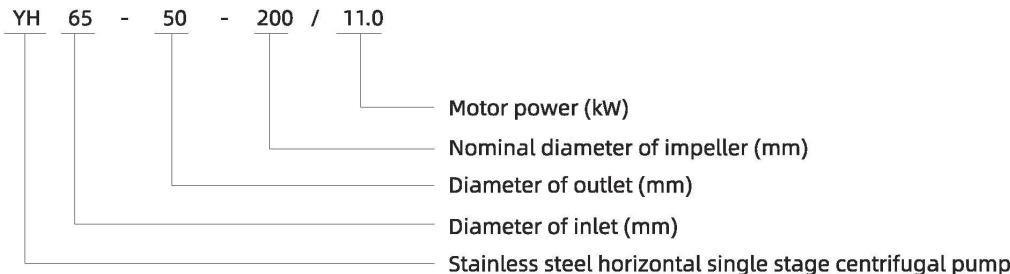


Model Instruction



Product Overview

Made by adopting such advanced technologies as stamping, bulging and welding of stainless steel plates, YH stainless steel horizontal single stage centrifugal pump is a new generation of domestically initiative centrifugal pump, which can replace traditional IS pumps and general corrosion-resistance pumps. It has such features as good-looking appearance, lightweight structure, high efficiency and energy saving, robustness, resistance to light corrosion, and low noise.

Operating Conditions

■ The use of YH pump is restricted by the following conditions:

1. Clean, thin, and non-flammable & non-explosive liquid that does not contain solid particles and fibers
2. Liquid at the temperature between -20° C and +100° C
3. Maximum ambient temperature: +40° C
4. Maximum altitude: 1000m
5. Maximum system pressure :1.0MPa

Structural Features



Motor

High efficiency and energy saving
Angular contact bearing is adopted at the drive end, so that the motor operates more safely with lower noise.



Pump body

Stainless steel stamping and welding
Good discharge capacity
Reliable hydraulic self-balancing



Pump cover

Professional style design
Heightened design, equipped with protective cover
Surface electrophoresis treatment
Good ventilation and heat dissipation



Pump cover

Sleeve coupling type
100,000 times of reliability testing
Stainless steel material
Dynamic balancing



Impeller

German casting technology
Efficient hydraulic design
Stainless steel material

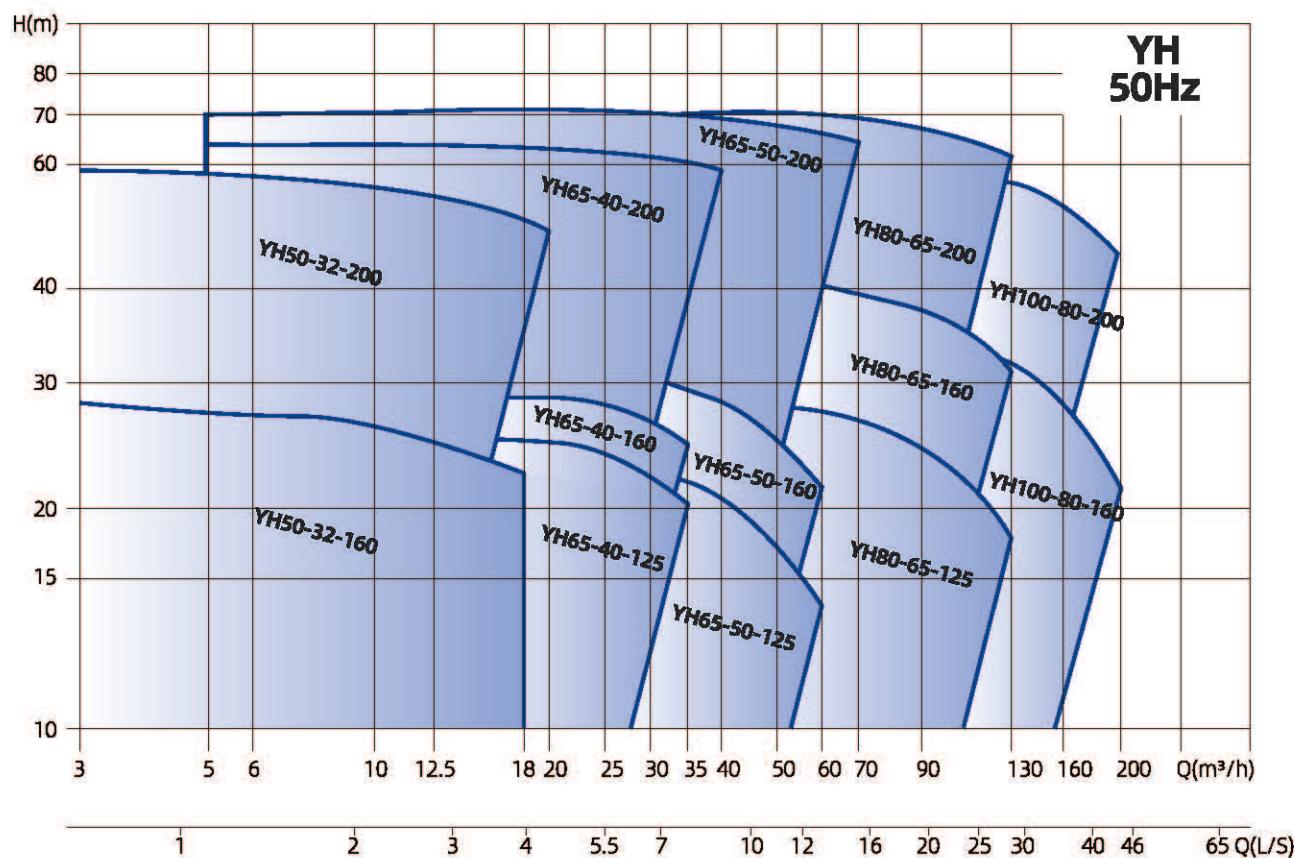
The international popular modular design is adopted to reduce the unnecessary parts and components, guarantee the universality of parts, and facilitate purchasing, manufacturing and maintenance.

Applications

YH stainless steel horizontal single stage centrifugal pump is a multi-functional product with a wide range of applications, which can convey various media including water or industrial liquids, applicable to different ranges of temperature, flow and pressure. Its typical applications mainly include the following:

- **Water supply:** Filtering, transmission, sectionalized water supply, and manifold pressurization;
- **Industrial pressurization:** Process water system and cleaning system;
- **Industrial liquid conveying:** Boiler water supply, condensing system, cooling and air conditioning system, machine matching, and weak acid and alkali conveying;
- **Water treatment:** Distillation system or separator, and swimming pool, etc.;
- **Farm irrigation,** and medicine and health, etc.

Spectrum Diagram

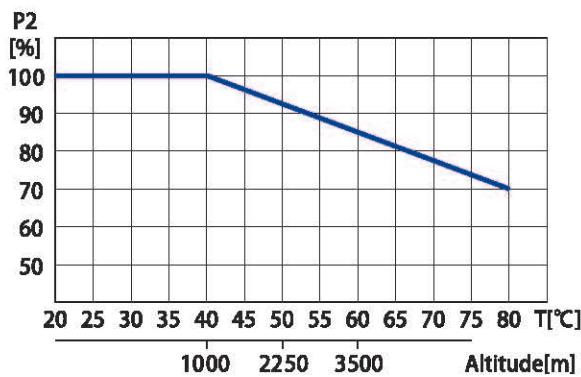


Performance Parameters

No.	Model	Flow rate (m³/h)	Lift (m)	Rotating speed (r/min)	Standard motor voltage [V]	
					1x220V P ₂ [kW]	3x380V P ₂ [kW]
1	YH50-32-160/1.5	12.5	20		/	1.5
2	YH50-32-160/2.2	12.5	25		/	2.2
3	YH50-32-200/3	12.5	32		/	3
4	YH50-32-200/4	12.5	42		/	4
5	YH50-32-200/5.5	12.5	54		/	5.5
6	YH65-40-125/1.5	25	13	2900	/	1.5
7	YH65-40-125/2.2	25	18		/	2.2
8	YH65-40-125/3	25	24		/	3
9	YH65-40-160/4	25	28		/	4
10	YH65-40-200/5.5	25	36		/	5.5
11	YH65-40-200/7.5	25	46		/	7.5
12	YH65-40-200/11	25	62		2950	/ 11
13	YH65-50-125/3	50	13			/ 3
14	YH65-50-125/4	50	18			/ 4
15	YH65-50-160/5.5	50	25			/ 5.5
16	YH65-50-200/7.5	50	32			/ 7.5
17	YH65-50-200/9.2	50	40			/ 9.2
18	YH65-50-200/11	50	48	2950		/ 11
19	YH65-50-200/15	50	58			/ 15
20	YH65-50-200/18.5	50	68			/ 18.5
21	YH80-65-125/5.5	100	13			/ 5.5
22	YH80-65-125/7.5	100	18	2900		/ 7.5
23	YH80-65-125/9.2	100	23			/ 9.2
24	YH80-65-160/11	100	27			/ 11
25	YH80-65-160/15	100	36			/ 15
26	YH80-65-200/18.5	100	45			/ 18.5
27	YH80-65-200/22	100	53	2950		/ 22
28	YH100-80-160/11	160	15			/ 11
29	YH100-80-160/15	160	22			/ 15
30	YH100-80-160/18.5	160	28			/ 18.5
31	YH100-80-200/22	160	33			/ 22

