Haier
Inspired living

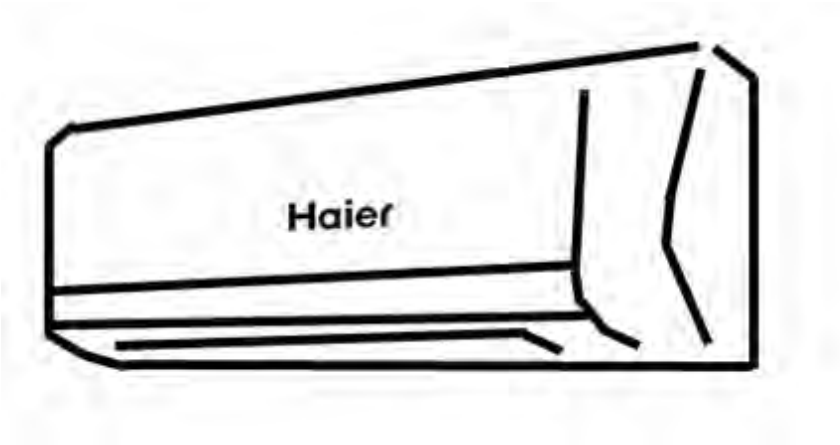
Domestic
Air conditioner

TECHNICAL DATA

AC Inverter

Wall mounted Type E -Series

HSU-09/12HEA03/(BP)



CAUTION

1. READ THIS MANUAL CAREFULLY TO DIAGNOSE TROUBLE CORRECTLY BEFORE OFFERING SERVICE.
2. THIS MANUAL IS USED BY QUALIFIED APPLIANCE TECHNICIANS ONLY.
3. HAIER DOES NOT ASSUME ANY RESPONSIBILITY FOR PROPERTY DAMAGE OR PERSONAL INJURY FOR IMPROPER SERVICE PROCEDURES DONE BY ONE UNQUALIFIED PERSON.

Table of Contents

DRY function: Make dehumidifying in the room when the unit is working in the "DRY" mode

12 Hour timer: Use the timer function to set on,or off.

Easy clean design: The panel is easy to wash and the airflow vents can be detached without any special tools for quick cleaning of the inside of the air conditioner

Intelligent air: With twin-blade technology ,the airflow can be adjusted not to blow directly to human body,so preventing people from the air condintioner sympton

Anti-mold filter: Catches most small particles and remove unpleasant odors effectively

4 Fan setting: Slect the fan speed LO,MED,HI,AUTO

Child lock: Avoid the child's wrong operation on the remote controller.

2.Specifications

This information was not available at the time of publication .

NOMINAL CAPACITY and NOMINAL INPUT					
For indoor units only:					
INDOOR UNITS				HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
NOMINAL INPUT	Cooling	nominal	kW	0.1	0.1
	Heating	nominal	kW	0.1	0.1

NOMINALCAPACITY and NOMINAL INPUT					
Model				HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
NORMINAL CAPACITY(3-4)	Cooling(1)	min.~norm.~max.	kw	2.6	3.5
	Heating(2)	min.~norm.~max.	kw	3.6	4.8
NORMINAL INPUT	Cooling	min.~norm.~max.	kw	1.45	2.11
	Heating	min.~norm.~max.	kw	1.60	2.00
EER	Cooling			3.06	2.80
COP	Heating			3.08	2.81
ANNUAL ENERGY CONSUMPTION(9)	Cooling		kwh	725	1055

TECHNICAL SPECIFICATIONS					
INDOOR UNITS				HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
DIMENSIONS	Unit	H	mm	187	
		W	mm	795	
		D	mm	265	
WEIGHT	Unit		kg	10.1	
COLOR	Unit			WHITE	
SOUND LEVEL	Sound pressure (cooling/heating)(5)	high	dB(A)	38	39
		medium	dB(A)	35	36
		low	dB(A)	30	31
	Sound power(cooling/heating)(6)	high	dB(A)	48	50
FAN	Air flow rate(cooling/heating)	high	m^3/min	9.4/8.2	10.1
		low	m^3/min	7.7	8.2
		super low	m^3/min	5.9	6.5
	Speed(cooling/heating)	steps		4 steps,silent and auto	
		high	rpm	1150/1190	1200
		medium	rpm	1055/1075	1060
		low	rpm	960/960	920
	Type			Cross flow fan	
HEAT EXCHANGER	Motor output		W	15	
	Type			ML fin - 7HI - XA tube	
	Row x stage x fin pitch		mm	2 x 14 x1.4	
AIR FILTER				Removable/washable/mildew proof	
REMOTE CONTROLLER				YR-M10	
TEMPERATURE CONTROL				Microcomputer control	
PIPING CONNECTIONS(external diameter)		liquid	mm	6.35	
		gas	mm	9.52	12.7
		drain	mm	16	
INSULATION MATERIAL	Heat insulation type			both liquid and gas pipes	

TECHNICAL SPECIFICATIONS

OUTDOOR UNITS				HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
NE T DIMENSIONS (stop value,and bottom support is not included)	Unit	H	mm	543	543
		W	mm	783	783
		D	mm	255	255
WEIGHT	Unit		kg	34	38
COLOR	Unit			white	white
SOUND LEVEL	Sound pressure(cooling/heating)(5)	high	dB(A)	53.8/54.8	54.2/54.6
	Sound power (cooling/heating)(6)	high	dB(A)	63/64	64/64
FAN	Air flow rate(cooling/heating)	high	m^3 /min	27.8	27.8
	Speed(cooling/heating)	high	rpm	860	860
	Type			Propeller fan	
	Motor output		W	19	19
REFRIGERAN TCIRCUIT	Refrigerant type			R22	R22
	Refrigerant charge		kg	0.75	1.08
	Maximum allowable distance between indoor and outdoor.		m	15	20
	Maximum allowable lever difference		m	20	15
	Refrigerant control			capillary	
COMPRESSOR	Type			Rotary Compressor	
	Model			KHV104FCKA	SHV130FFDC
	Motor output		W	550	650
	Oil type			HAF68D1 or equiwlent	FV50S
	Oil charge volume		L	0.33	0.52
PIPING CONNECTTIONS	Liquid		mm	6.35	6.35
	Gas		mm	9.52	12.7
	Drain		mm	16	16
INSUL ATION MATERIAL	Heat insulation type			both liquid and gas pipes	

ELECTRICAL SPECIFICATIONS

Forcombination indoor units and outdoo runits :				HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
CURRENT	Nominal Running Current	cooling	A	2.6	3.5
		heating	A	3.6	4.8
	Maximum Running Current	cooling	A	4.7	7.0
		heating	A	4.7	6.9
	Starting Current	cooling	A	20	26
		heating	A	20	26

For indoor units only:			HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
POWER SUPPLY			VM	VM
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase		1PH	1PH
	Frequency	Hz	50	50
	Voltage	V	220	220

NOTES

1 Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB * outdoor temperature 35°CDB/24°CWB * refrigerant piping length: 5m * level diference: 0m.

2 Nominal heating capacities are based on: indoor temperature 20°CDB * outdoor temperature 7°CDB/6°CWB * refrigerant piping length 5m (horizontal) * level difference 0m.

3 Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

4 Units should be selected on nominal capacity. Maximum capacity is limited to peak periods.

5 The sound pressure level is measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. For measuring conditions: please refer to item 8 of this chapter.

6 The sound power level is an absolute value indicating the ''power'' which a sound source generates.

7 Energy label: scale from A (most efficient) to G (less efficient).

8 The energy label Directive 2002/31/EC will enter into force once the relevant measurement standard will be published in the European official Standard.

9 Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions)

3 Remote controller lists

Model	HSU-09HEA03/(BP)	HSU-12HEA03/(BP)
YR-M13	Y	Y

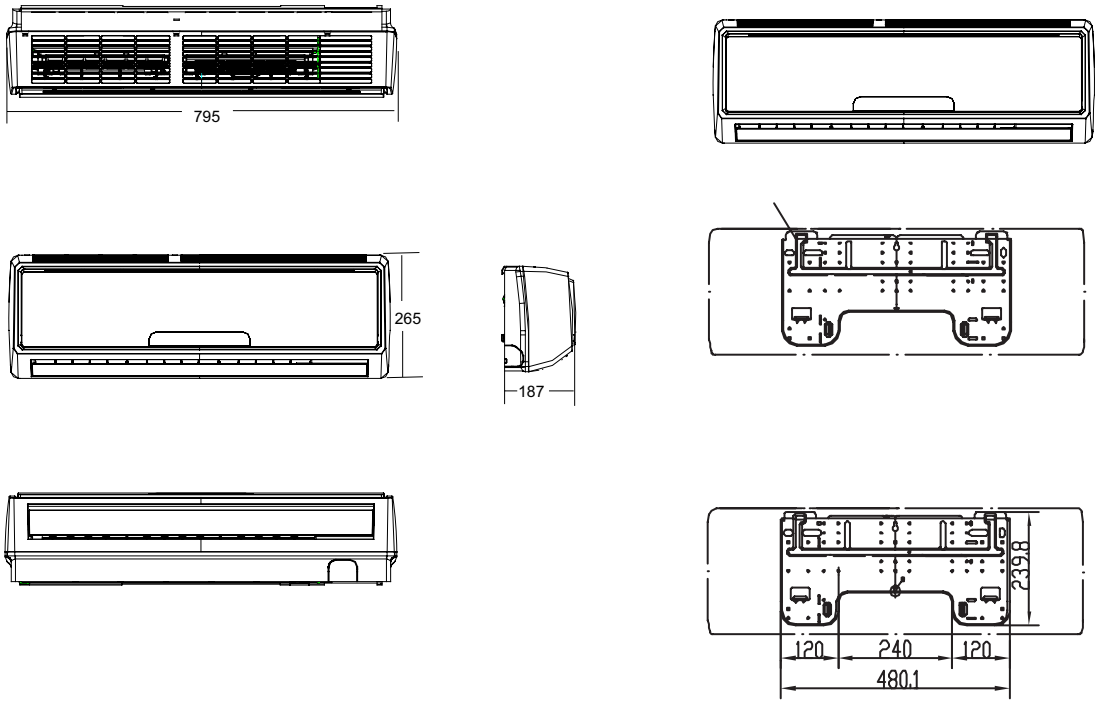
4 Sensors lists

INDOOR UNIT		
type	Description	Qty
Room sensor	It's used for detecting room temperature	1
Pipe sensor	It's used for detecting temperature of evaporator	1

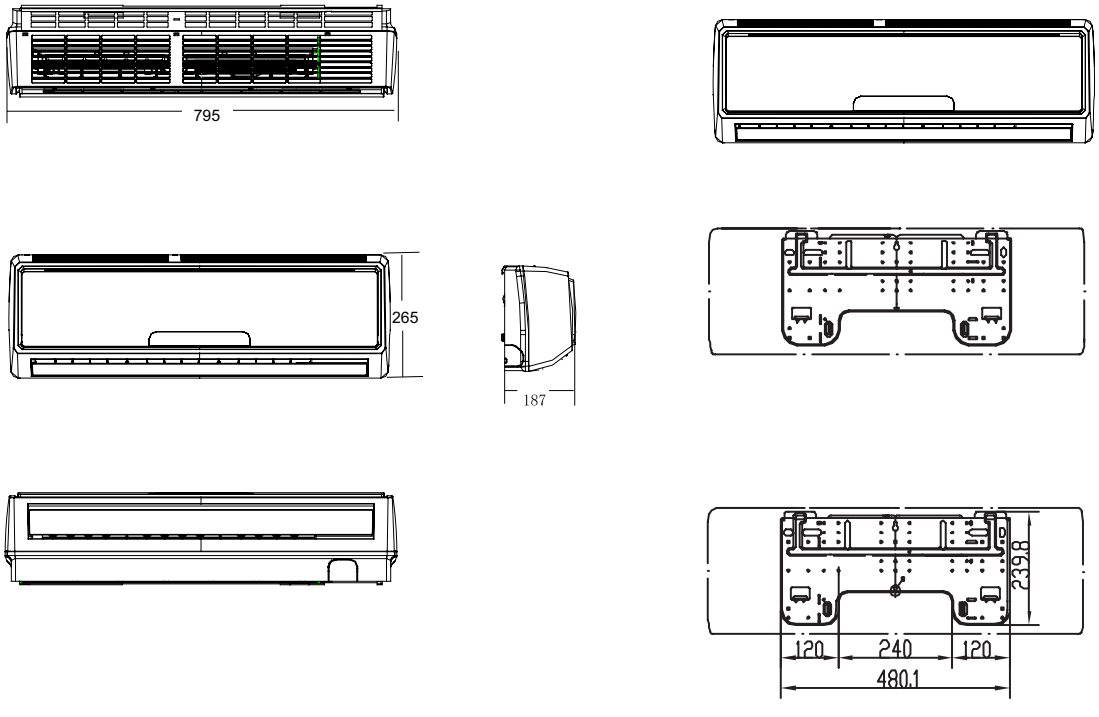
5 Dimensional drawings

Indoor unit

HSU-09HEA03/(BP)

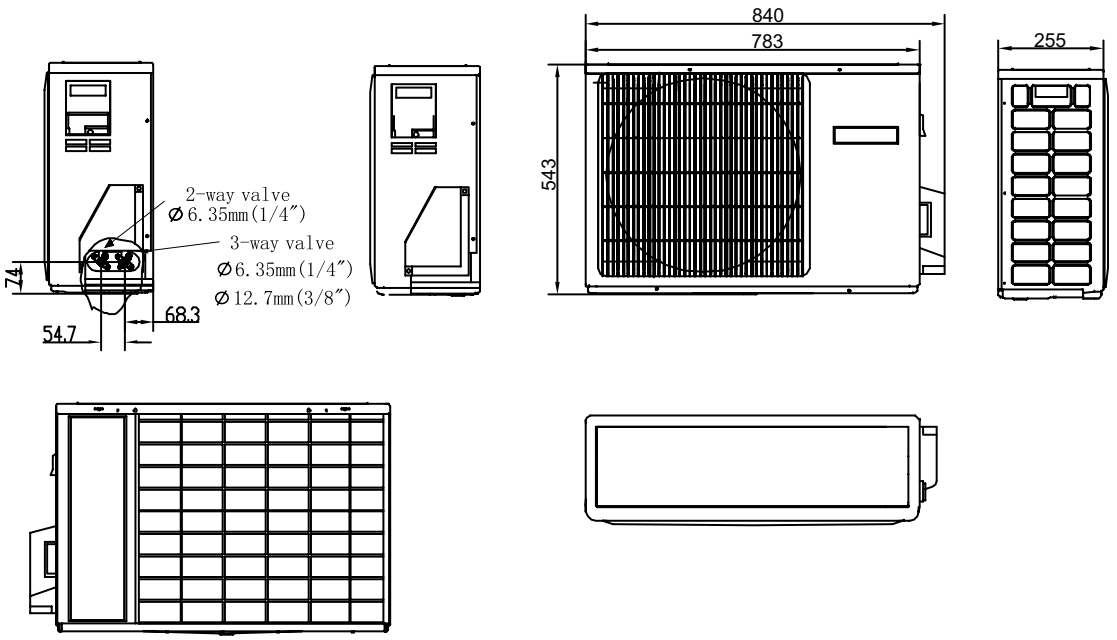


HSU-12HEA03/(BP)



