



Small goods with

Great Performance





Habor Precise Industries (Taiwan)



Habor Precise Machine (ZheJiang)

- HABOR (Shanghai)
- HABOR (Zhejiang)
- HABOR Headquarter (Taiwan)

Extremely precise
Environmental friendly
Energy saving

- 3 - 9 Oil Cooler Series
- 10 - 17 Water Cooler Series
- 18 - 19 Air Cooler Series / Heat Pipe Heat Exchanger Series
- 20 - 22 Ventilation Filter With Fan Series
- 23 Air Dryer Series
- 26 Electronic Controller

PID V Series PID Controlled : Control the coolant temperature with the precision of +/- 0.2°C by PID controlled proportional value.

ON / OFF ON/OFF Controlled : Control the coolant temperature within +/- 1°C

Application / Series	HBO	HK	HJ	HE	HW	HA	HPW/HPC	FU	HRD
	Oil Cooler			Water Cooler	Air Cooler	Heat Exchanger	Ventilation Filter With Fan	Air Dryer	
High Speed Spindle	●	●			●				●
Linear Motor	●	●			●				
Ball Screw	●	●							
Hydraulic System	●				●				
Coolant		●	●						
CNC Cutting Machine	●	●	●		●	●	●	●	●
Laser Machine					●	●	●	●	●
CNC Lathe	●	●	●			●	●	●	●
Machining Center	●	●	●	●	●	●	●	●	●
EDM				●					
WireCut Machine					●	●	●	●	
PCB Drilling Machine	●				●	●	●	●	●
Injection Machine					●	●	●	●	
Semi Con Industrial Machine					●				●
Medical Equipment					●				
Printing Equipment					●				
Electronic or Electric Cabinets						●	●	●	
Tele-communication Equipment						●	●		
CNC Control Equipment						●	●	●	

Air Cooler & Heat Pipe Heat Exchanger

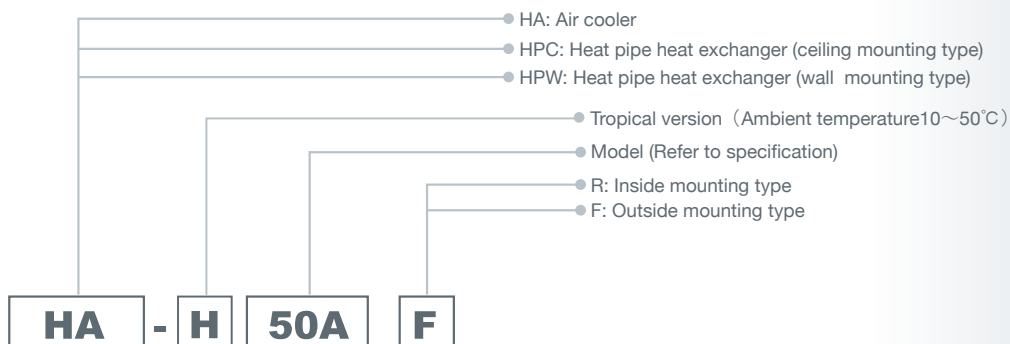


HA Series
Air Cooler

HPW / HPC Series
Heat Pipe Heat Exchanger

Description of Type & Model

▲ EX. : HA-50AF



HA Series Air Cooler

Feature

- Two separated air circulation to prevent damage from intrusion of ambient air with scrap, dust, moisture or any corrosive elements.
- Saving the cost due to controller down time.
- Installed with compressor, functioned dehumidify and temperature control.
- Extend the lifetime of the control cabinet.



Specification

Item / Model		HA-35A	HA-50A	HA-100A	HA-120A	HA-160A	HA-200A	HA-260A	HA-400A	HA-600A	HA-750A	HA-900A
Cooling capacity	KCAL/H 50/60Hz	170/215	250/300	300/375	415/500	550/625	650/750	825/1000	1250/1500	1650/2000	2500/3000	3400/3750
	W 50/60Hz	200/250	300/350	350/440	480/580	580/730	760/880	960/1170	1460/1750	1930/2340	2930/3500	4000/4400
	BTU/H 50/60Hz	680/850	1000/1200	1200/1500	1650/2000	2000/2500	2600/3000	3300/4000	5000/6000	6600/8000	10000/12000	13600/15000
Power source		1Ø 200~230V 50/60Hz						1Ø 200~230V or 3Ø 220V or 3Ø 380V 50/60Hz				
Max. ambient temperature	Standard	40°C										
	Tropical	50°C										
Dimension WxDxH (mm)	Standard	170x193x500	280x185x550	360x250x595		250x270x935		475x215x1085		550x262x1085		*
	Tropical	*	*	*	360x280x695	250x290x935		400x317x1285		400x295x1535	450x325x1535	485x380x1520
Weight (KG)	Standard	15	30	31		34		56		70		*
	Tropical	*		36		36		68		77	84	90
Noise level		Below 70 dB(A)										