Motor

- **Structure:** All-series totally enclosed air-cooled three-phase asynchronous standard motor, in which single-phase motor is optional for the power range of 1.1kW ~ 2.2kW.
- **Motor protection:** Single-phase motor is equipped with the built-in thermal protector, and three-phase motor shall be connected to the motor starter according to local regulations.
- **Ambient temperature:** ≤ 40° C; In an environment above this temperature, or when the motor is installed at an altitude above 1000m, due to the lower air density, the cooling effect of motor weakens, the loss of windings and iron core increases, and the operating efficiency reduces, resulting in the drop in the output power (P2) of motor; in this case, a motor with higher output power must be selected, as shown in Figure 1.



■ Figure 1 Relationship between motor output power (P2) and ambient temperature

IE2 Three-phase Motor

Rated power (kW)	Rated current(A)		Rated speed (r/min)	Power factor (cosφ)	Efficiency (%)	Connection method	Standard motor voltage [V]
	380(V)	415(V)					
1.5	3.34	3.06	2890	0.84	81.3	Y	6205ZZ
2.2	4.73	4.33	2890	0.85	83.2	Y	6205ZZ
3	6.19	5.67	2890	0.87	84.6	Y	6206ZZ
4	8.05	7.37	2910	0.88	85.8	△	6206ZZ
5.5	10.9	9.99	2940	0.88	87.0	△	6308ZZ
7.5	14.5	13.3	2940	0.89	88.1	△	6308ZZ
11	21.0	19.2	2930	0.89	89.4	△	6309ZZ
15	28.4	26.0	2930	0.89	90.3	△	6309ZZ
18.5	34.7	31.8	2940	0.89	90.9	△	6309ZZ
22	41.1	37.7	2940	0.89	91.3	△	6311ZZ
30	55.7	51.0	2950	0.89	92.0	△	6312ZZ

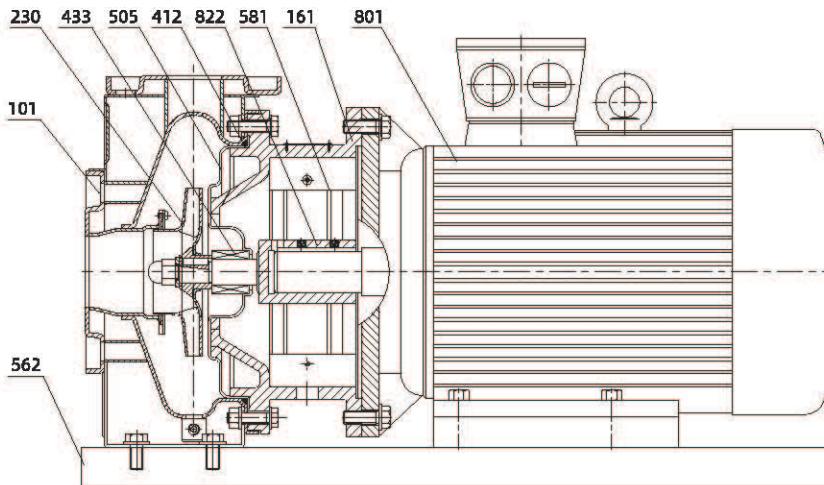
IE3 Three-phase Motor

Rated power (kW)	Rated current(A)		Rated speed (r/min)	Power factor (cosφ)	Efficiency (%)	Connection method	Standard motor voltage [V]
	380(V)	415(V)					
1.5	3.22	2.95	2895	0.84	84.2	Y	6205ZZ
2.2	4.58	4.19	2895	0.85	85.9	Y	6205ZZ
3	6.02	5.51	2895	0.87	87.1	Y	6206ZZ
4	7.84	7.18	2905	0.88	88.1	△	6206ZZ
5.5	10.65	9.75	2930	0.88	89.2	△	6308ZZ
7.5	14.37	13.16	2930	0.88	90.1	△	6308ZZ
11	20.59	18.85	2945	0.89	91.2	△	6309ZZ
15	27.86	25.51	2945	0.89	91.9	△	6309ZZ
18.5	34.18	31.3	2940	0.89	92.4	△	6309ZZ
22	40.51	37.1	2955	0.89	92.7	△	6311ZZ
30	54.89	50.26	2960	0.89	93.3	△	6312ZZ

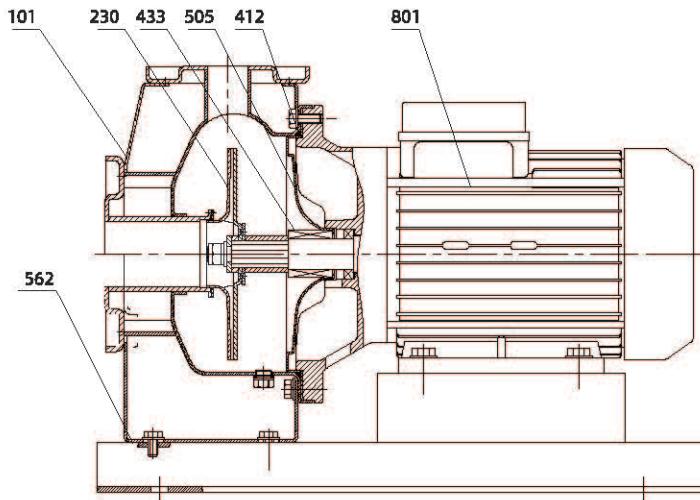
The product has two structures: integral structure for 1.5kW~4kW, and separated structure for 5.5kW and above; the separated structure is mainly composed of the five core components: pump body, impeller, pump cover, pump shaft, and motor, the motor is separable from the pump, the pump part is designed as the top pull-out structure, and all models are equipped with the standard motor and mechanical seal. The pump body is equivalent to a section of pipeline, and during the maintenance of pumps, the pump body can be sealed with the blank flange so as not to affect the normal operation of the system. The impeller is of an enclosed structure, and adopts the design of the twisted blade, which better ensures high hydraulic efficiency. The pump cover has the dual function of supporting the motor and sealing the pump body, and the seal between it and the pump body adopts the static seal "O-ring". The dimensions of inlet & outlet flanges of the pump meet the stipulations of such standards as GB/T 17241.6, ISO 7005-2 and DIN 2501

■ Sectional views of the product

■ Separated structure



No.	Component	Material
101	Casing	304
161	Casing cover	HT200
230	Impeller	304
412	O-ring	NBR
433	Shaft seal	FPM
505	Baffle	304
562	Base	Q235A
581	Protection sheet	304
801	Motor	/
822	Pump shaft	304+45#