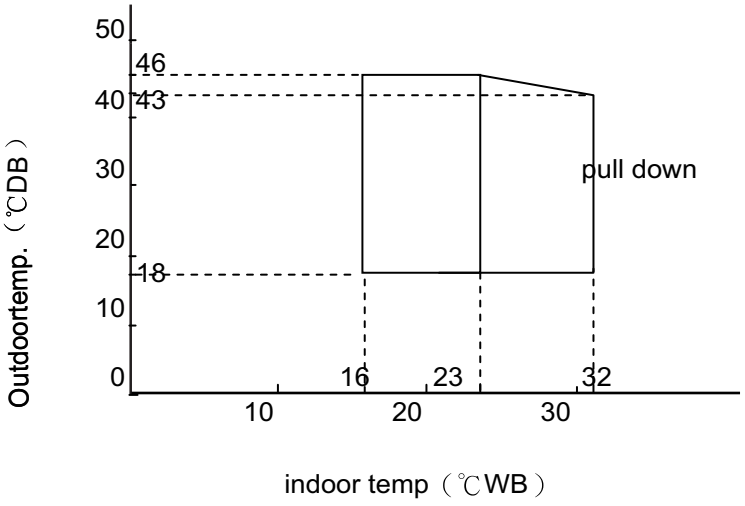
Outdoor unit

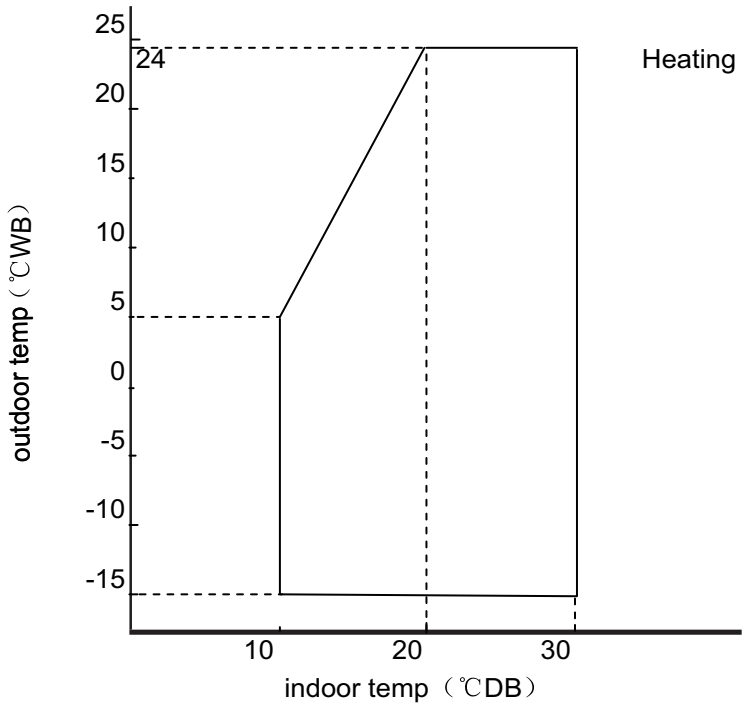
HSU-09 12HEA3/(BP)



6 Operation range

Cooling





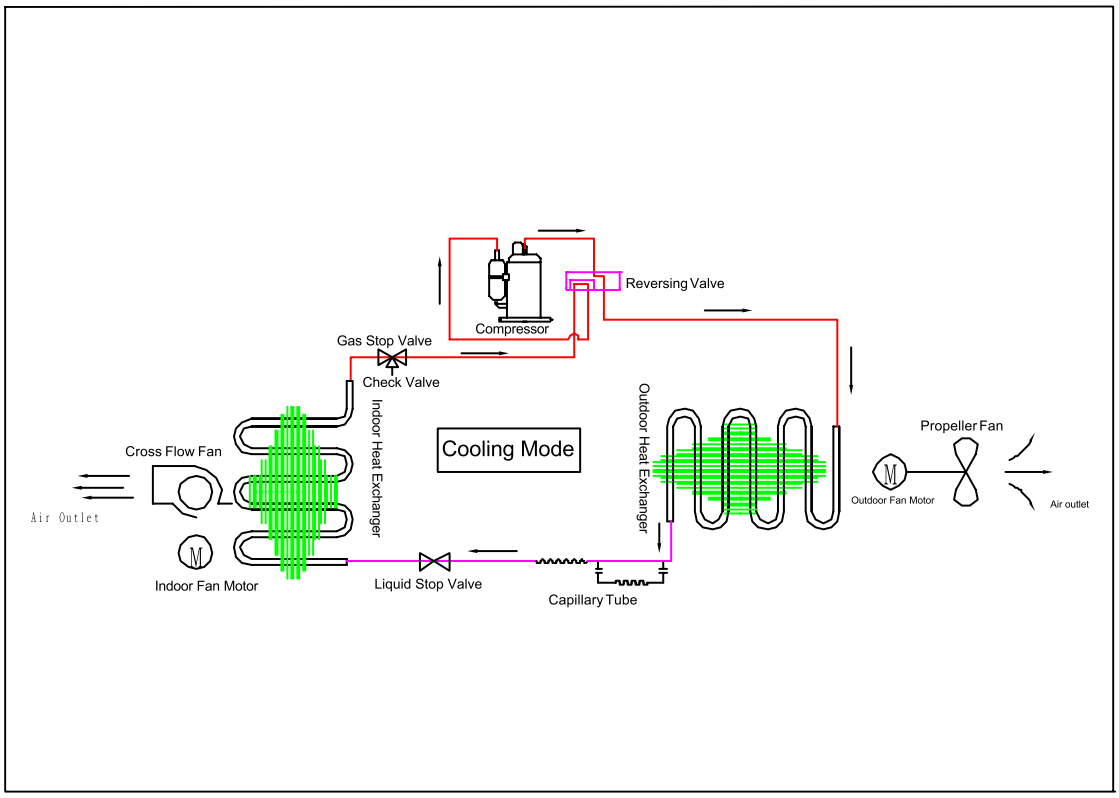
Notes：

The graphs are based on the following condition：

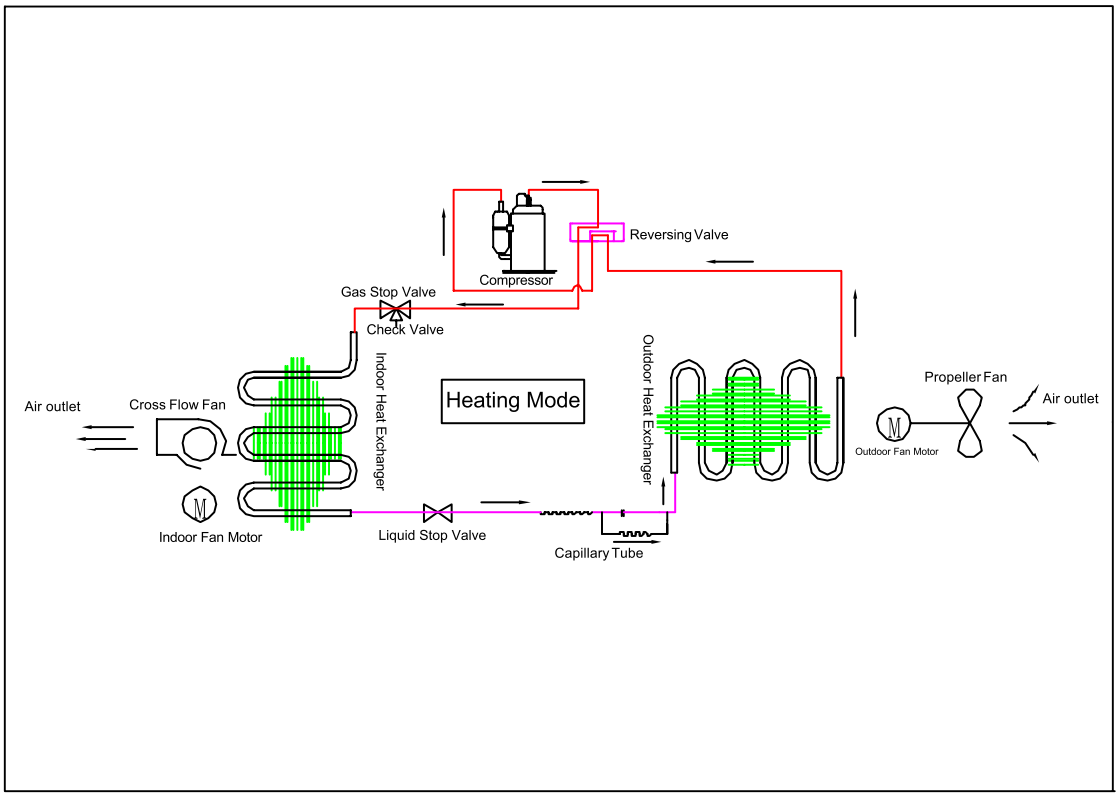
Equivalent piping length	7.5m
Level difference	0m
Air flow rate	high

7 Piping diagrams

Cooling mode



Heating mode

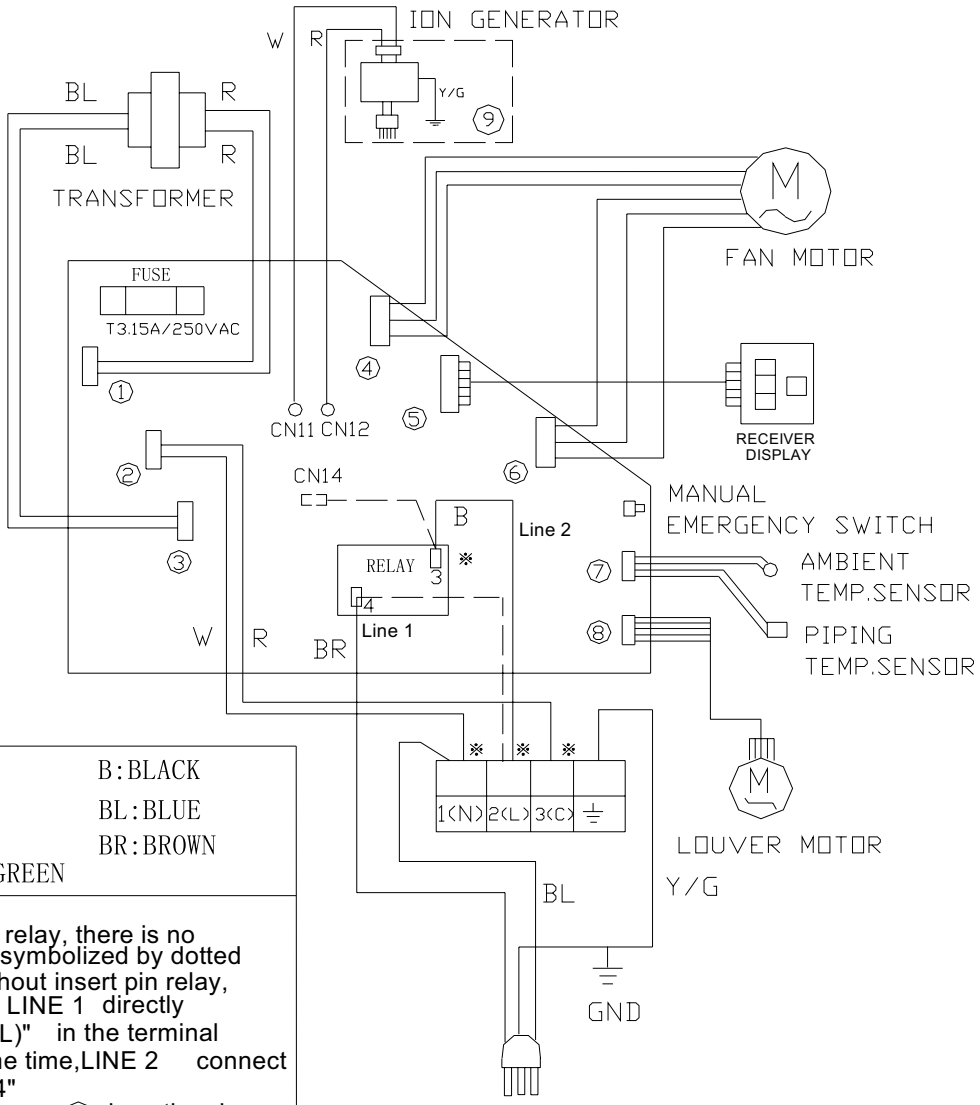


8.Wiring Diagrams

INDOORUNIT

0010518491

INDOOR WIRING DIAGRAM



R:RED	B:BLACK
W:WHITE	BL:BLUE
Y:YELLOW	BR:BROWN
Y/G:YELLOW/GREEN	

ATTENTION

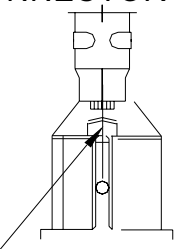
For PCB with relay, there is no connection wire symbolized by dotted line.For PCB without insert pin relay, connection wire LINE 1 directly connected to "2(L)" in the terminal block,at the same time,LINE 2 connect directly to "CN14"

Dotted line frame ⑨ is optional.

