hole in the flange, is it plain hole or screwed hole.
Fixed coupling installation	Pump, auto coupled device(Including outlet pipe seat, fixing stand, coupling stand)	1. Supply one pump with one set of auto coupled device. 2. Guide rod(tap water pipe). 50,60 equipped with 1inch, 80~200 with 2 inch.

**MAIN PARTS**

Part	Casing, impeller, pump cover	Motor shell	Shaft	Mechanical Seal	
				Motor side	Pump side
parts	HT250 or nodular cast iron	HT250	2Cr13	C/SiC	WC/SiC

**WQ INSTALLATION SKETCH**
**1、 Auto-coupled installation**

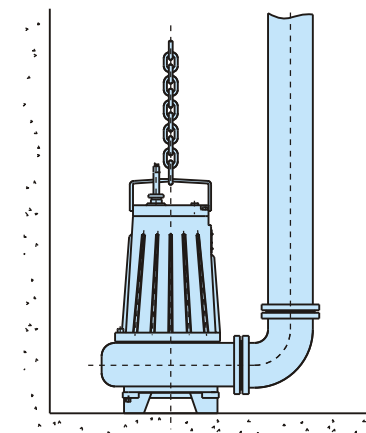
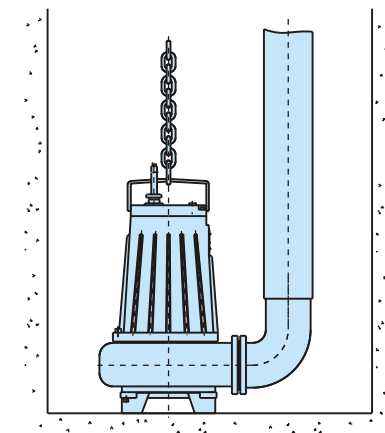
The pump is placed down along with the guide rod and automatically connected to the drainage pipeline system. Less cost mounting and lowering the cost for repair.

**SCHMATIC DRAWING OF COUPLING DEVICE INSTALLATION**

**WQ INSTALLATION METHOD**
**2. Movable Hard Pipe installation**

The pump is supported by its foundation, the hard pipe joint is connected to the pipeline system.

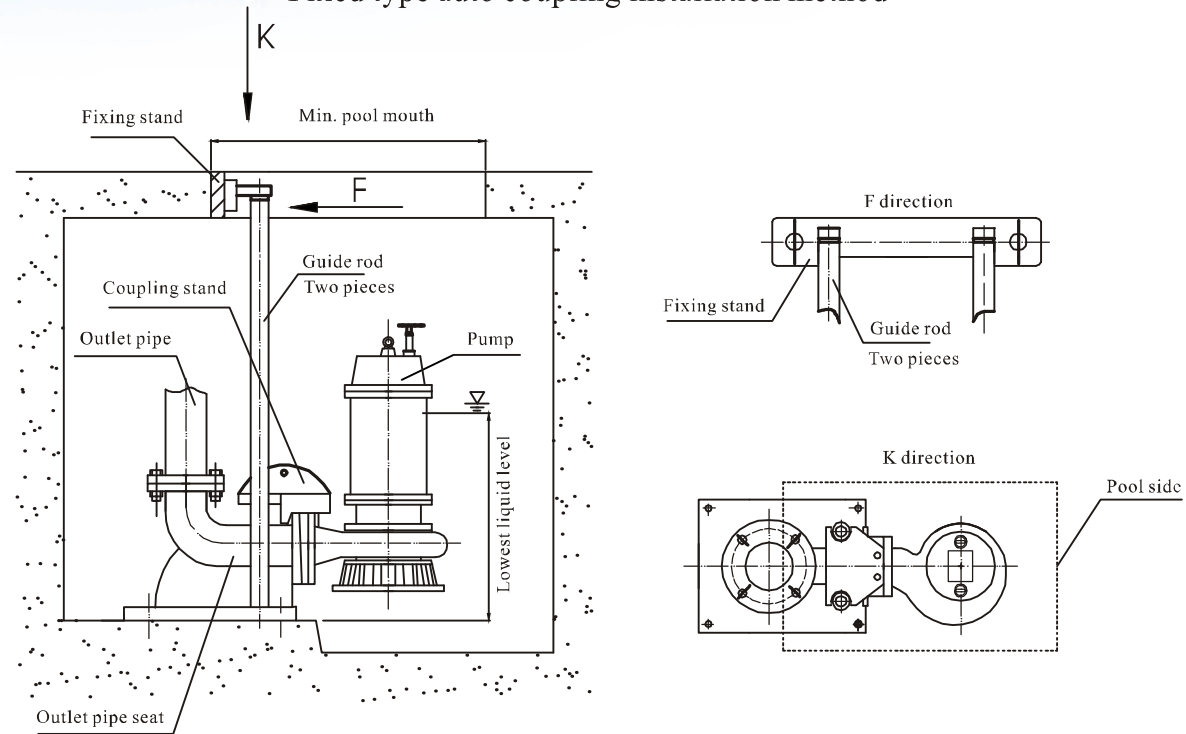
**3. Movable Soft Pipe installation**

The pump is supported by its foundation, the soft pipe joint is connected to the outlet rubber pipe, with multiple purposes, easy to be mounted, the pump can be easily moved from one sewage well to another.


**Movable Hard Pipe Installation**

**Movable Soft Pipe Installation**

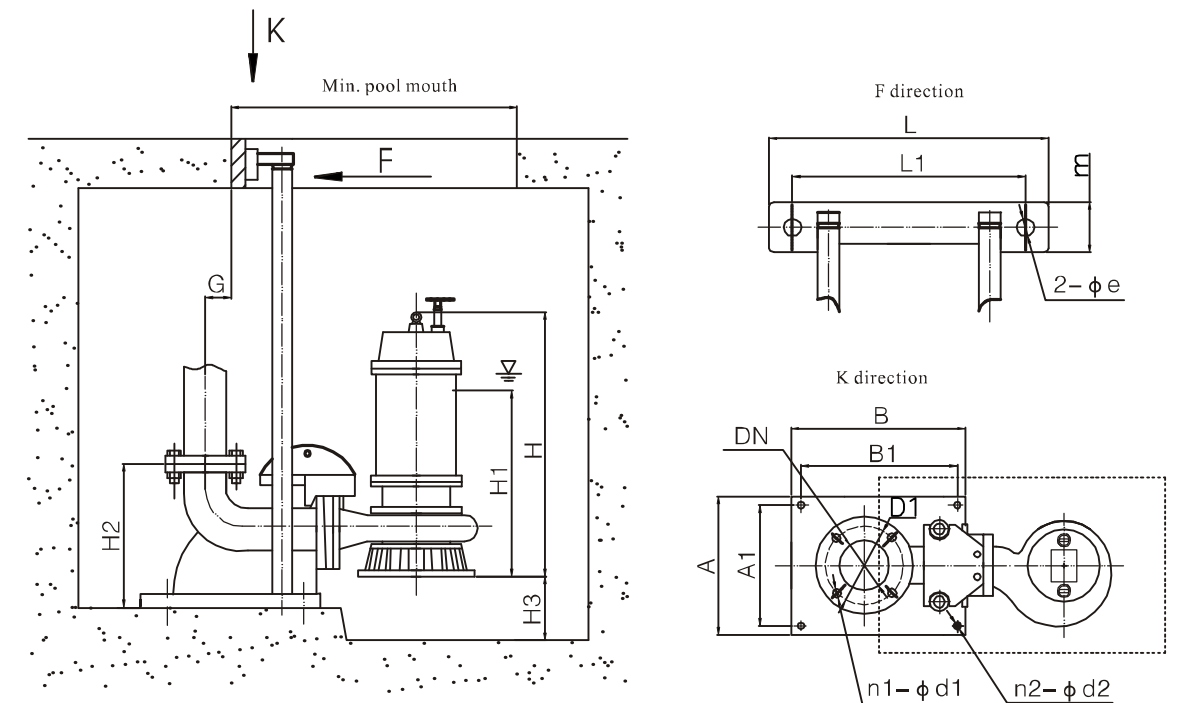
WQ INSTALLATION METHOD

Fixed type auto coupling installation method



WQ INSTALLATION METHOD

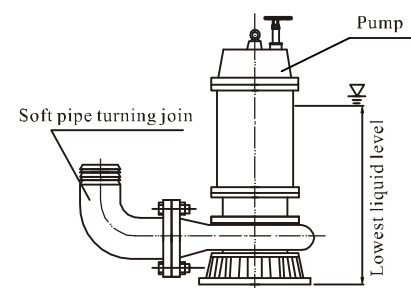
Size drawing of fixed type auto coupling installation method



