



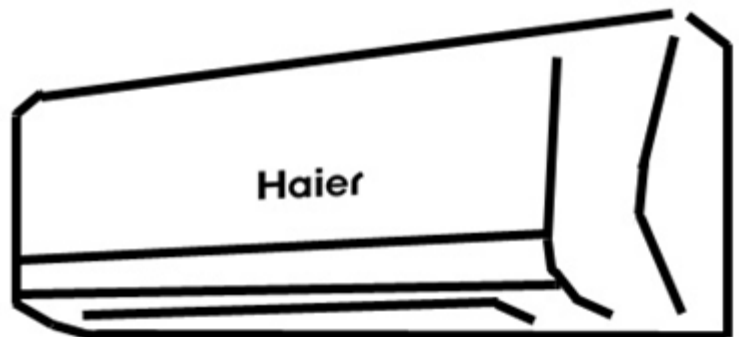
## Domestic Air conditioner

# ***TECHNICAL DATA***

## **ON/OFF**

### Wall mounted Type Arc-Series

HSU-18LEA03  
HSU-18HEA03  
HSU-22LEA03  
HSU-22HEA03



## **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.

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# 1 Features



Healthy negative ion: make your room full of an abundance natural negative ions



ESF filter : Trap harmful dust and remove unpleasant odors effectively



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



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



Sleep mode: The setting temprature and the indoor noise can be adjusted to a more comfortable level when you set the "sleep mode"during night sleep



24 Hour timer: Use the timer function to set on,or off,or from on to off,or from off to on



Auto restart: The function permits automatic return to previous peration conditions



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



Auto mode According to the fixed temperature "26°C " ,the unit will adjust the operation mode automatically.



HSU-18 22L/HEA03



18K



22K

## 2 Specifications

This information was not available at the time of publication .

NOMINAL CAPACITY and NOMINAL INPUT					
For indoor units only:					
INDOOR UNITS			HSU-18LEA03		HSU-18HEA03
NOMINAL INPUT	Cooling	nominal	KW	1.75	1.9
	Heating	nominal	KW	—	1.9

NOMINAL CAPACITY and NOMINAL INPUT					
Model			HSU-18LEA03		HSU-18HEA03
NORMINAL CAPACITY(3-4)	Cooling(1)	norm.	kw	4.8	4.8
	Heating(2)	norm.	kw	—	5.2
NORMINAL INPUT	Cooling	norm.	kw	1.75	1.9
	Heating	norm.	kw	—	1.9
EER	Cooling			2.74	2.53
COP	Heating			—	2.74
ANNUAL ENERGY CONSUMPTION(9)	Cooling		kwh	875	950

TECHNICAL SPECIFICATIONS						
INDOOR UNITS			HSU-18LEA03		HSU-18HEA03	
DIMENSIONS	Unit	H	mm	182	182	
		W	mm	938	938	
		D	mm	265	265	
WEIGHT	Unit	kg		10.5	10.5	
COLOR	Unit			White	White	
SOUND LEVEL	Sound pressure (cooling/heating)(5)	high	dB(A)	45.8	45.8/46.0	
		medium	dB(A)	42.1	42.1/42.5	
		low	dB(A)	38.0	38.0/38.6	
	Sound power(cooling/heating)(6)	high	dB(A)	56.0	56.0/56.2	
FAN	Air flow rate(cooling/heating)	high	m <sup>3</sup> /min	12.5	12.5	
		low	m <sup>3</sup> /min	11.6	11.6	
		super low	m <sup>3</sup> /min	10.6	10.6	
	Speed(cooling/heating)	steps		5 steps,silent and auto		
		high	rpm	1350	1350	
		medium	rpm	1250	1250	
	Type	Cross flow fan				
Motor output	W		26	30		
HEAT EXCHANGER	Type	ML fin - Φ 7HI - XA tube				
	Row x stage x fin pitch	mm		2 x 12 x1.4	2 x 24 x1.4	
AIR FILTER	Removable/washable/mildew proof					
REMOTE CONTROLLER	YL-M10		YR-M10			
TEMPERATURE CONTROL	Microcomputer control					
PIPING CONNECTIONS(external diameter)	liquid	mm		6.35	6.35	
	gas	mm		12.7	12.7	
	drain	mm		16	16	
INSULATION MATERIAL	Heat insulation type			both liquid and gas pipes		

NOMINAL CAPACITY and NOMINAL INPUT					
For indoor units only:					
INDOOR UNITS			HSU-22LEA03		HSU-22HEA03
NOMINAL INPUT	Cooling	nominal	KW	2.25	2.3
	Heating	nominal	KW	—	2.45

NOMINAL CAPACITY and NOMINAL INPUT					
Model			HSU-22LEA03		HSU-22HEA03
NOMINAL CAPACITY(3-4)	Cooling(1)	norm.	kw	6.0	6.0
	Heating(2)	norm.	kw	—	6.7
NOMINAL INPUT	Cooling	norm.	kw	2.25	2.3
	Heating	norm.	kw	—	2.45
EER	Cooling			2.67	2.61
COP	Heating			—	2.73
ANNUAL ENERGY CONSUMPTION(9)	Cooling		kwh	1125	1150/1225

TECHNICAL SPECIFICATIONS						
INDOOR UNITS			HSU-22LEA03		HSU-22HEA03	
DIMENSIONS	Unit	H	mm	182	182	
		W	mm	938	938	
		D	mm	265	265	
WEIGHT	Unit		kg	10.5	10.5	
COLOR	Unit			WHITE	WHITE	
SOUND LEVEL	Sound pressure (cooling/heating)(5)	high	dB(A)	50.5	50.2/50.7	
		medium	dB(A)	46.1	46.2/46.4	
		low	dB(A)	40.6	40.3/42.2	
	Sound power (cooling/heating)(6)	high	dB(A)	60.3	60.0/60.2	
FAN	Air flow rate (cooling/heating)	high	m <sup>3</sup> /min	12.5	12.5	
		low	m <sup>3</sup> /min	11.6	11.6	
		super low	m <sup>3</sup> /min	10.6	10.6	
	Speed (cooling/heating)	steps		5 steps, silent and auto		
		high	rpm	1480	1480	
		medium	rpm	1340	1300	
		low	rpm	1200	1100	
Type	Cross flow fan					
Motor output	W		40	40		
HEAT EXCHANGER	Type	ML fin - Φ 7HI - XA tube				
	Row x stage x fin pitch	mm	2 x 12 x 1.4	2 x 30 x 1.4		
AIR FILTER	Removable/washable/mildew proof					
REMOTE CONTROLLER	YL-M10		YR-M10			
TEMPERATURE CONTROL	Microcomputer control					
PIPING CONNECTIONS (external diameter)	liquid	mm	9.52	9.52		
	gas	mm	15.88	15.88		
	drain	mm	16	16		
INSULATION MATERIAL	Heat insulation type		both liquid and gas pipes			

TECHNICAL SPECIFICATIONS					
OUTDOOR UNITS				HSU-18LEA03	HSU-18HEA03
NET DIMENSIONS (stop valve, and bottom support is not included)	Unit	H	mm	540	540
		W	mm	780	780
		D	mm	245	245
WEIGHT	Unit		kg	37	37.5
COLOR	Unit			white	white
SOUND LEVEL	Sound pressure(cooling/heating)(5)	high	dB(A)	56	56.5/58
	Sound power(cooling/heating)(6)	high	dB(A)	66	66.5/68
FAN	Air flow rate(cooling/heating)	high	m <sup>3</sup> /min	7.8	8.0/8.0
	Speed(cooling/heating)	high	rpm	840	860/860
	Type	Propeller fan			
	Motor output	W		30	30
REFRIGERANT CIRCUIT	Refrigerant type			R22	R22
	Refrigerant charge	kg		1.1	1.46
	Maximum allowable distance between indoor and outdoor	m		15	15
	Maximum allowable level difference	m		20	20
	Refrigerant control	capillary			
COMPRESSOR	Type	Rotary Compressor			
	Model			PH310X2CS-4KU3	48R473N
	Motor output	w		1690	1900
	Oil type			SUNISO 4GSI	SUNISO 4GSI
	Oil charge volume	L		0.75	0.51
PIPING CONNECTIONS	liquid	mm		6.35	6.35
	gas	mm		12.7	12.7
	drain	mm		16	16
INSULATION MATERIAL	Heat insulation type			both liquid and gas pipes	

ELECTRICAL SPECIFICATIONS					
For combination indoor units+ outdoor units:				HSU-18LEA03	HSU-18HEA03
CURRENT	Nominal running current	cooling	A	7.8	8.7
		heating	A	—	8.7
	Maximum running current	cooling	A	11.5	12.8
		heating	A	—	11
	Starting current	cooling	A	34	38
		heating	A	—	38

TECHNICAL SPECIFICATIONS					
OUTDOOR UNITS				HSU-22LEA03	HSU-22HEA03
NET DIMENSIONS (stop valve, and bottom support is not included)	Unit	H	mm	680	680
		W	mm	810	810
		D	mm	288	288
WEIGHT	Unit		kg	52	57
COLOR	Unit			white	white
SOUND LEVEL	Sound pressure(cooling/heating)(5)	high	dB(A)	56	56.5/56
	Sound power(cooling/heating)(6)	high	dB(A)	66	66.5/66
FAN	Air flow rate(cooling/heating)	high	m <sup>3</sup> /min	7.8	7.8/7.8
	Speed(cooling/heating)	high	rpm	840	860/860
	Type	Propeller fan			
	Motor output	W		37	37
REFRIGERANT CIRCUIT	Refrigerant type			R22	R22
	Refrigerant charge	kg		1.48	2.02
	Maximum allowable distance between indoor and outdoor	m		15	15
	Maximum allowable level difference	m		20	20
	Refrigerant control	capillary			
COMPRESSOR	Type	Rotary Compressor			
	Model			PH400X3CS-8KUC1	PH420X3CS-8KUC1
	Motor output	w		2245	2370
	Oil type			SUNISO 4GSI	SUNISO 4GSI
	Oil charge volume	L		0.95	0.95
PIPING CONNECTIONS	liquid	mm		9.52	9.52
	gas	mm		15.88	15.88
	drain	mm		16	16
INSULATION MATERIAL	Heat insulation type			both liquid and gas pipes	

ELECTRICAL SPECIFICATIONS					
For combination indoor units+ outdoor units:				HSU-22LEA03	HSU-22HEA03
CURRENT	Nominal running current	cooling	A	11.0	11.0
		heating	A		11.8
	Maximum running current	cooling	A	14.8	14.0
		heating	A		13.8
	Starting current	cooling	A	48	48
		heating	A		48

For indoor units only:			HSU-18/22LEA03	HSU-18/22HEA03
POWER SUPPLY			VM	VM
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase		1PH	1PH
	Frequency	Hz	50	50
	Voltage	V	220~240	220~230

## NOTES

- Nominal cooling capacities are based on: indoor temperature 27°CDB/19°CWB \* outdoor temperature 35°CDB \* refrigerant piping length: 5m \* level difference: 0m.
- Nominal heating capacities are based on: indoor temperature 20°CDB \* outdoor temperature 7°CDB/6°CWB \* refrigerant piping length 5m (horizontal) \* level difference 0m.
- Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- Units should be selected on nominal capacity. Maximum capacity is limited to peak periods.
- 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.
- The sound power level is an absolute value indicating the "power" which a sound source generates.
- Energy label: scale from A (most efficient) to G (less efficient).
- The energy label Directive 2002/31/EC will enter into force once the relevant measurement standard will be published in the European official Standard.
- Annual energy consumption: based on average use of 500 running hours per year at full load (= nominal conditions)