For PCB with relay：	For PCB without relay：
① CN1	① CN1-1
② CN3	② CN5
③ CN4	③ CN1-2
④ CN2	④ CN9
⑤ CN6	⑤ CN2-1
⑥ CN7	⑥ CN8
⑦ CN8	⑦ CN4
⑧ CN9	⑧ CN6

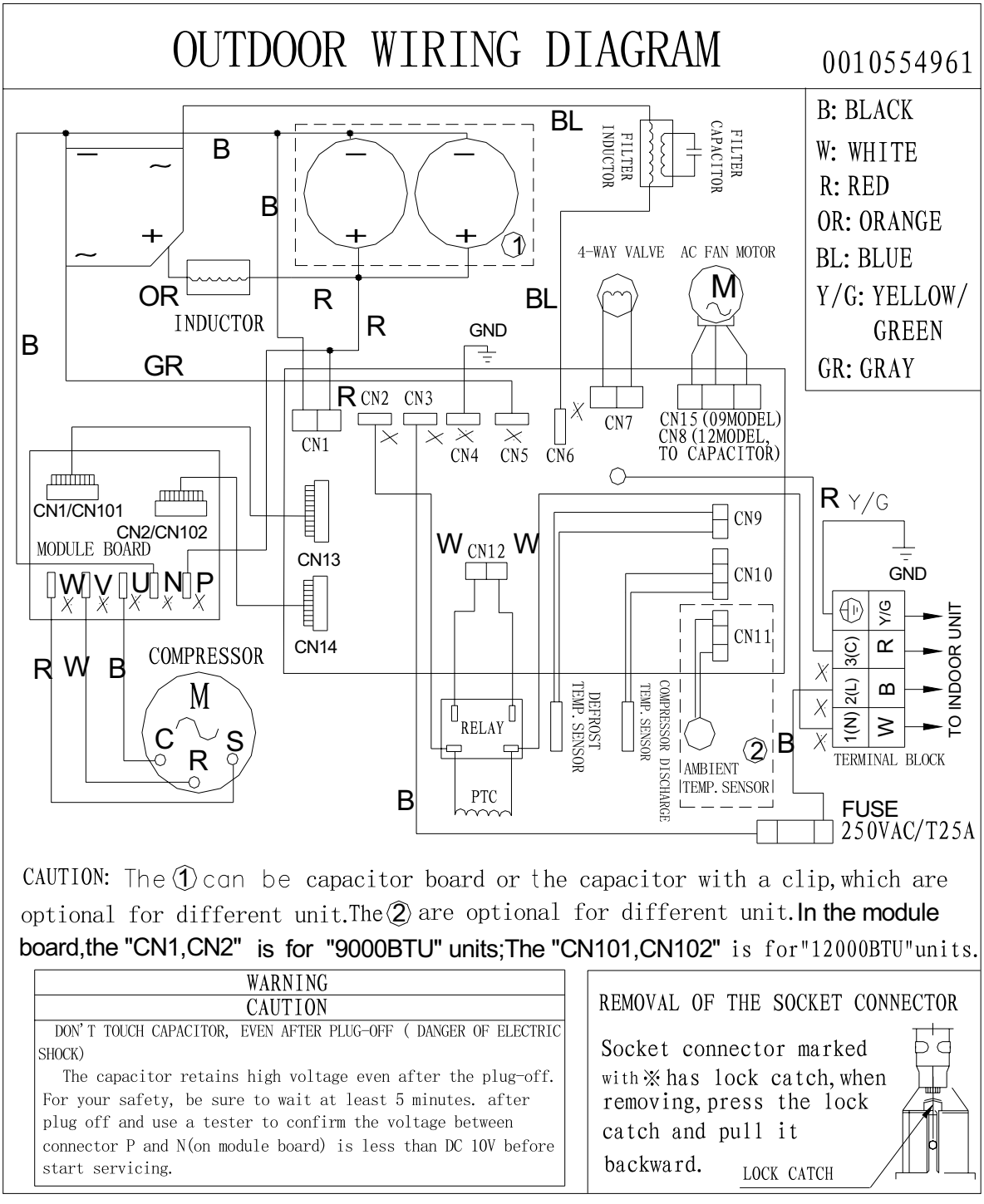
REMOVAL OF THE SOCKET CONNECTOR

Socket connector marked with ※ has lock catch,when removing, press the lock catch and pull it backward



LOCK CATCH

Outdoor unit



CAUTION: The ① can be capacitor board or the capacitor with a clip, which are optional for different unit. The ② are optional for different unit. In the module board, the "CN1,CN2" is for "9000BTU" units; The "CN101,CN102" is for "12000BTU" units.

WARNING
CAUTION
DON'T TOUCH CAPACITOR, EVEN AFTER PLUG-OFF (DANGER OF ELECTRIC SHOCK) The capacitor retains high voltage even after the plug-off. For your safety, be sure to wait at least 5 minutes. after plug off and use a tester to confirm the voltage between connector P and N(on module board) is less than DC 10V before start servicing.

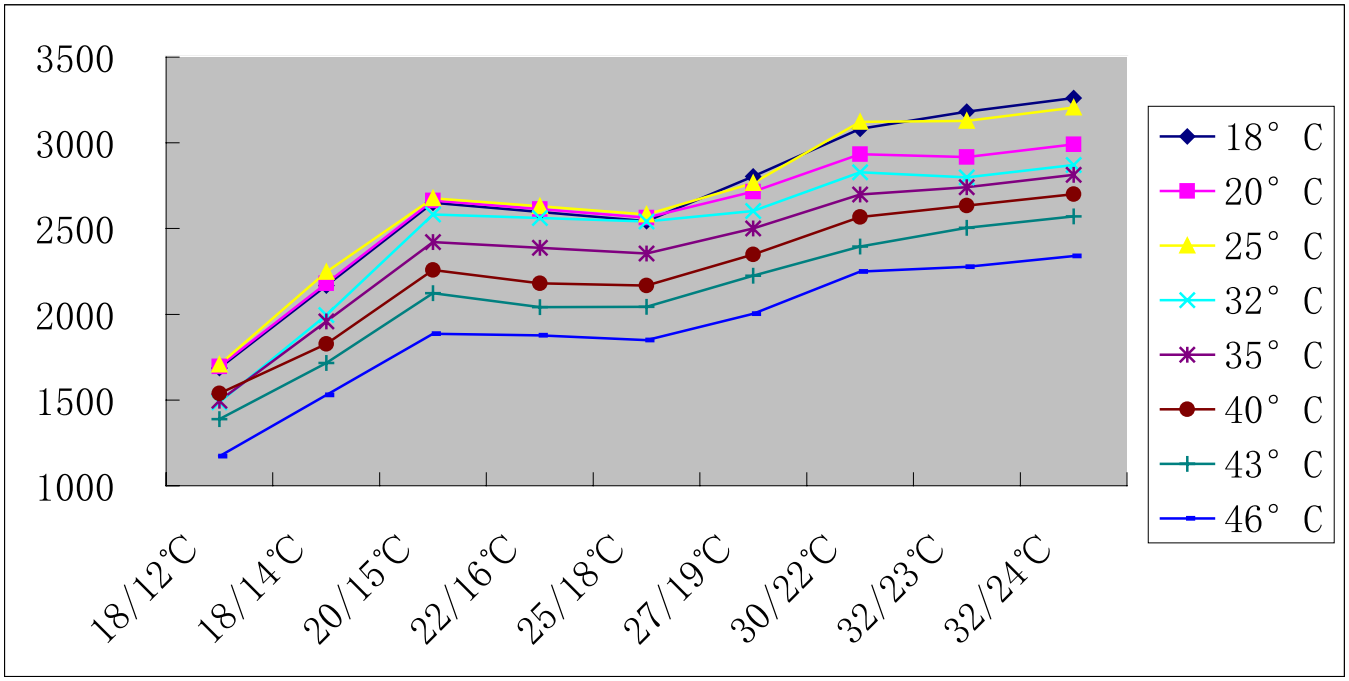
REMOVAL OF THE SOCKET CONNECTOR

Socket connector marked with ※ has lock catch, when removing, press the lock catch and pull it backward.

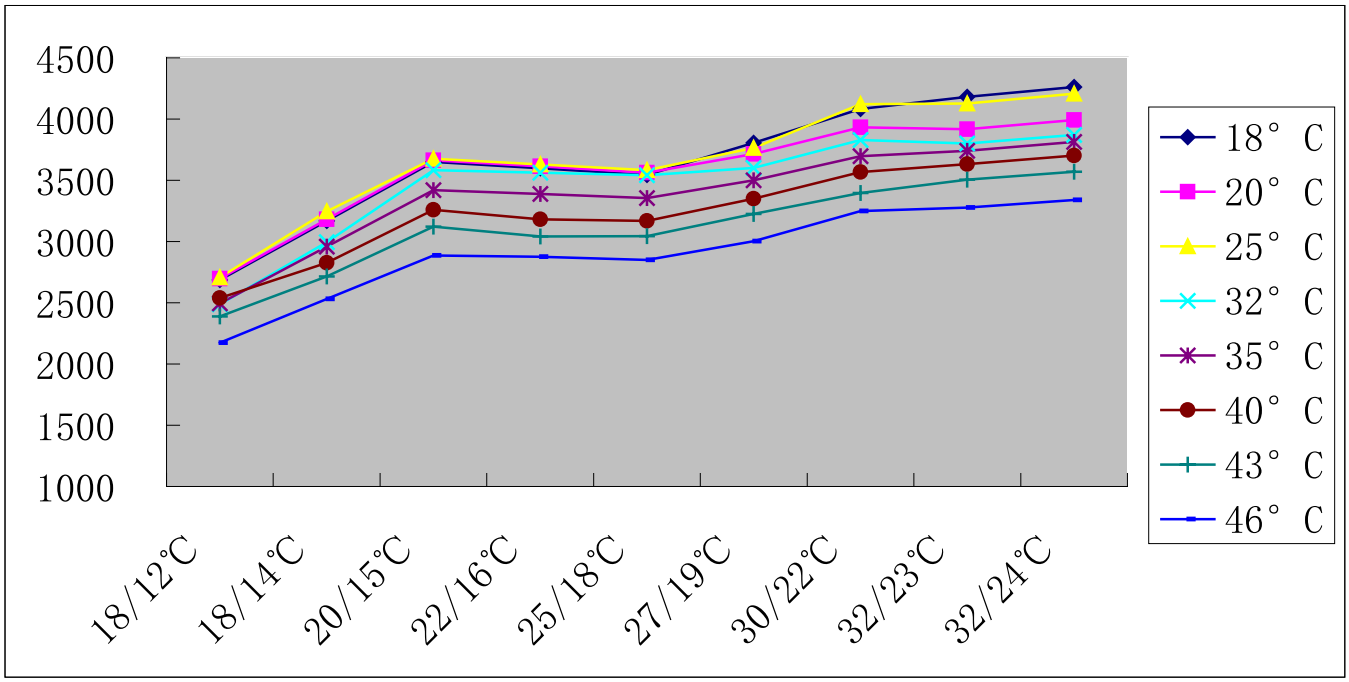
9 Performance Curves Diagram

9.1 Cooling Capacity-temperature Curves

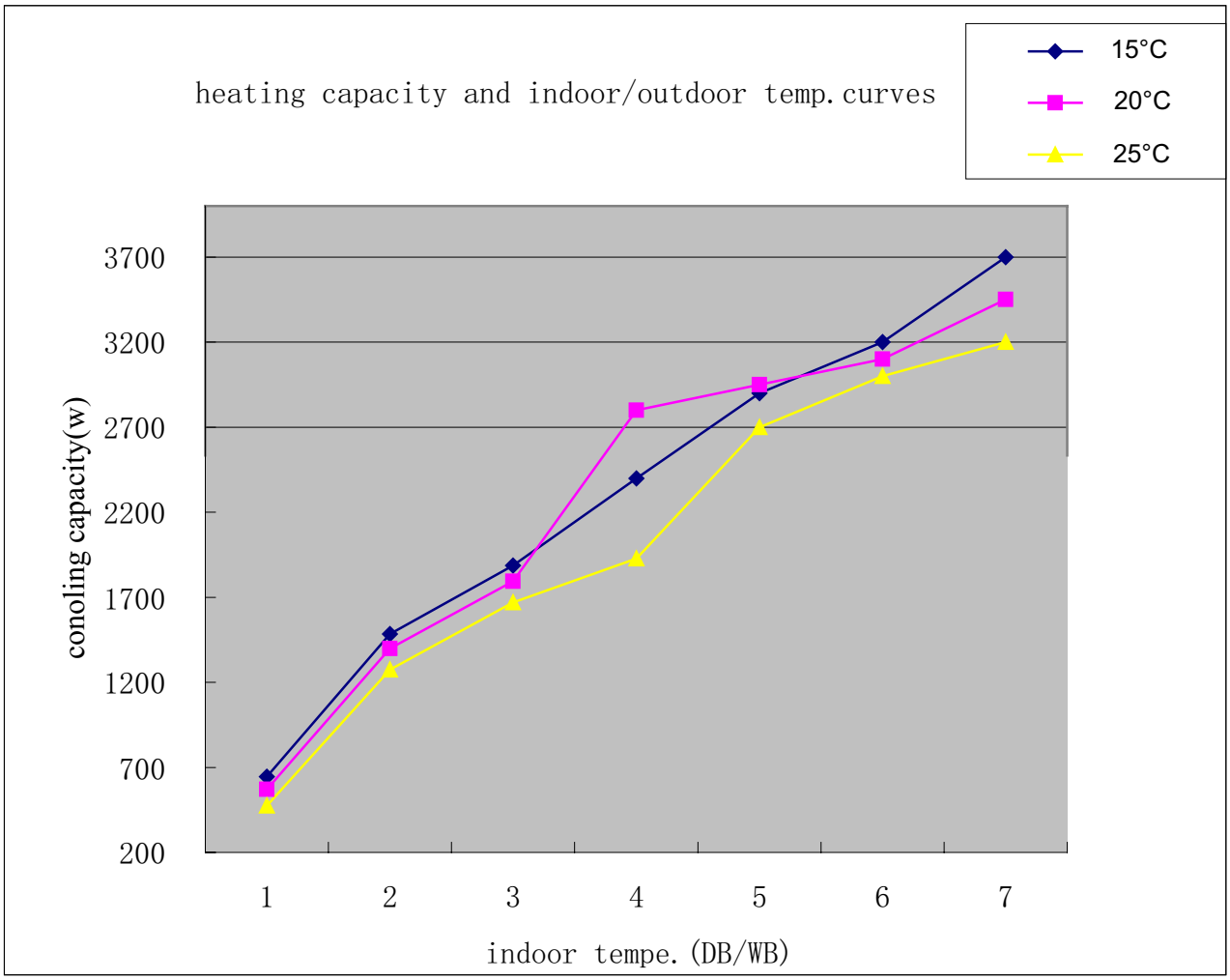
HSU-09HEA03/(BP) performance curves								
cooling value-temerature talbe								
indoor temp.	outdoor temp.(humidity 46%)							
DB/WB	18℃	20℃	25℃	32℃	35℃	40℃	43℃	46℃
18/12℃	1686	1697	1707	1486	1496	1539	1389	1173
18/14℃	2169	2180	2247	1995	1958	1828	1716	1530
20/15℃	2651	2664	2677	2582	2420	2259	2123	1887
22/16℃	2597	2613	2630	2562	2387	2181	2042	1877
25/18℃	2544	2563	2582	2541	2354	2168	2045	1849
27/19℃	2805	2715	2765	2602	2500	2349	2226	2002
30/22℃	3082	2934	3122	2828	2698	2568	2396	2249
32/23℃	3182	2918	3128	2799	2742	2633	2505	2277
32/24℃	3261	2992	3206	2871	2813	2701	2570	2340