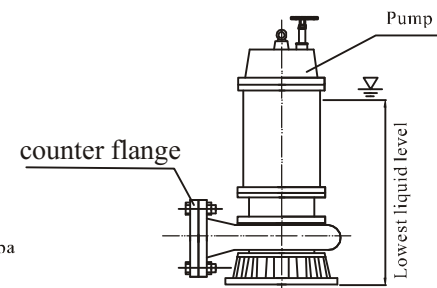
Movable soft pipe installation

Flange size

Movable hard pipe installation



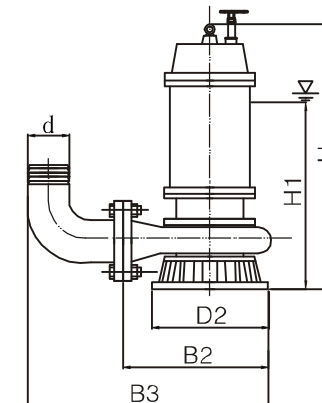
Standard:GB4216.3-1984 PN0.6Mpa



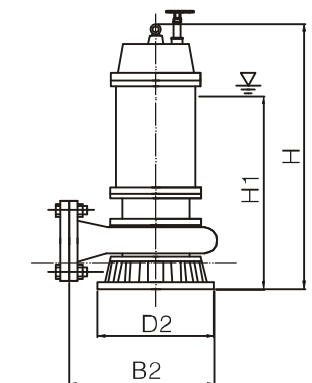
Movable soft pipe installation

Flange size

Movable hard pipe installation



Standard:GB4216.3-1984 PN0.6Mpa



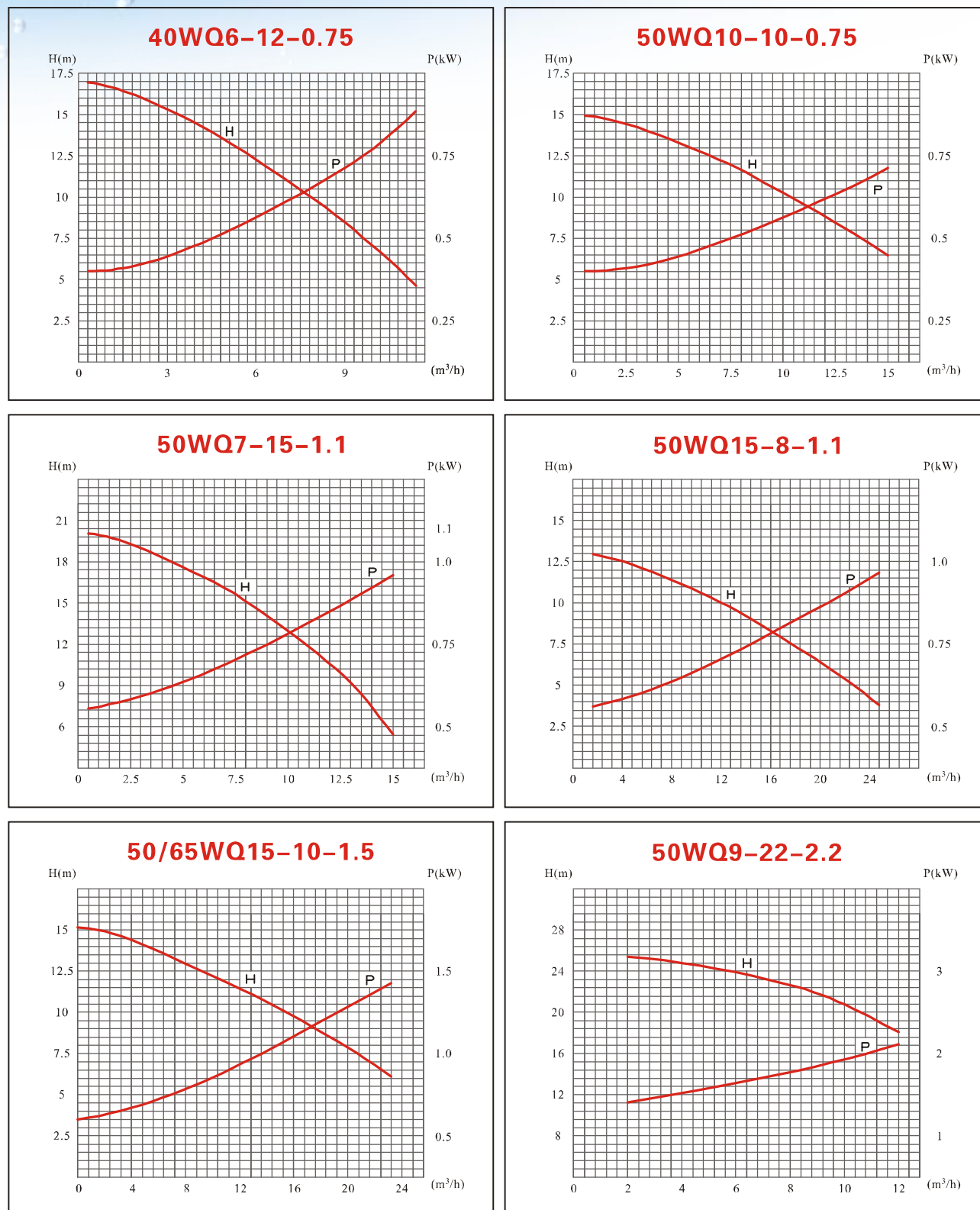
**WQ DIMENTIONS**

Dia DN	Model	Capacity (m <sup>3</sup> /h)	Head (m)	Speed (rpm)	Power (kW)	Dimentions (mm)					
						H	H1	B2	B3	D2	d
40	40WQ6-12-0.75	6	12	2900	0.75	520	470	230	420	190	40
50	50WQ10-10-0.75	10	10		0.75	350	300	330	420	190	50
	50WQ15-8-1.1	15	8		1.1	520	470	230	320	190	
	50WQ7-15-1.1	7	15		1.1	520	470	230	320	190	
	50WQ15-10-1.5	15	10		1.5	540	690	240	330	200	
	50WQ15-15-2.2	15	15		2.2	570	520	250	340	200	
	50WQ9-22-2.2	9	22		2.2	570	520	250	340	200	
	50WQ15-30-3	15	30		3.0	620	570	260	350	210	
	50WQ15-35-4	15	35		4.0	650	600	270	360	250	
	50WQ15-40-5.5	15	40		5.5	660	610	300	390	250	
	50WQ20-40-7.5	20	40		7.5	660	610	300	390	280	
65	65WQ15-10-1.5	15	10		1.5	540	690	240	330	190	63
	65WQ15-15-2.2	15	15		2.2	570	520	260	350	200	
	65WQ20-18-2.2	20	18	2.2	570	520	260	350	200		
	65WQ25-15-3	25	15	3.0	620	570	260	350	200		
	65WQ20-25-4	20	25	4.0	650	600	280	370	240		
	65WQ30-30-5.5	30	30	5.5	740	660	280	370	250		
80	80WQ40-8-2.2	40	8	2.2	560	510	250	350	230	75	
	80WQ50-7-2.2	50	7	2.2	570	520	250	350	230		
	80WQ43-13-3	43	13	3.0	580	450	260	380	240		
	80WQ50-10-4	50	10	4.0	680	630	350	450	230		
	80WQ65-15-5.5	65	15	5.5	710	560	300	420	280		
	80WQ45-22-7.5	45	22	7.5	820	770	360	460	360		
	80WQ40-45-11	40	45	11	850	780	360	500	330		
100	100WQ50-7-2.2	50	7	2.2	550	420	270	430	220	100	
	100WQ60-9-3	60	9	3.0	630	580	270	400	230		
