



VPA III HIGH EFFICIENCY CIRCULATION PUMP

Features:

VPA series circulation pump is high efficiency pump for water circulation, which features well-designed compact structure, integrated controller and frequency converter. It is easy for installation and operation in most fields of applications. In terms of electricity consumption, the unique operation mode makes VPA series circulation pump more energy-saving.

Fields of applications:

1. System with constant or variable flow
2. System with variable temperature liquid
3. System with night mode
4. Air conditioning and cooling system
5. Industrial circulation system
6. Domestic hot water and drinking water supply system

Operation conditions:

1. Power supply: voltage 220-240V, frequency 50/60Hz, single-phase AC power. According to individual voltage and frequency requirements for different applications, customized design and manufacturing is available for models listed in the catalogue.

2. Max. system pressure: 1.0MPa

3. To avoid damage to bearing caused by cavitation, inlet pressure must fulfill following requirement:

4. Ambient temperature: 0°C-70°C, relative humidity: <95%, medium temperature: 2°C-110°C. In order to avoid condensate water in stator, make sure the ambient temperature is lower than liquid temperature,

5. Medium: clean, non-corrosive, non-explosive liquid, does not contain any kinds of solid particles, fibers or mineral oil. Pump must not be used for delivering flammable liquids, such as diesel and gasoline. Delivering liquid of high viscosity will reduce performance of the pump, so while choosing a pump, the viscosity of the medium must be taken into consideration.

6. VPA series is lubricated by the pumped liquid. Do not start the pump before the system has been filled with liquid.

Liquid temperature	75°C	95°C	110°C
Inlet pressure	0.05bar	0.5bar	1.08bar
	Head 0.5m	Head 5m	Head10.8

contents > > >

▶ VPA III

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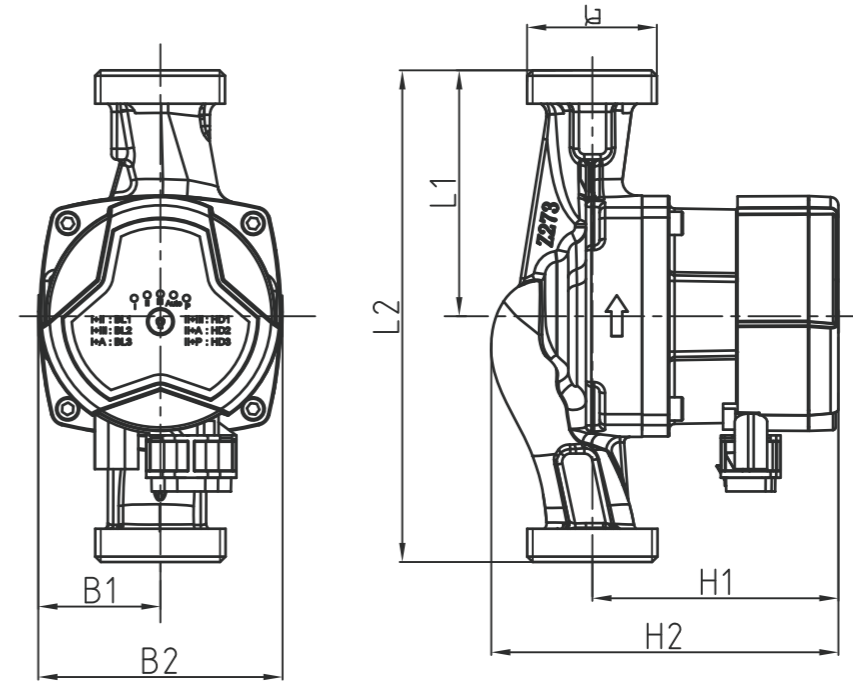
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The VPA III series pump has 11 different control modes: HS1, HS2, HS3, HD1, HD2, HD3, BL1, BL2, BL3, Auto and PWM