■ Integral structure

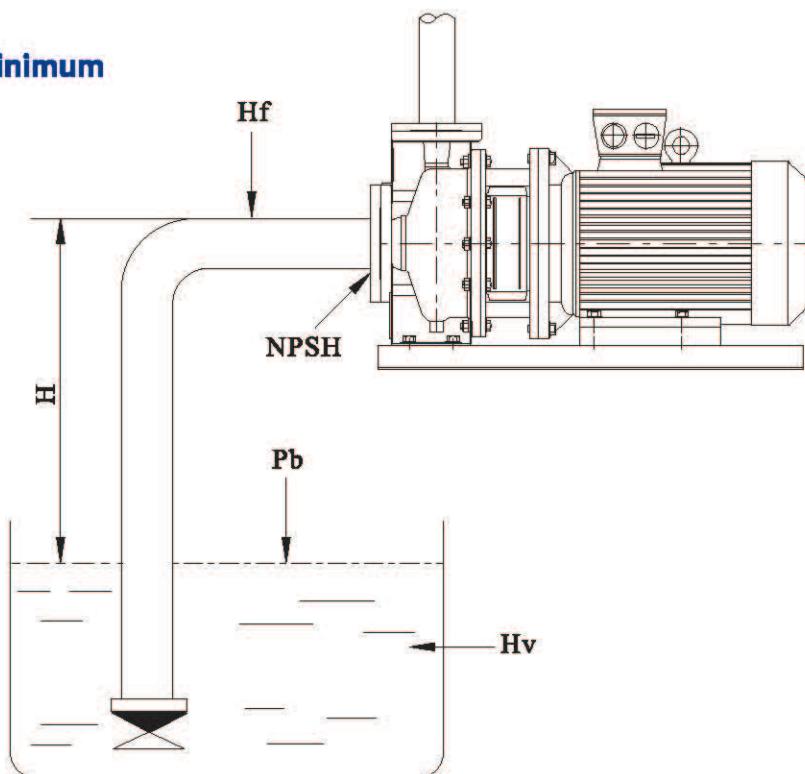
No.	Component	Material
101	Casing	304
230	Impeller	304
412	O-ring	NBR
433	Shaft seal	FPM
505	Baffle	304
562	Base	Q235A
801	Motor	/

Installation Conditions

YH stainless steel horizontal single stage centrifugal pump adopts direct pump-shaft coupling, and it is composed of the pump, pump shaft and standard motor:

- The pump shall be installed at a ventilated and anti-icing place;
- The pump shall be so properly installed as to ensure that it is not affected by the tension of the system pipeline in use;
 - If the pump is installed outdoors, an appropriate outer cover must be provided to prevent water from entering or condensing in electrical components;
 - In order to facilitate inspection and maintenance, enough space must be left around the unit;
 - The electrical wiring device shall ensure that the pump is not damaged by phase loss, instable voltage, electrical leakage and overload;
 - The pump shall be horizontally mounted on the base, the horizontal direction is the inlet of pump, and the vertical direction is the outlet of pump.

■ Calculation of minimum inlet pressure



Inlet pressure: In order to ensure that the water pump is in the best operating state, and control the noise at the minimum level, the inlet pressure must be correctly calculated and set. If the pressure in the pump is lower than the vaporization pressure of the conveyed medium, cavitation will occur to the water pump, and in order to ensure a minimum pressure at the inlet of pump, the maximum suction height (m) can be calculated by the following formula:

$$H = Pb \times 10.2 - NPSH - Hf - Hv - Hs$$

Pb: Atmospheric pressure, unit: ba;

NPSH: Net positive suction height, unit: m (The specific value can be read from the numerical value corresponding to the maximum flow point of pump operation on the NPSH curve in the performance curves of corresponding models);

Hf: The inlet line loss at the maximum flow of pump operation, unit: m;

Hv: Vaporization pressure of liquid, unit: m (See the figure right for specific value);

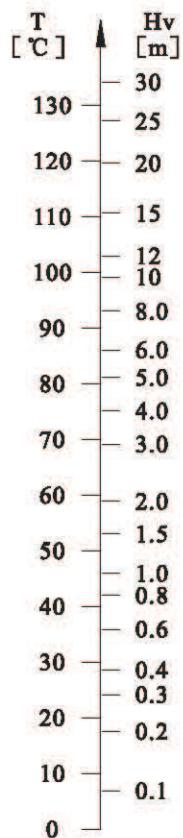
Hs: Safety margin, unit: m, usually it takes 0.5m.

When calculated by the formula above, if the "H" value is positive, it indicates that the pump can operate at this suction height.

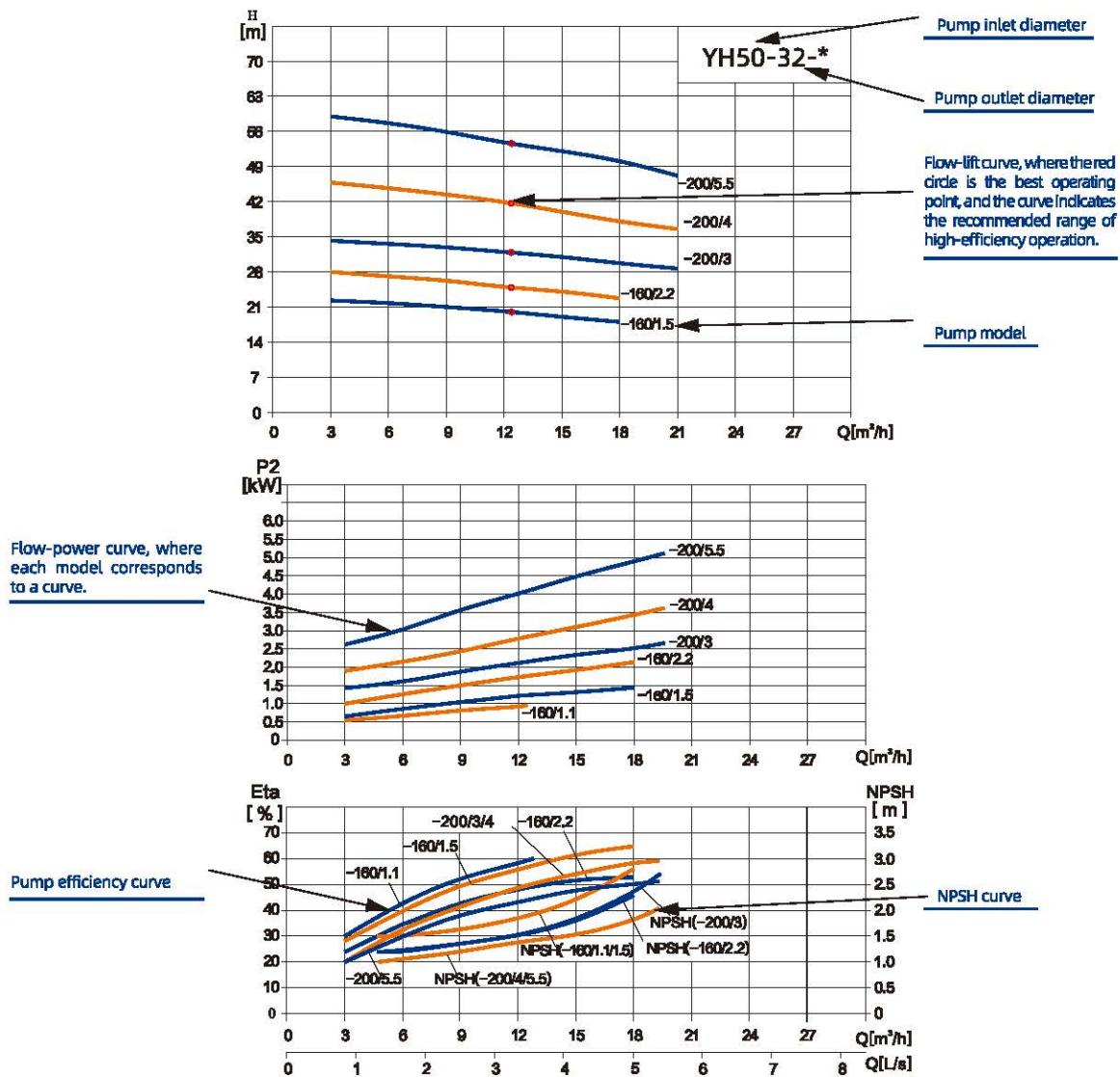
If the "H" value is negative, the pump can operate normally when the minimum inlet pressure reaches the pressure head of "H" m.

Notes: Usually the calculation above is not necessary, but the calculation is required under the following circumstances:

1. The liquid temperature is high;
2. The inlet conditions are poor;
3. The inlet pipeline is long, or the pump needs to be installed and used for suction;
4. The system pressure is too low;
5. The flow velocity of liquid is too high, causing a larger line loss.