	100WQ65-10-4	65	10	4.0	680	630	320	450	230		
	100WQ65-15-5.5	65	15	5.5	730	680	320	450	250		
	100WQ65-20-7.5	65	20	7.5	820	770	360	500	330		
	100WQ80-25-11	80	25	11	1000	950	330	660	420		
	100WQ80-30-15	80	30	15	1050	1000	580	710	420		
	100WQ80-35-18.5	80	35	18.5	1100	1050	580	710	420		

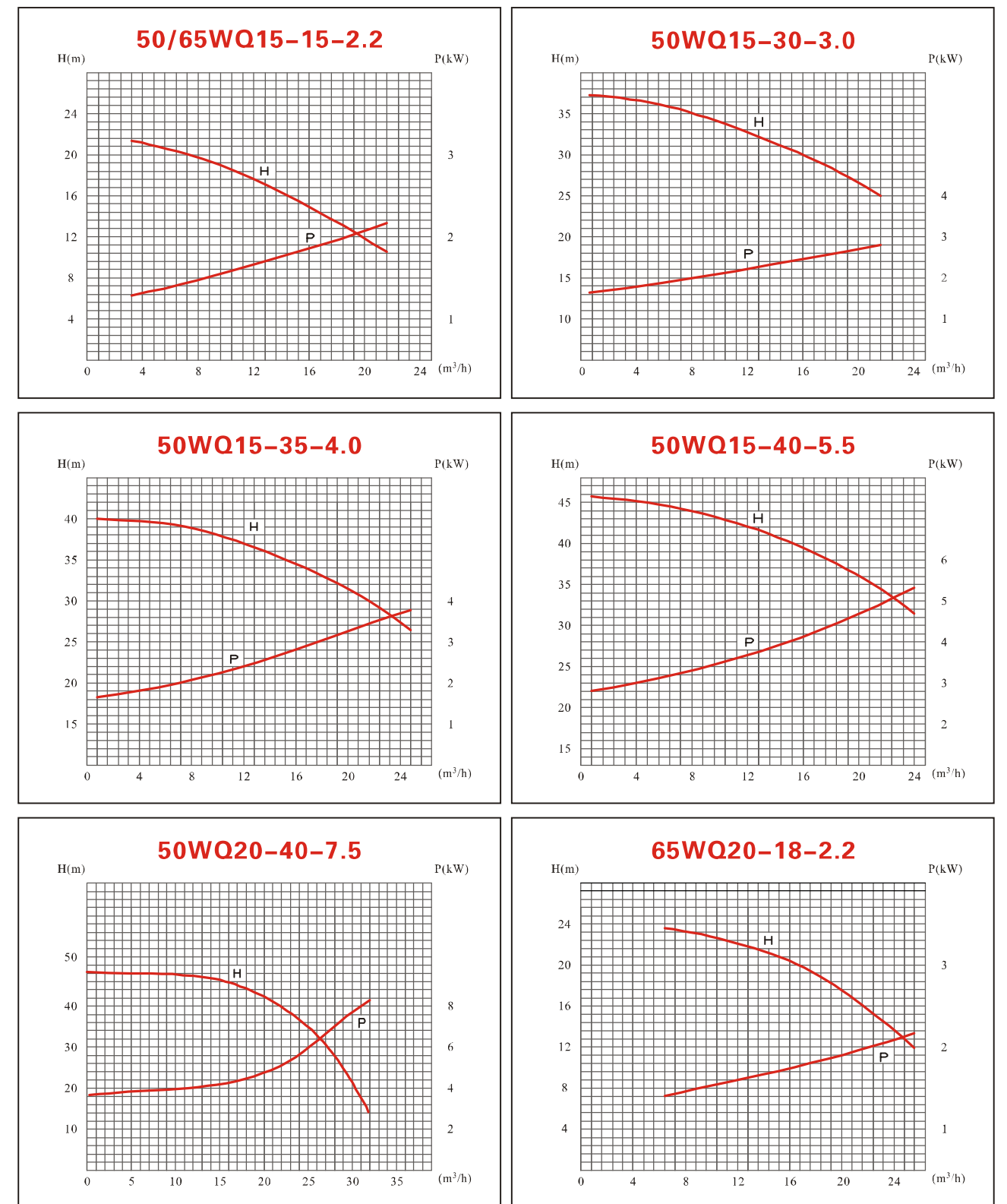
**WQ DIMENTIONS**

Dia DN	Model	Capacity (m <sup>3</sup> /h)	Head (m)	Speed (rpm)	Power (kW)	Dimentions (mm)					
						H	H1	B2	B3	D2	d
150	150WQ120-10-7.5	120	10	2900	7.5	800	750	620	800	360	150
	150WQ130-15-11	130	15		11	850	800	770	950	420	
	150WQ130-20-15	130	20		15	1050	1000	770	950	420	
	150WQ180-20-18.5	180	20		18.5	1080	1030	790	970	420	
	150WQ180-25-22	180	25		22	1100	1050	790	970	420	
	150WQ200-25-30	200	25		30	1240	980	610	810	520	
	150WQ200-30-37	200	30		37	1240	980	610	810	520	
	150WQ180-40-45	180	40		45	1290	1030	610	810	520	
	200	200WQ300-7-11	300		7	1450	11	1120	1070	1100	
200WQ250-11-15		250	11	15	1150		1100	1100	1350	420	
200WQ250-15-18.5		250	15	18.5	1020		800	580	860	420	
200WQ300-15-22		300	15	22	1100		800	580	860	420	
200WQ250-22-30		250	22	30	1240		980	600	880	520	
200WQ300-20-37		300	20	37	1240		980	600	880	520	
200WQ250-35-45		250	35	45	1290		1030	600	880	520	
250	250WQ400-30-55	400	30	950	55	1450	1050	870	1050	580	250
	250WQ600-9-30	600	9		30	1300	1050	650	980	530	
	250WQ600-12-37	600	12		37	1300	1050	650	980	530	
	250WQ800-12-45	800	12		45	1350	1100	650	980	580	
	250WQ600-20-55	600	20		55	1450	1050	870	1210	580	
300	300WQ800-8-37	800	8	950	37	1300	1050	800	1200	580	300
	300WQ800-12-45	800	12		45	1350	1100	800	1200	580	
	300WQ600-20-55	600	20		55	1480	1080	870	1270	580	
350	350WQ1500-7-45	1500	7	950	45	1500	1100	820	1320	670	350
	350WQ1100-10-55	1100	10		55	1550	1050	900	1400	670	