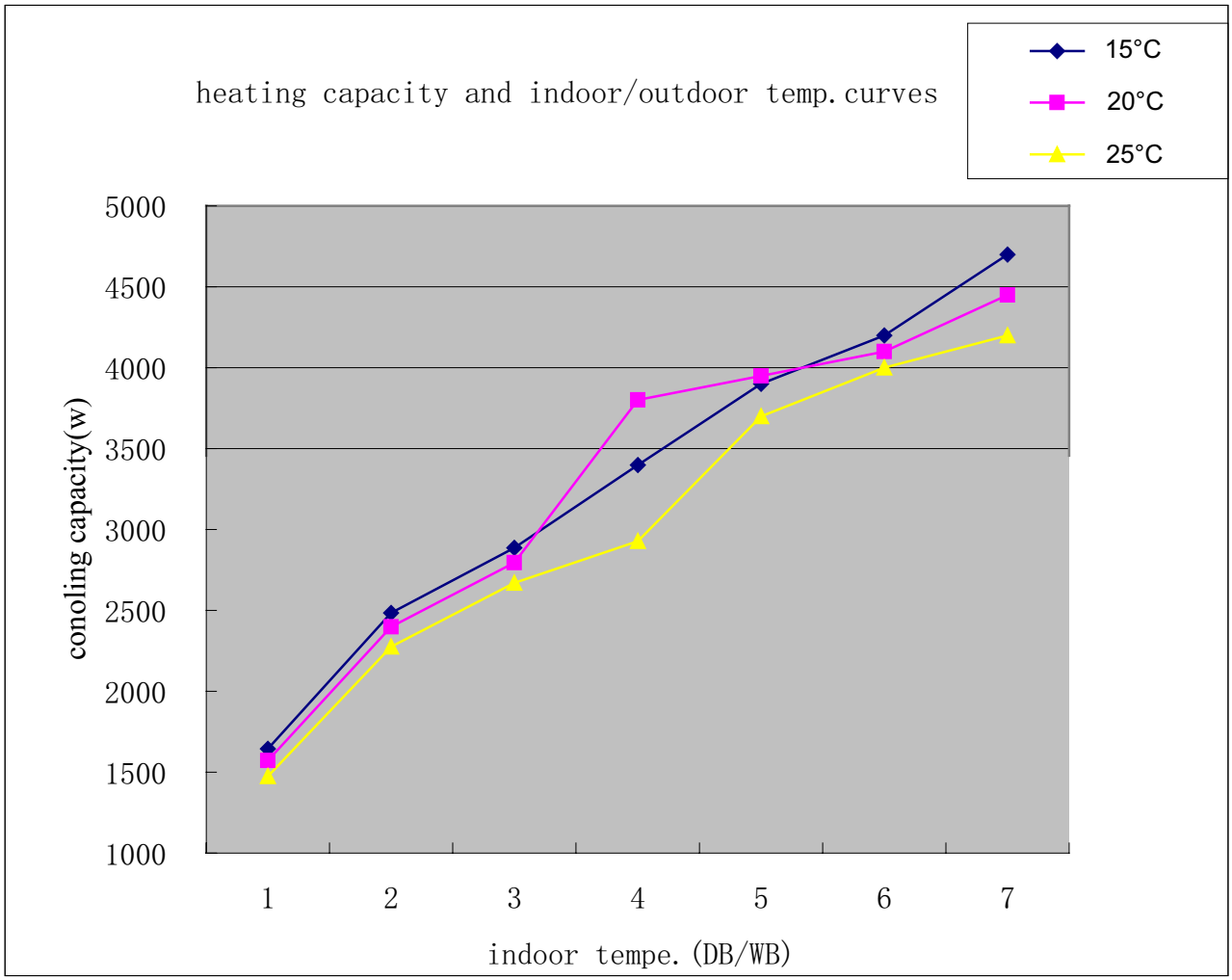
HSU-12HEA03/(BP) performance curves								
cooling value-temerature talbe								
indoor temp.	outdoor temp.(humidity 46%)							
DB/WB	18℃	20℃	25℃	32℃	35℃	40℃	43℃	46℃
18/12℃	2686	2697	2707	2486	2496	2539	2389	2173
18/14℃	3169	3180	3247	2995	2958	2828	2716	2530
20/15℃	3651	3664	3677	3582	3420	3259	3123	2887
22/16℃	3597	3613	3630	3562	3387	3181	3042	2877
25/18℃	3544	3563	3582	3541	3354	3168	3045	2849
27/19℃	3805	3715	3765	3602	3500	3349	3226	3002
30/22℃	4082	3934	4122	3828	3698	3568	3396	3249
32/23℃	4182	3918	4128	3799	3742	3633	3505	3277
32/24℃	4261	3992	4206	3871	3813	3701	3570	3340



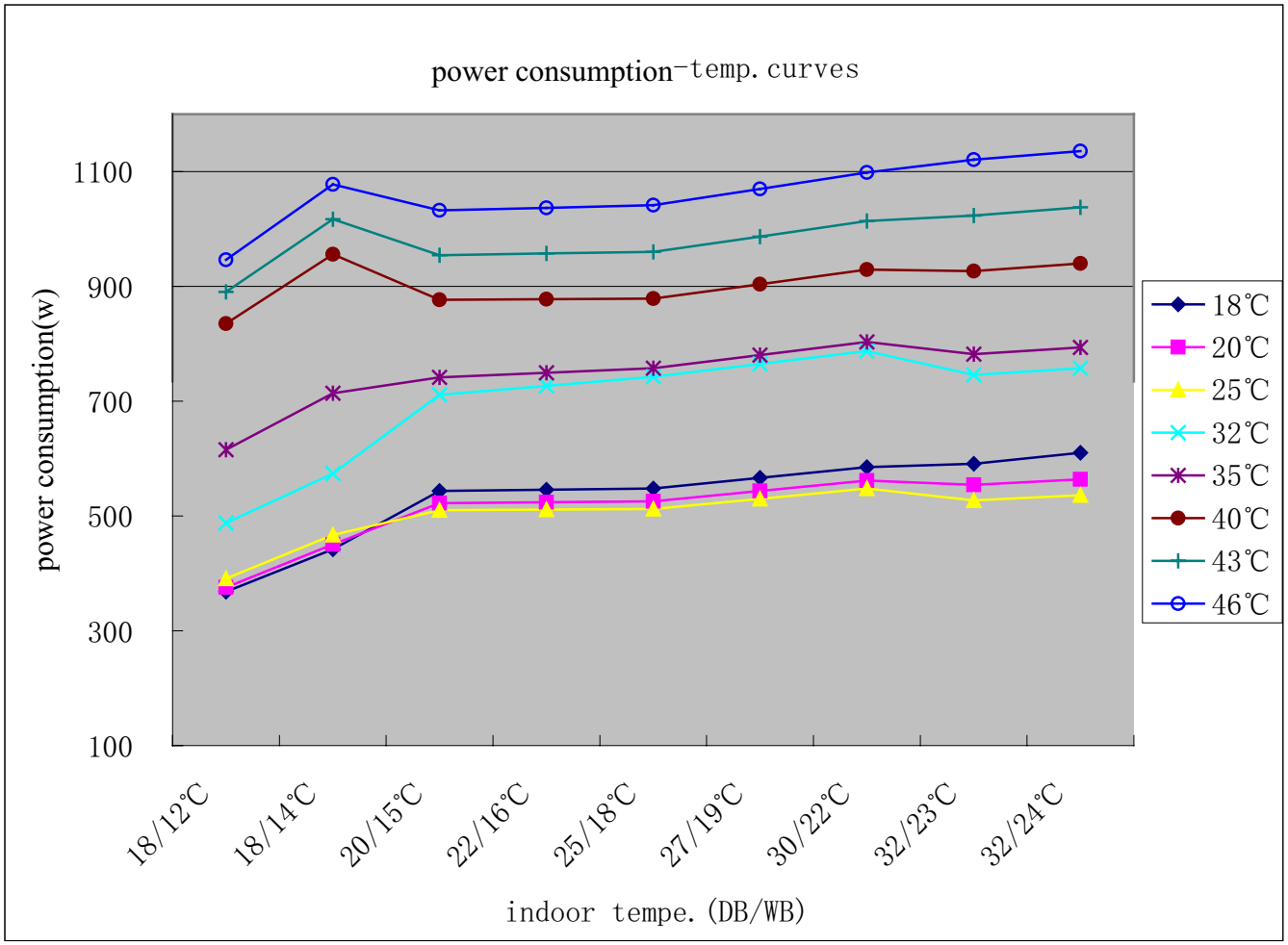
HSU-09HEA03/(BP) performance curves			
heating capacity and indoor/outdoor temp.curves			
outdoor temp.	indoor temp.(humidity 46%)		
DB/WB	15℃	20℃	25℃
-15℃	645	572	475
-5℃	1484	1398	1275
5℃	1886	1794	1669
7/6℃	2399	2800	1928
15℃	2900	2950	2700
20℃	3200	3100	3000
25℃	3700	3450	3200



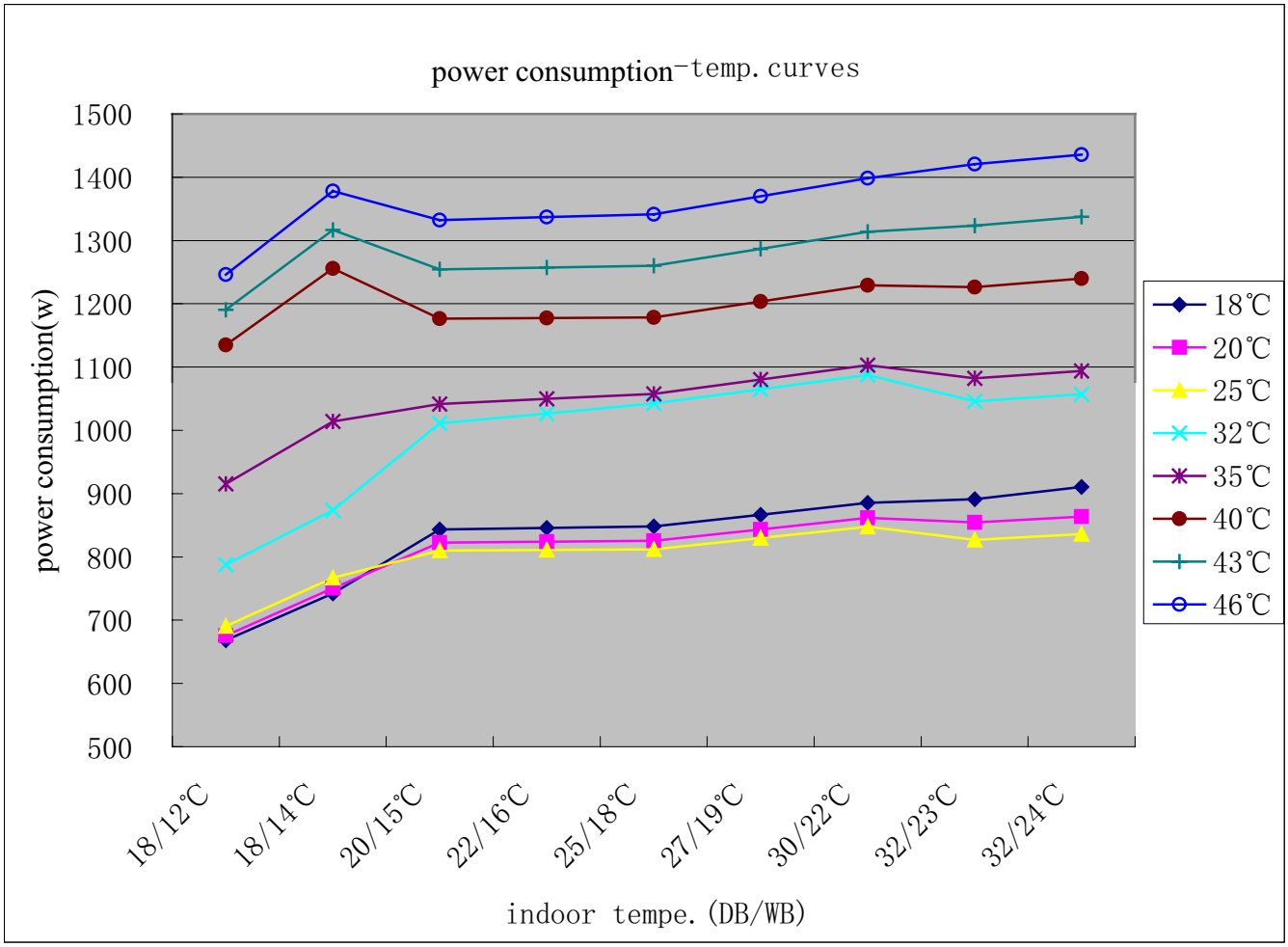
HSU-12HEA03/(BP) performance curves			
heating capacity and indoor/outdoor temp.curves			
outdoor temp.	indoor temp.(humidity 46%)		
DB/WB	15℃	20℃	25℃
-15℃	1645	1572	1475
-5℃	2484	2398	2275
5℃	2886	2794	2669
7/6℃	3399	3800	2928
15℃	3900	3950	3700
20℃	4200	4100	4000
25℃	4700	4450	4200