### 3 Remote controller lists

Model	HSU-18L/HEA03	HSU-22L/HEA03
YL-M10	Y	Y

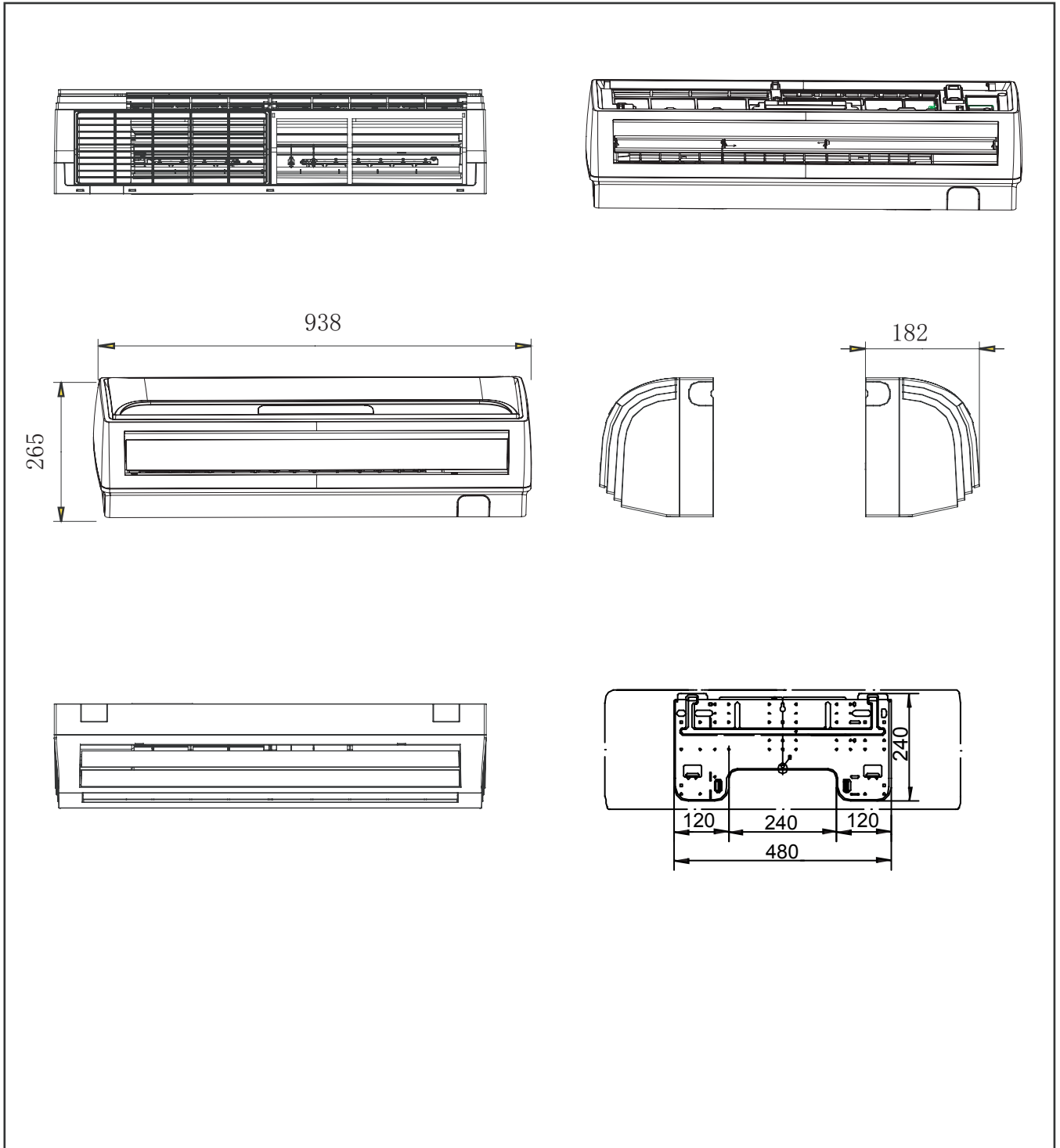
### 4 Sensors lists

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

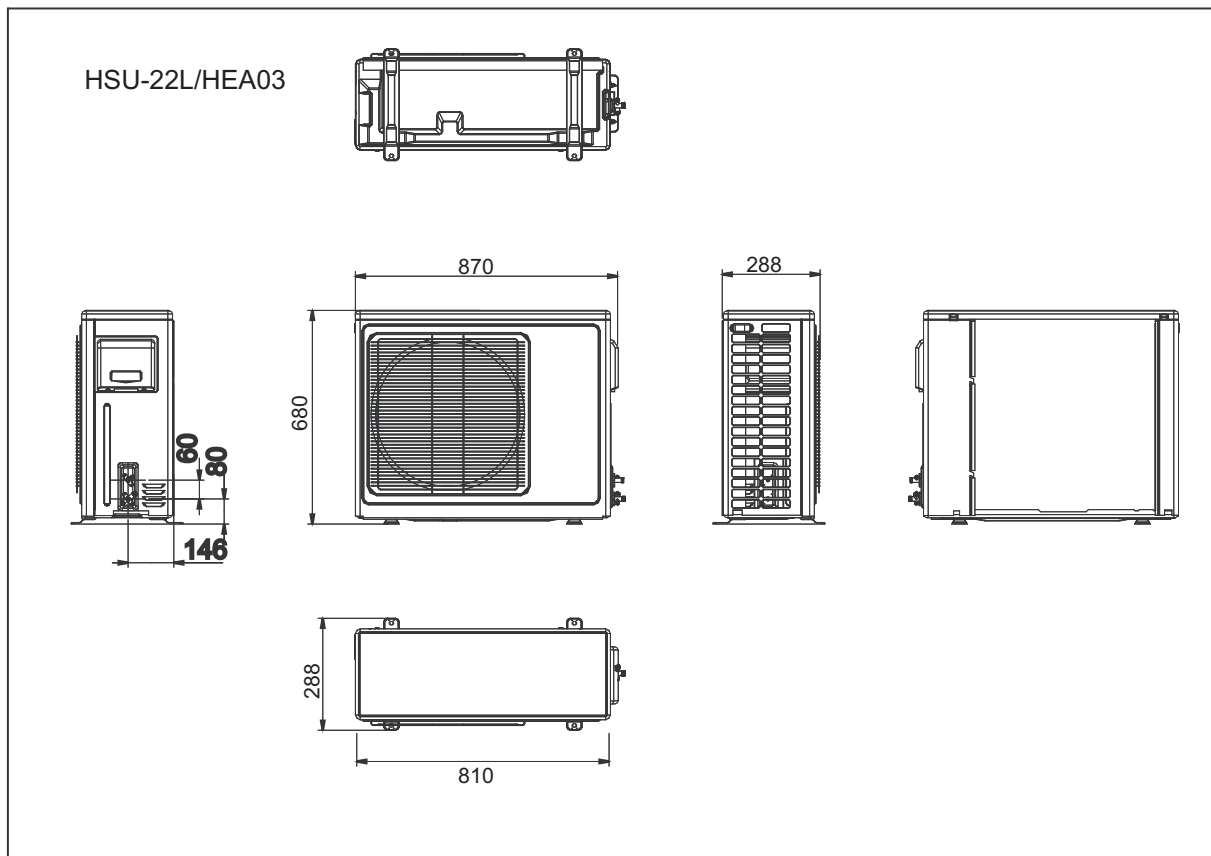
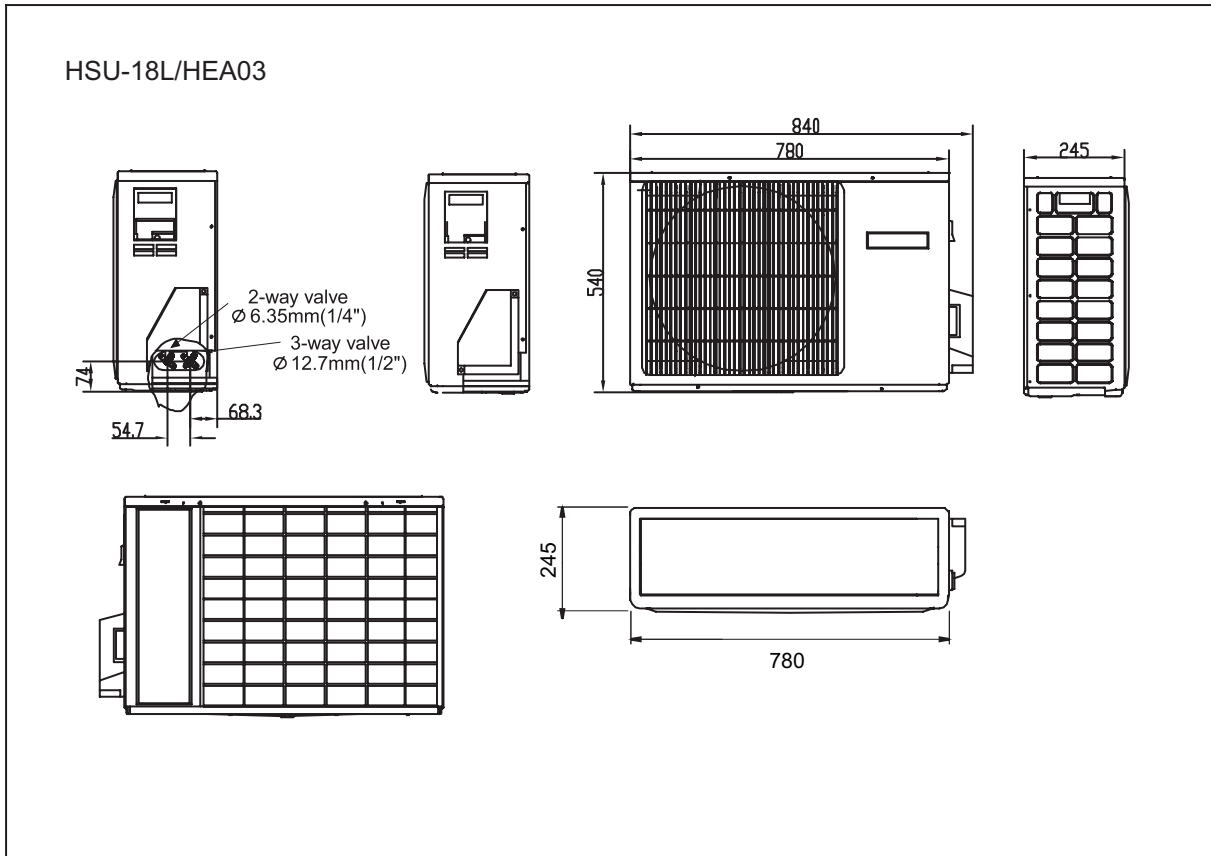
OUTDOOR UNIT		
type	Description	Qty
Ambient sensor	It's used for detecting temperature outdoor side	1
Suction sensor	It's used for detecting suction pipe temperature of compressor to adjust gas flowing	1
Defrosting sensor	It's used for controlling outdoor defrosting at heating mode	1
Discharging sensor	It's used for protecting compressor in case of over-heat	1

# 5 Dimensional drawings

## Indoor unit

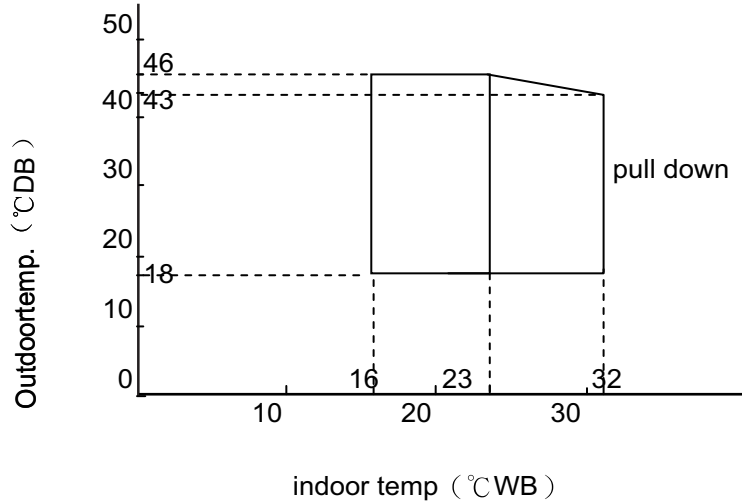


# Outdoor unit

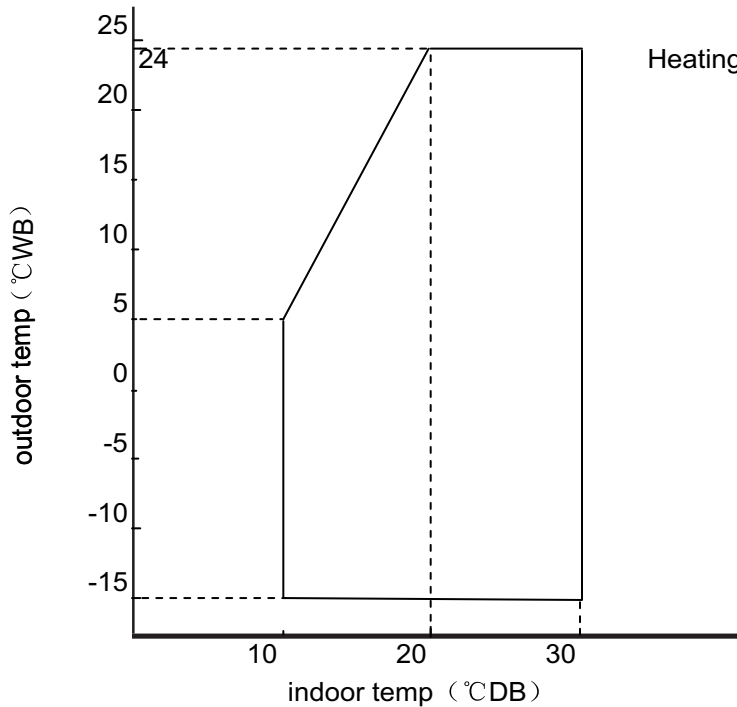


# 6 Operation range

Cooling



Heating

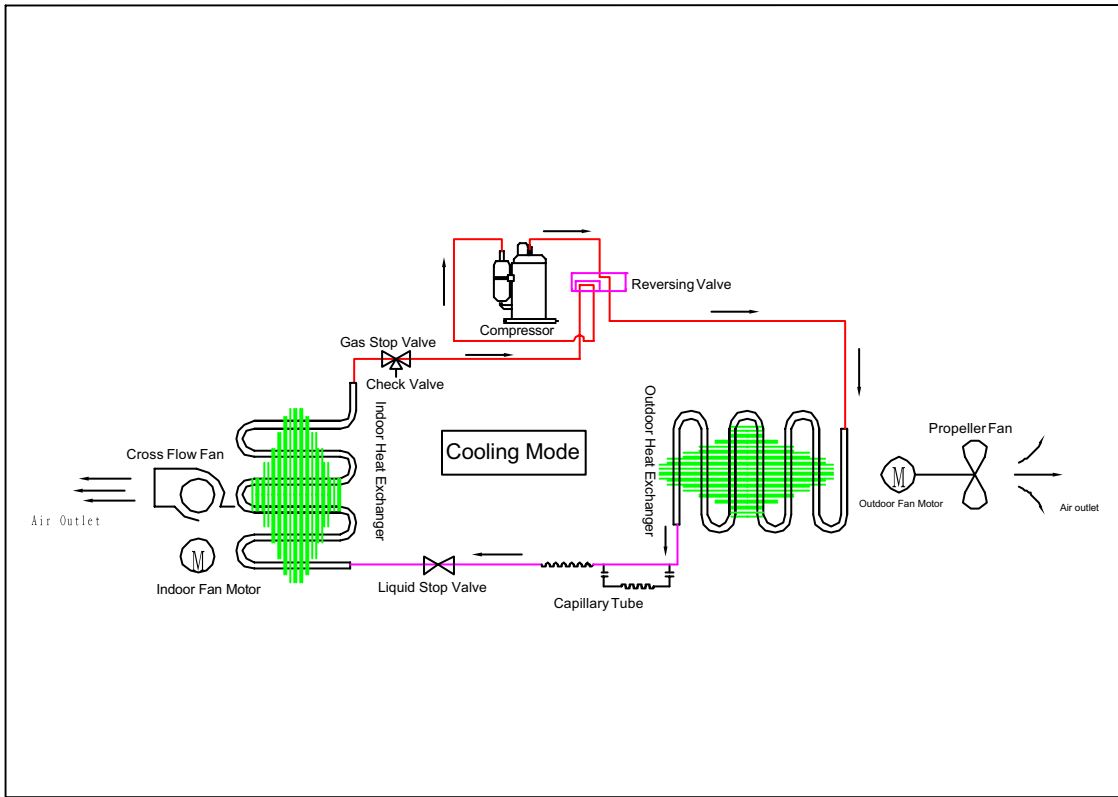


Notes:

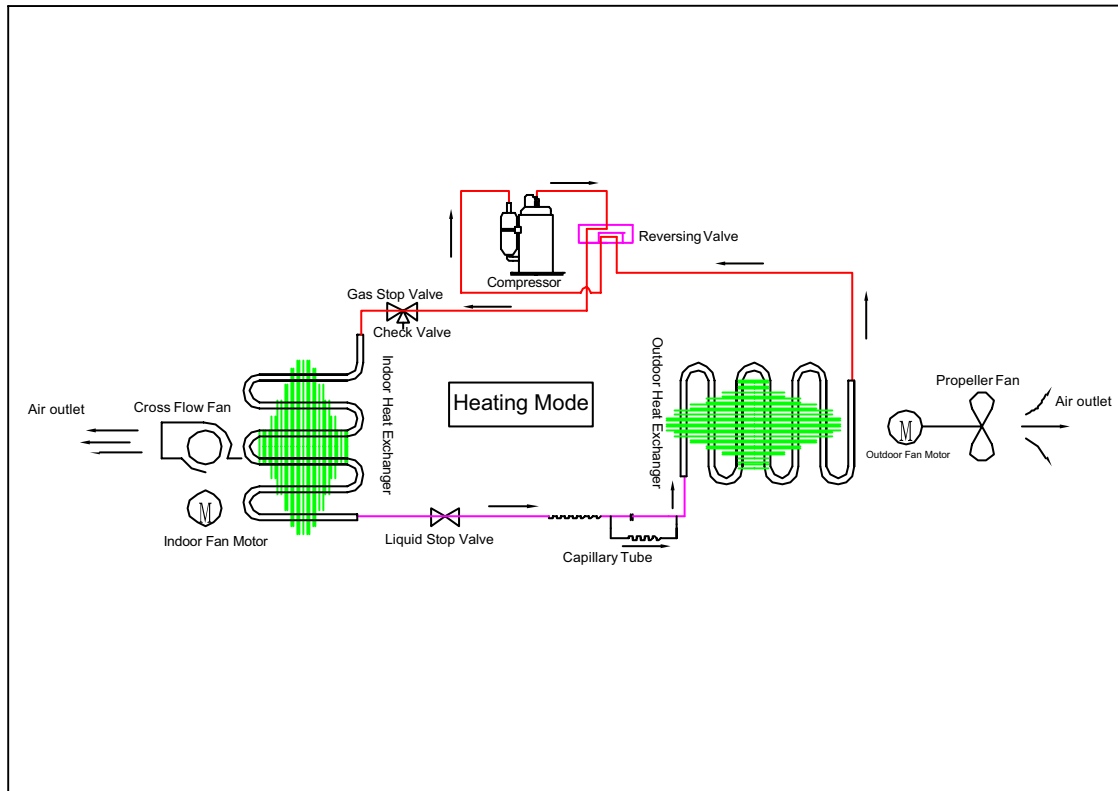
- The graphs are based on the following condition:
- Equivalent piping length            7.5m
- Level difference                        0m
- Air flow rate                            high