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Installation Diagram



Product Parameters

Power (W)	Model	Max. Flow (m³/h)	Max. Head (m)	Amps (A)	V/Hz	Material of pump housing				Dimension(mm)						
						230V 50/60Hz	Cast Iron	Plastic	Copper	Stainless Steel	L1	L2	B1	B2	H1	H2
25	VPA20-4 III	2.2	4	0.25	●	●	●	●	●	65	130	45	90	94	122	1"
	VPA25-4 III	2.5			●	●	●	●	65	130	45	90	90	127	1 1/2"	
	VPA32-4 III	2.8			●	●	●	●	90	180	45	90	90	127	2"	
33	VPA20-5 III	2.3	5	0.30	●	●	●	●	●	65	130	45	90	94	122	1"
	VPA25-5 III	2.8			●	●	●	●	65	130	45	90	90	127	1 1/2"	
	VPA32-5 III	3.2			●	●	●	●	90	180	45	90	90	127	2"	
39	VPA20-6 III	2.8	6	0.35	●	●	●	●	●	65	130	45	90	94	122	1"
	VPA25-6 III	3.2			●	●	●	●	65	130	45	90	90	127	1 1/2"	
	VPA32-6 III	3.6			●	●	●	●	90	180	45	90	90	127	2"	
52	VPA20-7 III	2.8	7	0.45	●	●	●	●	●	65	130	45	90	94	122	1"
	VPA25-7 III	3.4			●	●	●	●	65	130	45	90	90	127	1 1/2"	
	VPA32-7 III	3.8			●	●	●	●	90	180	45	90	90	127	2"	
60	VPA20-7.5 III	2.8	7.5	0.50	●	●	●	●	●	65	130	45	90	94	122	1"
	VPA25-7.5 III	3.4			●	●	●	●	65	130	45	90	90	127	1 1/2"	
	VPA32-7.5 III	3.8			●	●	●	●	90	180	45	90	90	127	2"	