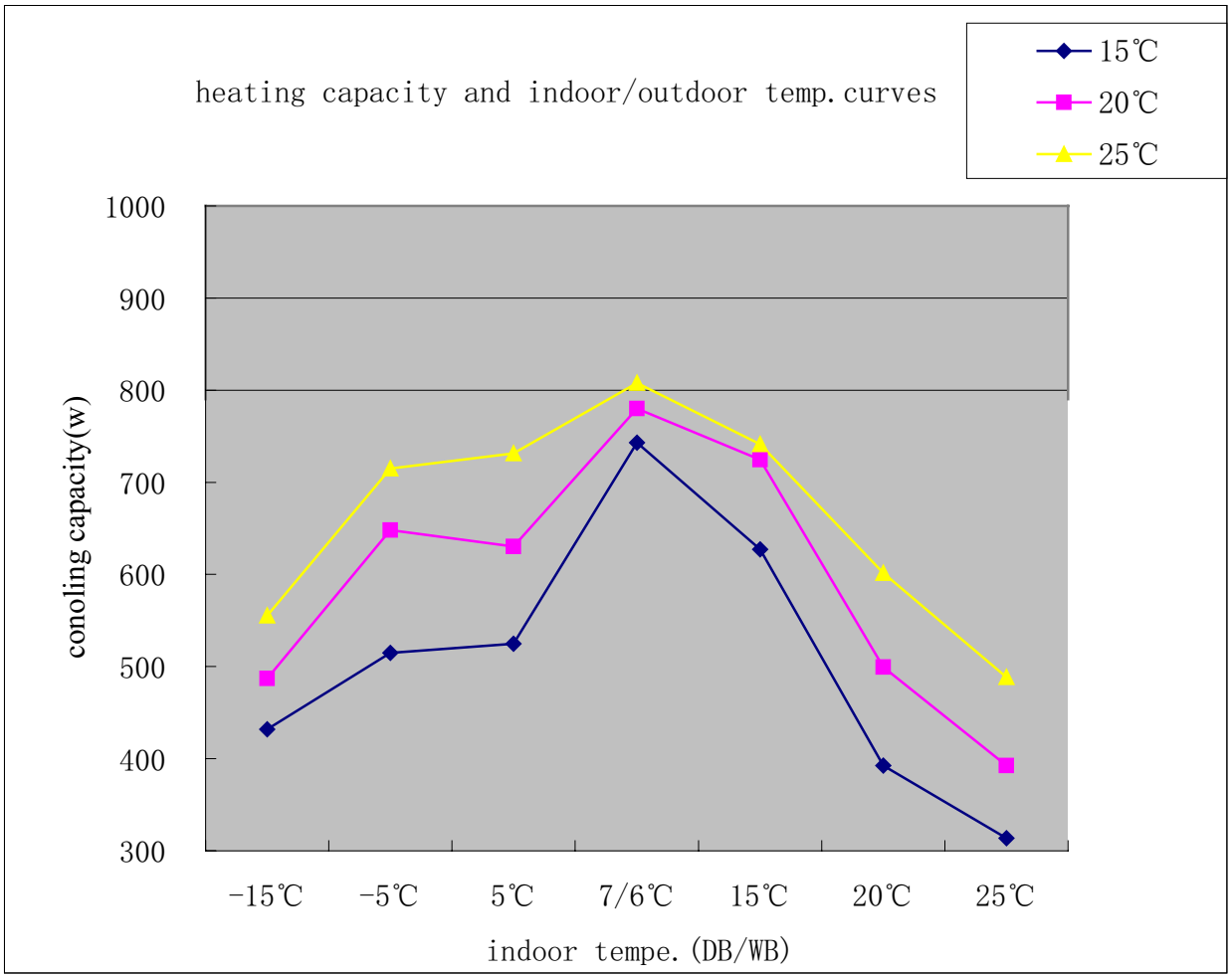
HSU-09HEA03/(BP) performance curves								
power consumption value-teme.talbe								
indoor temp.	outdoor temp.(humidity 46%)							
DB/WB	18℃	20℃	25℃	32℃	35℃	40℃	43℃	46℃
18/12℃	368	376	391	488	615	835	891	946
18/14℃	442	450	467	574	714	956	1017	1078
20/15℃	543	522	510	711	742	877	954	1032
22/16℃	546	524	511	727	750	878	957	1037
25/18℃	548	526	512	742	758	879	960	1041
27/19℃	566	543	530	765	780	904	987	1070
30/22℃	585	562	548	787	803	929	1014	1099
32/23℃	591	554	527	746	782	927	1024	1121
32/24℃	610	564	536	757	794	940	1038	1136



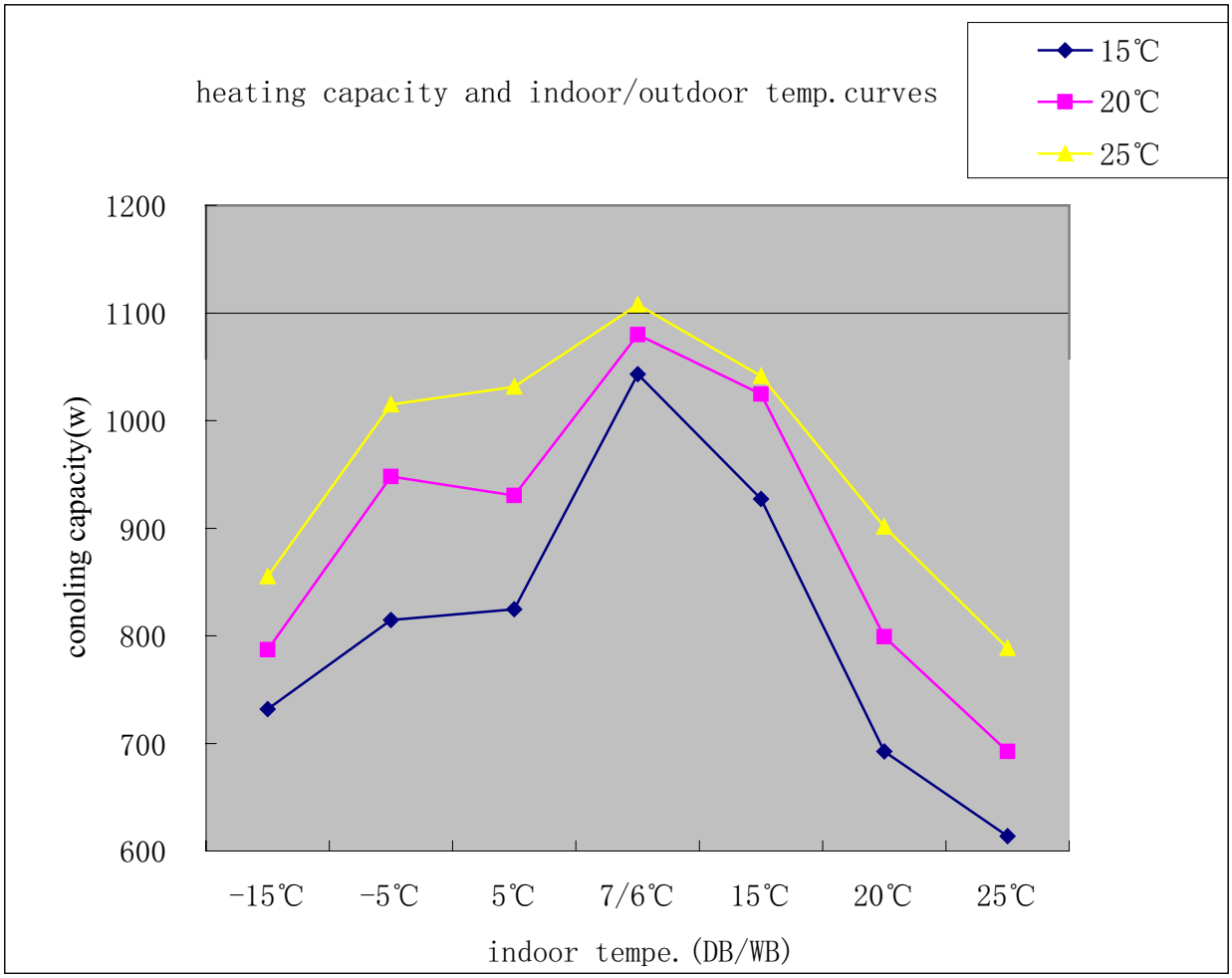
HSU-12HEA03/(BP) performance curves								
power consumption value-teme.talbe								
indoor temp.	outdoor temp.(humidity 46%)							
DB/WB	18℃	20℃	25℃	32℃	35℃	40℃	43℃	46℃
18/12℃	668	676	691	788	915	1135	1191	1246
18/14℃	742	750	767	874	1014	1256	1317	1378
20/15℃	843	822	810	1011	1042	1177	1254	1332
22/16℃	846	824	811	1027	1050	1178	1257	1337
25/18℃	848	826	812	1042	1058	1179	1260	1341
27/19℃	866	843	830	1065	1080	1204	1287	1370
30/22℃	885	862	848	1087	1103	1229	1314	1399
32/23℃	891	854	827	1046	1082	1227	1324	1421
32/24℃	910	864	836	1057	1094	1240	1338	1436



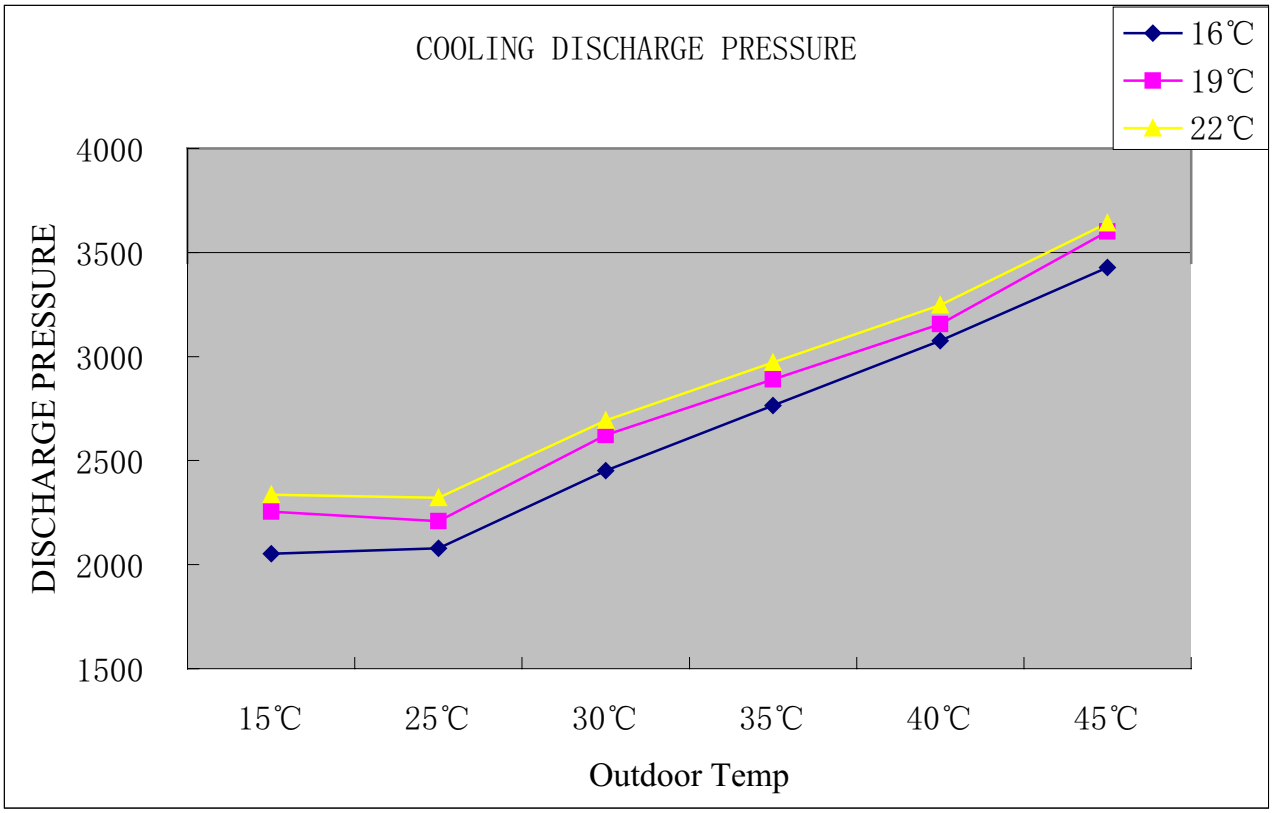
HSU-09HEA03/(BP) performance curves			
power consumption value-temp.talbe			
outdoor temp.	indoor temp.(humidity 46%)		
DB/WB	15℃	20℃	25℃
-15℃	432	487	555
-5℃	515	648	715
5℃	525	630	731
7/6℃	743	780	808
15℃	627	725	741
20℃	392	499	601
25℃	314	392	489