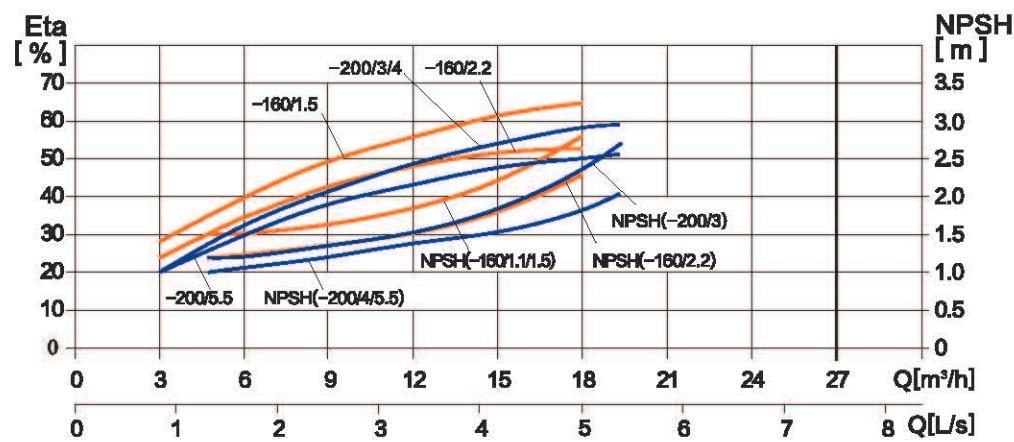
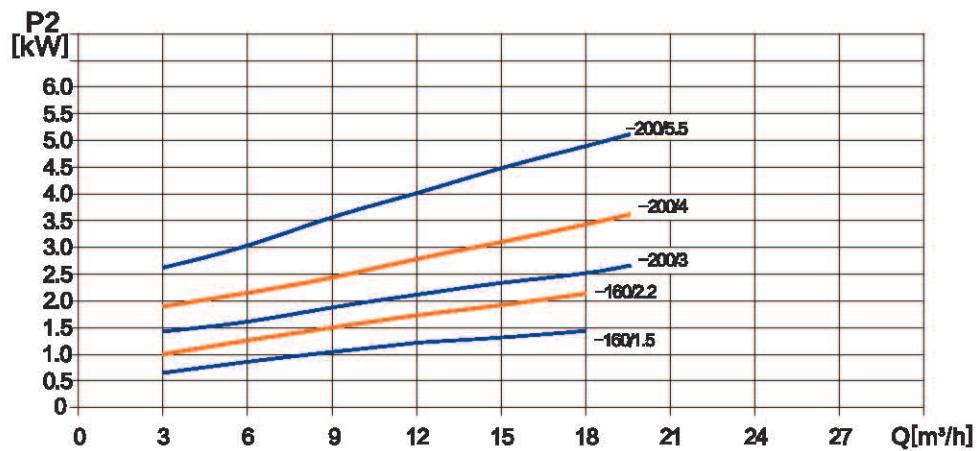
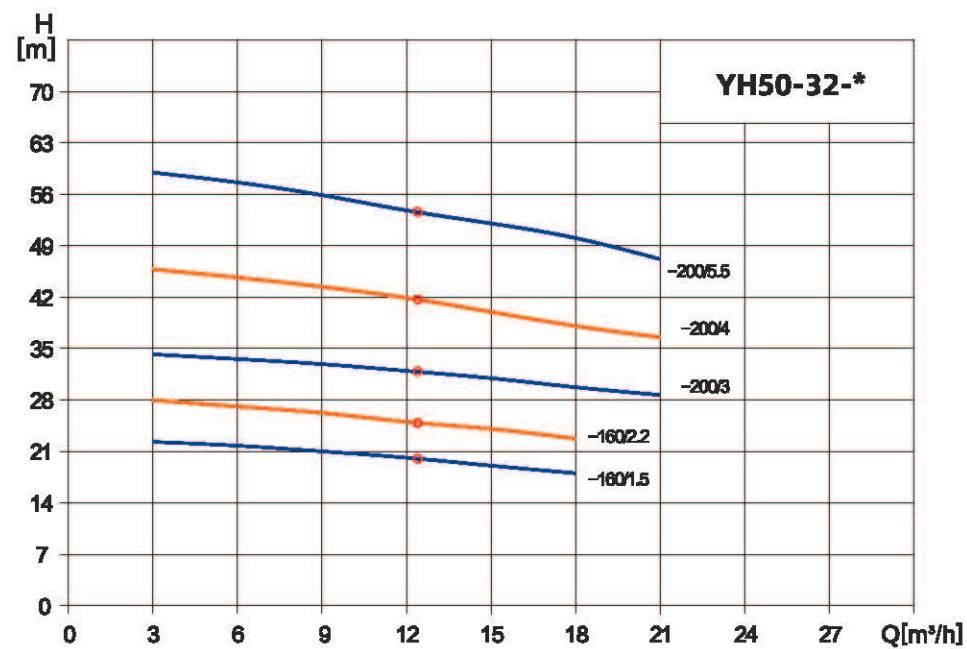
Examples of Performance Curves



Applicable Principles of Performance Curves

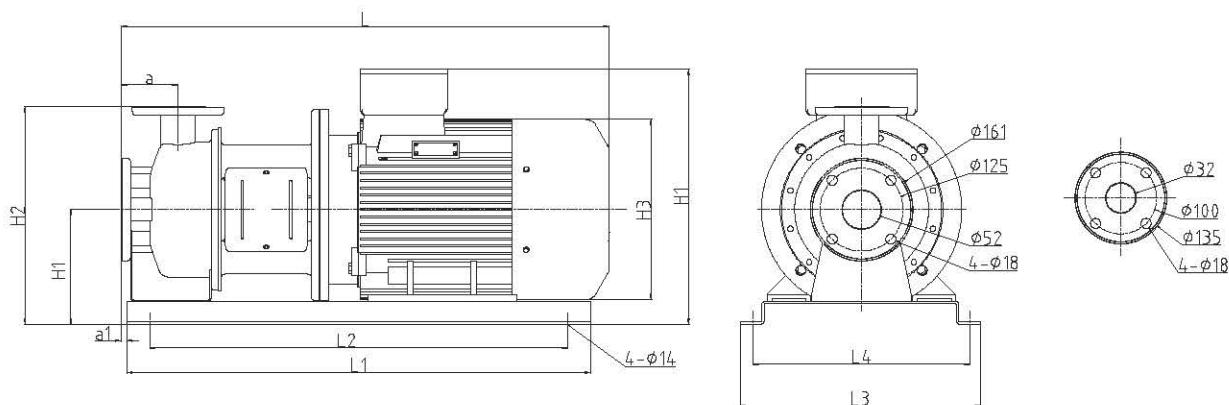
1. The curve tolerance complies with ISO9906, Annex A;
2. The test medium is 20° C clean water that does not contain any solid impurity and air;
3. All curves are based on 3x380V electric motors with the rated speed of 2900rpm/1450rpm;
4. The curves are applicable to liquid with the kinematic viscosity $\gamma=1\text{mm/s}$ (1cst);
5. In order prevent the danger of overheating, the pump shall be ensured to operate within the range of curves to avoid overload of motor.

