

## ALPHA6600 Series AC Drive for Constant Pressure Water Supply System



## Feature

ALPHA6600 series AC drive for constant pressure water supply system fully utilizes the hardware advantages of ALPHA6000. It has high performance and can drive 4 sets motors (drive 2 motors in circular running) without water control card/controller, which provides excellent drive and control solution in water supply and HVAC industry.

## Technical Characteristics

- Voltage fluctuation range is  $\pm 20\%$ .
- Composed of the AC drive and the PID regulator.
  - Comprehensive water supply solution; flexible configuration of general pump, fire pump, and pump with sleep mode; easy to realize automation of water supply pump system; circular pump mode: drive 2 motors; fixed pump mode: drive 4 motors
  - Keep constant pressure under any flow condition
  - Simple setup and diagnosing on pumps
  - Make pumps run alternatively based on its working time to avoid the pump's unbalanced wear
  - Turn on/off subsidiary pumps according to the technical specifications; control the variable pump to ensure continuous flow changing
  - When one single variable-speed pump fails to meet requirement of complete flow range, the system adopts one variable-speed pump and multiple fixed speed pumps (Max. 4 units) with built-in PID regulating the pumps and pressure sensor giving feedback

## Applications

The AC drive is ideal for use in the non-tower water feeder, non-negative pressure water supply system, the residential water supply system, as well as the urban central heating and water supply system.

## Specification

### Technical Specifications of ALPHA6600

Item	Specification
Power Range	380V $\pm 20\%$ three phases: from 1.5 to 400kW
Rated Input Voltage and Frequency	380V three phases: 50/60Hz
Allowable Input Voltage Range	380V three phases: from 304 to 456V, Voltage unbalance rate of less than 3%, Frequency fluctuation of below $\pm 5\%$
Rated Output Voltage	From 0 to rated input voltage
Max. Overload Current	P model: 120% for 3 seconds, 150% for one second
Control Method	V/F control
Frequency Range	From 0.00 to 650.00Hz (from 31R5PB to 35R5PB) From 0.00 to 400.00Hz (from 37R5PB to 3400P)
Frequency Accuracy	Digital command $\pm 0.01\%$ (from $-10^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ ) Simulation command $\pm 0.01\%$ ( $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$ )
Preset Frequency Resolution	Digital command 0.01Hz Simulation command 1/1000 of the maximum frequency
Output Frequency Resolution	0.01Hz
Preset Frequency Signal	From 0 to 10V, from 0 to 20mA
Torque Boost	Automatic or manual operation (from 0.1 to 30.0%)
Acceleration-Deceleration Modes	Straight line, or user-defined S curve
Acceleration-Deceleration Time	From 0.1 to 3600 seconds (The acceleration and deceleration time are set individually.)
Braking Torque	The additional braking resistance reaches up to 125%.
Voltage-Frequency Characteristics	There are 4 fixed V/F characteristics for option, and any V/F characteristic can be preset. The V/F control with PG is provided.
Protective Functions	Over-voltage, under-voltage, current limit, over-current, overload, electronic thermal relay, overheating, over-voltage stall, load short circuit, grounding, under-voltage protection, input phase loss, output phase loss, short circuit to ground, interphase short circuit, motor overload protection, etc
Ambient Temperature	From $-10^{\circ}\text{C}$ to $+40^{\circ}\text{C}$
Humidity	From 5 to 95% RH (No condensation)
Storage Temperature	From $-40^{\circ}\text{C}$ to $+70^{\circ}\text{C}$
Service Place	Indoor (without any corrosive gas)
Installation Site	The altitude is at most 1,000m. There is not any dust, corrosive gas, or direct solar radiation.