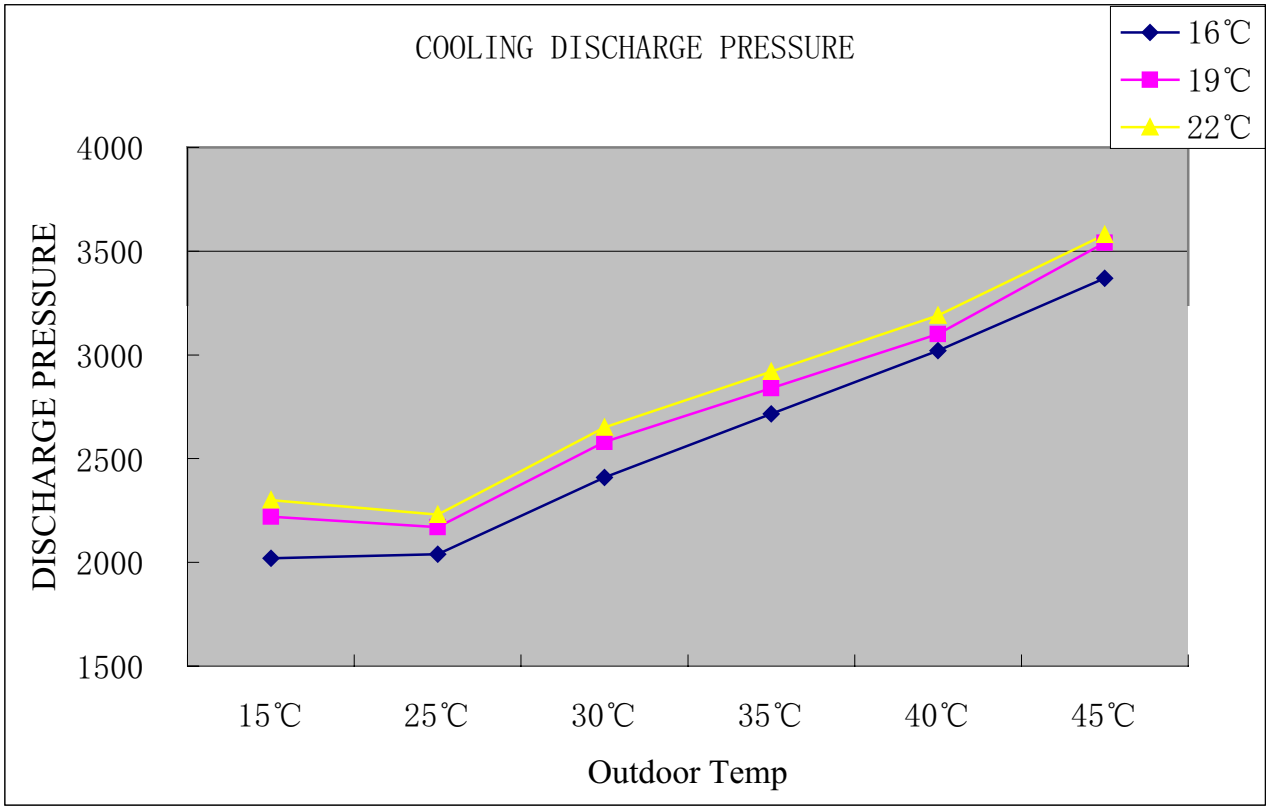
HSU-12HEA03/(BP) performance curves			
power consumption value-temp.talbe			
outdoor temp.	indoor temp.(humidity 46%)		
DB/WB	15℃	20℃	25℃
-15℃	732	787	855
-5℃	815	948	1015
5℃	825	930	1031
7/6℃	1043	1080	1108
15℃	927	1025	1041
20℃	692	799	901
25℃	614	692	789



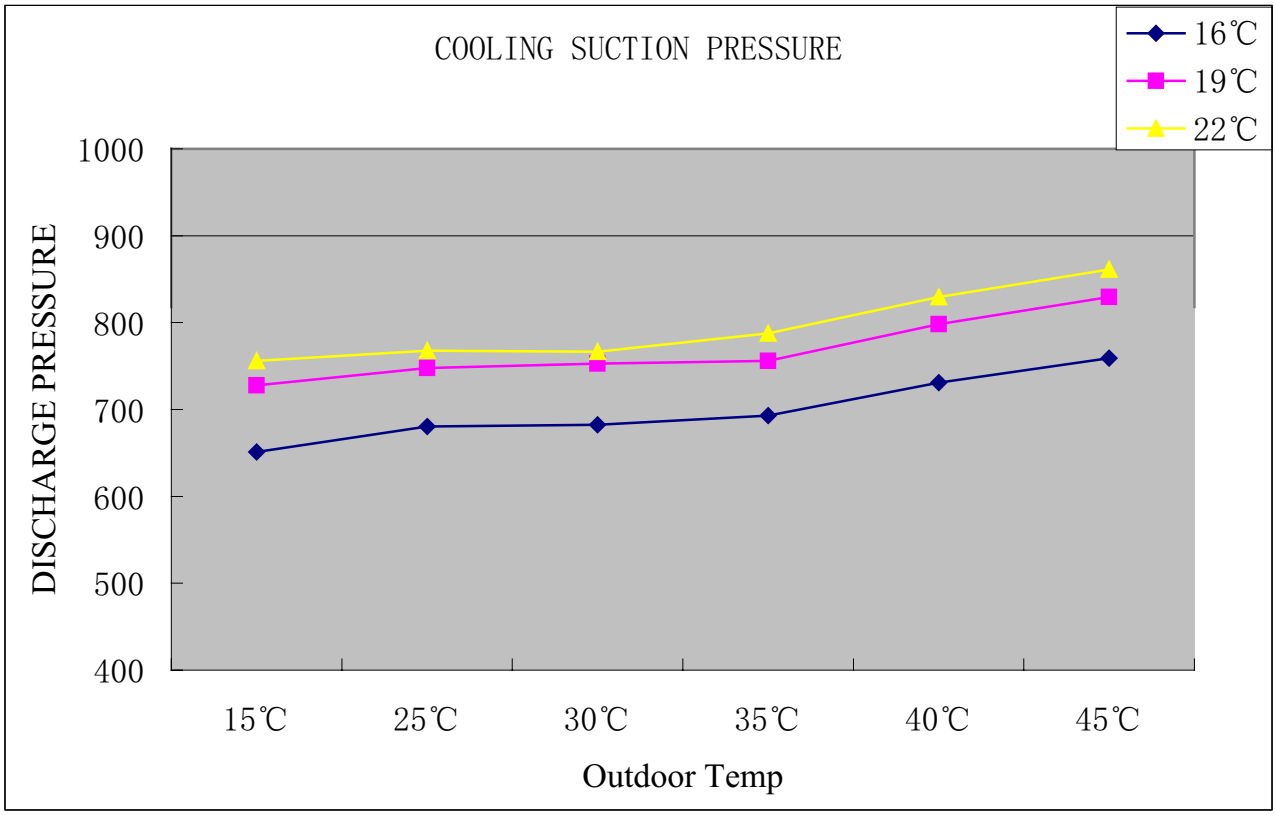
HSU-09HEA03/(BP)performance curves			
COOLING DISCHARGE PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16℃	19℃	22℃
15℃	2053	2255	2336
25℃	2078	2210	2321
30℃	2451	2623	2694
35℃	2764	2890	2971
40℃	3075	3156	3247
45℃	3429	3600	3641



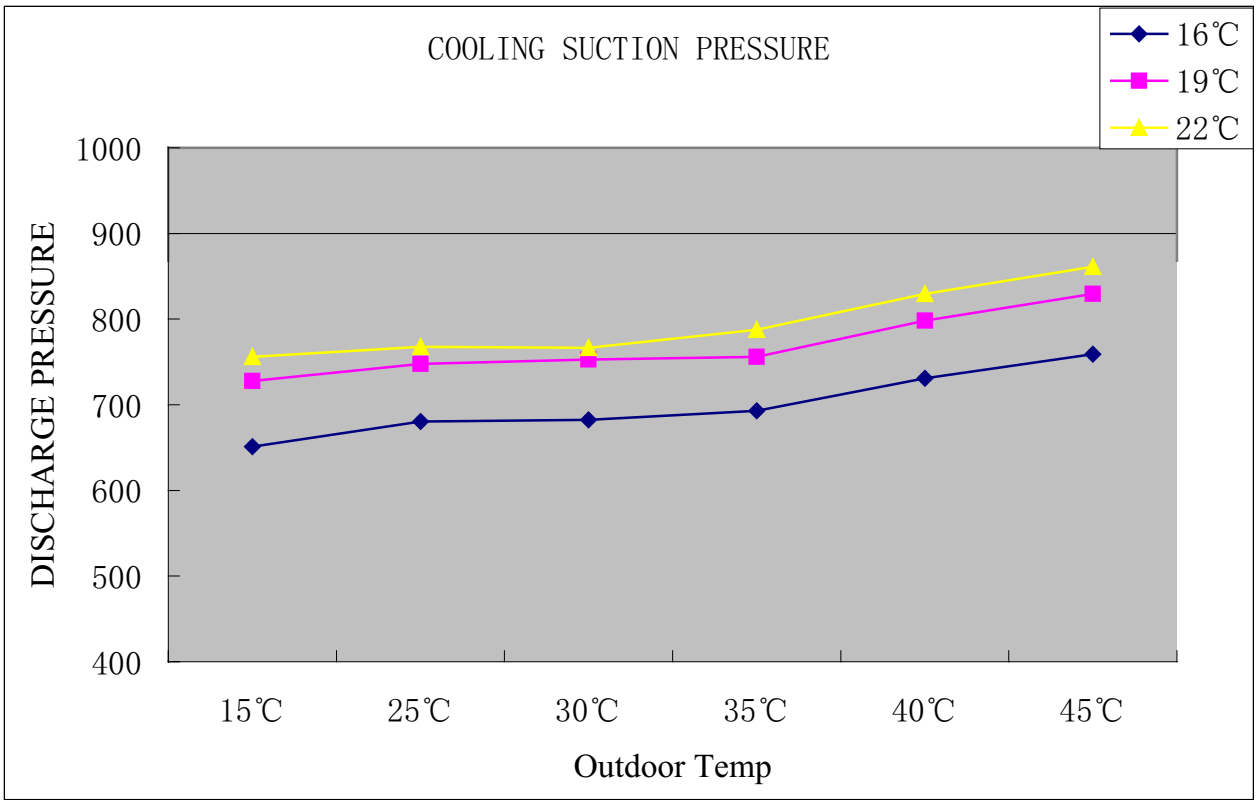
HSU-12HEA03/(BP) performance curves			
COOLING DISCHARGE PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16℃	19℃	22℃
15℃	2020	2220	2300
25℃	2040	2170	2230
30℃	2410	2580	2650
35℃	2715	2840	2920
40℃	3020	3100	3190
45℃	3370	3540	3580



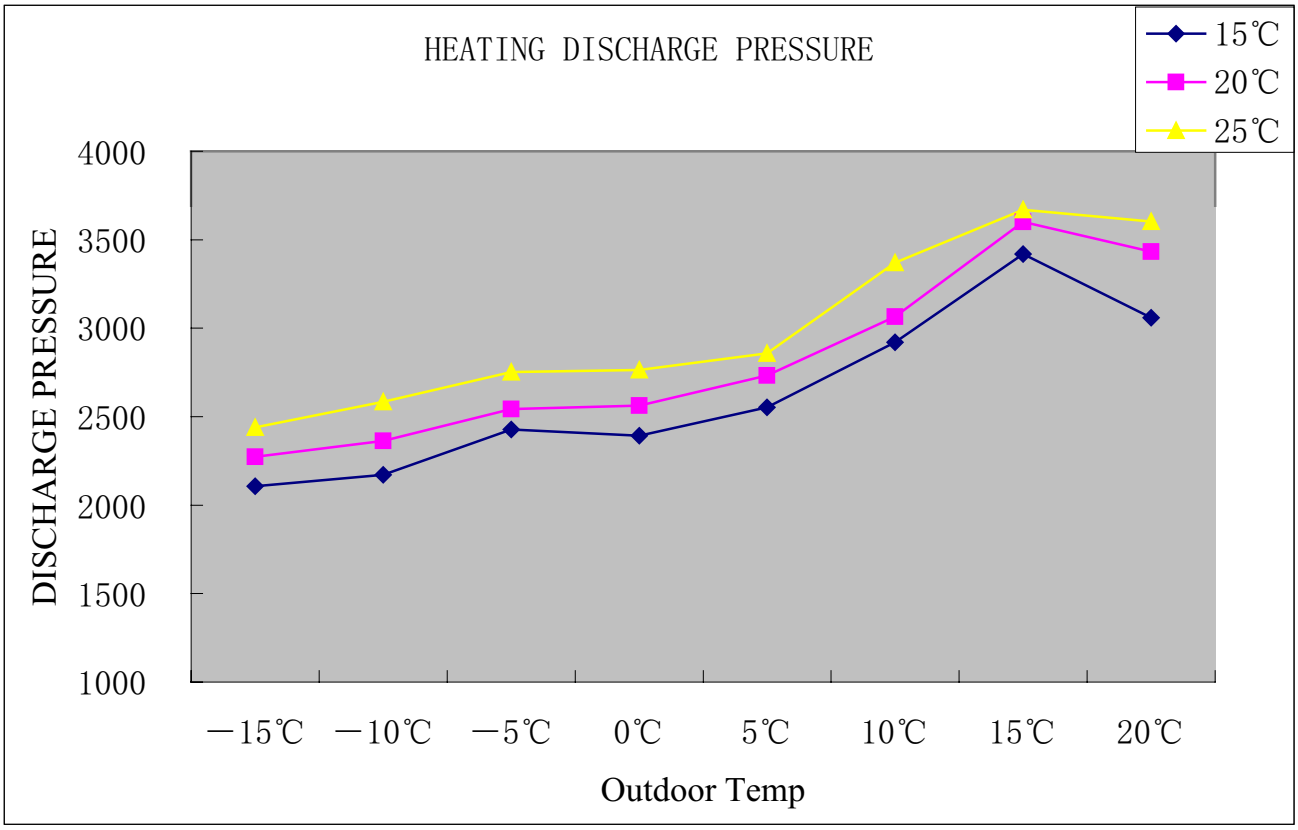
HSU-09HEA03/(BP) performance curves			
COOLING SUCTION PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16℃	19℃	22℃
15℃	664	752	764
25℃	693	772	776
30℃	696	777	775
35℃	706	780	796
40℃	744	822	838
45℃	772	854	869