# 7 Piping diagrams

## Cooling mode



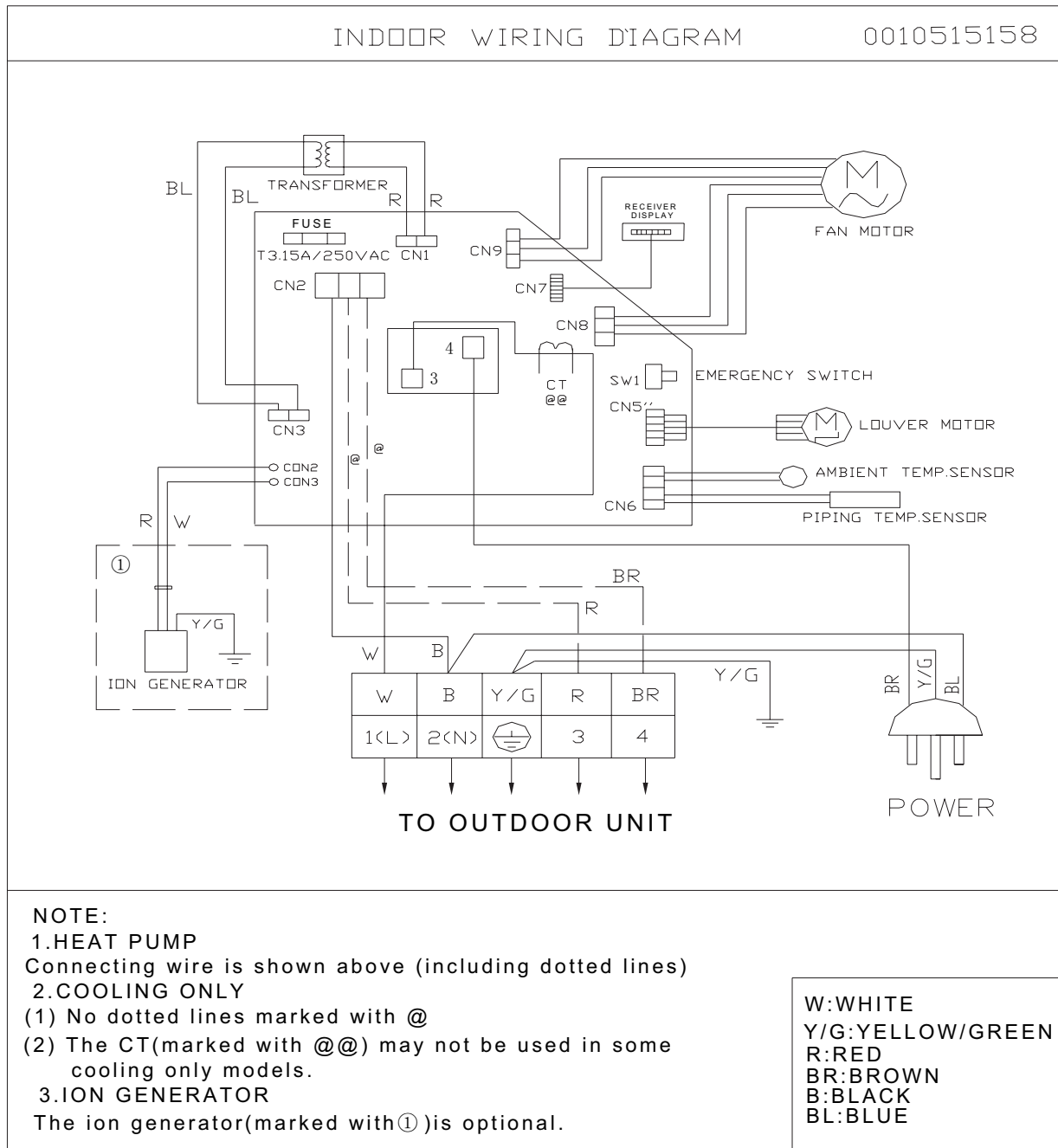
## Heating mode



## 8 Wiring diagrams

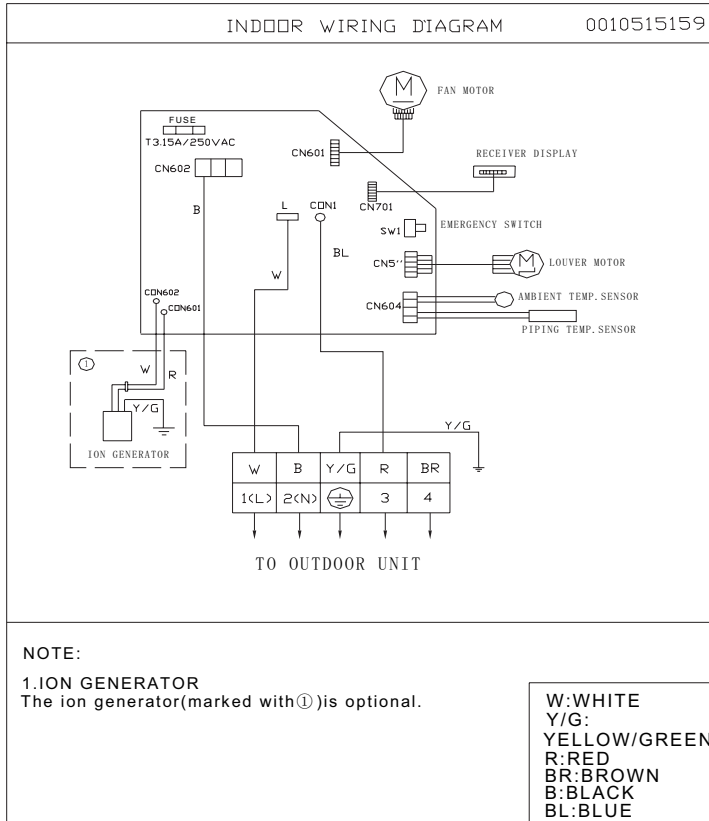
### Indoor

#### HSU-18L/HEA03

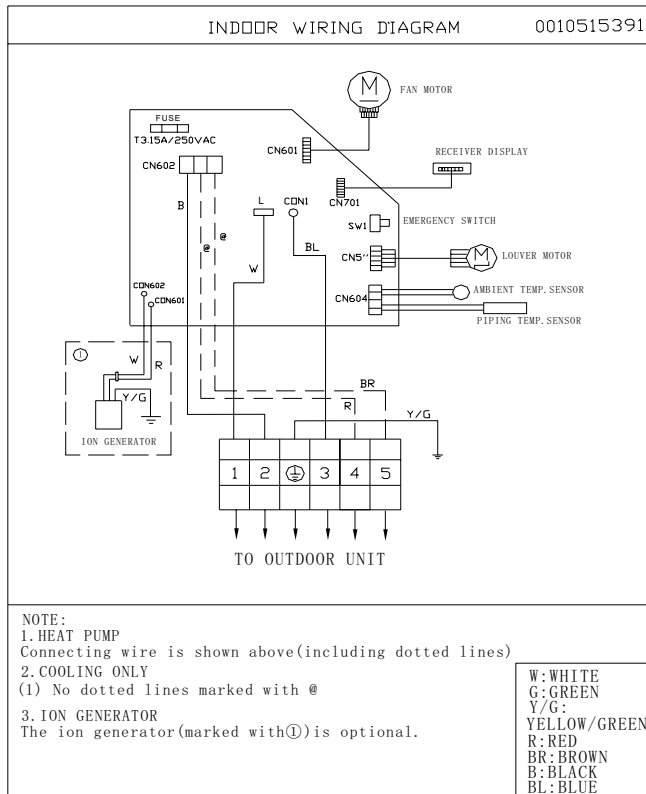


# Indoor

## HSU-22LEA03

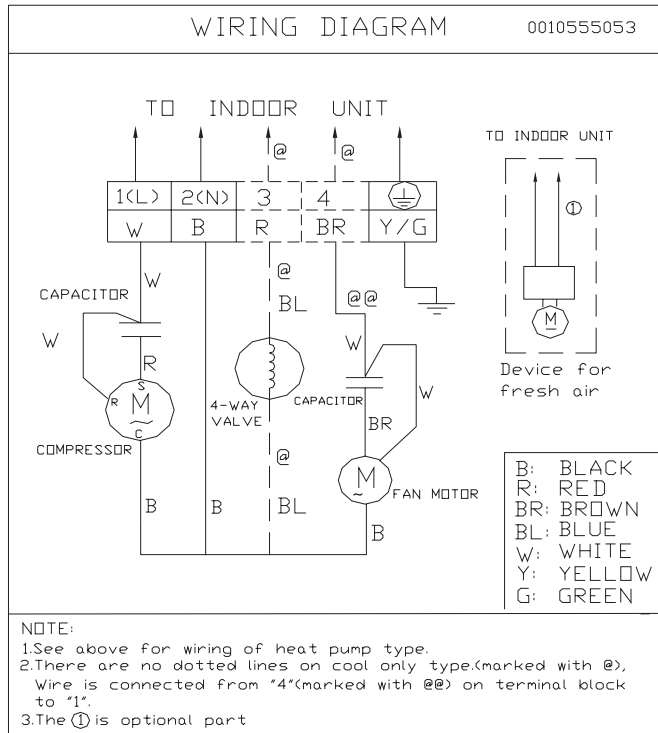


## HSU-22HEA03

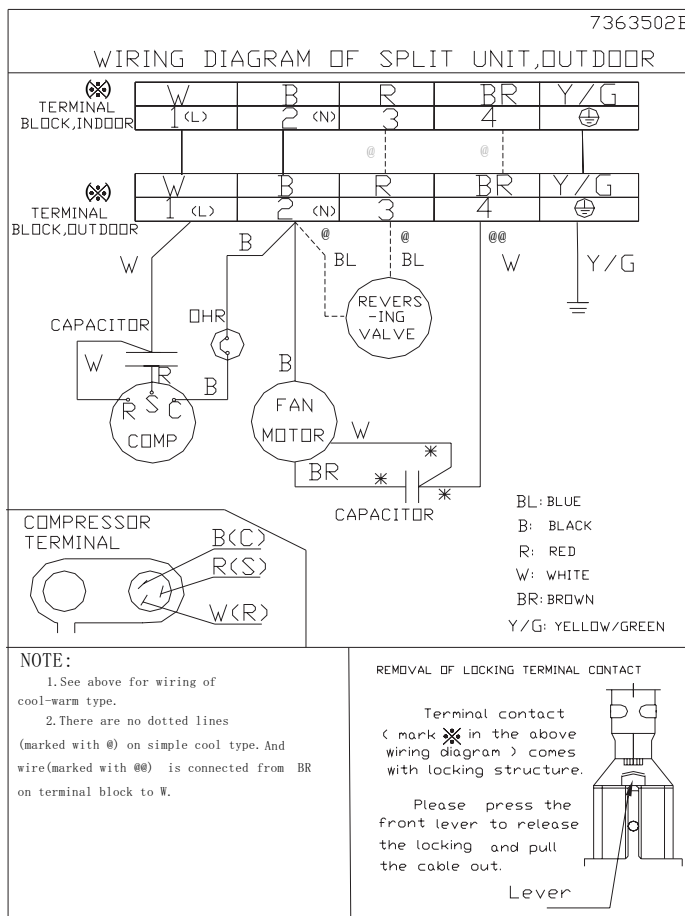


# Outdoor

## HSU-18LEA03



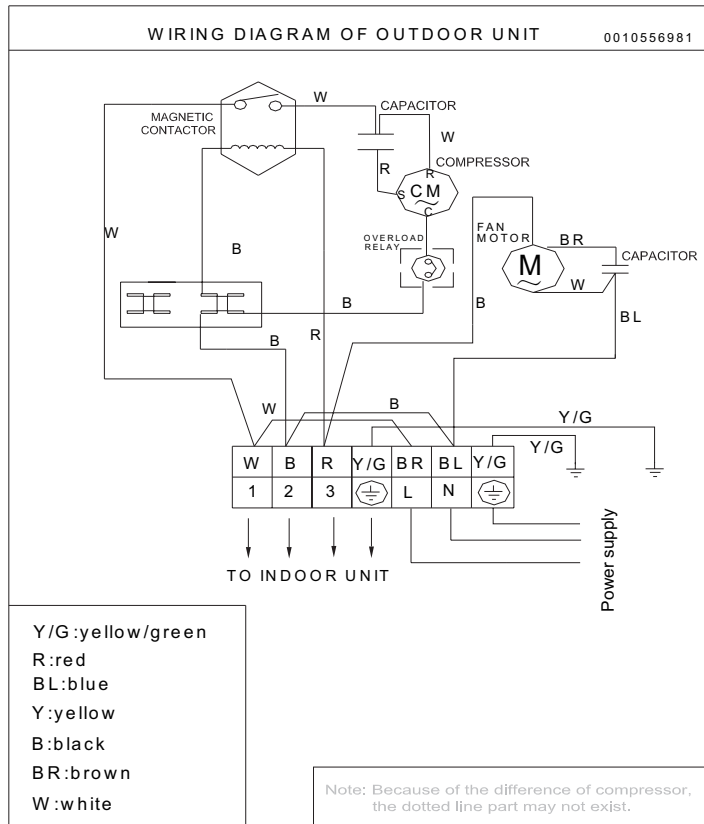
## HSU-18HEA03



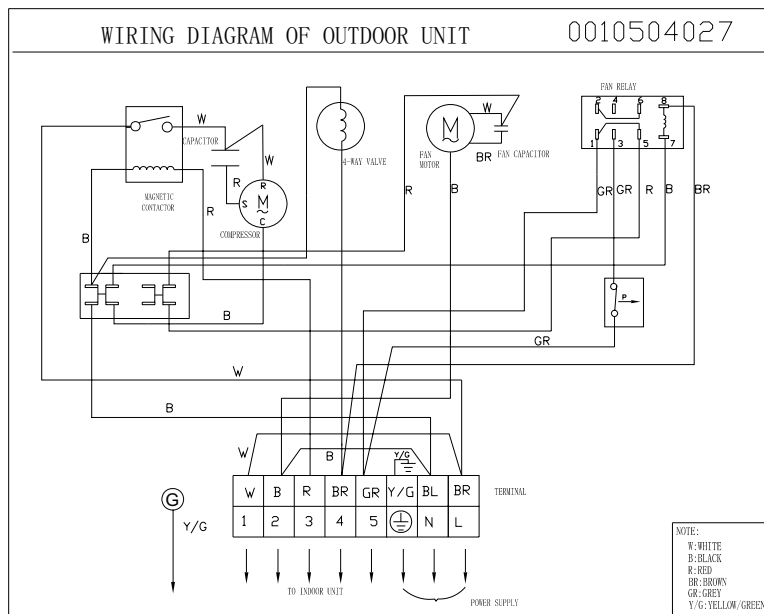


# Outdoor

## HSU-22LEA03



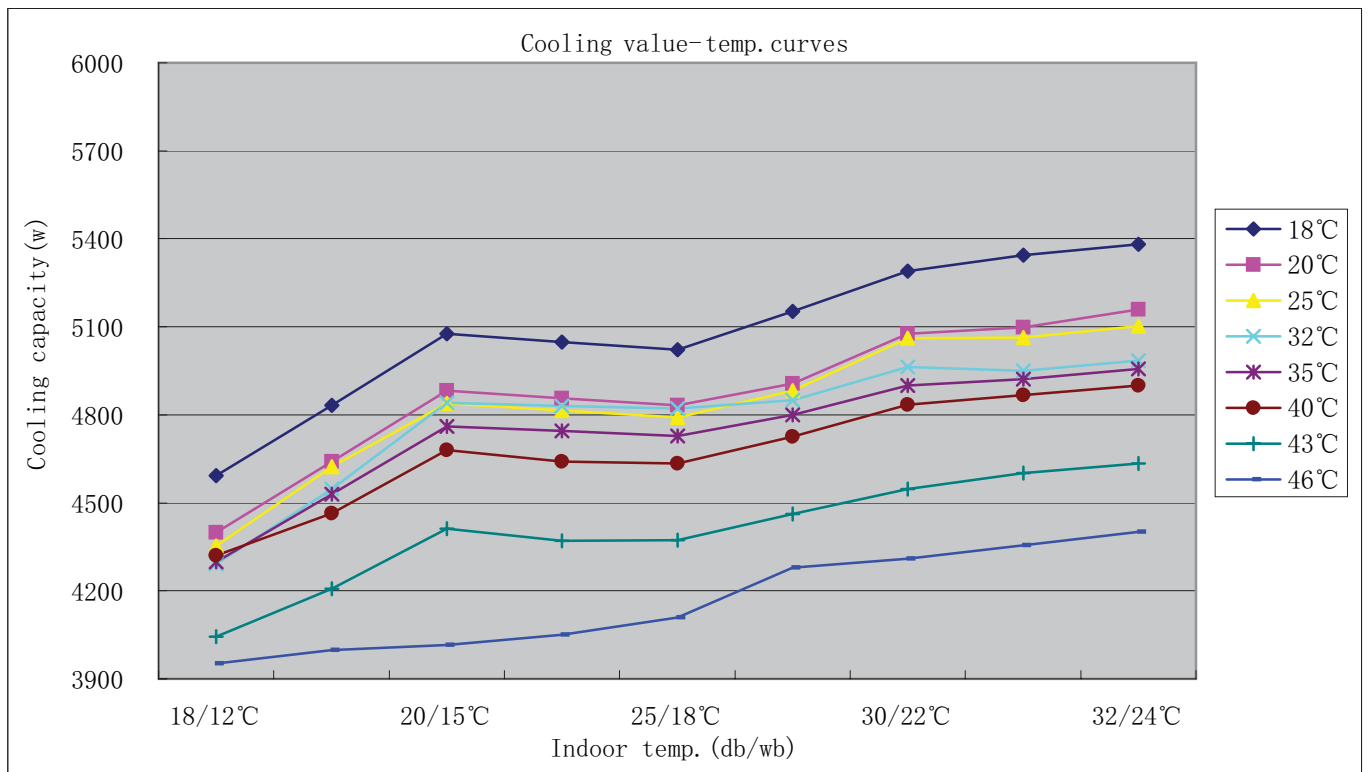
## HSU-22HEA03



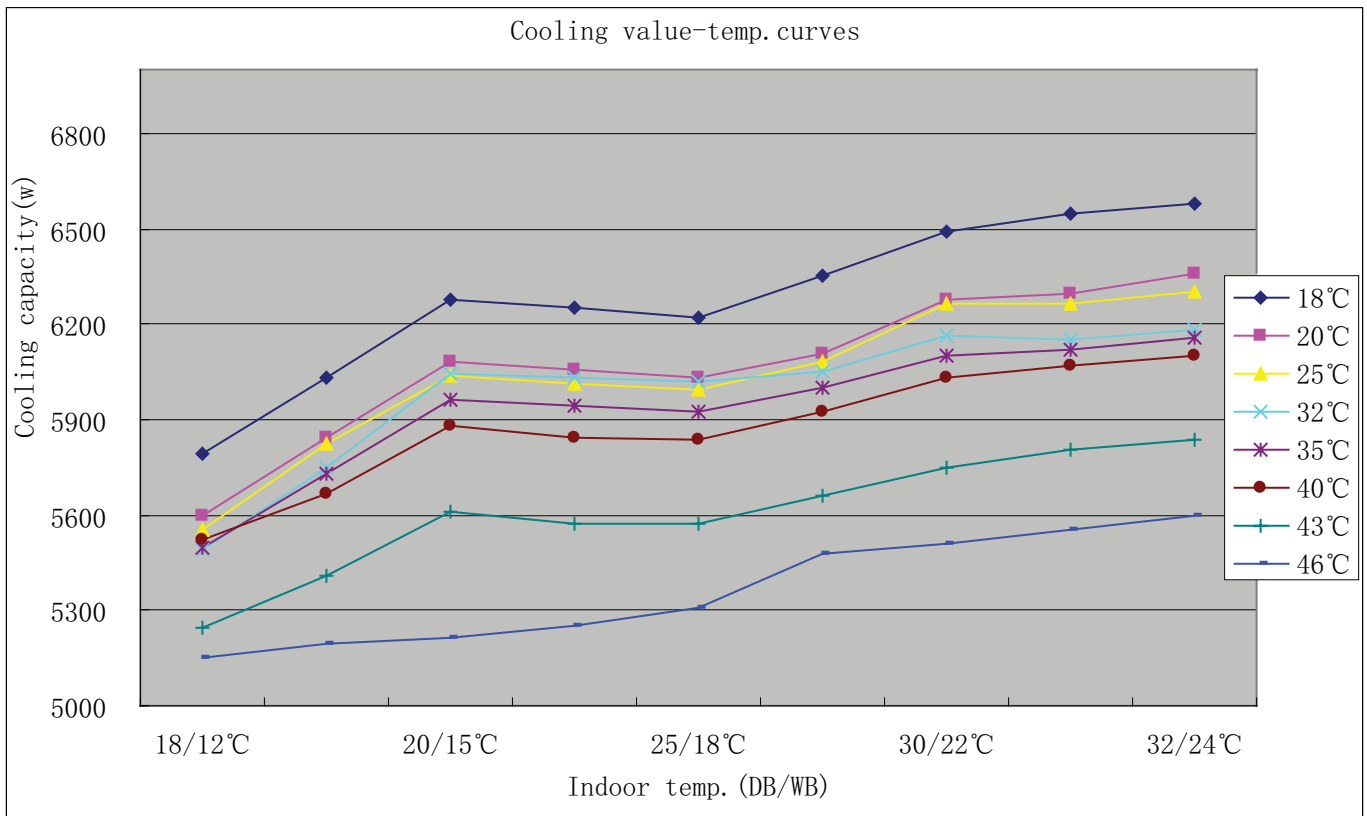
## 9. Capacity diagrams and curves diagrams

### 9.1 Cooling Capacity-temperature Curves

HSU-18L/HEA03 performance curves								
Cooling capacity and indoor/outdoor temp.table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	4593	4398	4354	4293	4298	4319	4045	3952
18/14°C	4833	4640	4623	4548	4529	4464	4208	3998
20/15°C	5075	4882	4839	4841	4760	4679	4411	4015
22/16°C	5049	4857	4815	4831	4745	4641	4371	4050
25/18°C	5022	4831	4791	4821	4727	4634	4372	4110
27/19°C	5152	4907	4882	4851	4800	4725	4463	4280
30/22°C	5291	5076	5061	4964	4899	4834	4548	4310
32/23°C	5345	5098	5064	4950	4921	4867	4602	4355
32/24°C	5381	5160	5103	4985	4956	4901	4635	4400