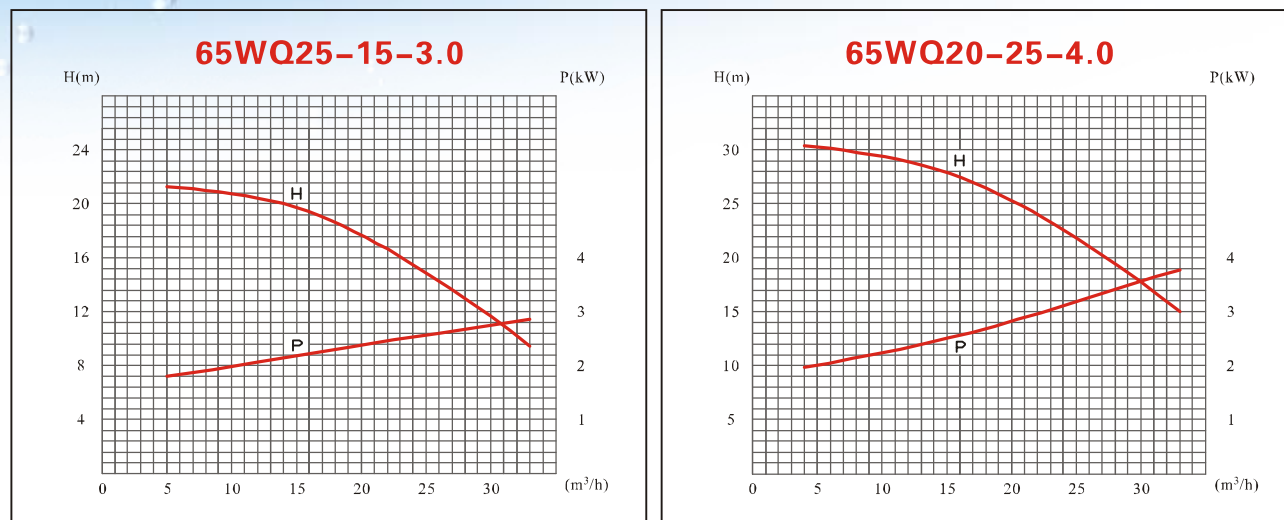
WQ TYPICAL PERFORMANCE CURVE



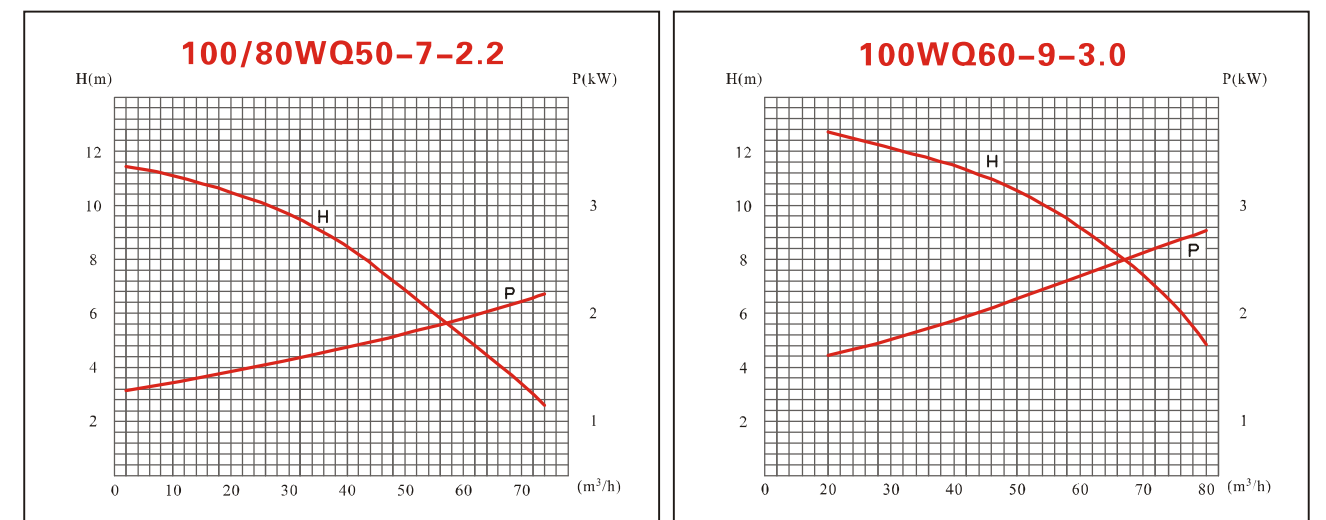
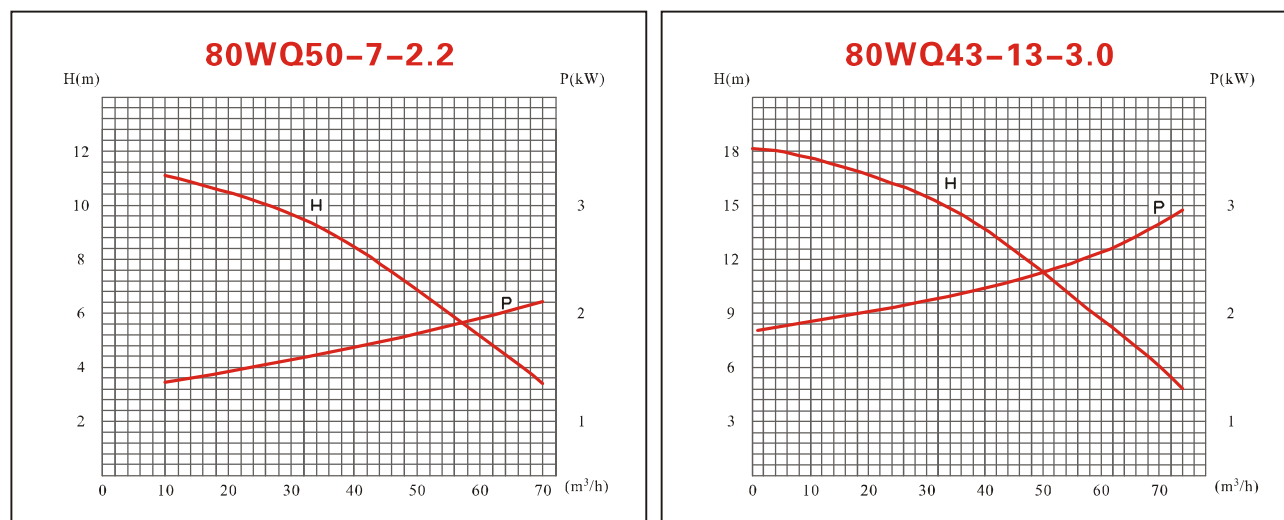
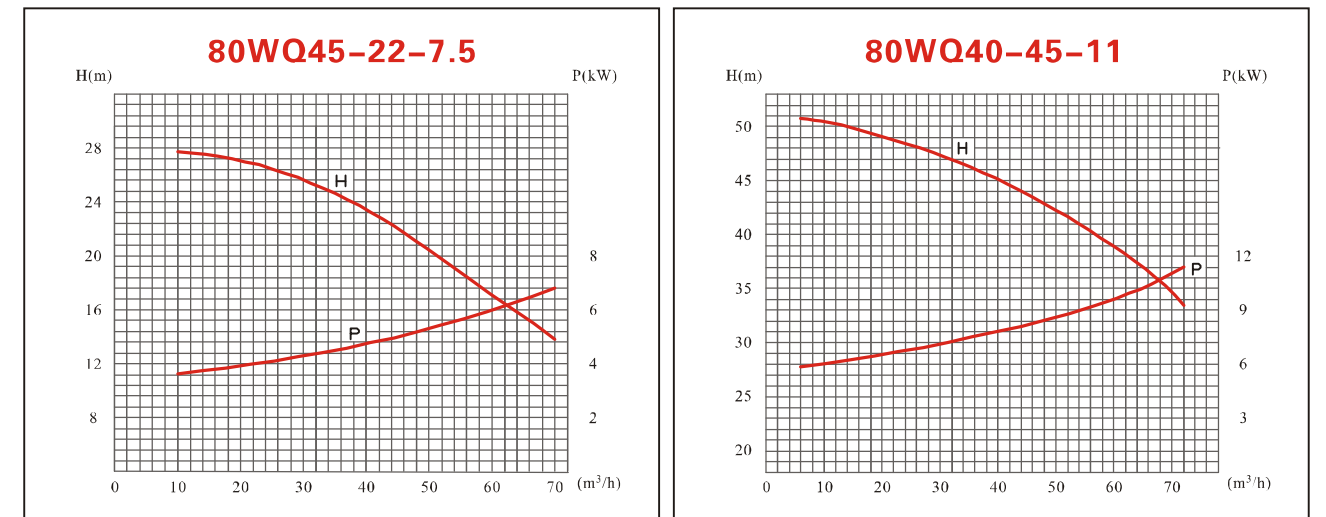
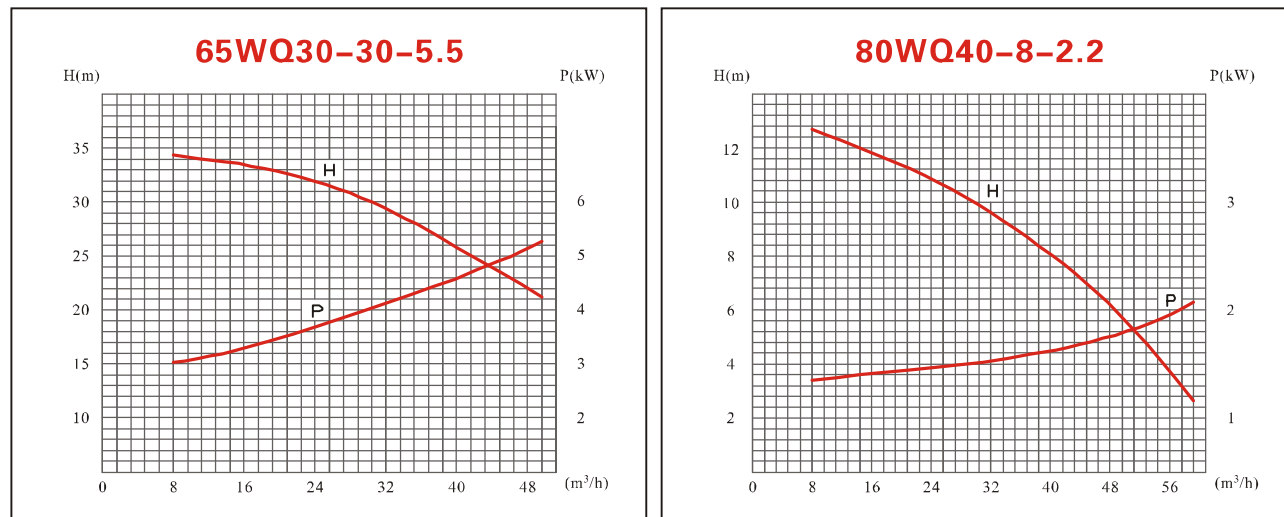