YH50-32-*



Performance Table

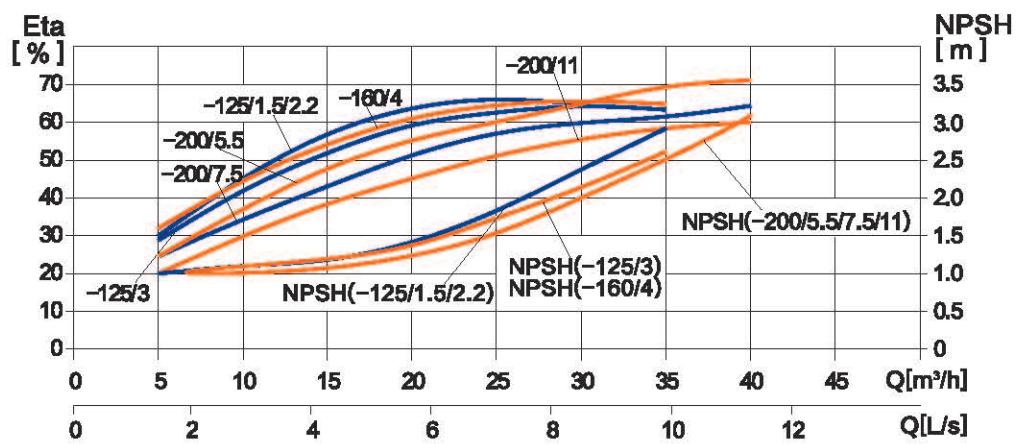
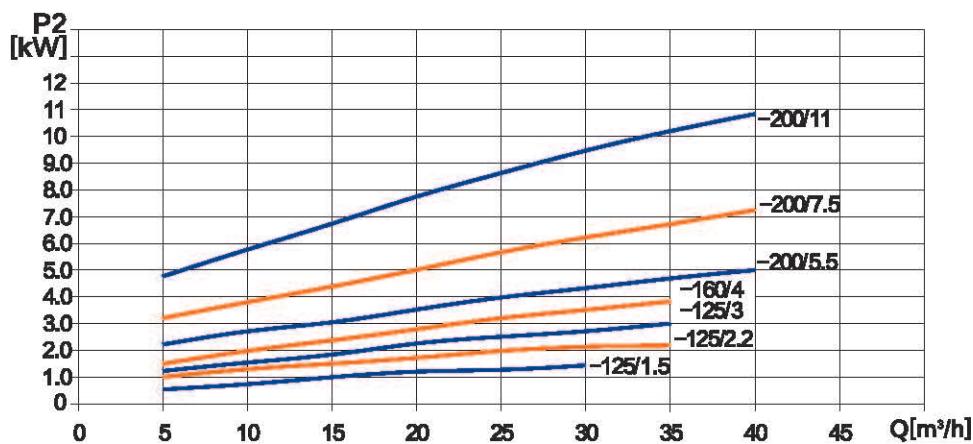
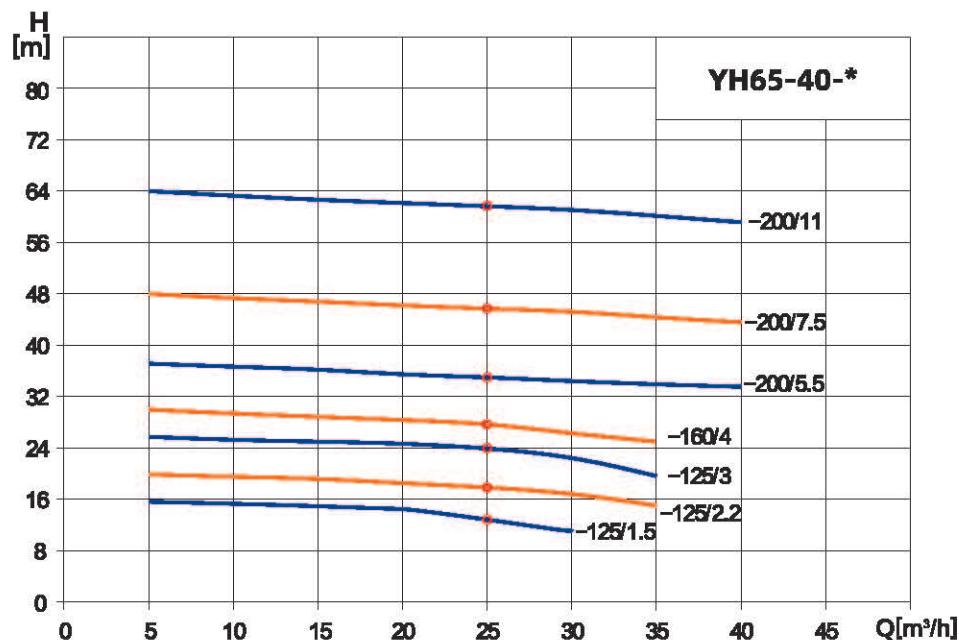
Model	Power (kw)	Q (m³/h)	3	6.3	9	15	18	20
YH50-32-160/1.5	1.5	H(m)	22.5	22	21	19	18	/
YH50-32-160/2.2	2.2		28	27	26.3	24	22.5	/
YH50-32-200/3	3		34.9	34.1	33.3	31	29.8	28.9
YH50-32-200/4	4		45.7	44.8	43.7	40.7	39	37.7
YH50-32-200/5.5	5.5		58.5	57.2	56	52.5	50	48.5



Dimensions and Weight

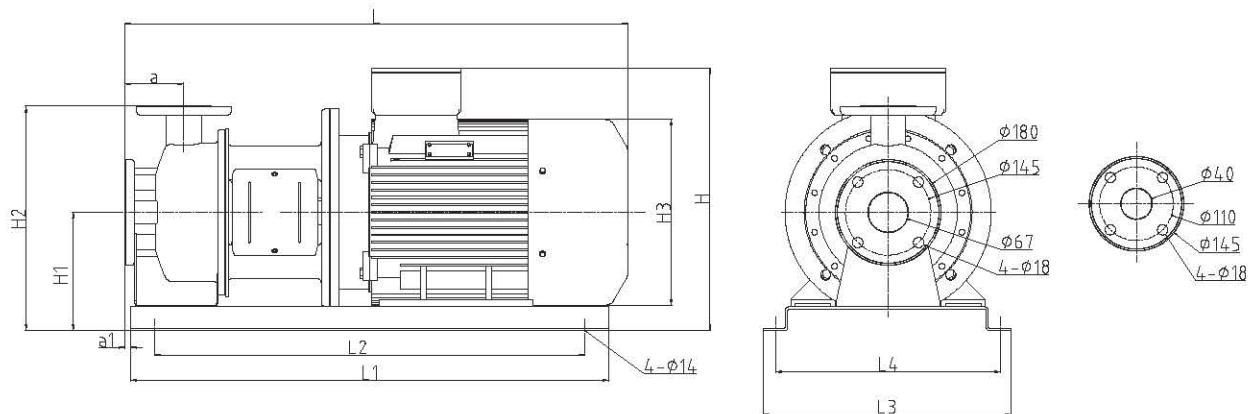
Pump model	Dimensions											Weight (kg)
	a	a1	L	L1	L2	L3	L4	H	H1	H2	H3	
YH50-32-160/1.5	82	2	466	500	430	280	240	283	152	296	168	27
YH50-32-160/2.2	82	2	466	500	430	280	240	283	152	296	168	29
YH50-32-200/3	82	3	516	550	480	330	290	328	200	386	191	43
YH50-32-200/4	82	7	512	550	480	330	290	350	200	386	214	48
YH65-20-200/5.5	100	6	685	660	580	370	330	408	200	386	258	77

YH65-40-*



Performance Table

Model	Power (kW)	Q (m³/h)	5	10	15	20	25	30	35	40
YH65-40-125/1.5	1.5	H(m)	15.5	15.4	15	14.4	13	11.3	/	/
YH65-40-125/2.2	2.2		20	19.7	19.5	19	18	16.7	15.2	/
YH65-40-125/3	3		25.7	25.3	25.1	24.8	24	22.3	20.3	/
YH65-40-160/4	4		30	29.7	29.3	28.9	28	26.5	24.5	/
YH65-40-200/5.5	5.5		37.4	37.2	36.7	36.4	36	35.5	34.6	33.3
YH65-40-200/7.5	7.5		48	47.5	47	46.6	46	45.2	44.5	43.3
YH65-40-200/11	11		64	63.5	63	62.5	62	61.5	60.5	59