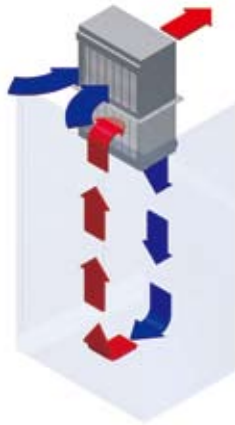
1. The above cooling capacity is based on the condition of ambient temperature 35°C and the cabinet's internal temperature 35°C.
2. Please contact us for special request on specification.
3. Design and specification are subject to change without prior notice.
4. We supply the same model with different dimensions; please contact us for your dimensional enquiries.
5. Please contact us for the panel cutting dimension.

HPW / HPC

Series Heat Pipe Heat Exchanger

Feature

- Using heat pipe with high heat conductivity to ensure excellent heat exchange.
- Enclosed design to assure isolation of internal and ambient air.
- Compact design with light weight for easy transportation and installation.
- Dew proof from over-cooling.
- Easy to maintain and inspect.



Specification

Item / Model		HPC-15A		HPC-25A		HPC-35A		HPC-50A		HPC-70A		HPC-100A	
Heat dissipation W/°C		15		25		35		50		70		100	
Fan	Quantity	1x2		1x2		1x2		2x2		2x2		2x2	
	Voltage (ACV)	110	220	110	220	110	220	110	220	110	220	110	220
	Input (W)	35x2	35x2	35x2	35x2	35x2	35x2	35x4	35x4	35x4	35x4	35x4	35x4
	Rate current (A)/PC	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29
Dimension WxDxH (mm)		260x165x382		305x175x382		305x200x412		414x200x412		441x200x472		565x525x492	

Specification

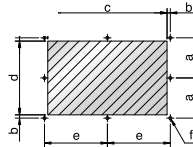
Item / Model		HPW-05A		HPW-10A		HPW-15A		HPW-25A		HPW-35A		HPW-50A		HPW-70A		HPW-100A	
Heat dissipation W/°C		5		10		15		25		35		50		70		100	
Fan	Quantity	1x2		1x2		1x2		1x2		1x2		2x2		2x2		2x2	
	Voltage (ACV)	110	220	110	220	110	220	110	220	110	220	110	220	110	220	110	220
	Input (W)	20x2	20x2	20x2	20x2	35x2	35x2	35x2	35x2	35x2	35x2	35x4	35x4	35x4	35x4	35x4	35x4
	Rate current (A)/PC	0.21	0.129	0.21	0.125	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29	0.43	0.29
Dimension WxDxH (mm)		250x72x480		250x72x580		250x80x780		295x90x780		295x90x860		414x90x940		440x120x970		565x120x100	

Ceiling mounting type

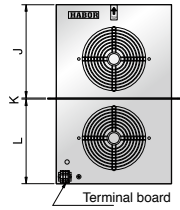
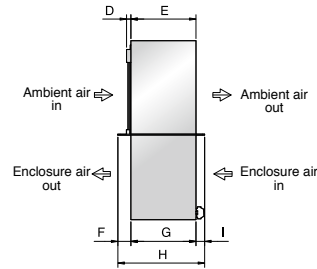
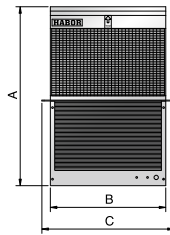
HPC-15/25/35A

▨ Ceiling mounting type (mm)

Model	a	b	c	d	e	f
HPC-15A	75	7.5	230	135	122.5	8-ø6.5
HPC-25A	80		275	145	145	
HPC-35A	92.5		275	170	145	



▨ : Panel cutting dimension



Ceiling mounting type (mm)