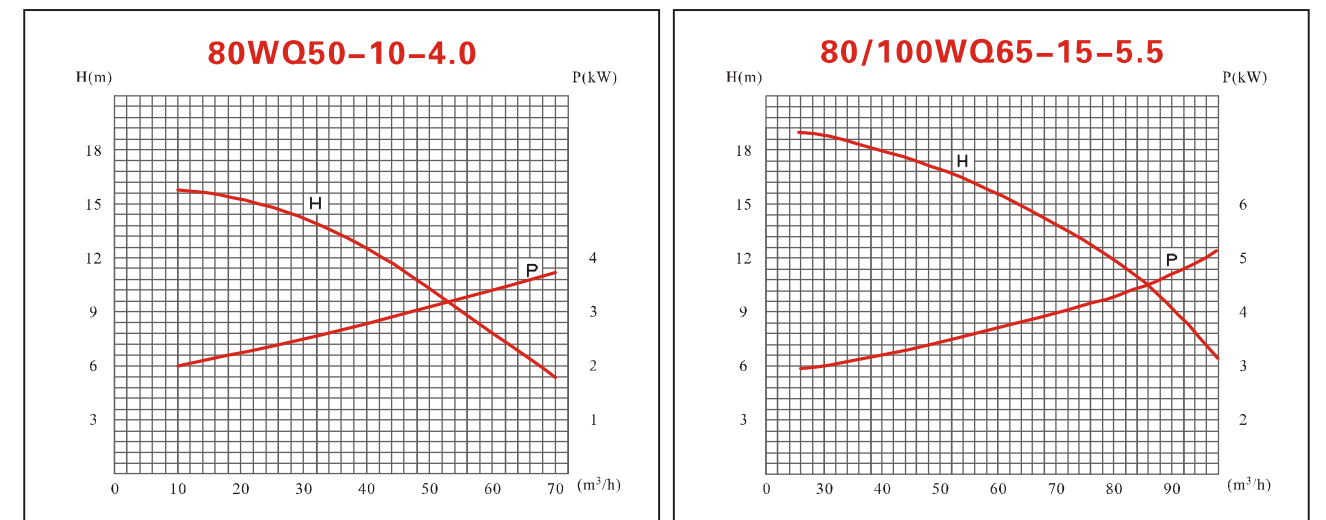
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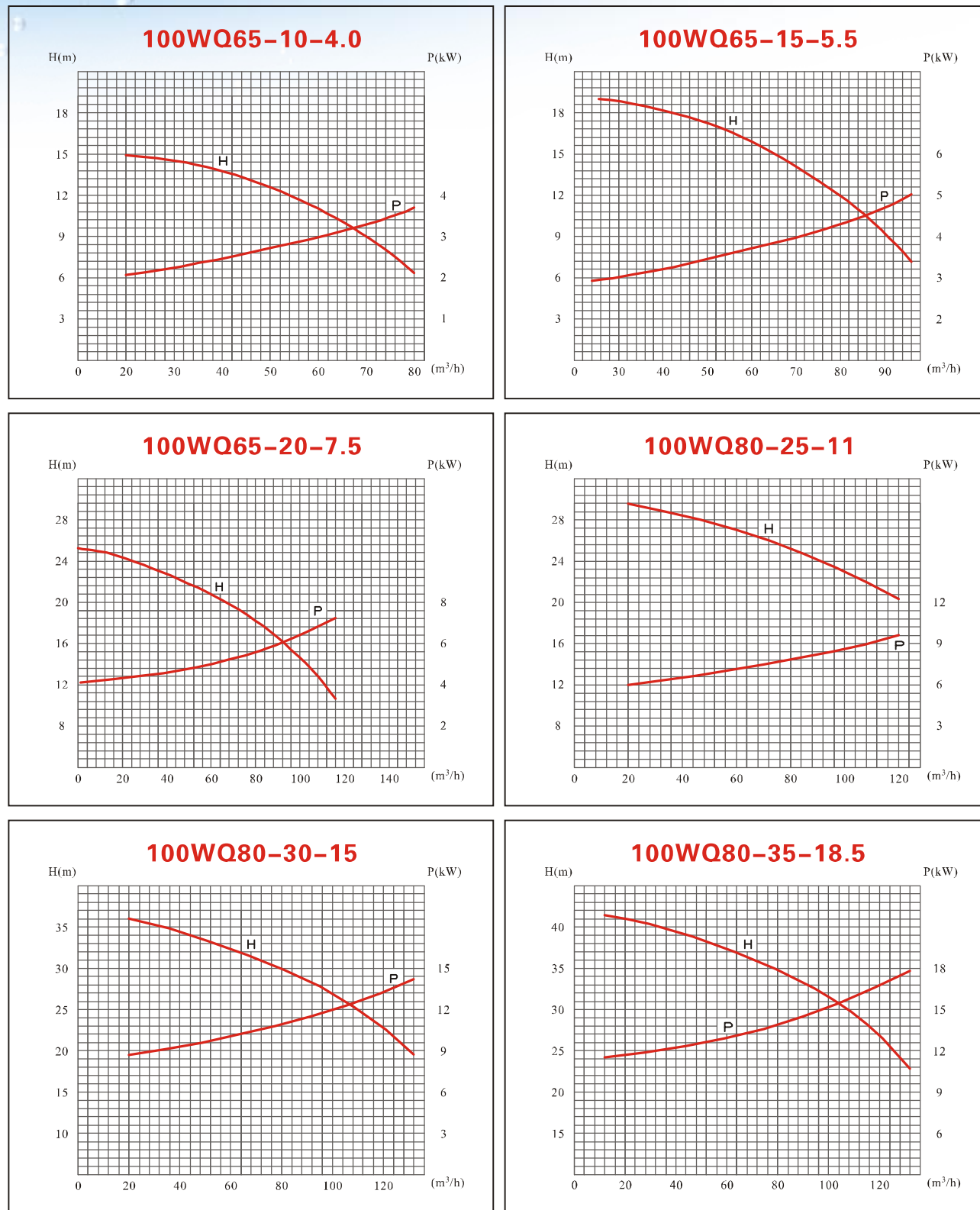
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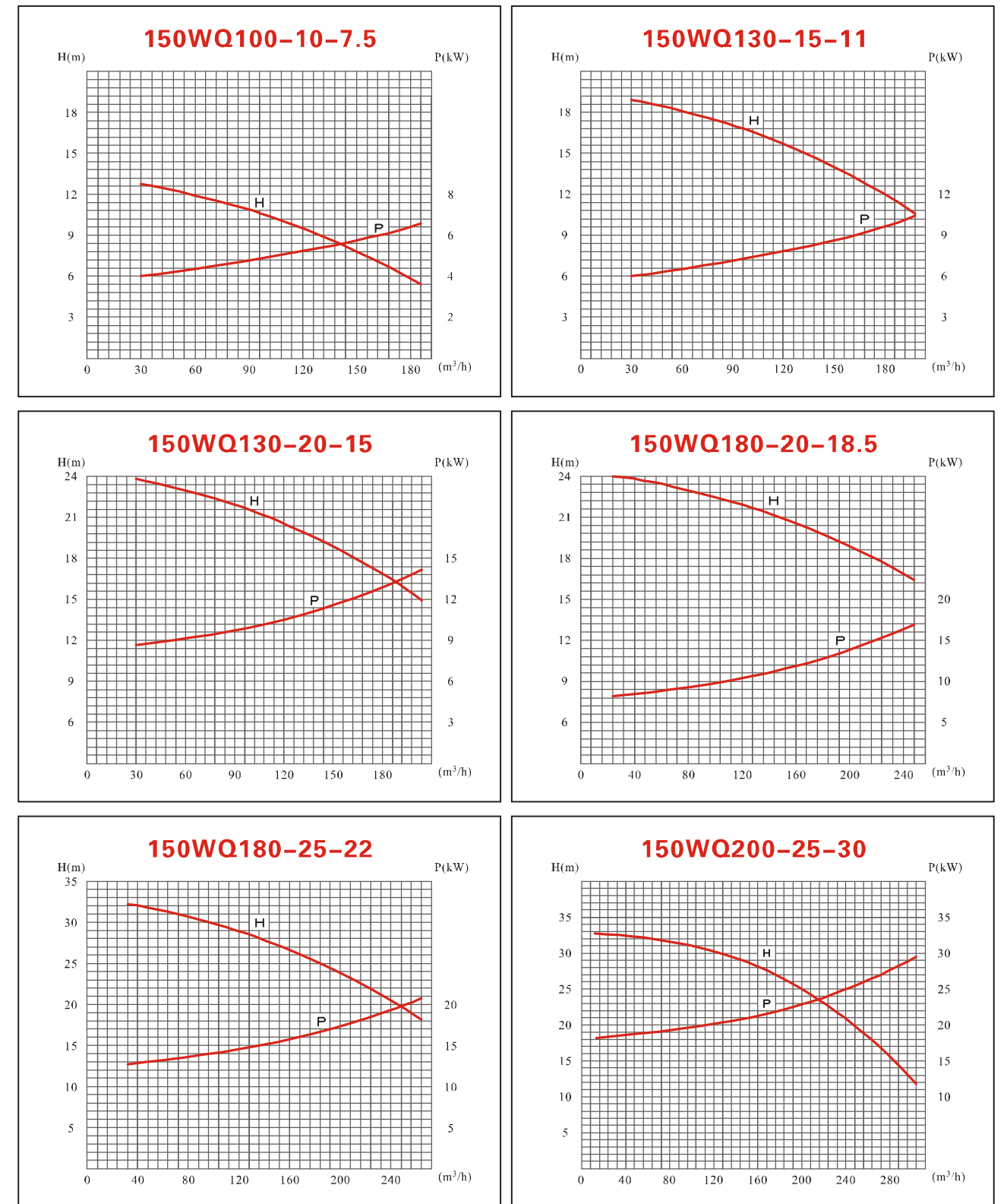