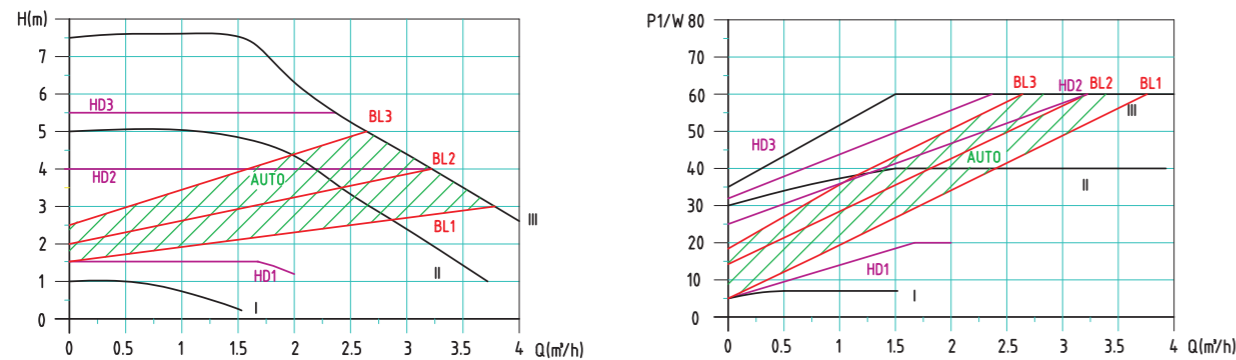


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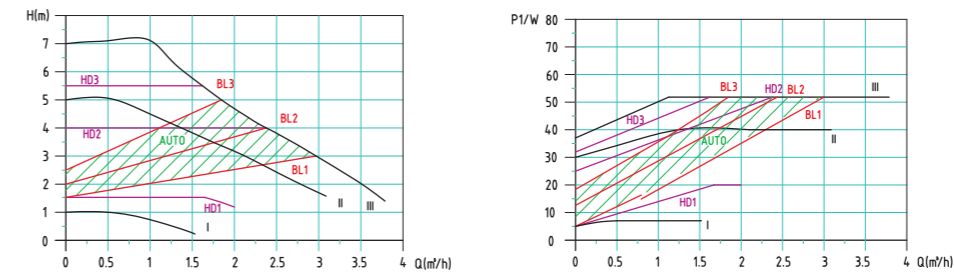
Setting	Performance curve	Function
AUTO (Initial Setting)	Highest to Lowest Proportional Pressure Curve	AUTO function will automatically control the pump performance within the specified scope. adjust pump performance based on system scale; adjust pump performance based on load variance within a period of time; Under the AUTO mode, the pump will be set to proportional pressure control.
BL1	Lowest Proportional Pressure Curve	The operating point of the pump will move up and down on the lowest proportional pressure curve based on the demand of system flow rate. When flow demand decreases, the pressure supply of pump drops; when flow demand increases, the pressure supply of pump rises.
BL2	Intermediate Proportional Pressure Curve	The operating point of the pump will move up and down on the intermediate proportional pressure curve based on the demand of system flow rate. When flow demand decreases, the pressure supply of pump drops; when flow demand increases, the pressure supply of pump rises.
BL3	Highest Proportional Pressure Curve	The operating point of the pump will move up and down on the highest proportional pressure curve based on the demand of system flow rate. When flow demand decreases, the pressure supply of pump drops; when flow demand increases, the pressure supply of pump rises.
HD1	Lowest Constant Pressure Curve	The operating point of the pump will move around the lowest constant pressure curve based on the demand of system flow rate. The supply pressure of pump remains constant and it is irrelevant with the flow rate.
HD2	Intermediate Constant Pressure Curve	The operating point of the pump will move around the intermediate constant pressure curve based on the demand of system flow rate. The supply pressure of pump remains constant and it is irrelevant with the flow rate.
HD3	Highest Constant Pressure Curve	The operating point of the pump will move around the highest constant pressure curve based on the demand of system flow rate. The supply pressure of pump remains constant and it is irrelevant with the flow rate.
III	Velocity III	It runs on the constant curve in a constant velocity. In the Velocity III mode, the pump is set to work on the highest curve under all working conditions. Setting the pump as Velocity mode within short period of time can quickly vent the pump.
II	Velocity II	It runs on the constant curve in a constant velocity. In the Velocity II mode, the pump is set to work on the intermediate curve under all working conditions.
I	Velocity I	It runs on the constant curve in a constant velocity. In the Velocity I mode, the pump is set to work on the intermediate curve under all working conditions.
PWM	Duty cycle and rotational velocity curve	The rotational velocity of pump can be adjusted based on PWM (duty cycle). When the duty cycle is 0% or 100%, the PWM mode is disabled and the pump will automatically switch the previous mode. PWM mode supports velocity adjustment, and under abnormal rotational velocity such as pump blocking or running in low voltage, it will generate feedback signal.

Performance Curve

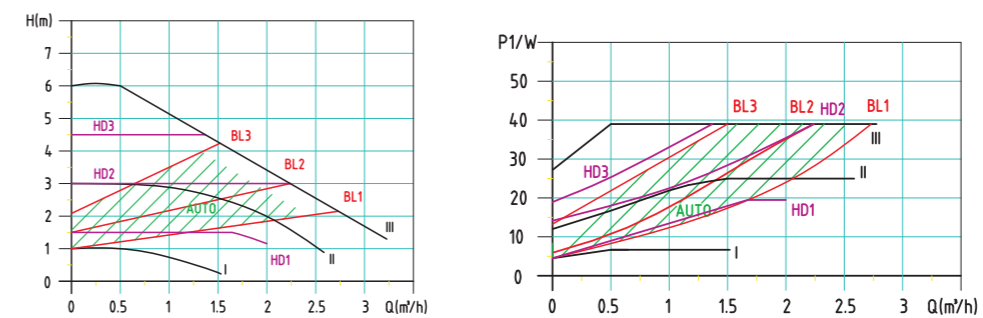
VPA 25-7.5 III Performance curve



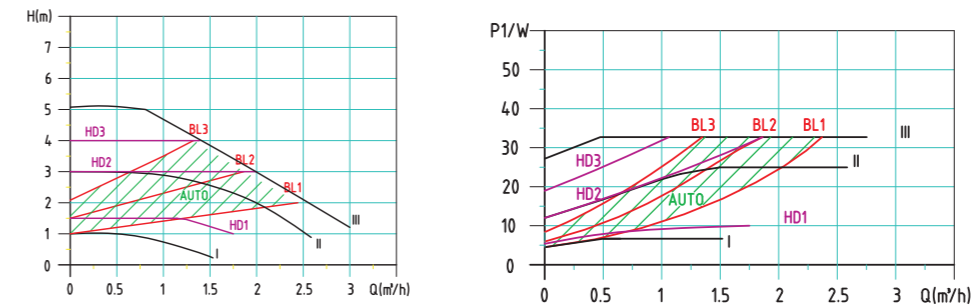
VPA 25-7 III Performance curve



VPA 25-6 III Performance curve



VPA 25-5 III Performance curve



VPA 25-4 III Performance curve