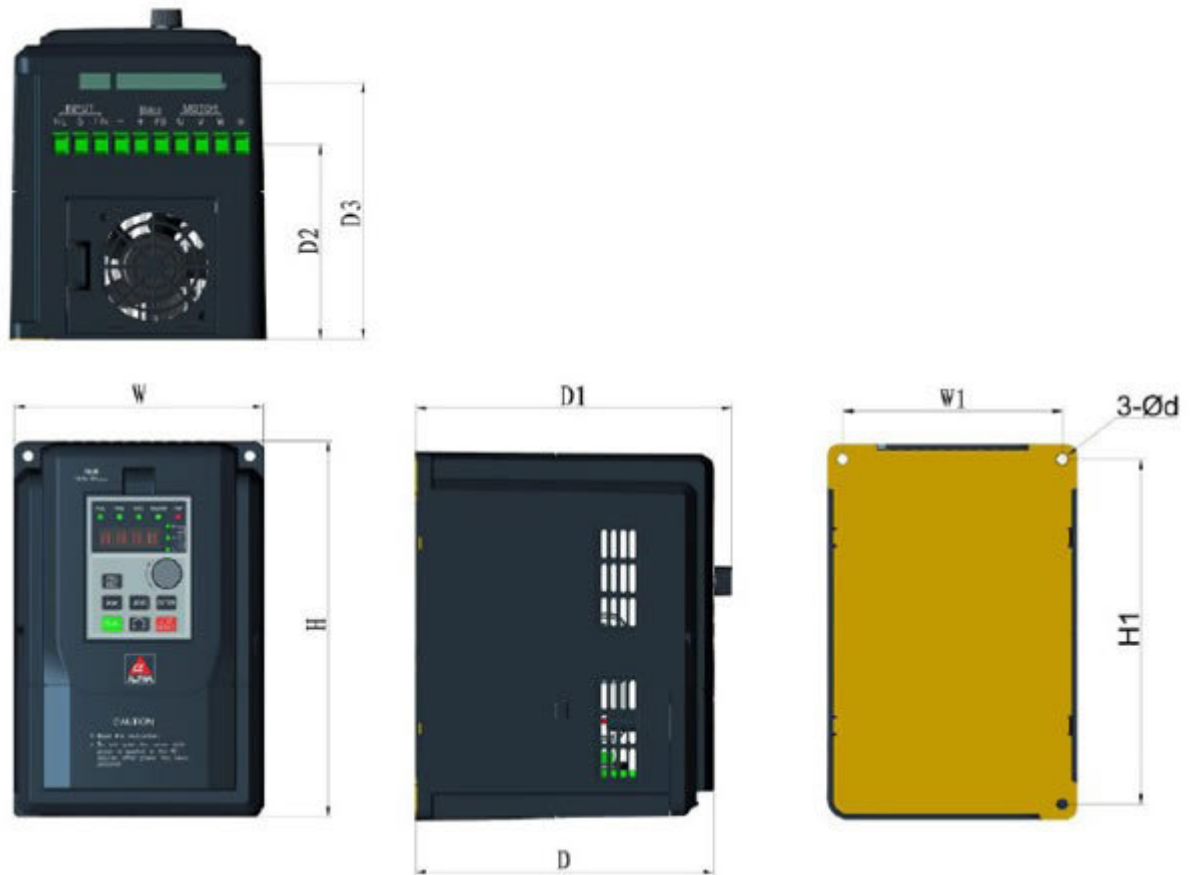
Vibration	Less than $5.9\text{m/s}^2$ (0.6g)
Protection Rating	IP20
Cooling Method	Forced air cooling All our machines of below 22kW come with fans.