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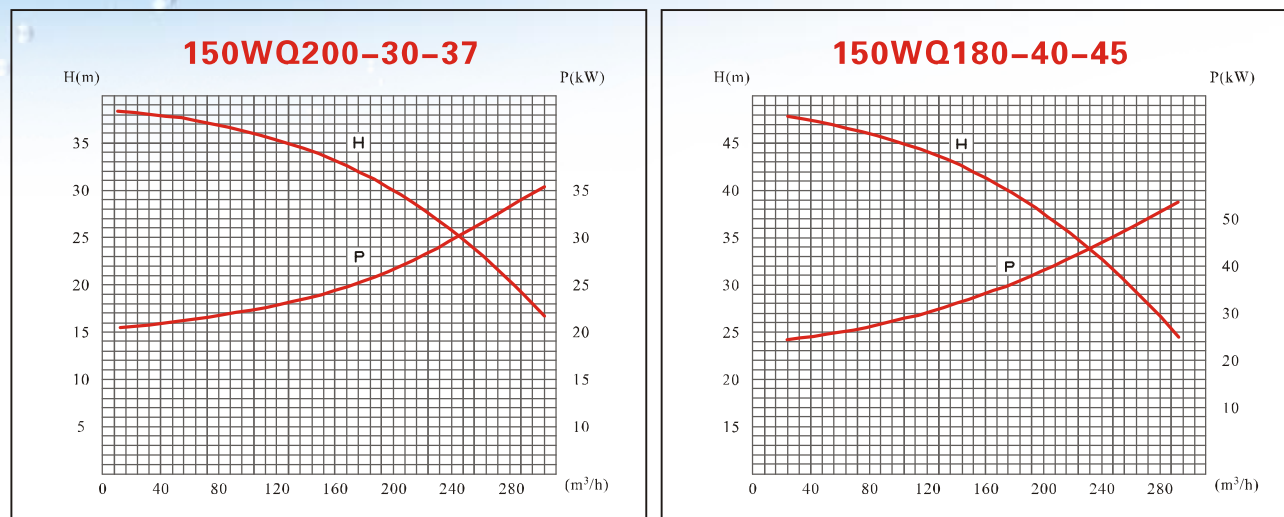
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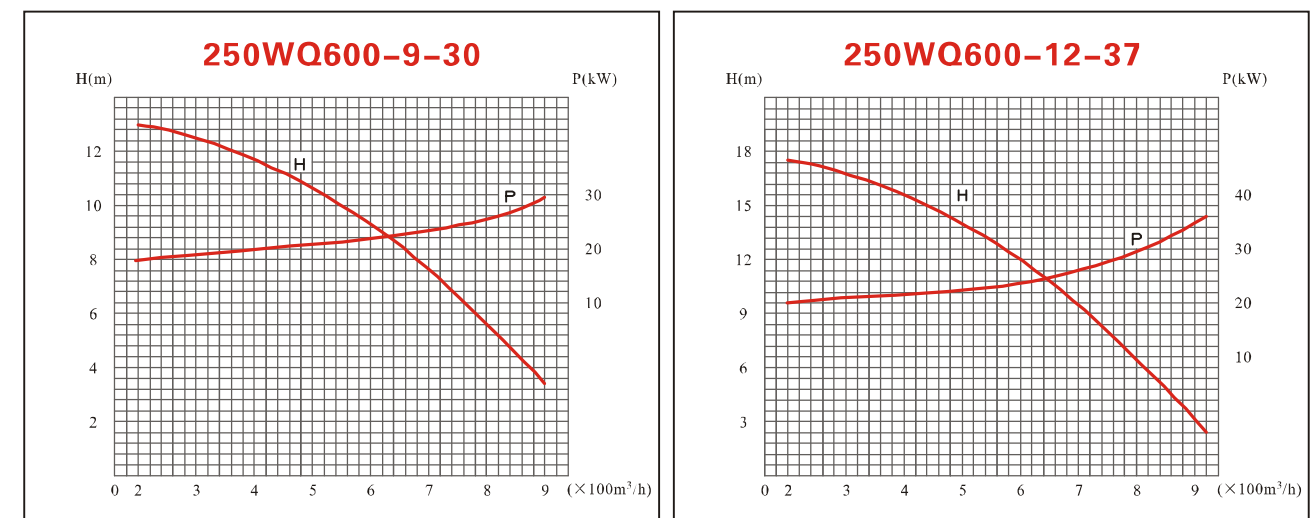