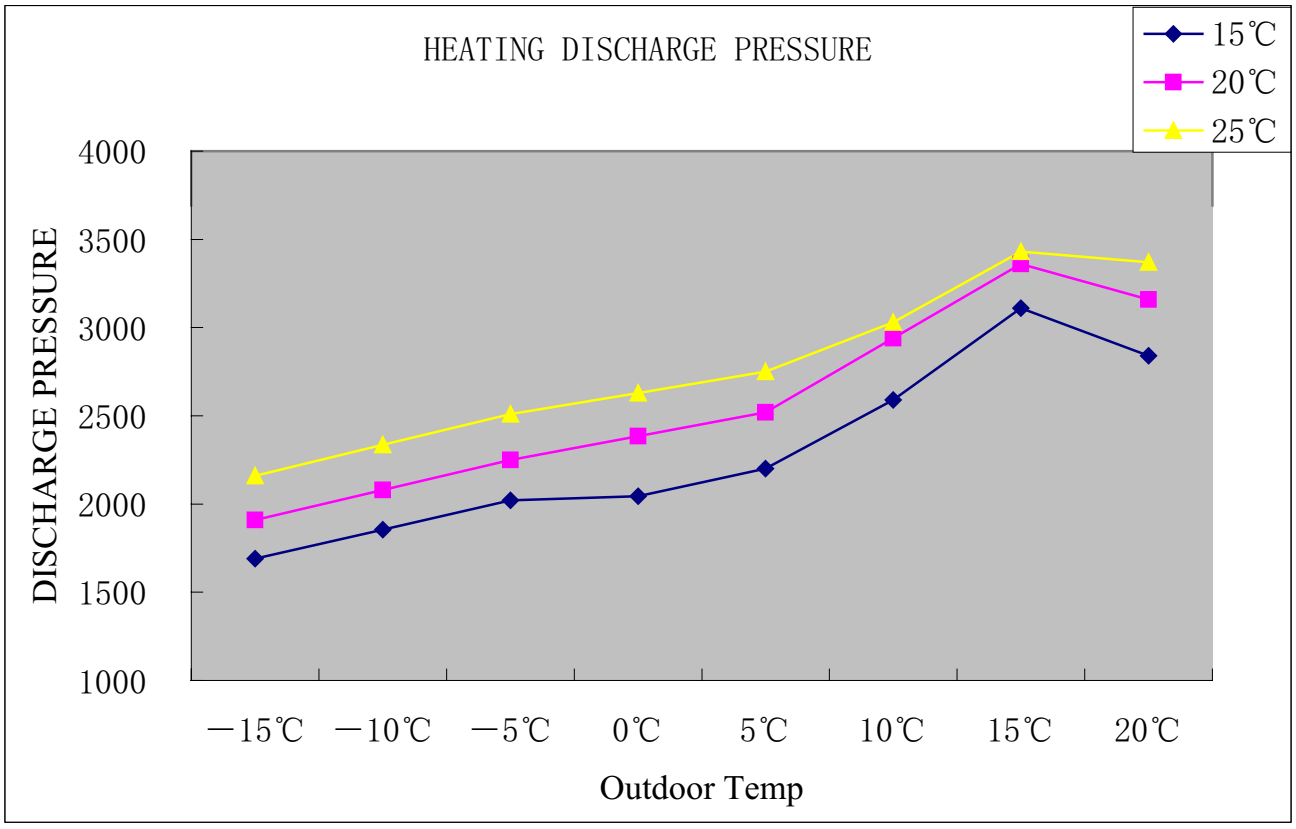
HSU-12HEA03/(BP) performance curves			
COOLING SUCTION PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16℃	19℃	22℃
15℃	620	693	720
25℃	648	712	731
30℃	650	717	730
35℃	660	720	750
40℃	696	760	790
45℃	723	790	820



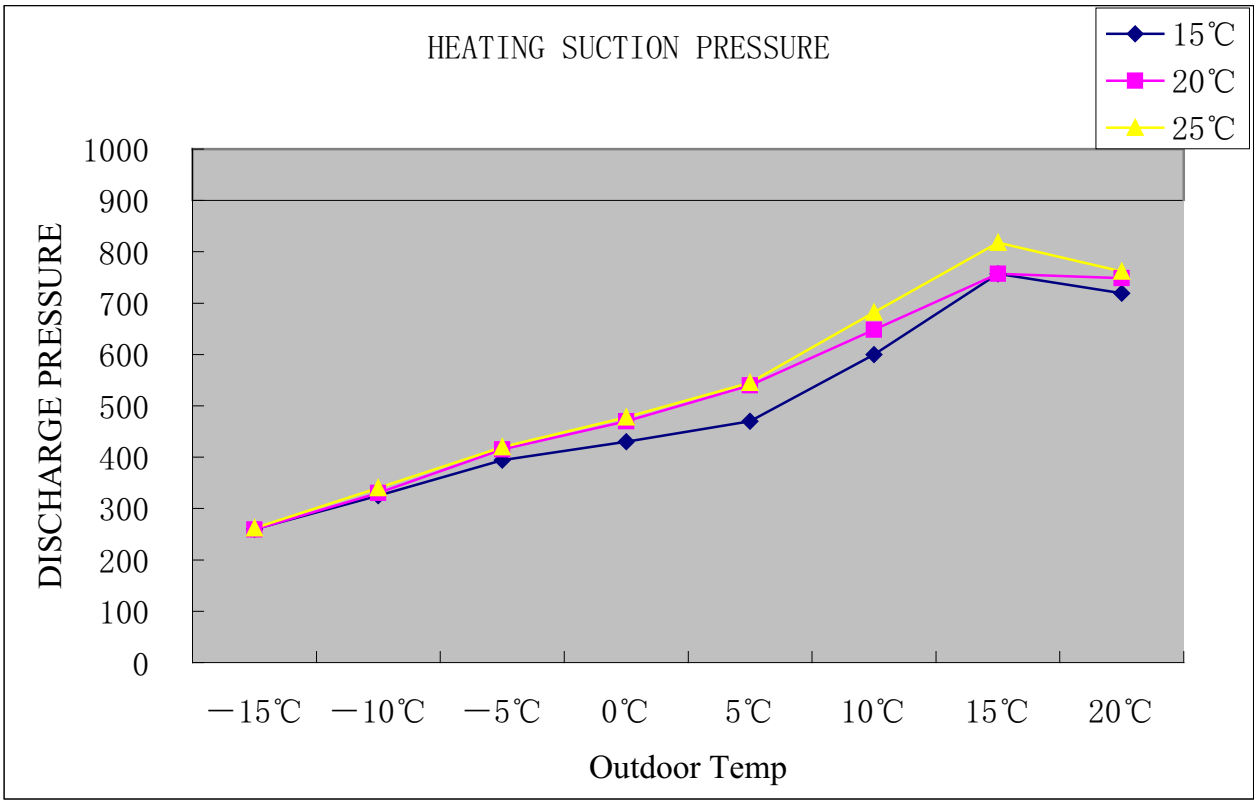
HSU-09HEA03/(BP)performance curves			
HEATING DISCHARGE PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15℃	20℃	25℃
−15℃	2106	2274	2439
−10℃	2172	2363	2585
−5℃	2427	2543	2752
0℃	2393	2563	2764
5℃	2552	2733	2858
10℃	2920	3065	3370
15℃	3419	3602	3670
20℃	3060	3433	3603



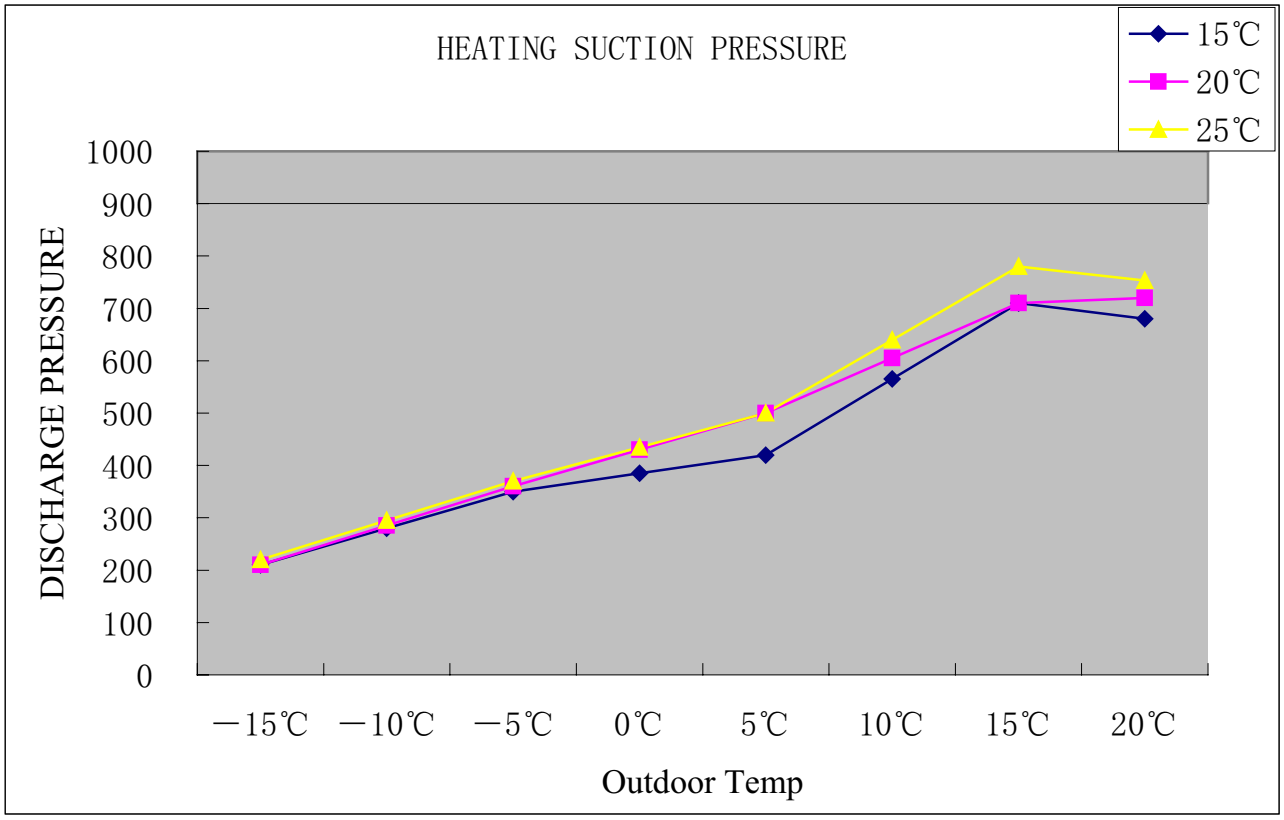
HSU-12HEA03/(BP)performance curves			
HEATING DISCHARGE PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15℃	20℃	25℃
－15℃	1690	1910	2160
－10℃	1855	2080	2335
－5℃	2020	2250	2510
0℃	2045	2385	2630
5℃	2200	2520	2750
10℃	2590	2940	3030
15℃	3110	3360	3430
20℃	2840	3160	3370

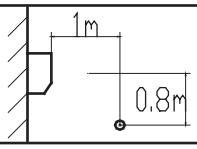


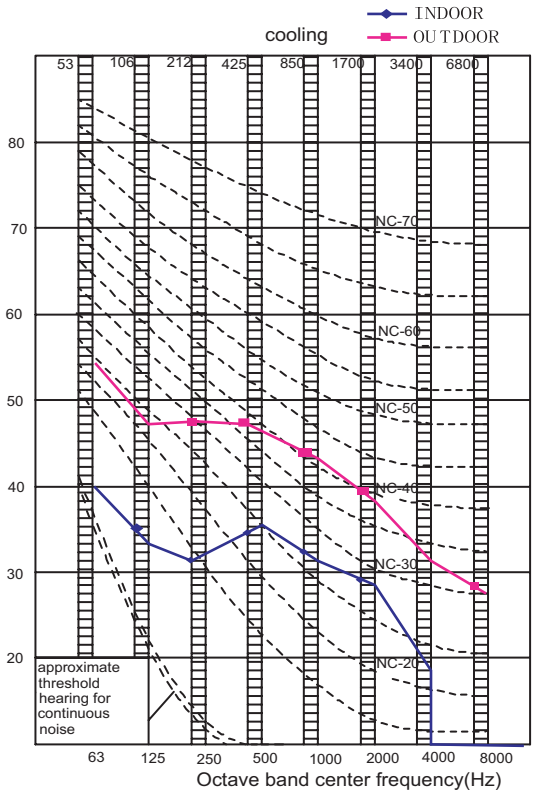
HSU-09HEA03/(BP)performance curves			
HEATING SUCTION PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15℃	20℃	25℃
－15℃	260	259	262
－10℃	325	330	340
－5℃	394	415	420
0℃	430	470	478
5℃	470	540	545
10℃	600	648	682
15℃	757	757	818
20℃	719	749	762

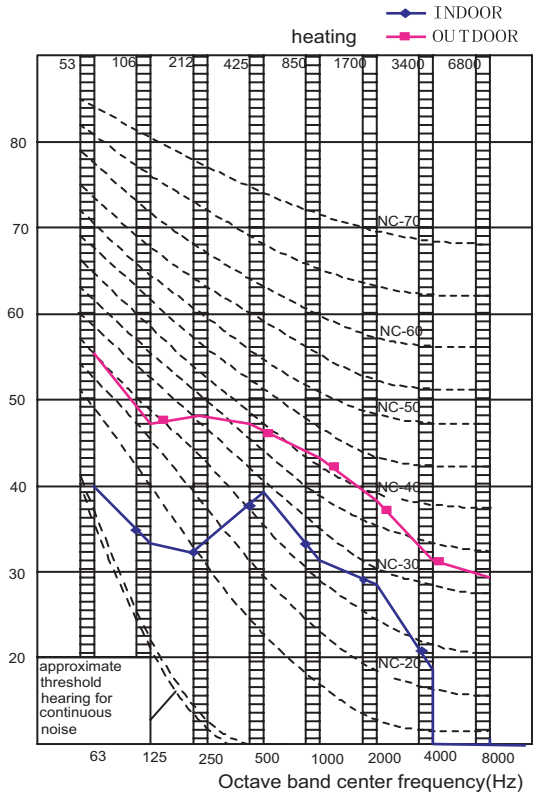


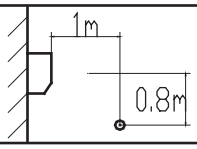
HSU-12HEA03/(BP)performance curves			
HEATING SUCTION PRESSURE.talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15℃	20℃	25℃
－15℃	210	210	220
－10℃	280	285	295
－5℃	350	360	370
0℃	385	430	435
5℃	420	500	500
10℃	565	605	640
15℃	710	710	780
20℃	680	720	753