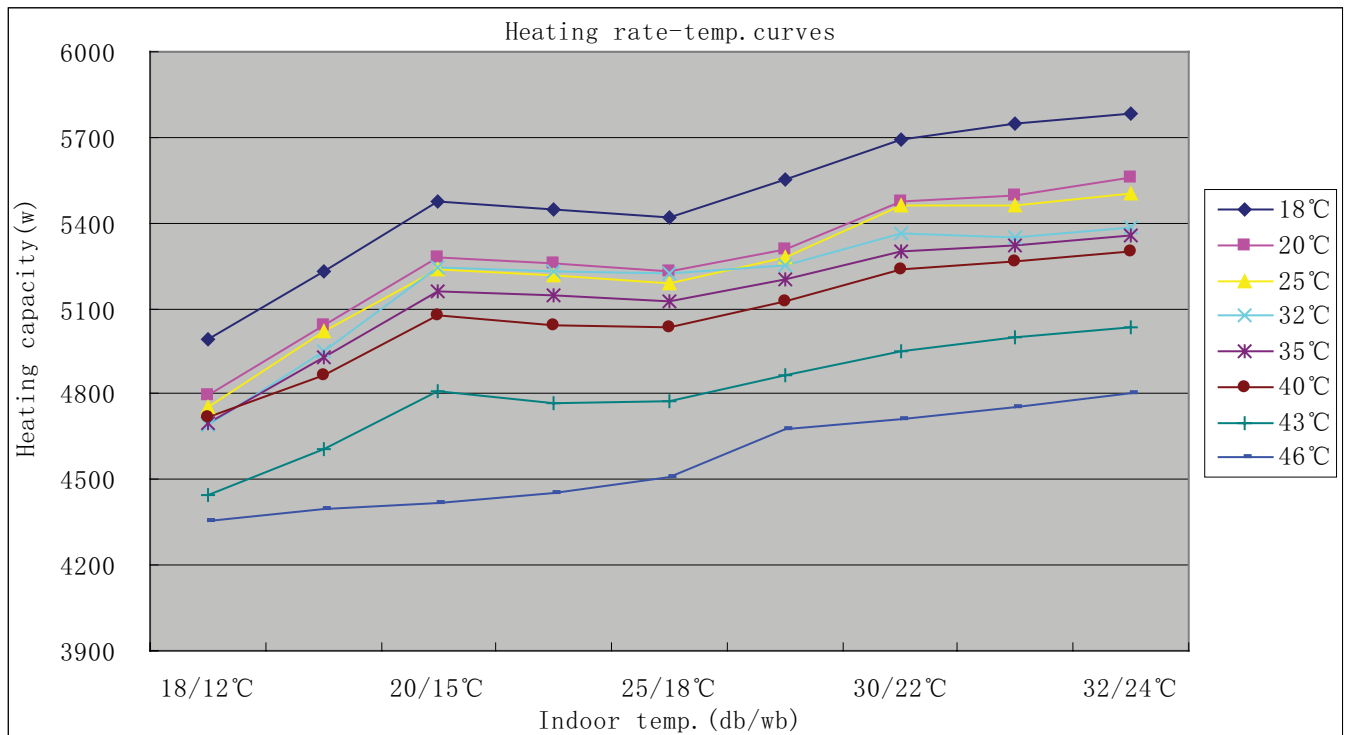


HSU-22L/HEA03 performance curves								
cooling capacity and indoor/outdoor temp. table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	5793	5598	5554	5493	5498	5519	5245	5152
18/14°C	6033	5840	5823	5748	5729	5664	5408	5198
20/15°C	6275	6082	6039	6041	5960	5879	5611	5215
22/16°C	6249	6057	6015	6031	5945	5841	5571	5250
25/18°C	6222	6031	5991	6021	5927	5834	5572	5310
27/19°C	6352	6107	6082	6051	6000	5925	5663	5480
30/22°C	6491	6276	6261	6164	6099	6034	5748	5510
32/23°C	6545	6298	6264	6150	6121	6067	5802	5555
32/24°C	6581	6360	6303	6185	6156	6101	5835	5600

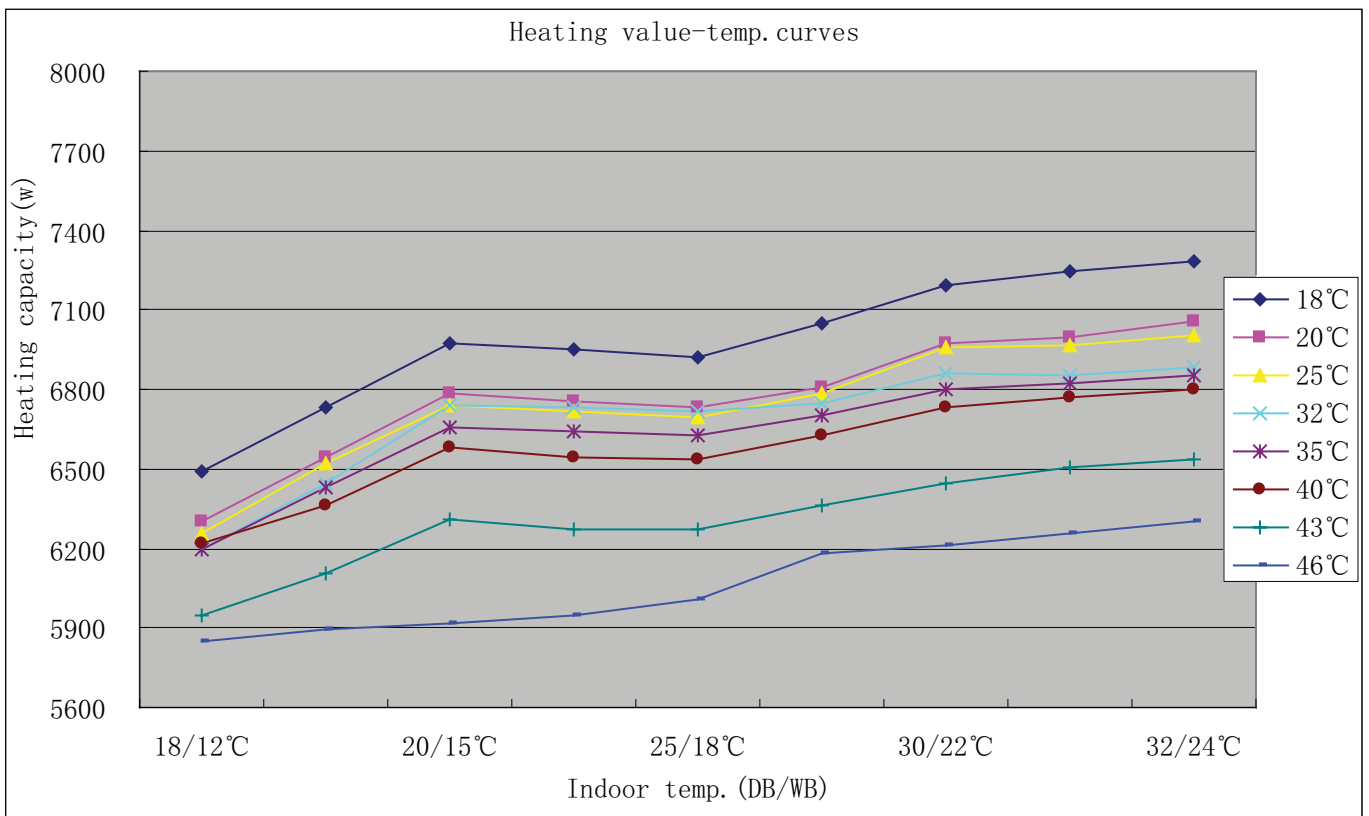


## 9.2 Heating Capacity-temperature Curves

HSU-18HEA03 performance curves								
cooling capacity and indoor/outdoor temp. table								
Indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	4993	4798	4754	4693	4698	4719	4445	4352
18/14°C	5233	5040	5023	4948	4929	4864	4608	4398
20/15°C	5475	5282	5239	5241	5160	5079	4811	4415
22/16°C	5449	5257	5215	5231	5145	5041	4771	4450
25/18°C	5422	5231	5191	5221	5127	5034	4772	4510
27/19°C	5552	5307	5282	5251	5200	5125	4863	4680
30/22°C	5691	5476	5461	5364	5299	5234	4948	4710
32/23°C	5745	5498	5464	5350	5321	5267	5002	4755
32/24°C	5781	5560	5503	5385	5356	5301	5035	4800