## Selection Guide

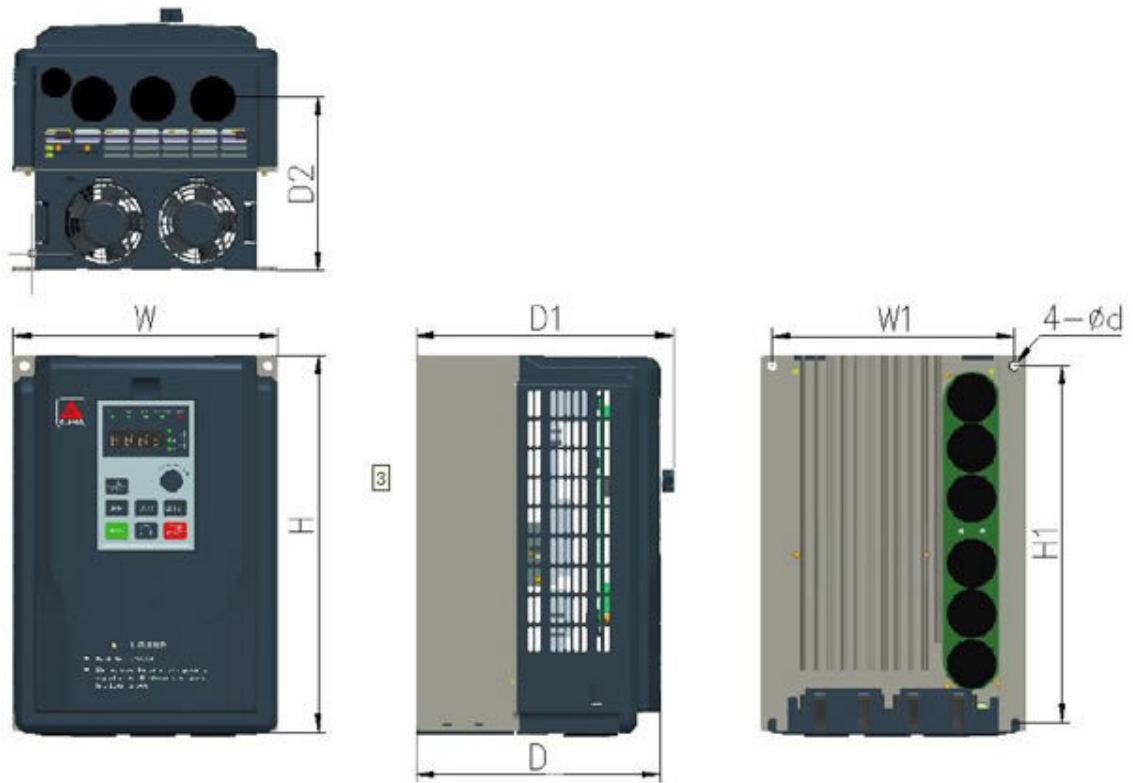
### ALPHA6600 Selection Table

Voltage Classes	Model	Motor Power (kW)	Rated Output Current (A)
380V Three Phases	6600-31R5PB	1.5	4
	6600-32R2PB	2.2	6
	6600-3004PB	3.7	9
	6600-35R5PB	5.5	13
	6600-37R5PB	7.5	17
	6600-3011PB	11	25
	6600-3015PB	15	32
	6600-3018PB	18.5	37
	6600-33022P	22	45
	6600-3030P	30	60
	6600-3037P	37	75
	6600-3045P	45	90
	6600-3055P	55	110
	6600-3075P	75	150
	6600-3093P	90	176
	6600-3110P	110	210
	6600-3132P	132	250
	6600-3160P	160	300
	6600-3185P	185	340
	6600-3200P	200	380
	6600-3220P	220	415
	6600-3250P	250	470
	6600-3280P	280	520
6600-3315P	315	600	
6600-3355P	350	640	
6600-3400P	400	750	

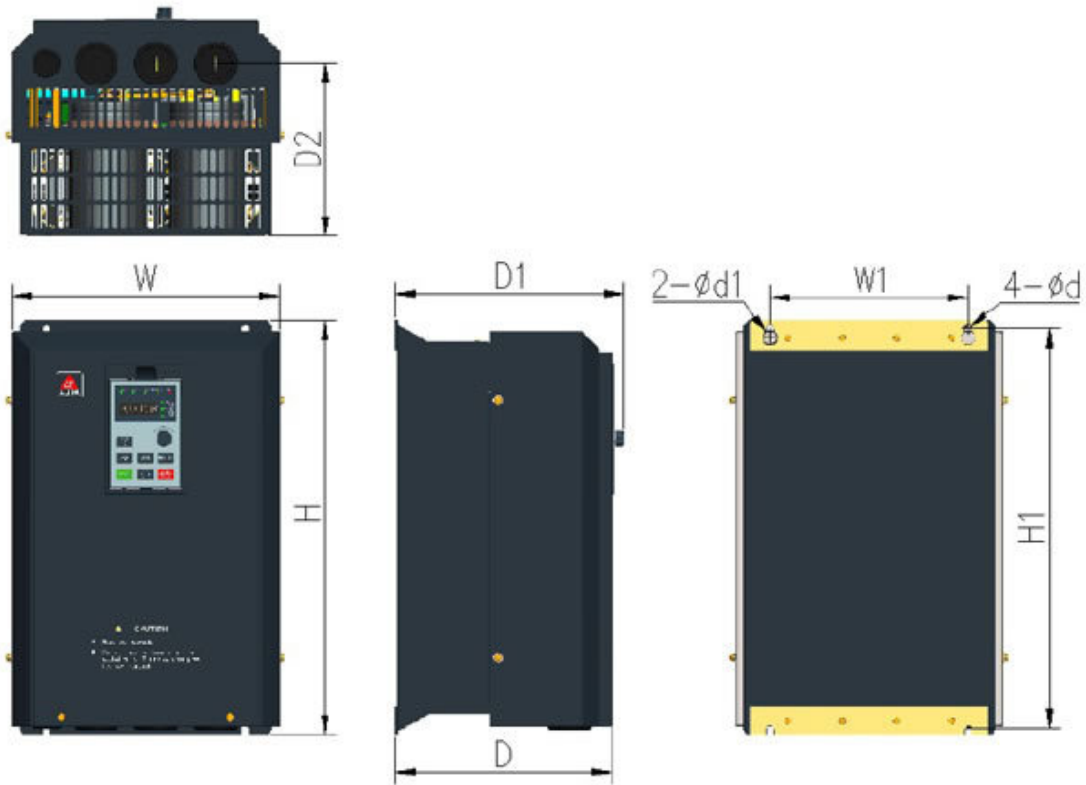
## Overall Dimension of ALPHA6600 Series AC Drive for Constant Pressure Water Supply System