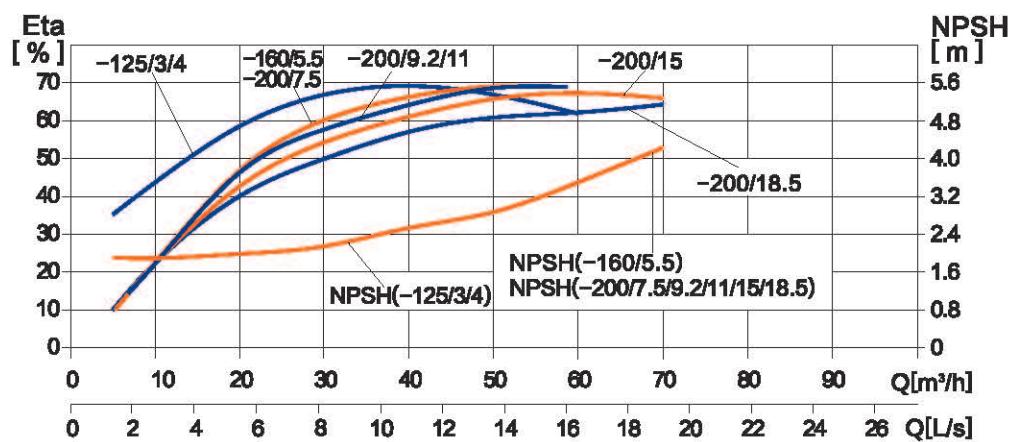
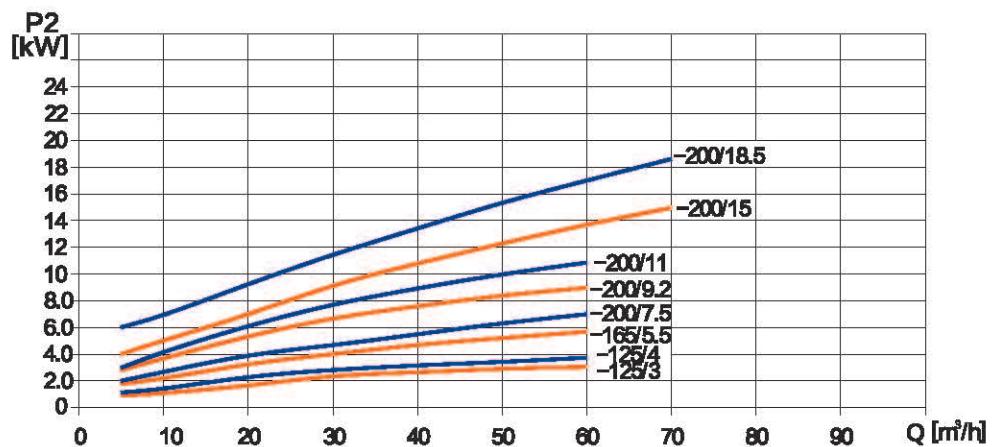
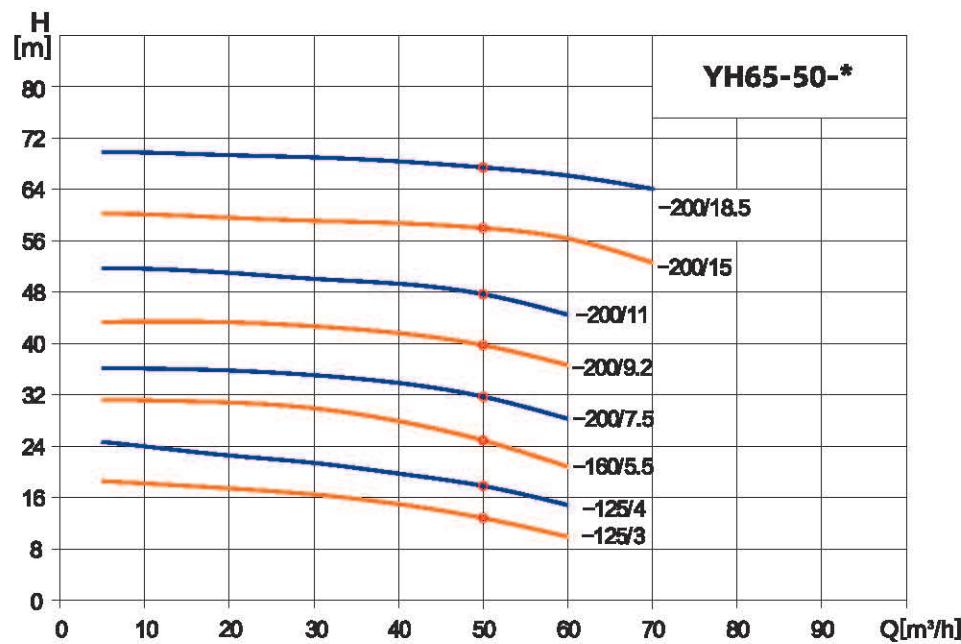


Dimensions and Weight

Pump model	Dimensions											Weight (kg)
	a	a1	L	L1	L2	L3	L4	H	H1	H2	H3	
YH65-40-125/1.5	82	7	472	500	430	280	240	283	152	294	168	23
YH65-40-125/2.2	82	7	472	500	430	280	240	283	152	294	168	25
YH65-40-125/3	82	7	516	530	460	300	260	283	152	294	191	37
YH65-40-160/4	82	7	506	550	480	330	290	302	152	294	214	42
YH65-40-200/5.5	100	10	700	660	580	370	330	408	200	380	258	78
YH65-40-200/7.5	100	10	700	660	580	370	330	408	200	380	258	82
YH65-40-200/11	100	10	853	810	730	420	380	455	200	380	315	161

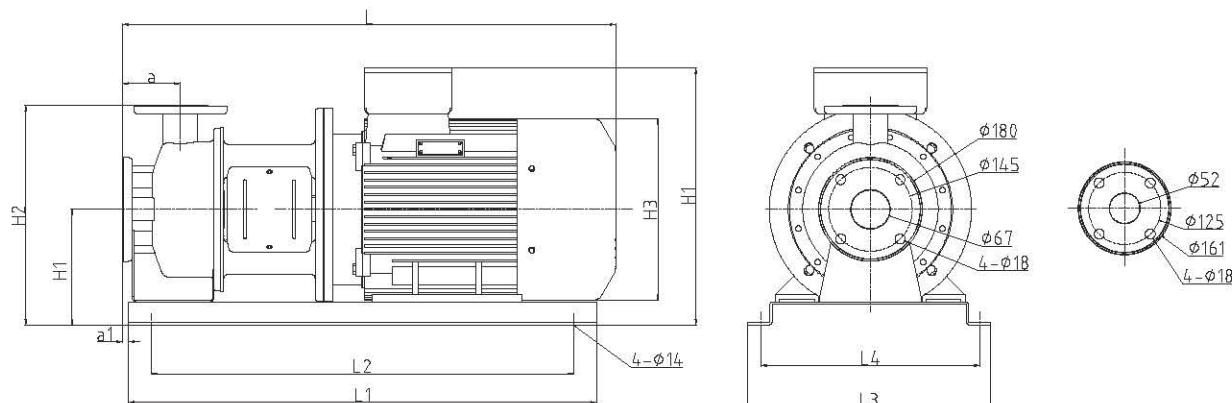
Note: The dimensions of the single phase motor and explosion-proof motor are subject to change.
You can consult SHIMGE for more details.

YH65-50-*



Performance Table

Model	Power (kW)	Q (m³/h)	5	10	20	30	40	50	60	70
YH65-50-125/3	3	H(m)	18	17.8	17.2	16.4	15.1	13	10	/
YH65-50-125/4	4		24.2	24.2	23.6	22.6	20.7	18	14.8	/
YH65-50-160/5.5	5.5		31.6	31.5	31	30	28	25	21.5	/
YH65-50-200/7.5	7.5		36.3	36.6	36.4	35.6	34.1	32	29.6	/
YH65-50-200/9.2	9.2		43.5	43.5	43.5	43	42	40	37.5	/
YH65-50-200/11	11		51.5	51.5	51	50	49.3	48	45.6	/
YH65-50-200/15	15		59.7	59.7	59.6	59.5	59	58	56.2	53
YH65-50-200/18.5	18.5		70.2	70.2	70.1	70	69.1	68	66.4	64