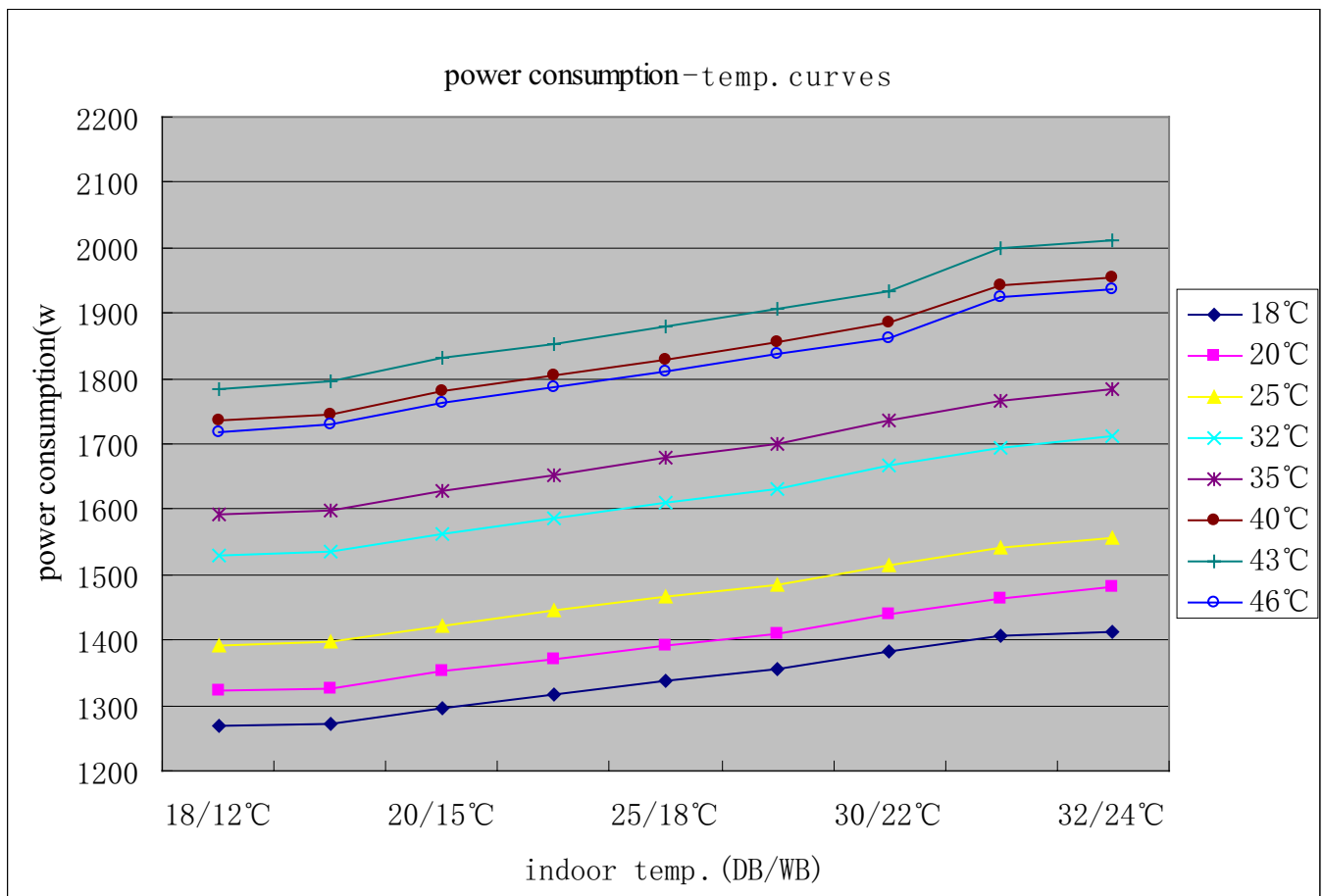


HSU-22HEA03 performance curves								
Heating capacity and indoor/outdoor temp.table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	6493	6298	6254	6193	6198	6219	5945	5852
18/14°C	6733	6540	6523	6448	6429	6364	6108	5898
20/15°C	6975	6782	6739	6741	6660	6579	6311	5915
22/16°C	6949	6757	6715	6731	6645	6541	6271	5950
25/18°C	6922	6731	6691	6721	6627	6534	6272	6010
27/19°C	7052	6807	6782	6751	6700	6625	6363	6180
30/22°C	7191	6976	6961	6864	6799	6734	6448	6210
32/23°C	7245	6998	6964	6850	6821	6767	6502	6255
32/24°C	7281	7060	7003	6885	6856	6801	6535	6300

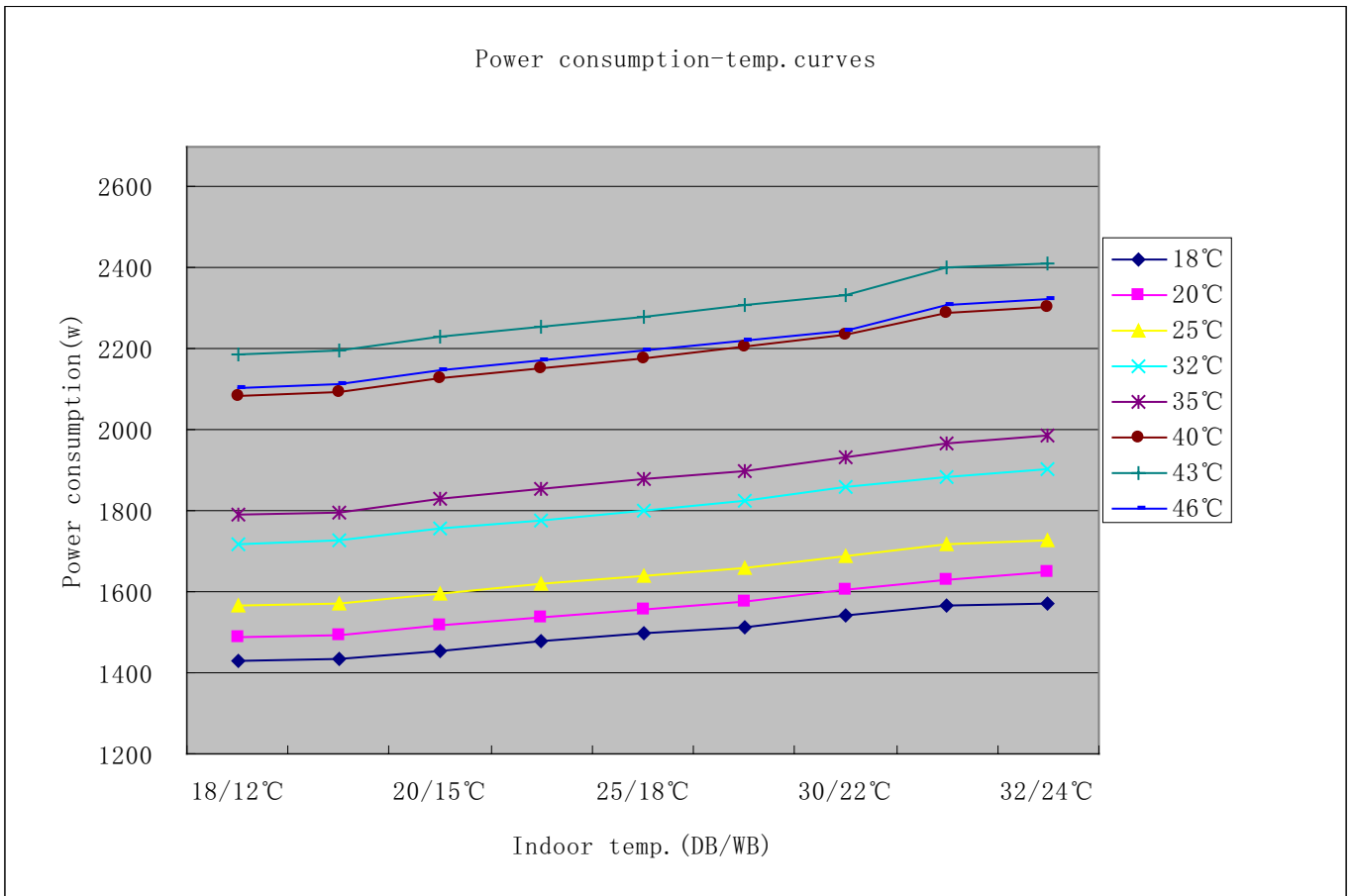


### 9.3 Cooling Power Consumption Value-temperature Curves

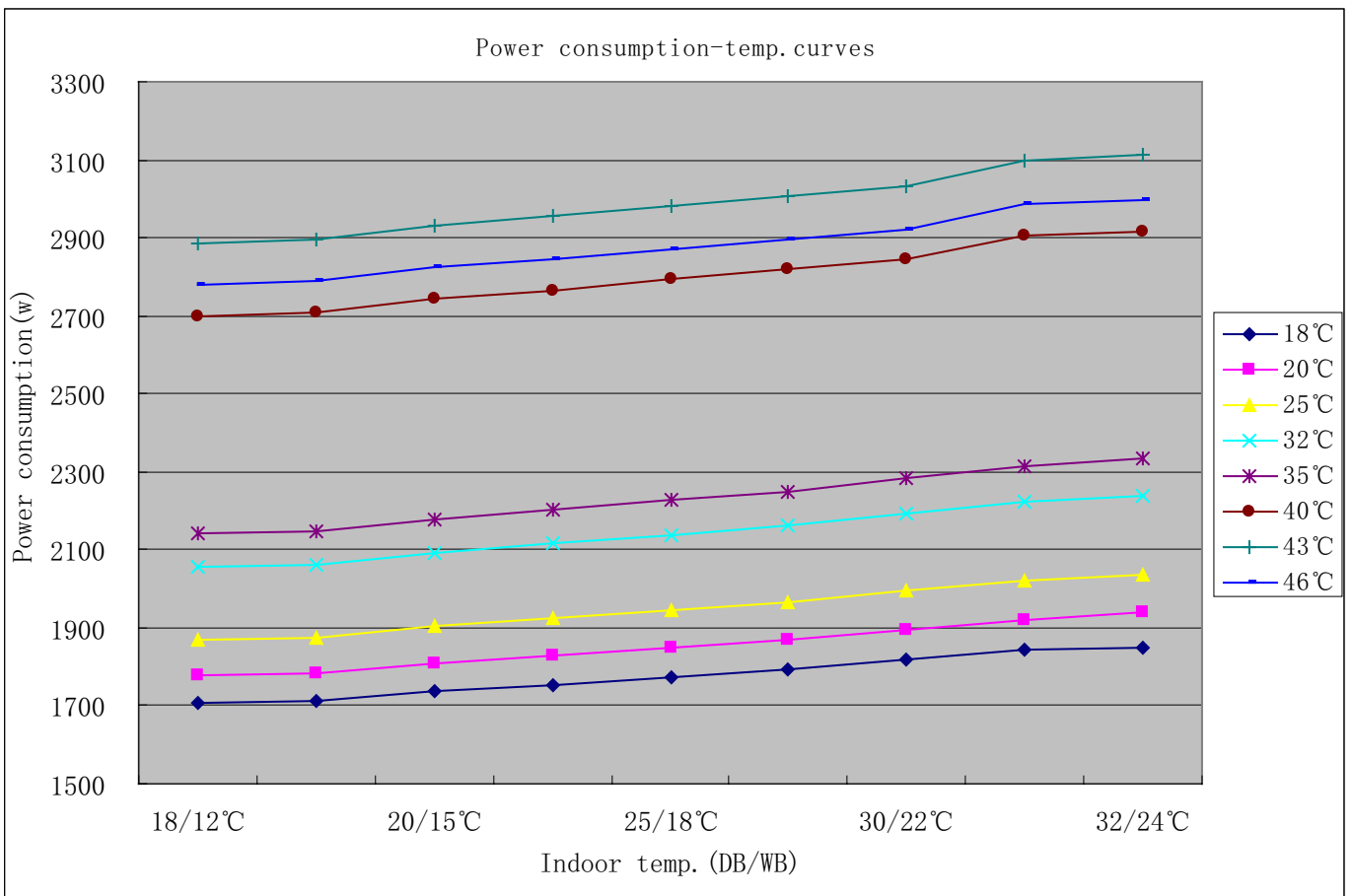
HSU-18LEA03 performance curves								
power consumption value-temp. table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	1308	1363	1434	1576	1642	2124	2285	2200
18/14°C	1313	1368	1440	1582	1648	2133	2295	2210
20/15°C	1337	1393	1466	1611	1678	2168	2331	2245
22/16°C	1357	1413	1488	1635	1703	2191	2354	2267
25/18°C	1377	1434	1510	1659	1728	2217	2380	2292
27/19°C	1394	1452	1529	1680	1750	2243	2407	2318
30/22°C	1422	1481	1559	1714	1785	2272	2434	2344
32/23°C	1446	1506	1586	1742	1815	2329	2500	2408
32/24°C	1451	1523	1599	1760	1835	2343	2512	2419



HSU-18HEA03 performance curves								
power consumption value-temp. table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	1428	1487	1565	1720	1792	2087	2185	2104
18/14°C	1433	1492	1571	1726	1798	2096	2195	2114
20/15°C	1456	1517	1597	1755	1828	2130	2231	2148
22/16°C	1476	1538	1619	1779	1853	2154	2254	2171
25/18°C	1496	1559	1641	1803	1878	2180	2280	2196
27/19°C	1514	1577	1660	1824	1900	2205	2307	2222
30/22°C	1542	1606	1690	1858	1935	2234	2334	2248
32/23°C	1566	1631	1717	1886	1965	2291	2400	2311
32/24°C	1571	1648	1730	1904	1985	2305	2412	2323

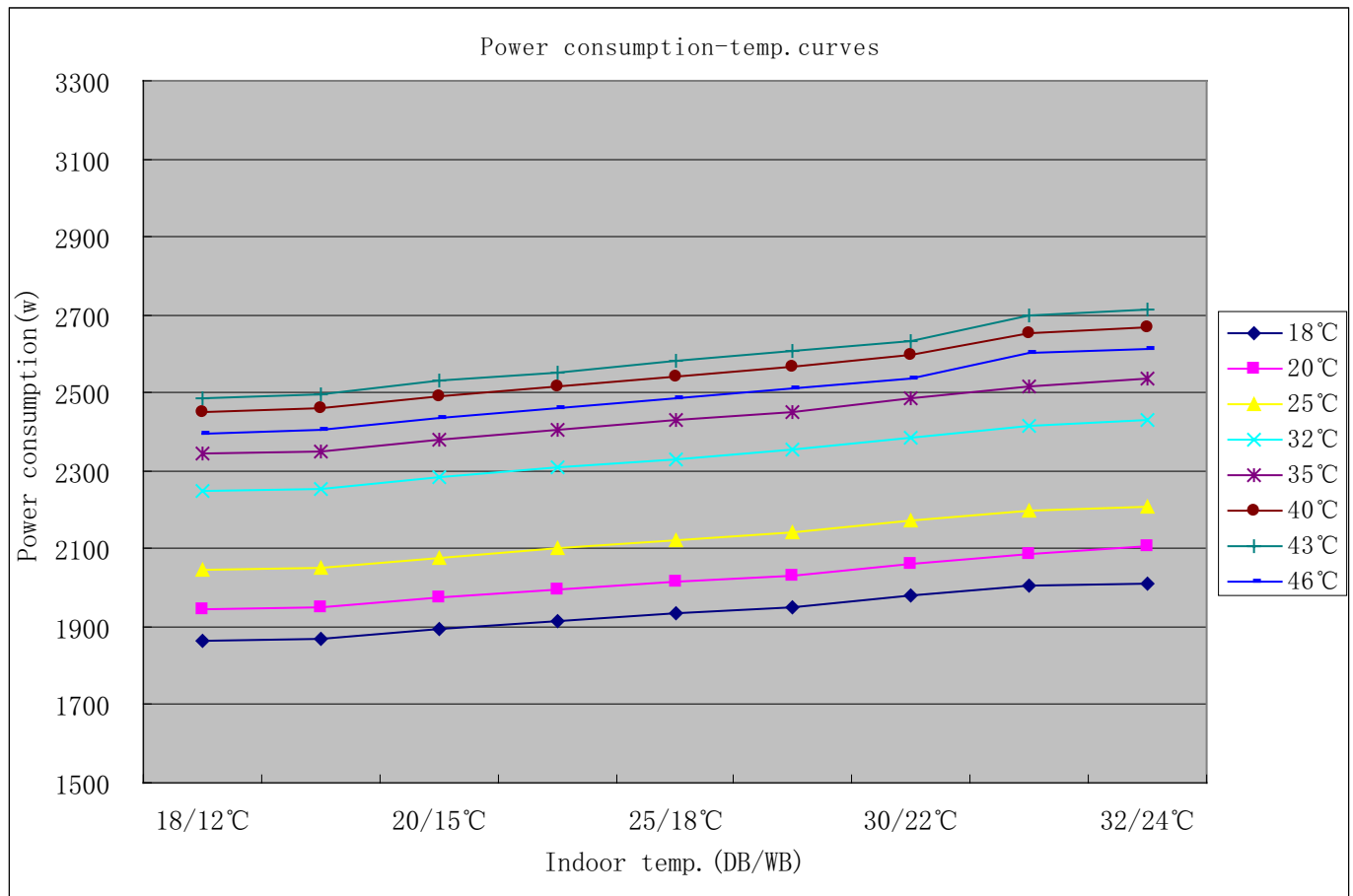


HSU-22LEA03 performance curves								
power consumption value-teme. table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	1707	1778	1871	2056	2142	2699	2885	2778
18/14°C	1711	1783	1876	2062	2148	2708	2895	2788
20/15°C	1735	1808	1903	2091	2178	2743	2931	2823
22/16°C	1755	1828	1925	2115	2203	2766	2954	2845
25/18°C	1775	1849	1946	2139	2228	2792	2980	2870
27/19°C	1793	1867	1966	2160	2250	2818	3007	2896
30/22°C	1821	1896	1996	2194	2285	2847	3034	2922
32/23°C	1844	1921	2022	2222	2315	2904	3100	2985
32/24°C	1849	1938	2035	2240	2335	2918	3112	2997