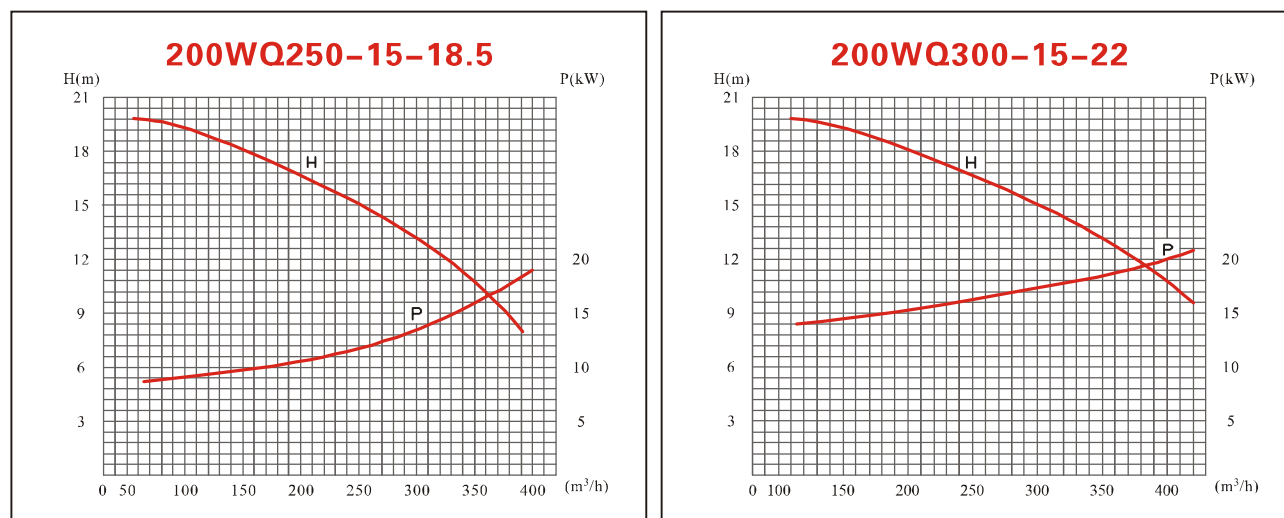
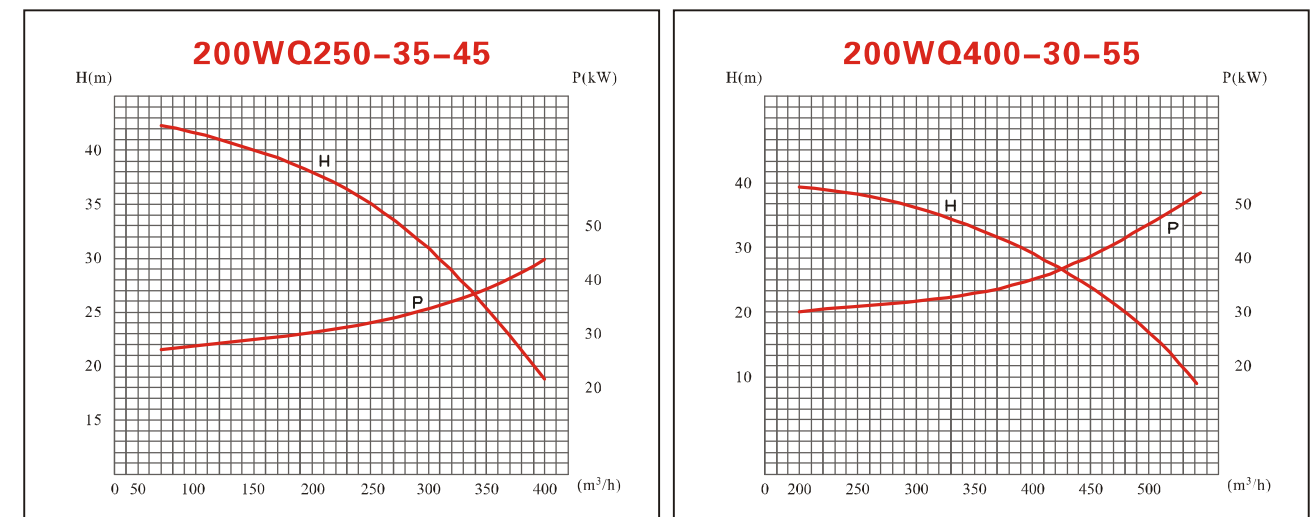
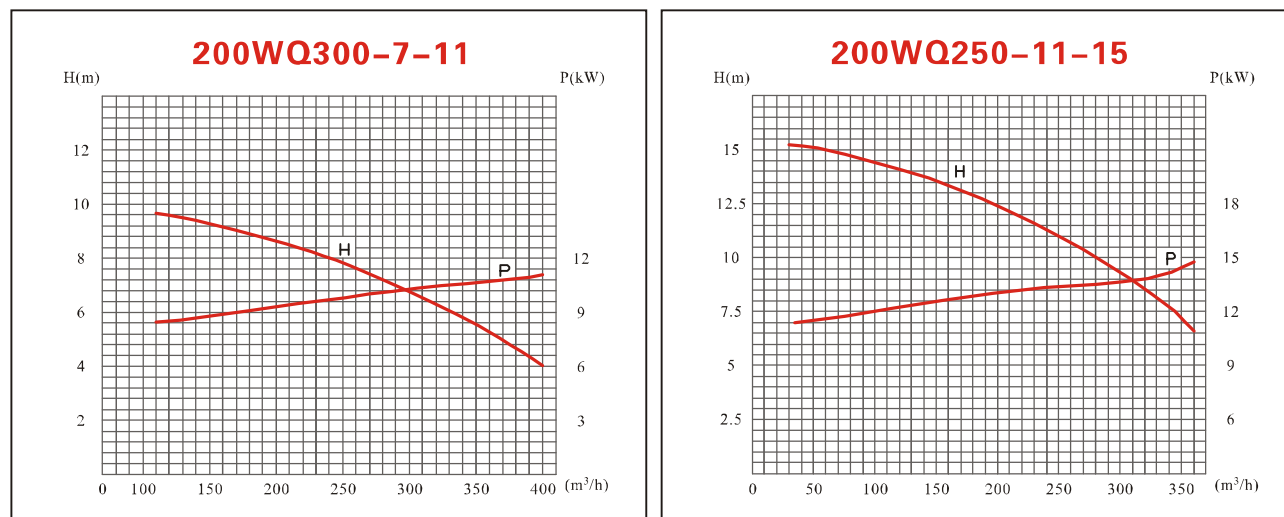
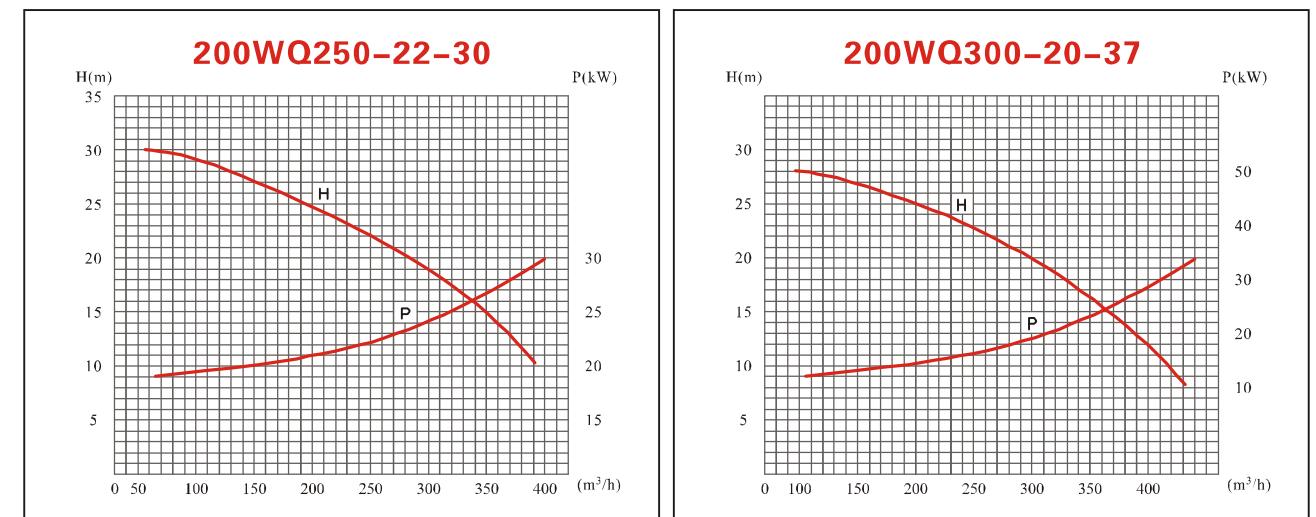
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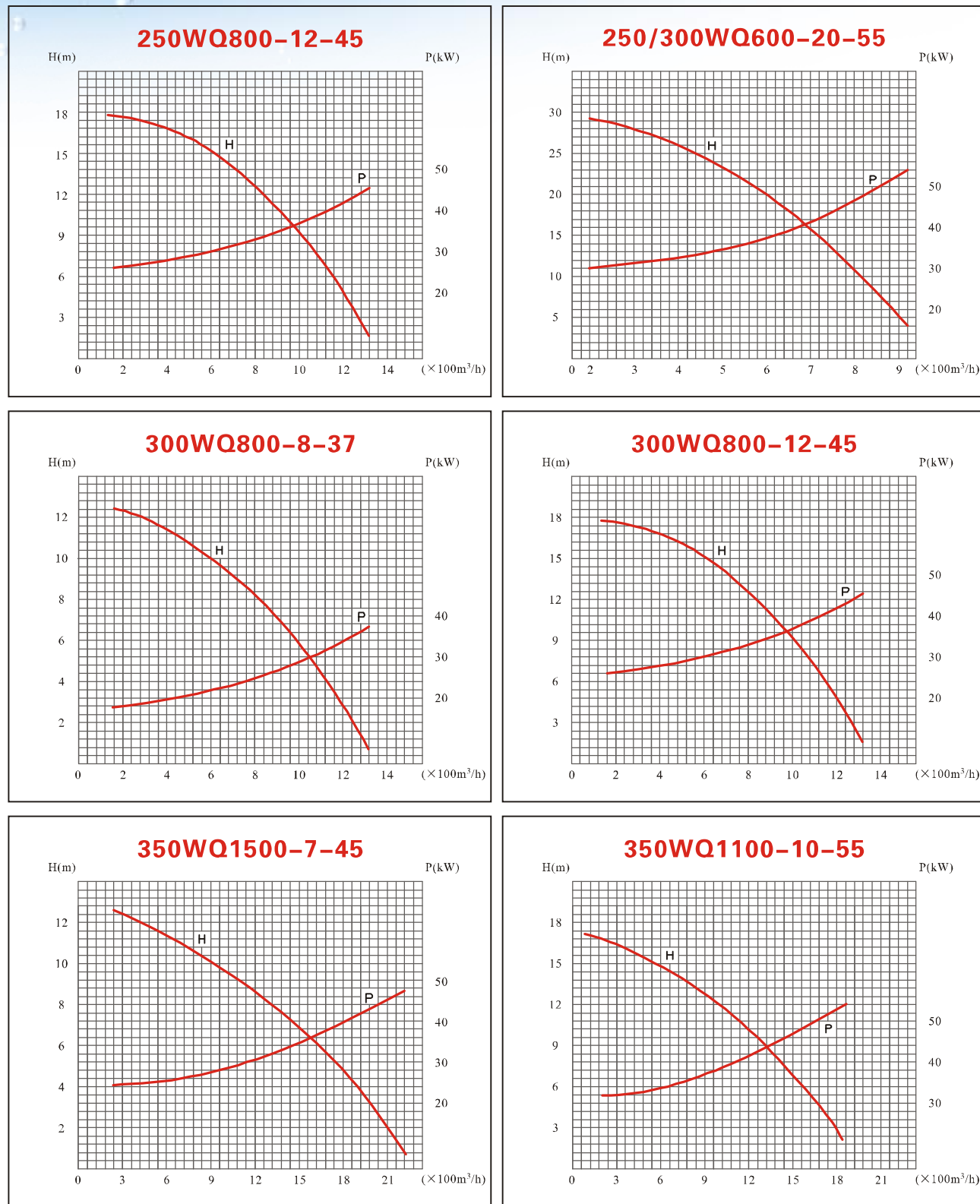
WQ TYPICAL PERFORMANCE CURVE



WQ TYPICAL PERFORMANCE CURVE



## WQ TYPICAL PERFORMANCE CURVE



CNP India  
 NANFANG PUMPS INDIA PVT. LTD.  
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