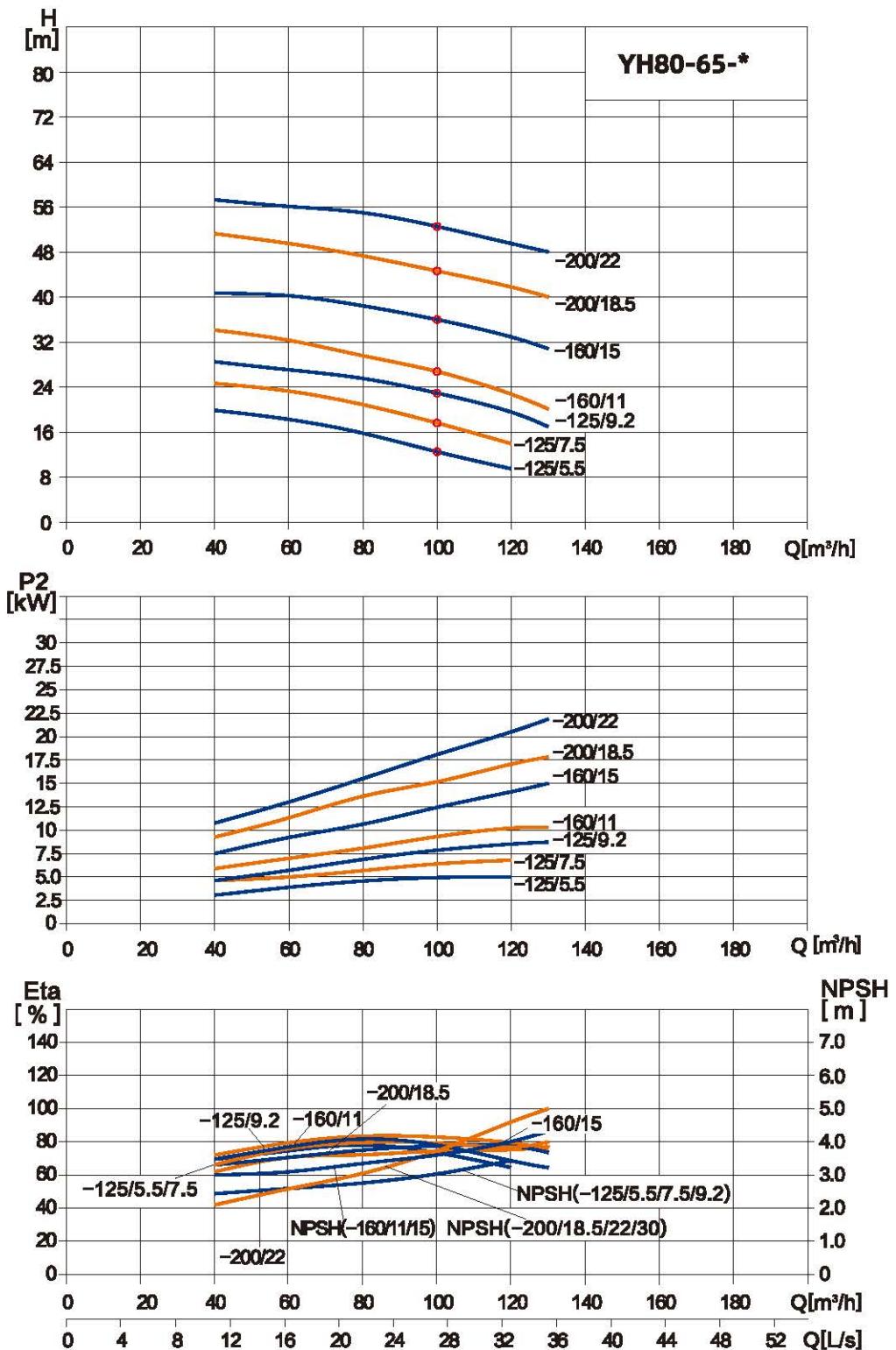


Dimensions and Weight

Pump model	Dimensions											Weight (kg)
	a	a1	L	L1	L2	L3	L4	H	H1	H2	H3	
YH65-50-125/3	86	11	525	550	490	330	290	304	172	338	196	39
YH65-50-125/4	86	11	514	550	490	330	290	322	172	338	214	44
YH65-50-160/5.5	100	10	700	660	580	370	330	408	200	380	258	78
YH65-20-200/7.5	100	10	700	660	580	370	330	363	200	380	258	82
YH65-20-200/9.2	100	10	738	660	580	370	330	363	200	380	258	85
YH65-50-200/11	100	10	853	810	730	420	380	455	200	380	315	161
YH65-50-200/15	100	10	853	810	730	420	380	455	200	380	315	171
YH65-50-200/18.5	100	10	898	810	730	420	380	455	200	380	315	188

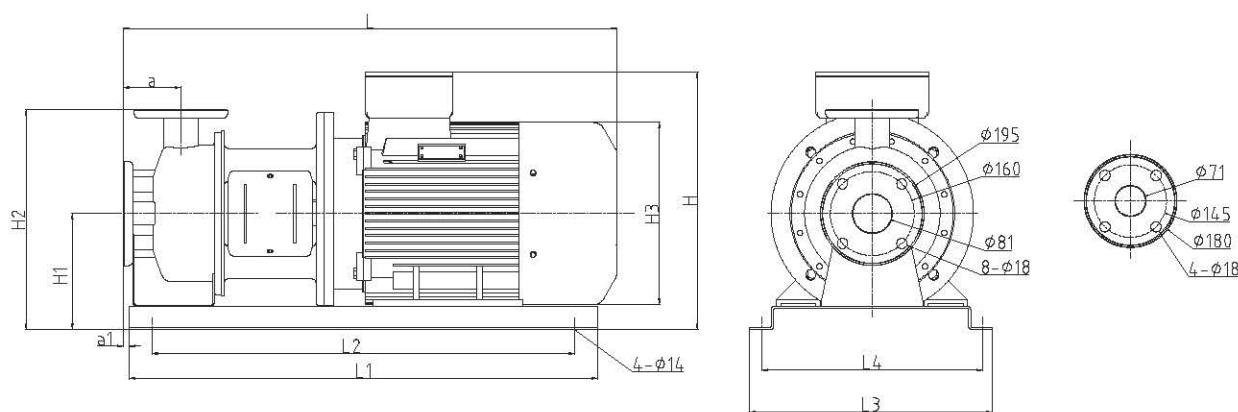
Note: The dimensions of the single phase motor and explosion-proof motor are subject to change.
You can consult SHIMGE for more details.

YH80-65-*



Performance Table

Model	Power (kW)	Q (m³/h)	40	50	60	70	80	90	100	110	120	130
YH80-65-125/5.5	5.5	H(m)	19.3	18.7	18	17	15.8	14.8	13	11.4	9.7	/
YH80-65-125/7.5	7.5		24.5	23.8	23.1	22.2	21	19.6	18	16.2	14.1	/
YH80-65-125/9.2	9.2		28.1	27.8	27.3	26.6	25.7	24.3	23	21.8	20.1	18.3
YH80-65-160/11	11		33.9	33	32.2	31.3	29.9	28.8	27	25.1	22.9	20.7
YH80-65-160/15	15		41.8	41.1	40.4	39.5	38.6	37.6	36	34.8	33	31
YH80-65-200/18.5	18.5		51	50.5	49.6	48.7	47.6	46.3	45	43.5	42.2	40.2
YH80-65-200/22	22		57.7	57.2	56.8	55.9	55.1	54	53	51.6	49.7	48.2