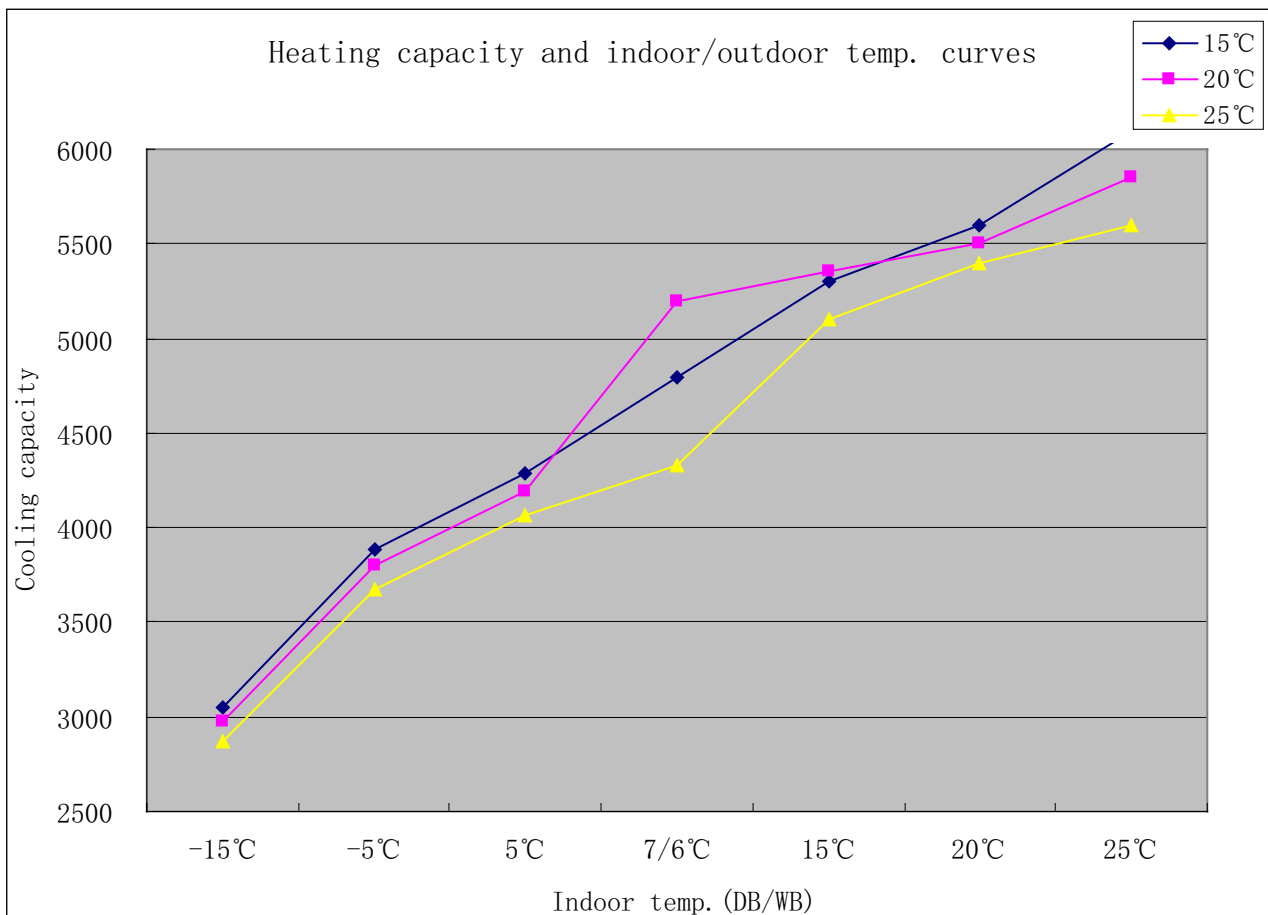


HSU-22HEA03 performance curves								
power consumption value-teme. table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	1866	1944	2046	2248	2342	2449	2485	2393
18/14°C	1871	1949	2051	2254	2348	2458	2495	2403
20/15°C	1895	1974	2077	2283	2378	2493	2531	2437
22/16°C	1915	1994	2099	2307	2403	2516	2554	2460
25/18°C	1934	2015	2121	2331	2428	2542	2580	2485
27/19°C	1952	2033	2140	2352	2450	2568	2607	2511
30/22°C	1980	2062	2171	2386	2485	2597	2634	2537
32/23°C	2004	2087	2197	2414	2515	2654	2700	2600
32/24°C	2009	2104	2210	2432	2535	2668	2712	2612

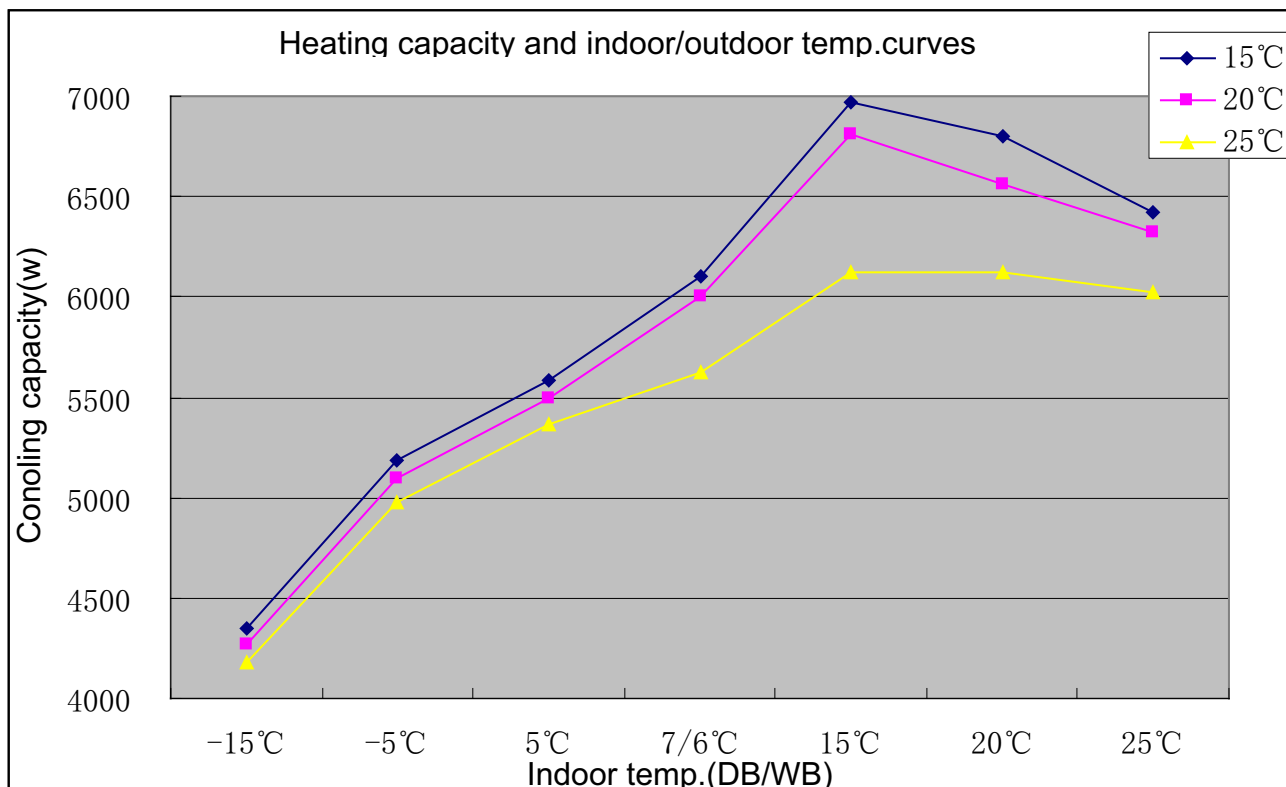


## 9.4 Heating Power Consumption Value-temperature Curves

HSU-18HEA03 performance curves			
heating capacity and indoor/outdoor temp. curves			
outdoor temp.	indoor temp. (humidity 46%)		
DB/WB	15°C	20°C	25°C
-15°C	3045	2972	2875
-5°C	3884	3798	3675
5°C	4286	4194	4069
7/6°C	4799	5200	4328
15°C	5300	5350	5100
20°C	5600	5500	5400
25°C	6100	5850	5600



HSU-22HEA03 performance curves			
heating capacity and indoor/outdoor temp.curves			
outdoor temp.	i ndoor temp.(humidity 46%)		
DB/WB	15°C	20°C	25°C
-15°C	4345	4272	4175
-5°C	5184	5098	4975
5°C	5586	5494	5369
7/6°C	6099	6000	5628
15°C	6971	6806	6124
20°C	6796	6566	6125
25°C	6427	6322	6025

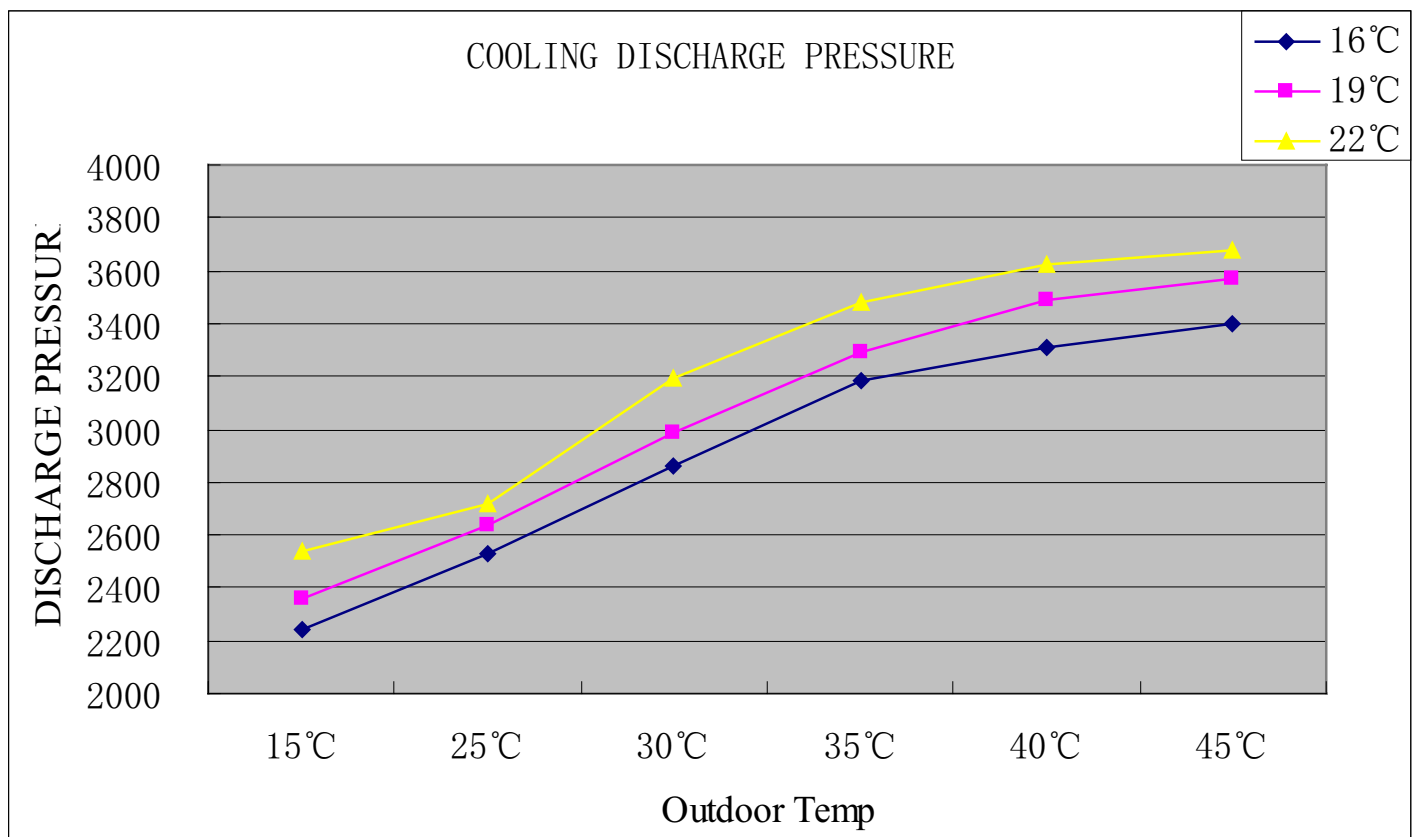


## 9.5 Cooling Discharge Pressure Curves

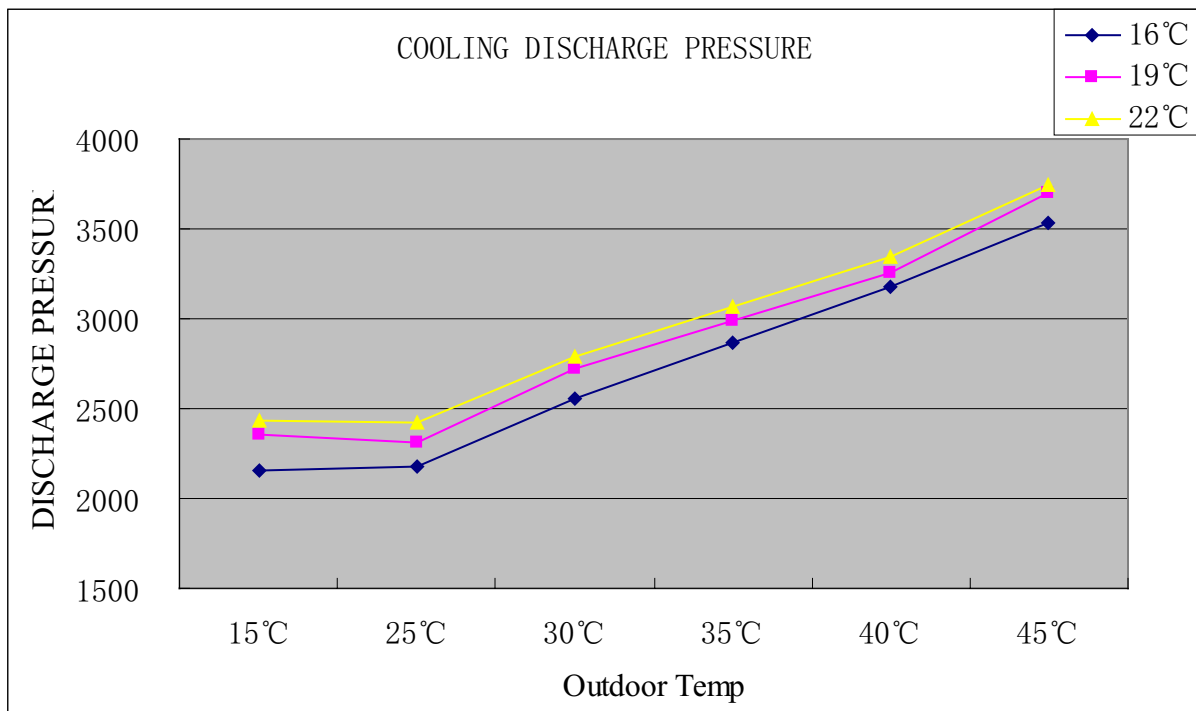
HSU-18L/HEA03 performance curves

### COOLING DISCHARGE PRESSURE table

outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16°C	19°C	22°C
15°C	2240	2360	2540
25°C	2530	2640	2720
30°C	2864	2990	3190
35°C	3180	3290	3480
40°C	3310	3490	3620
45°C	3400	3573	3680