Specifications	H	H1	W	W1	D	D1	D2	D3	d
6600-31R5PB									
6600-32R2PB	180	169	115	105	150	158	85	120	4.5
6600-3004PB									
6600-35R5PB	195	173	130	108	157	167	100	130	4.5

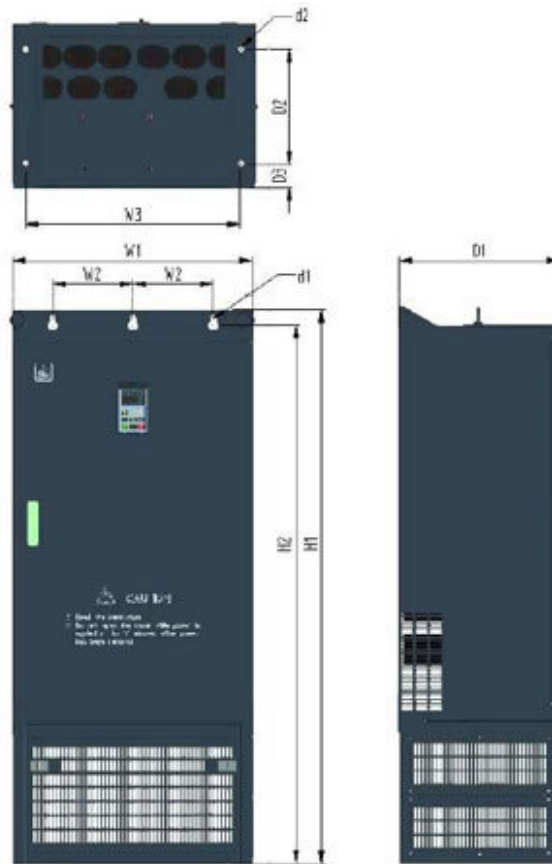


Specifications	H	H1	W	W1	D	D1	D2	d
6600-37R5PB	270	255	190	175	176	186	122	7
6600-3011PB								



Specifications	H	H1	W	W1	D	D1	D2	d	d1
6600-3015PB	373	360	235	200	176	188	125	7	12
6600-3018PB									
6600-33022P	420	405	270	200	218	230	175	7	14
6600-3030P									
6600-3037P	503	488	311	200	230	242	180	7	14
6600-3045P									
6600-3055P	590	570	351	200	254	266	192	10	20
6600-3075P									
6600-3093P	698	672	400	280	260	272	186	12	22
6600-3110P									
6600-3132P	850	823	505	420	280	292	212	12	22
6600-3160P									