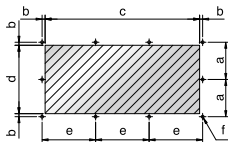
Model	A	B	C	D	E	F	G	H	I	J	K	L
HPC-15A	382	220	260	10	110	30	110	165	25	200	2	180
HPC-25A	382	268	305		125		125	175	20	200		180
HPC-35A	412	269	305		150		150	200	20	215		195

Ceiling mounting type

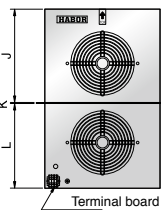
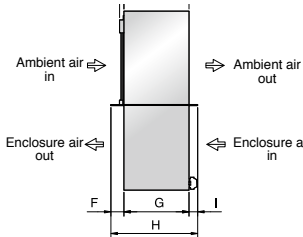
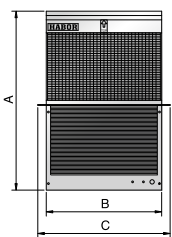
HPC-50/70A

▨ Ceiling mounting type (mm)

Model	a	b	c	d	e	f
HPC-50A	92.5	7.5	384	170	133	10-ø6.5
HPC-70A			411		142	



▨ : Panel cutting dimension

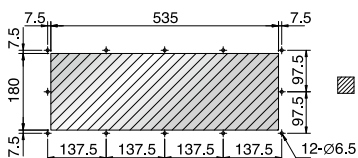


Ceiling mounting type (mm)

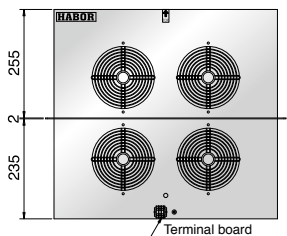
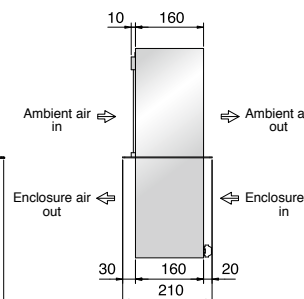
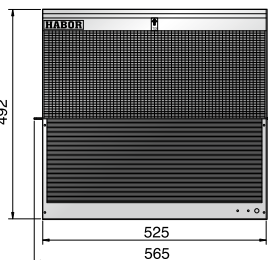
Model	A	B	C	D	E	F	G	H	I	J	K	L
HPC-50A	412	377	414	10	152	30	152	200	19	215	2	195
HPC-70A	472	400	441		152		152	200	19	245		225

Ceiling mounting type

HPC-100A

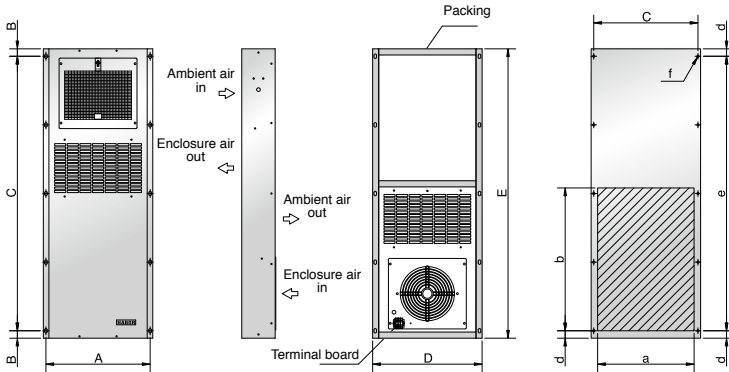


▨ : Panel cutting dimension



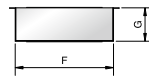
Wall mounting type HPW-05/10/15/25/35A

Outside mounting type HPW-XXAF

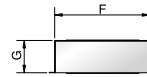


Ceiling mounting type (mm)

Model	A	B	C	D5	E	F	G
HPW-05A	236	20	110x4=440	250	480	215	72
HPW-10A	236		135x4=540		580		72
HPW-15A	236		185x4=740		780	80	
HPW-25A	281	295	185x4=740	295	780	265	90
HPW-35A	281		205x4=820		860		90