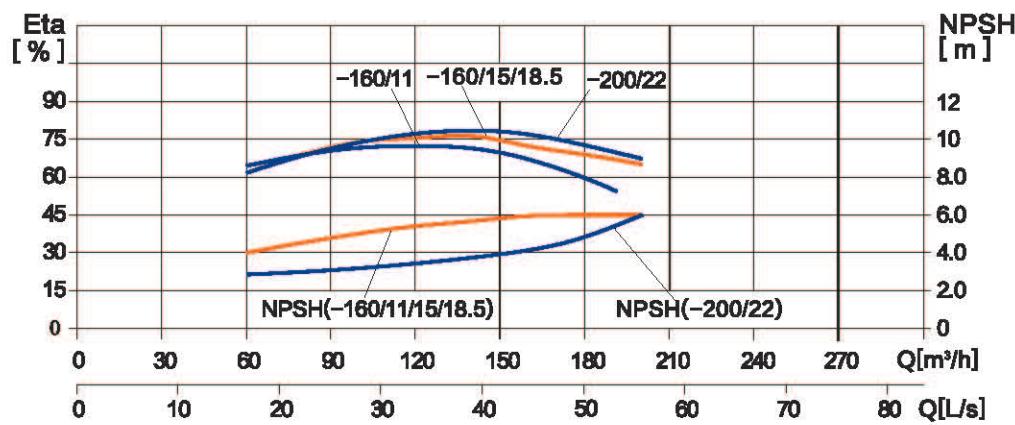
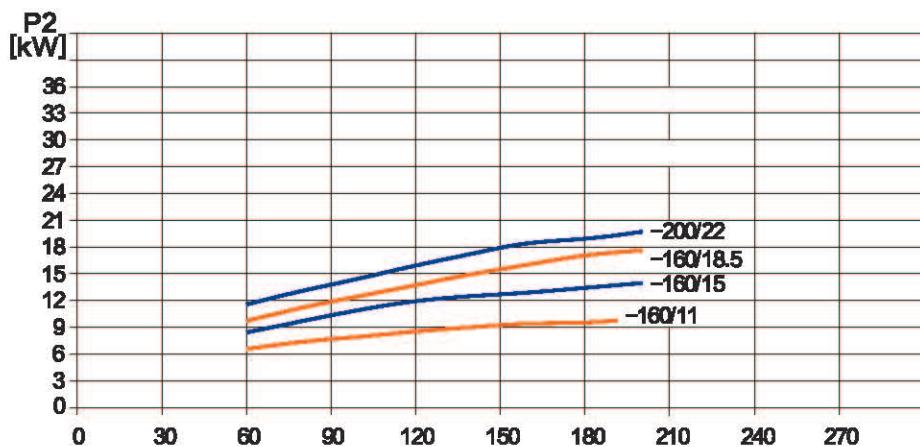
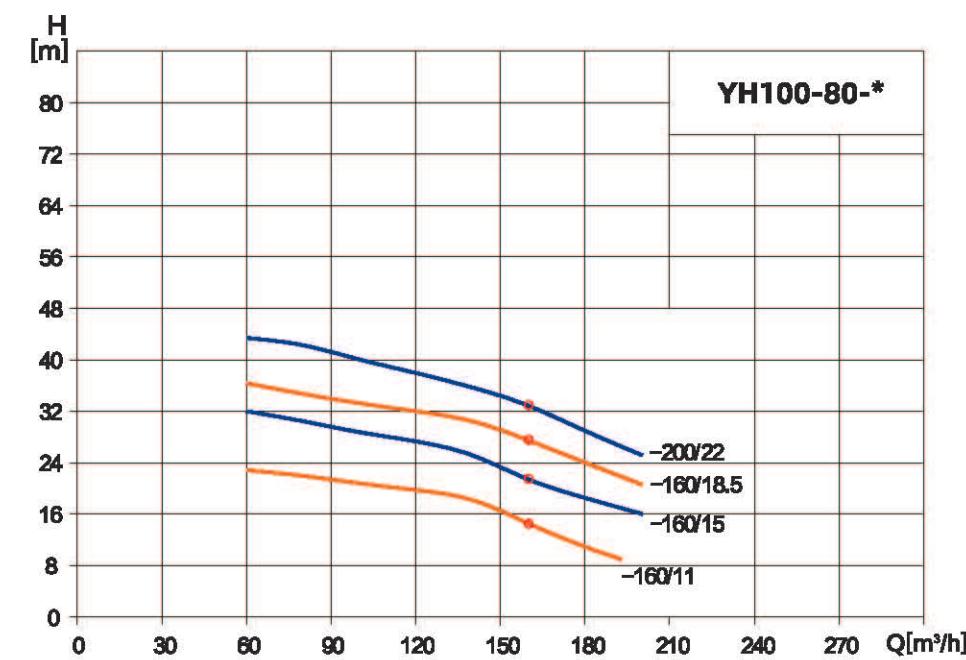


Dimensions and Weight

Pump model	Dimensions											Weight (kg)
	A	a	H	H1	h	L	L2	L3	L4	L5	L6	
YH80-65-125/5.5	100	10	700	660	580	370	330	408	200	380	258	79
YH80-65-125/7.5	100	10	700	660	580	370	330	408	200	380	258	83
YH80-65-125/9.2	100	10	738	660	580	370	330	408	200	380	258	87
YH80-65-160/11	100	10	853	810	730	420	380	455	200	400	315	163
YH80-65-160/15	100	10	853	810	730	420	380	455	200	400	315	173
YH80-65-200/18.5	100	10	898	810	730	420	380	455	200	425	315	190
YH80-65-200/22	100	20	933	890	810	450	415	490	220	445	355	220

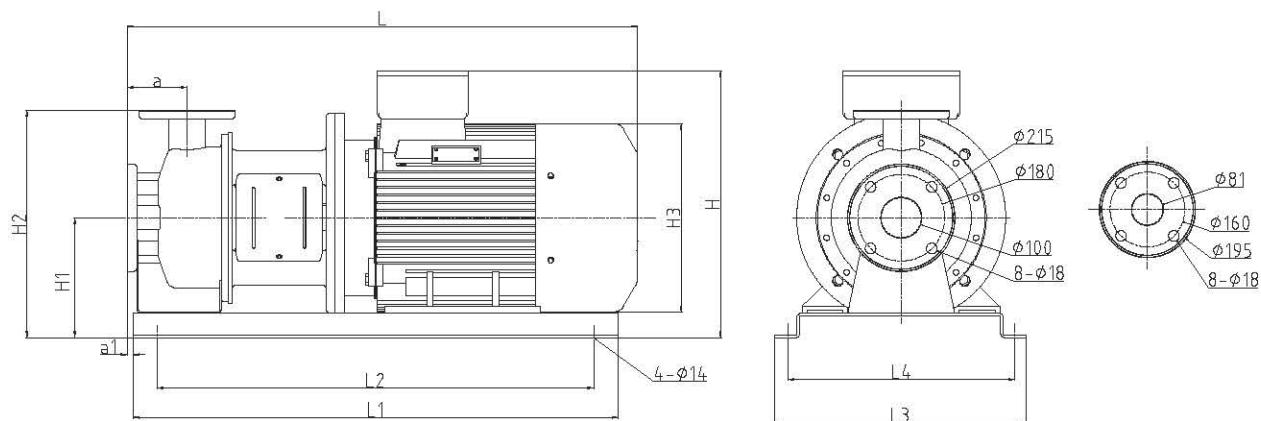
Note: The dimensions of the single phase motor and explosion-proof motor are subject to change.
You can consult SHIMGE for more details.

YH100-80-*



Performance Table

Model	Power (kW)	Q (m³/h)	60	80	100	120	140	160	180	192	200
YH100-80-160/11	11	H(m)	23.8	22.7	21.1	19.7	17.6	15	11.8	9.7	/
YH100-80-160/15	15		32.3	30.8	29.1	27.2	25.1	22	18.8	/	16.1
YH100-80-160/18.5	18.5		36.2	35.2	33.8	32.7	31	28	24.8	/	21.5
YH100-80-200/22	22		43.5	42	39.7	38.3	35.9	33	29	/	24.9



Dimensions and Weight

Pump model	Dimensions											Weight (kg)
	a	a1	L	L1	L2	L3	L4	H	H1	H2	H3	
YH100-80-160/11	125	10	883	850	770	420	380	455	200	425	315	163
YH100-80-160/15	125	10	883	850	770	420	380	455	200	425	315	173
YH100-80-160/18.5	125	10	928	850	770	420	380	455	200	425	315	185
YH100-80-200/22	125	10	963	890	810	450	415	490	220	470	355	223

Note: The dimensions of the single phase motor and explosion-proof motor are subject to change.
You can consult SHIMGE for more details.

Packing Sizes & Weight

Model	Dim.(mm)(L*W*H)	G.W.(kg)
YH50-32-160/1.5	540x310x350	32
YH50-32-160/2.2	540x310x350	34
YH50-32-200/3	580x360x440	50
YH50-32-200/4	600x360x440	52
YH50-32-200/5.5	830x440x550	87
YH65-40-125/1.5	540x310x350	28
YH65-40-125/2.2	540x310x320	30
YH65-40-125/3	570x330x320	43
YH65-40-160/4	590x360x320	50
YH65-40-200/5.5	830x440x550	88
YH65-40-200/7.5	830x440x550	92
YH65-40-200/11	980x490x590	175
YH65-50-125/3	570x360x390	44
YH65-50-125/4	590x360x390	53
YH65-50-160/5.5	830x440x550	88
YH65-50-200/7.5	830x440x550	92
YH65-50-200/9.2	830x440x550	95
YH65-50-200/11	980x490x590	175
YH65-50-200/15	980x490x590	185
YH65-50-200/18.5	1020x490x590	202
YH80-65-125/5.5	830x440x550	87
YH80-65-125/7.5	830x440x550	91
YH80-65-125/9.2	830x440x550	95
YH80-65-160/11	980x490x590	177
YH80-65-160/15	980x490x590	187
YH80-65-200/18.5	1020x490x590	204
YH80-65-200/22	1060x530x630	235
YH100-80-160/11	1030x450x590	177
YH100-80-160/15	1030x450x590	187
YH100-80-160/18.5	1050x450x590	199
YH100-80-200/22	1150x525x600	313