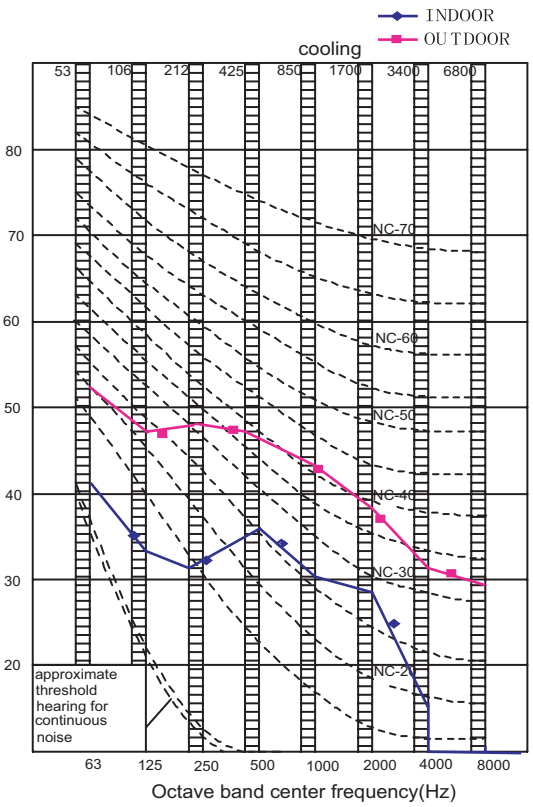
Model	Sound presure level			Measuring location Location of microphone	sound power level (cooling/heating)
	230V,50Hz Cooling/heating				
	H	L	SL		
HSU-09HEA03/(BP)	44/40.1	40.6/36.9	36.8/33.8		53.8/54.8

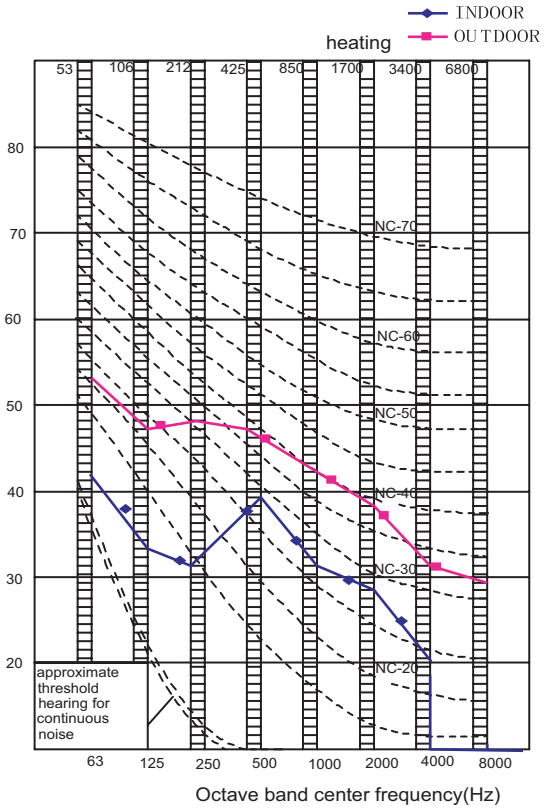




Model	Sound presure level			Measuring location Location of microphone	sound power level (cooling/heating)
	230V,50Hz				
	Cooling/heating				
	H	L	SL		
HSU-12HEA03/(BP)	34.3/40.9	41.4/37.2	37.5/34.3		52.4/54.6

heating





11 Accessories

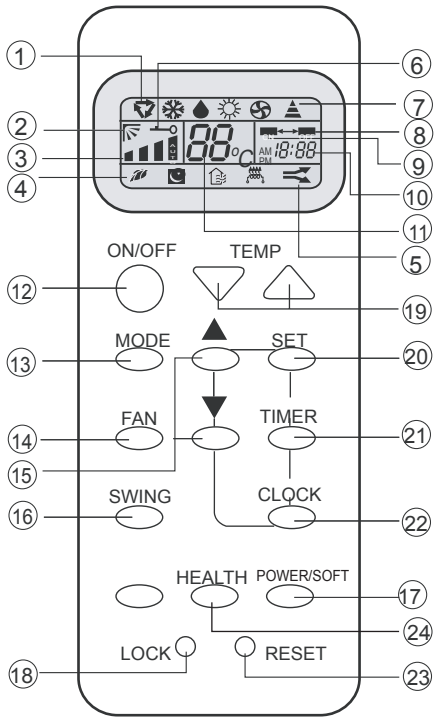
Standard accessories

Standard name	HSU-09HEA03/(BP) HSU-12HEA03/(BP)
Drain hose	1
Plastic bag	1
Screw assembly	1
Air purifier	2
BBattery	2
Mounting plate	1
Remote controller	1
Installation manual	1
Operation manual	1

12 Control system

Parts and Functions

Remote controller



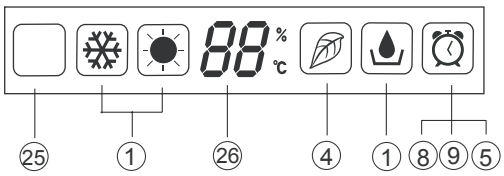
1. Operation mode display

Operation mode	COOL	DRY	HEAT
Remote controller	❄	💧	☀
Display board	❄	💧	☀

2. SWING display
3. FAN SPEED display

4. HEALTH display
5. POWER/SOFT display
6. LOCK display

Display board



7. SIGNAL SENDING display
8. TIMER OFF display
9. TIMER ON display
10. CLOCK display
11. TEMP display
12. POWER ON/OFF
    Used for unit start and stop.
13. MODE
    Used to select COOL,DRY,HEAT operation
14. FAN
    Used to select fan speed AUTO, HI, MED, LO
15. HOUR
    Used to set clock and timer setting.
16. SWING
    Used to set auto fan direction.
17. POWER/SOFT button
18. LOCK
    Used to lock buttons and LCD display.
19. TEMP.
    Used to select your desired temp.
20. SET
    Used to confirm timer and clock settings.
21. TIMER
    Used to select TIMER ON, TIMER OFF,
22. CLOCK
    Used to set correct time
23. RESET
    Used to reset the controller back to normal condition.
24. HEALTH
    Used to operate the healthy function
25. Singal receiver hole
26. Ambient temp.display
    When receiving the remote control signal, display the set temperature and in the rest time the room temperature is displayed and this room temperature is only for reference.

Clock set

When unit is started for the first time and after replacing batteries in remote controller, clock should be adjusted as follows:
Press CLOCK button, "AM" or "PM" flashes.
Press △ or ▽ to set correct time. Each press will increase or decrease 1min. If the button is kept depressed, time will change quickly.
After time setting is confirmed, press SET, "AM "and "PM" stop flashing, while clock starts working.

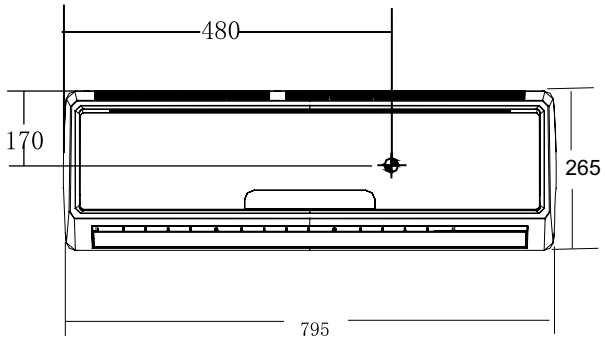
NOTE: Cooling only unit do not have displays and functions related with heating

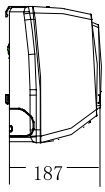
Hints

After replacing with new batteries, remote controller will conduct self-check, displaying all information on LCD. Then, it will become normal.

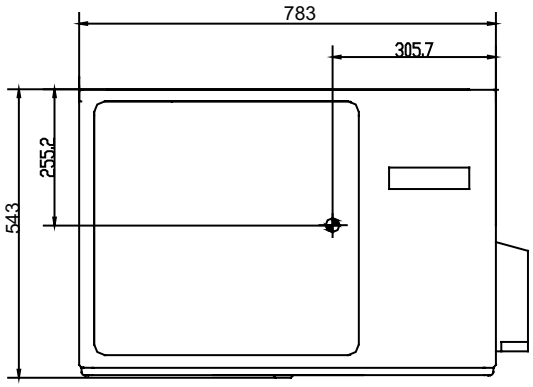
13 Center of gravity

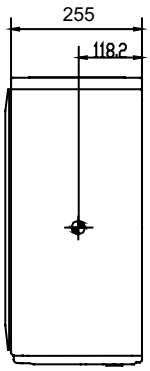
Indoor unit





Outdoor unit

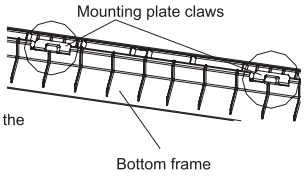


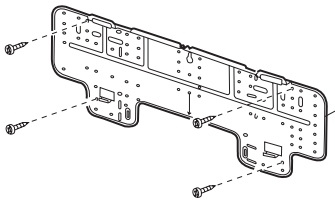


14 Installation

Indoor unit installation drawings

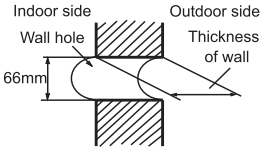
■ How to attach the indoor unit.
Hook the claws of the bottom frame to the mounting plate.
If the claws are difficult to hook ,remove the front panel.
■ How to remove the indoor unit.
Push up the marked area (at the lower part of the front panel) to release the the claws . If it is difficult to release ,remove the front panel .

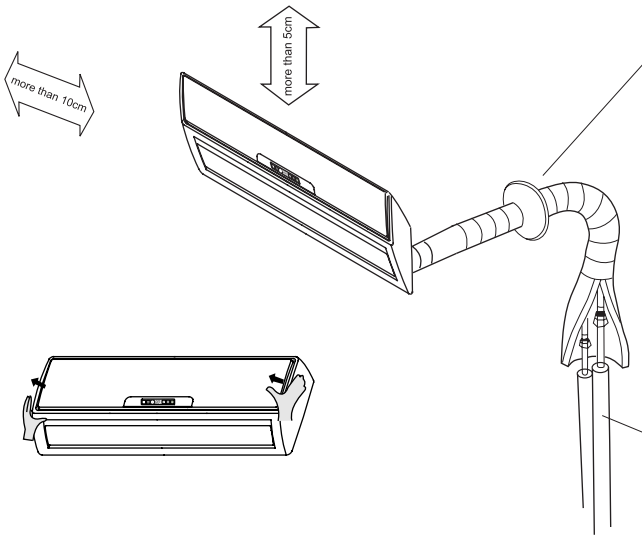




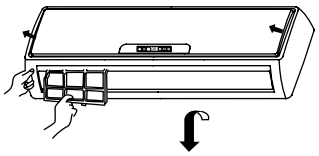
The mounting plate should be installed on a wall which can support the weight of the indoor unit.

(Section of wall hole)





Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line .



How to remove the air filter.

Open the inlet grille by pulling it upward.

Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

How to Attach the air filter.

Attach the filter correctly so that the "FRONT" indication is facing to the front.Make sure that the filter is completely fixed behind the stopper.If the right and left filters are not attached correctly, that may cause defects.

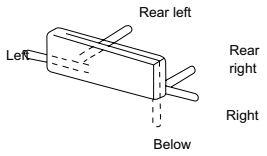
Close the inlet grille.

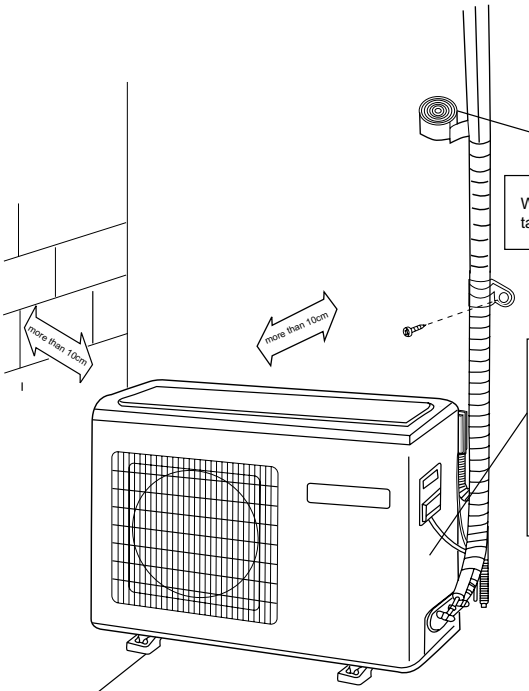
Outdoor

Model	35 class
Max.allowable length	Cooling only：20m Heat pump：25m
Max.allowable height	15m
Additional refrigerant required for refrigerant pipe exceeding 5m in length	16g/m
Gas pipe	O.D. 9.52
Liquid pipe	O.D. 6.35

*Be sure to add the proper amount of additional refrigerant.
Failuretodosomayresultinreducedperformance.

Arrangement of piping directions

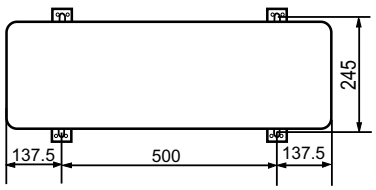




Wrap the installation pipe with the finishing tape from bottom to top Model 25 / 35 class

Service lid
- How to remove the service lid.
  This service lid is an open/close type.
  Slide the lid downward to remove it.
- How to attach the service lid.
  Insert the upper part of the service lid into the outdoor unit to install.
  Tighten the screws.

Where there is a danger of the unit falling, use foot bolts, or wires.



- Fix the unit to concrete or block with bolts(ϕ10mm) and nuts firmly and horizontally.
- When fitting the unit to wall surface, roof or rooftop, fix a supporter surely with nails or wires in consideration of earthquake and strong wind. The distance between the indoor unit and the floor should be more than 2m
- If vibration may affect the house, fix the unit by attaching a vibration-proof mat.

Sincere Forever

Haier Group

Haier Industrial Park, No.1, Haier Road
266101, Qingdao, China
E-mail: hractech@haier.com
Tel: +86 532 87636957
Http://www.haier.com

Edited by: Yan WenMing
Zhang Haichun
Signed by: Yang Bifei
Approved by: Wu Hongjin