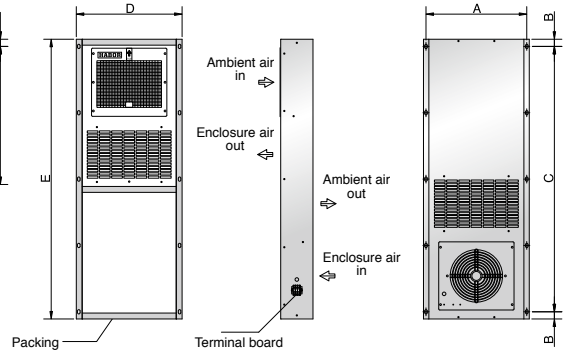
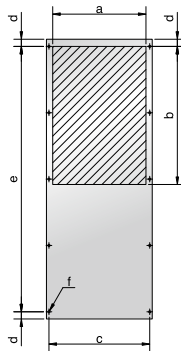
▨ : Panel cutting dimension



Inside mounting type HPW-XXAR

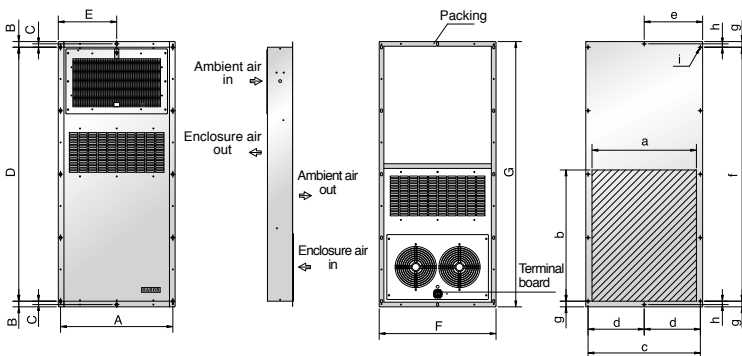
▨ Ceiling mounting type (mm)

Model	a	b	c	d	e	f
HPW-05A		235	236	20	110x4=440	10-ø5.5
HPW-10A	220	285			135x4=540	
HPW-15A		385			185x4=740	
HPW-25A	260	385	281	20	185x4=740	10-ø6.5
HPW-35A		435			205x4=820	



Wall mounting type HPW-50/70/100A

Outside mounting type HPW-XXAF



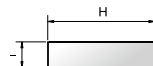
Ceiling mounting type (mm)

Model	A	B	C	D	E	F	G	H	I
HPW-50A	398	20	12	225x4=900	207	414	940	374	90
HPW-70A	424			232.5x4=930	220	440	970	396	120
HPW-100A	549			240x4=960	282.5	565	1000	522	120



▨ : Panel cutting dimension

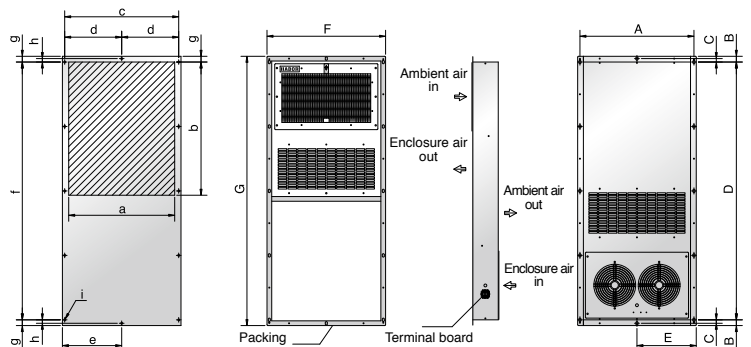
▨ : Panel cutting dimension



Inside mounting type HPW-XXAR

▨ Ceiling mounting type (mm)

Model	a	b	c	d	e	f	g	h	i
HPW-50A	370	465	398	199	207	225x4=900	20	12	12-ø6.5
HPW-70A	398	480	424	212	220	232.5x4=930			
HPW-100A	520	495	549	274.5	282.5	240x4=960			