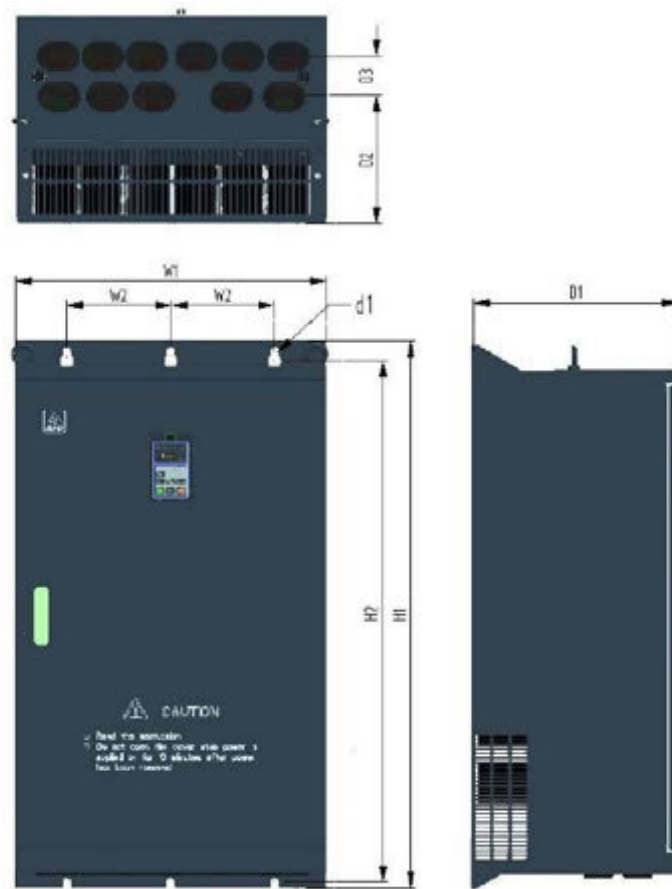
## Installation Size of 380V 160-355kW Three-Phase Standard Model with Base



Specifications	W1	W2	W3	H1	H2	D1	D2	D3	d 1	d 2
6600-3185P	600	200	530	1380	1360	400	280	60	3-φ 14	4-φ 14
6600-3200P										
6600-3220P										
6600-3250P	800	300	730	1535	1515	410	288	60	3-φ 14	4-φ 14
6600-3280P										
6600-3315P										
6600-3355P										
6600-3400P										

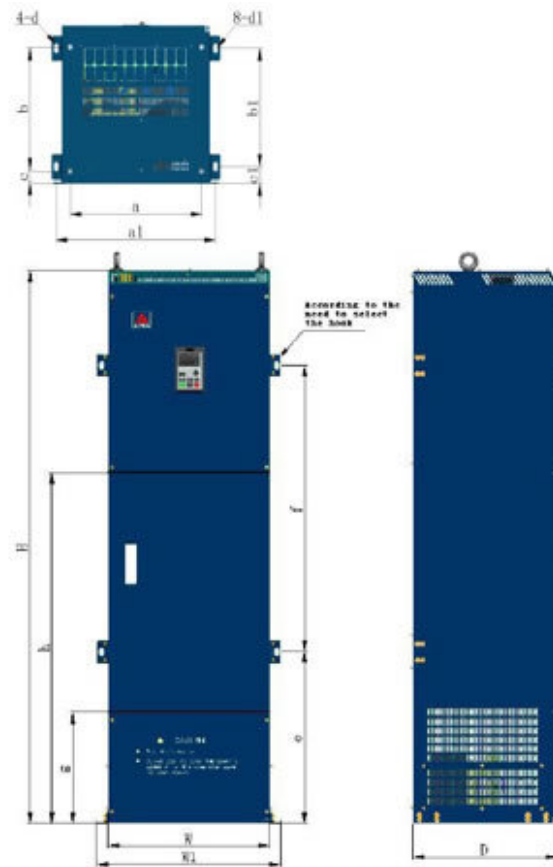


## Installation Size of 380V 160~355kW Three-Phase Standard Model with Wall Mount



Specifications	W1	W2	H1	H2	D1	D2	D3	d 1
6600-3185P	600	200	1026	1360	400	245	77	6-φ 14
6600-3200P								
6600-3220P								
6600-3250P	800	300	1180	1515	410	250	88	6-φ 14
6600-3280P								
6600-3315P								
6600-3355P								
6600-3400P								

## Installation Size of 380V 160-500kW Three-Phase Narrow-Body Model



Specifications	W	W1	D	H	a	b	c	d
6600-3185P	450	514	400	1600	400	315	30	15
6600-3200P								
6600-3220P								
6600-3250P								
6600-3280P	450	514	400	1800	400	315	30	15
6600-3315P								
6600-3355P								
6600-3400P								