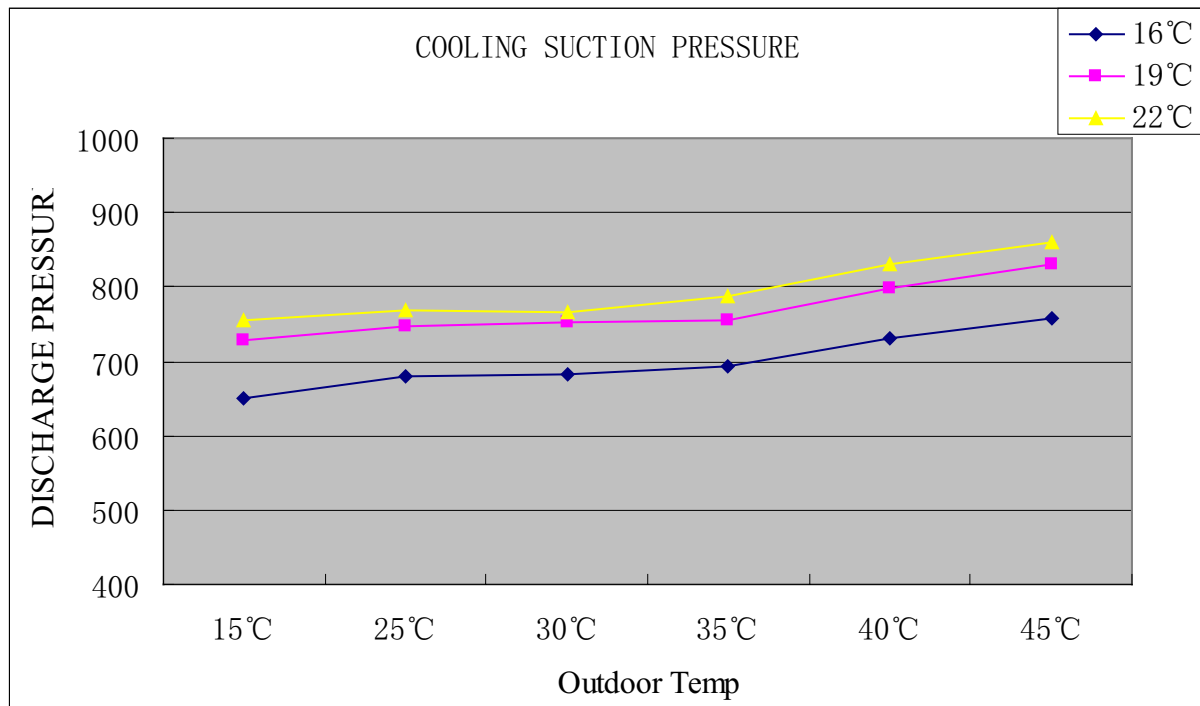


HSU-22L/HEA03 performance curves			
COOLING DISCHARGE PRESSURE. talbe			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16°C	19°C	22°C
15°C	2153	2355	2436
25°C	2178	2310	2421
30°C	2551	2723	2794
35°C	2864	2990	3071
40°C	3175	3256	3347
45°C	3529	3700	3741

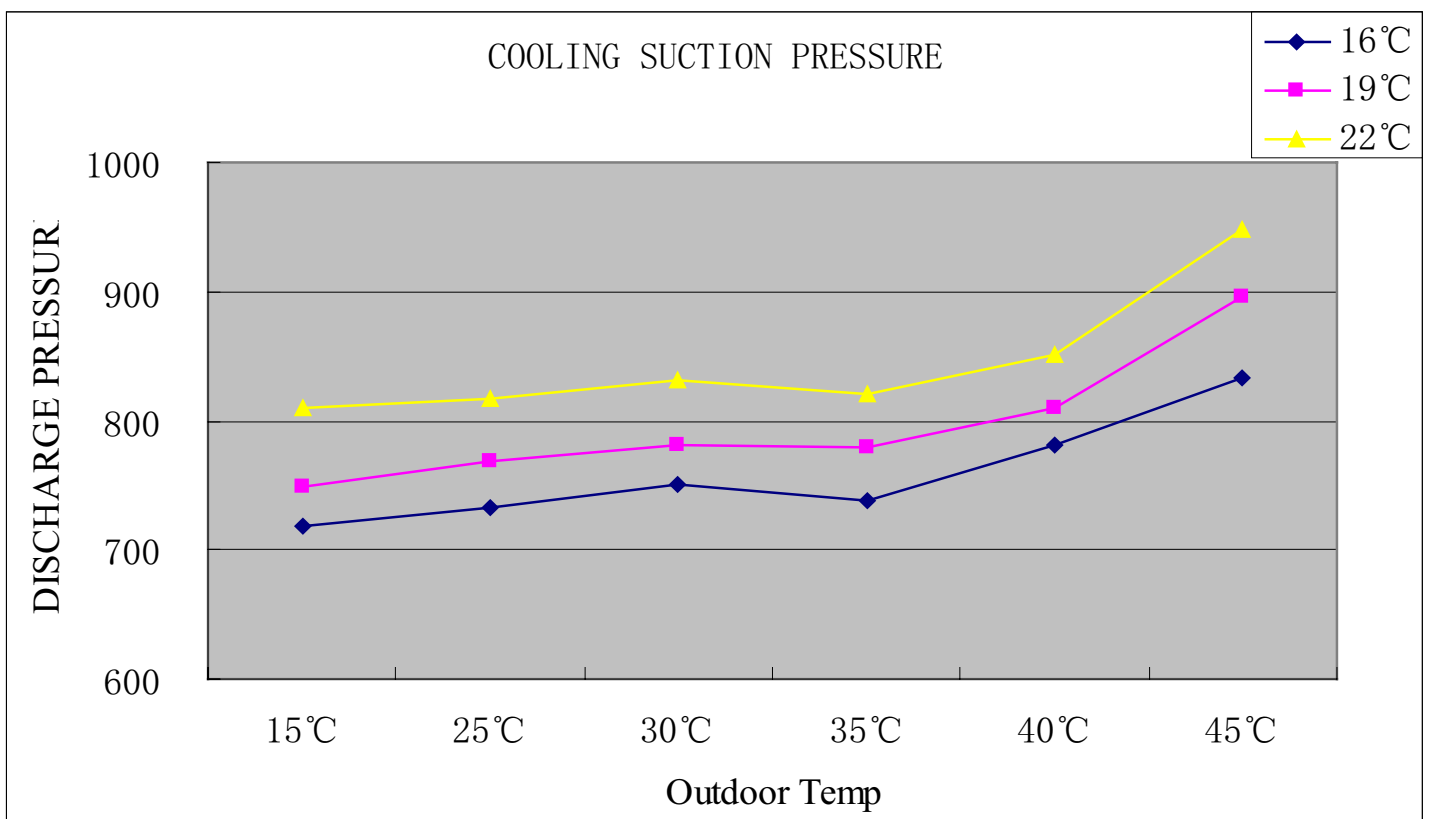


## 9.6 Cooling Suction Pressure Curves

HSU-18L/HEA03 performance curves			
COOLING SUCTION PRESSURE. table			
Outdoor temp. humidity(46%)	Indoor temp.		
	16°C	19°C	22°C
15°C	646	734	746
25°C	675	754	758
30°C	678	759	757
35°C	688	762	778
40°C	726	804	820
45°C	754	836	851

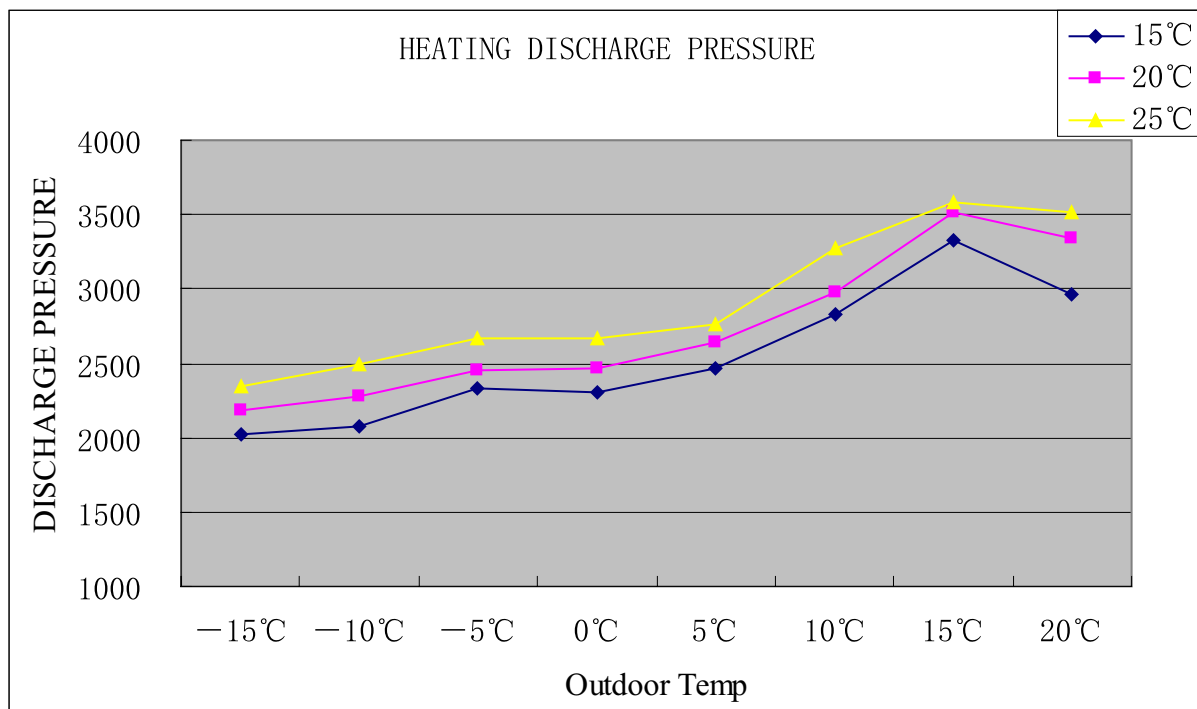


HSU-22L/HEA03 performance curves			
COOLING SUCTION PRESSURE table			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	16°C	19°C	22°C
15°C	718	749	810
25°C	733	768	817
30°C	751	782	831
35°C	738	779	820
40°C	782	810	851
45°C	834	896	948



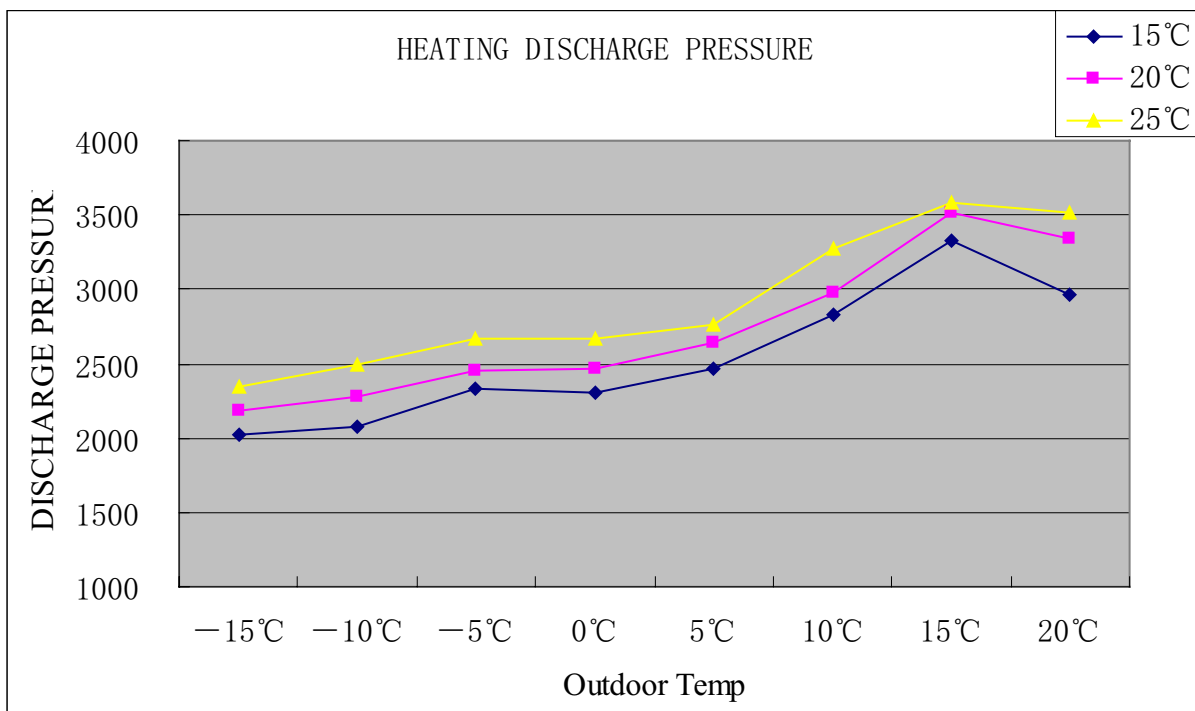
## 9.7 Heating Discharge Pressure Curves

HSU-18HEA03 performance curves			
HEATING DISCHARGE PRESSURE table			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15°C	20°C	25°C
-15°C	2003	2171	2336
-10°C	2069	2260	2482
-5°C	2324	2440	2649
0°C	2290	2460	2661
5°C	2449	2630	2755
10°C	2817	2962	3267
15°C	3316	3499	3567
20°C	2957	3330	3500



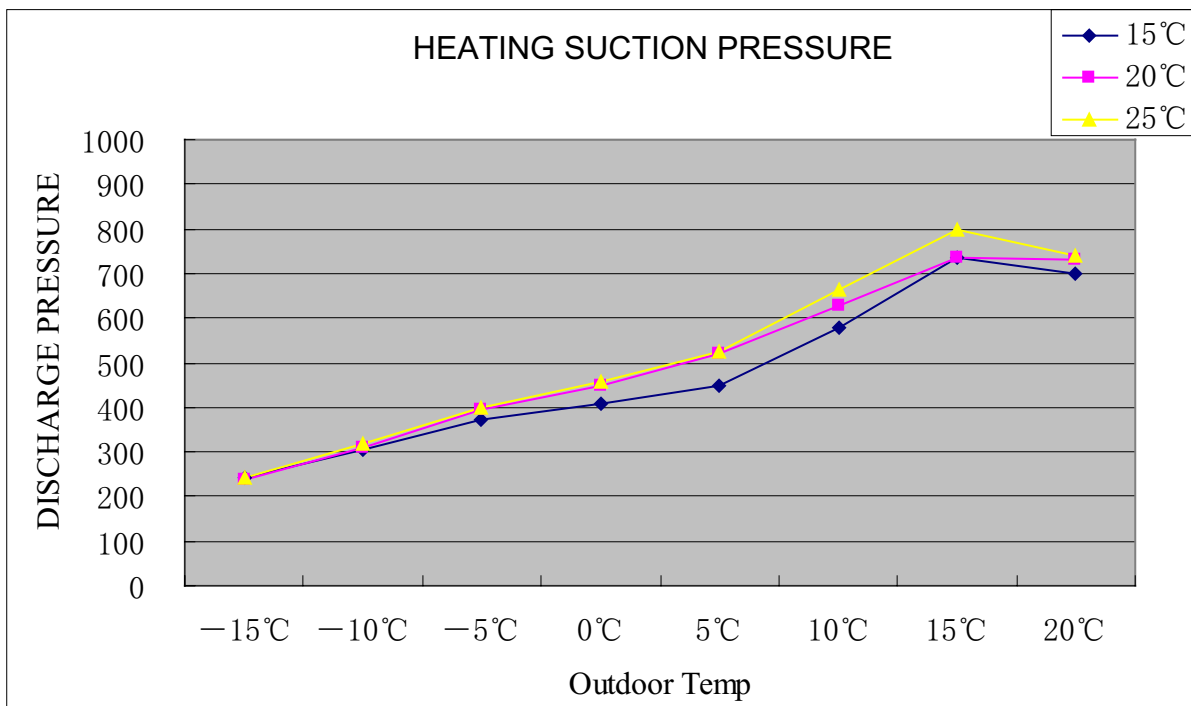


HSU-22HEA03 performance curves			
HEATING DISCHARGE PRESSURE.table			
outdoor temp. (humidity 46%)	indoor temp.		
	15°C	20°C	25°C
DB/WB			
-15°C	2016	2184	2349
-10°C	2082	2273	2495
-5°C	2337	2453	2662
0°C	2303	2473	2674
5°C	2462	2643	2768
10°C	2830	2975	3280
15°C	3329	3512	3580
20°C	2970	3343	3513