Temperature Sensor

Diagram 1

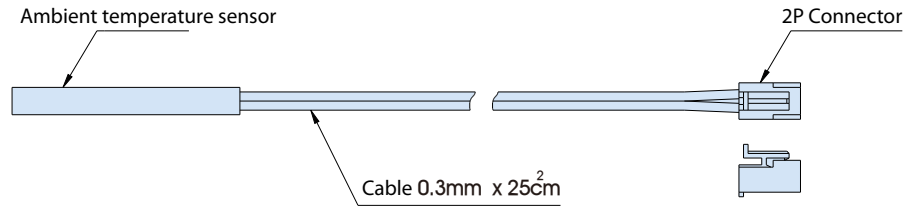


Diagram 2

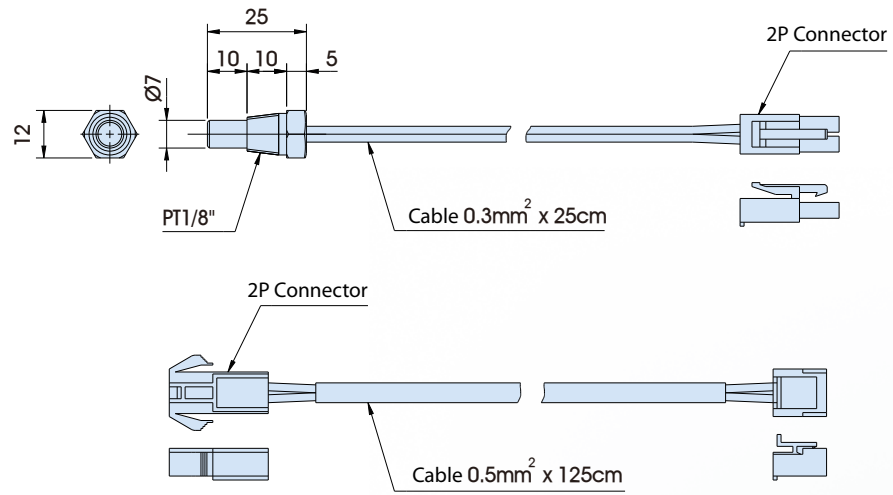
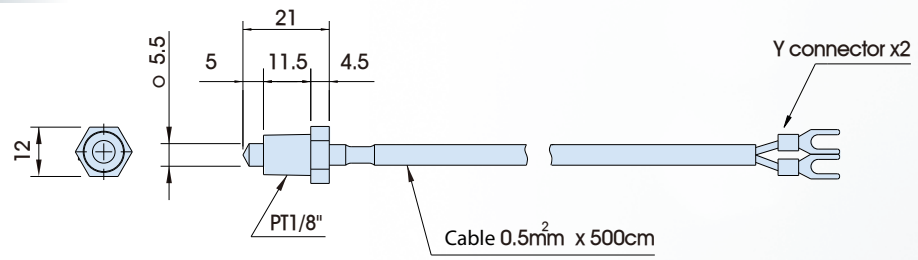


Diagram 3



Temperature Sensor

Sensor Type	Specifications	Dimension Diagram	Application Model
Room temperature sensor	RA	Diagram 1	Diff. temp. control tracing ambient temp.
Machine Body Temperature Sensor	RM	Diagram 3	Diff. temp. control tracing machine body temp
Oil temperature sensor	RO	Diagram 2	Oil cooler series
Water temperature sensor	RW	Diagram 2	Water cooler series



Electronics Temperature Controller

- Display of liquid temperature, ambient temperature and setting value.
- Micro digital circuit design makes high precise control.
- Output of alarm message.
- Function of compressor protection.
- Customized control is available upon request.
- Optional RS485 communication port.

PID Controller Panel

- Parameter display
- Parameter value display
- Standby button
- Parameter changing button
- Push button of setting value (Up)
- Push button of setting value (Down)



ON/OFF Controller Panel



- Indicator of refrigeration system fault
- Indicator of pump motor fault
- Indicator of compressor fault
- Liquid / base temperature
- Indicator of liquid temperature
- Indicator of base temperature
- Indicator of pump running
- Indicator of compressor running
- Indicator of heating (Optional)
- Setting value
- Change button for liquid / base temperature
- Push button of setting value (Up)
- Push button of setting value (Down)
- Indicator of liquid circulation system fault
- Indicator of reverse power



HABOR PRECISE INDUSTRIES CO.,LTD.

77,Industrial 20th Rd., Taiping City,
Taichung County 411, Taiwan
TEL:+886-4-2271-3588
FAX:+886-4-2271-3535
<http://www.habor.com>
E-mail:habor@ms17.hinet.net

HABOR PRECISE MACHINE (ZHE JIANG) CO.,LTD.

No.282, Fengxiang E. Rd., Wutong Street,
Tong-Xiang City, Zhejiang 314500, China
TEL:+86-573-8827-9588
FAX:+86-573-8827-6588
E-mail:habor_zj@hotmail.com

2010.03

[HTTP://WWW.HABOR.COM](http://www.habor.com)