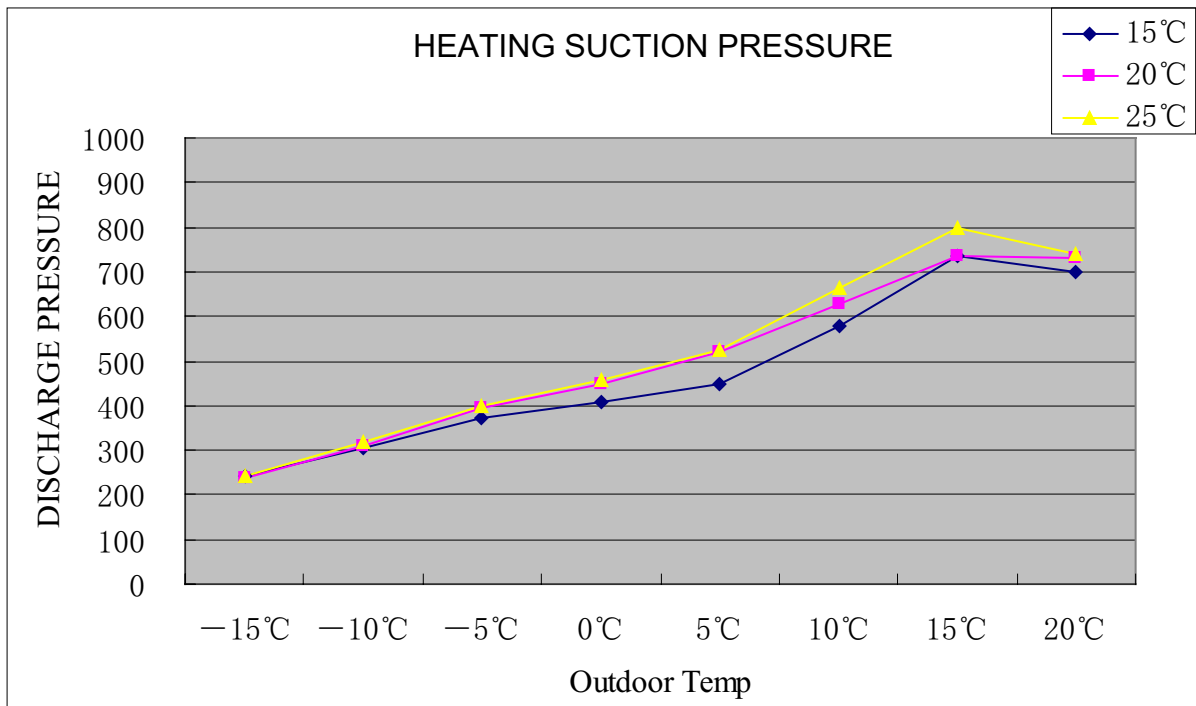


## 9.8 Heating Suction Pressure Curves

HSU-18HEA03 performance curves			
HEATING SUCTION PRESSURE.table			
outdoor temp. (humidity 46%)	indoor temp.		
	15°C	20°C	25°C
DB/WB			
-15°C	240	239	242
-10°C	305	310	320
-5°C	374	395	400
0°C	410	450	458
5°C	450	520	525
10°C	580	628	662
15°C	737	737	798
20°C	699	729	742

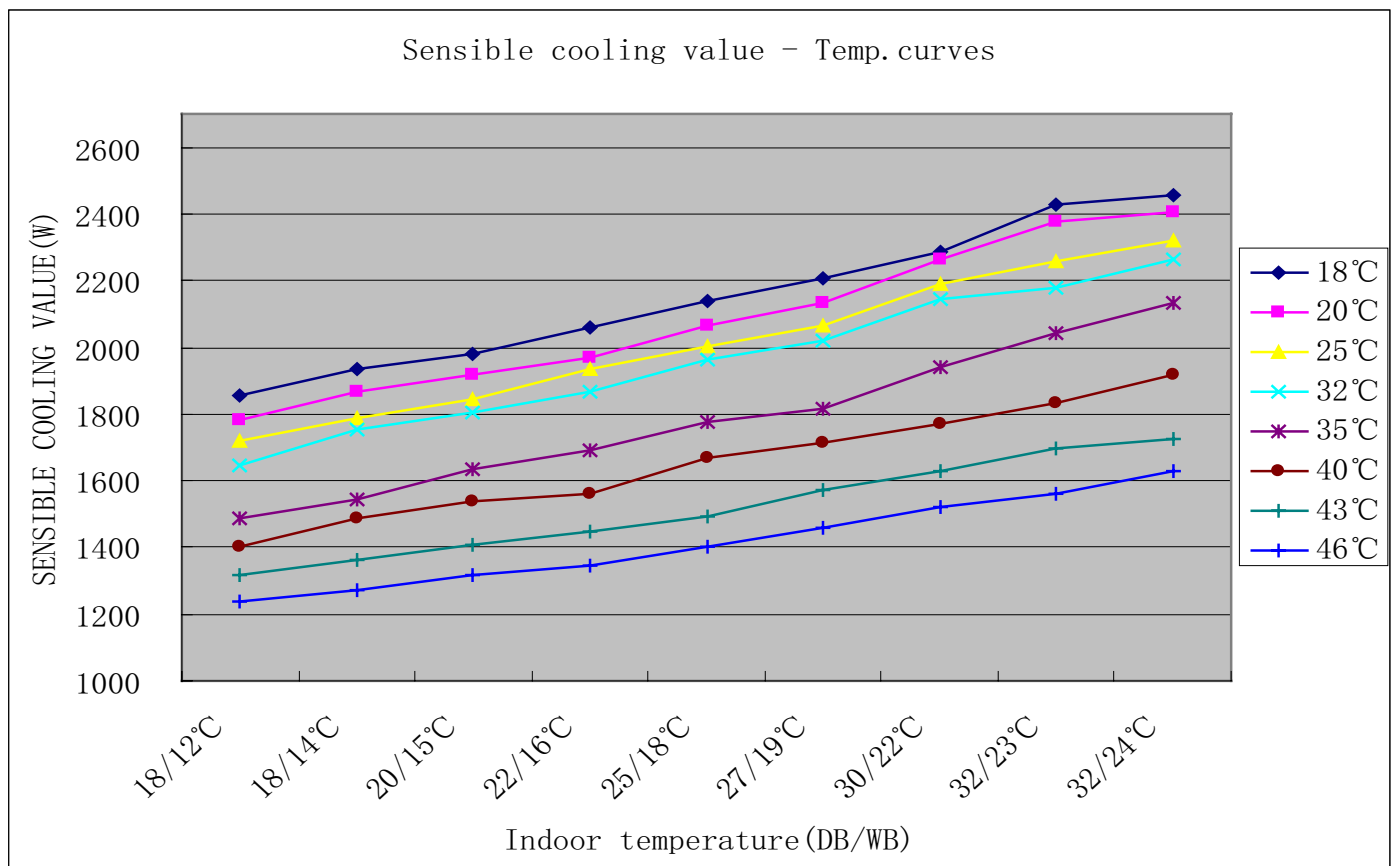


HSU-22HEA03 performance curves			
HEATING SUCTION PRESSURE.table			
outdoor temp. (humidity 46%)	indoor temp.		
DB/WB	15°C	20°C	25°C
-15°C	240	239	242
-10°C	305	310	320
-5°C	374	395	400
0°C	410	450	458
5°C	450	520	525
10°C	580	628	662
15°C	737	737	798
20°C	699	729	742

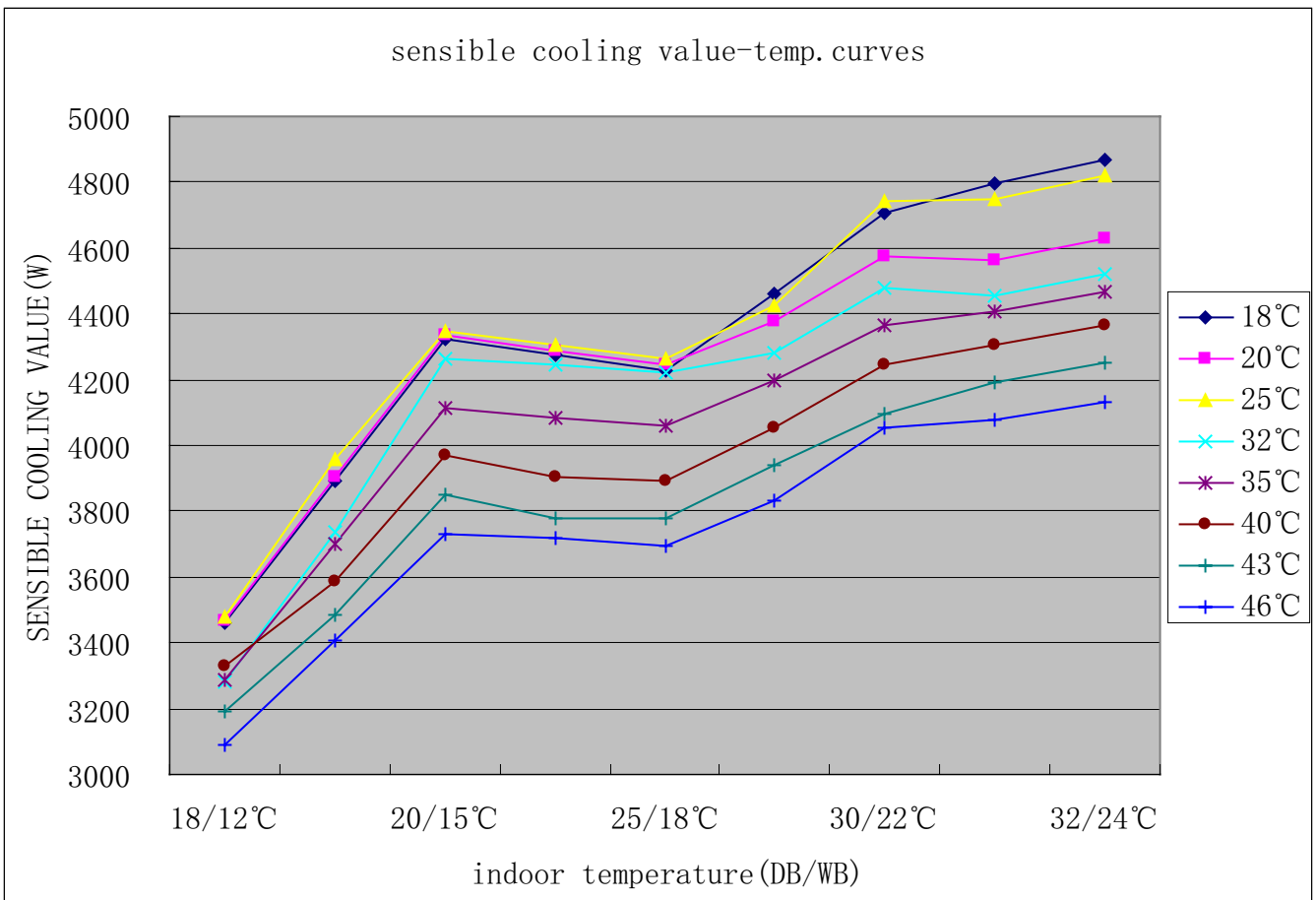


### 9.9 Sensible cooling capacity curves

HSU-18L/HEA03 performance curves								
sensible cooling value-temperature talbe								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	1857	1783	1720	1647	1489	1400	1315	1236
18/14°C	1936	1866	1789	1752	1545	1489	1360	1273
20/15°C	1982	1920	1845	1807	1634	1536	1408	1315
22/16°C	2061	1969	1935	1870	1691	1562	1445	1347
25/18°C	2137	2066	2003	1961	1774	1667	1491	1400
27/19°C	2205	2132	2063	2020	1819	1713	1570	1459
30/22°C	2284	2261	2192	2147	1941	1769	1630	1523
32/23°C	2430	2380	2260	2181	2043	1834	1699	1562
32/24°C	2454	2404	2320	2265	2131	1920	1723	1629

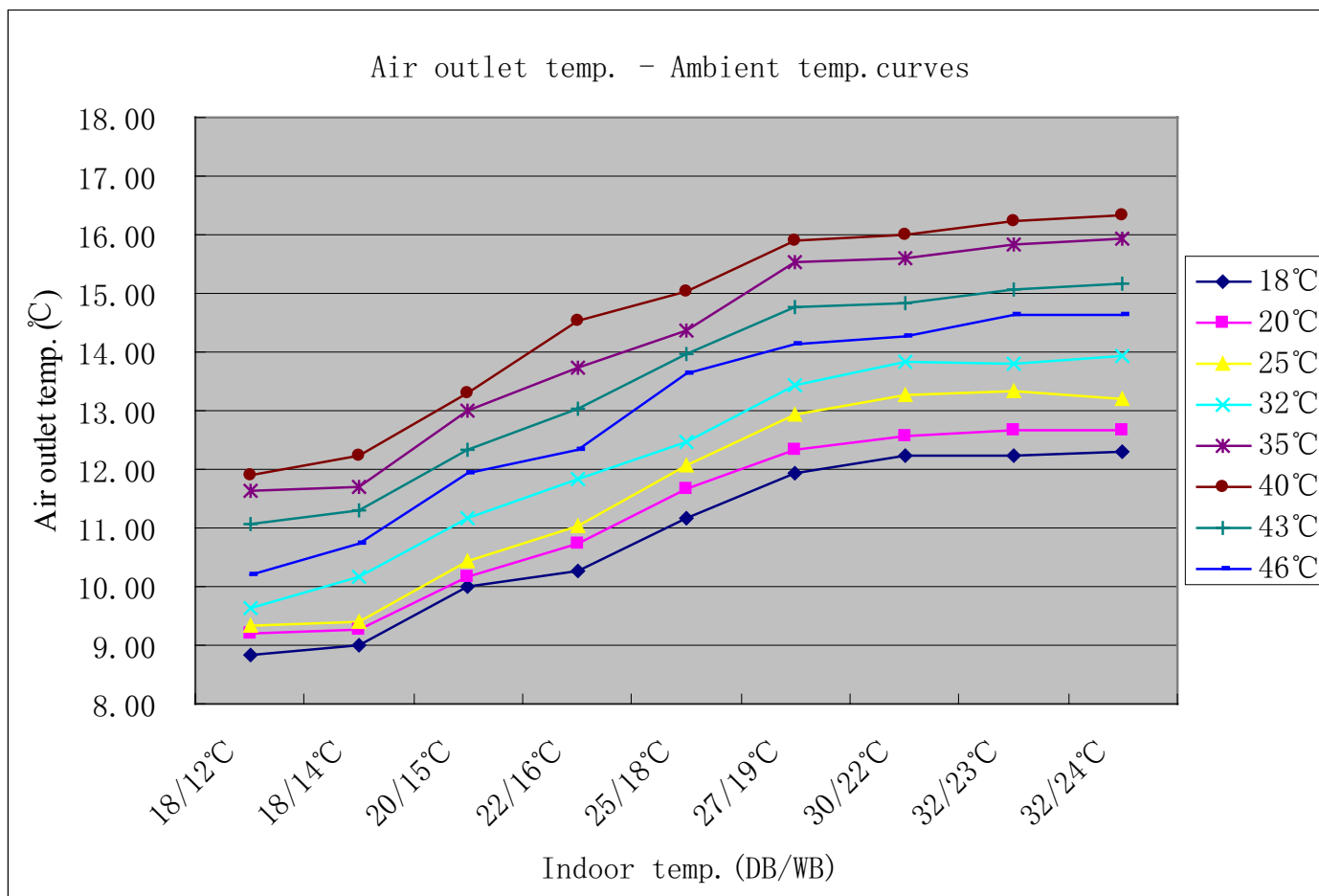


HSU-22L/HEA03 performance curves								
Sensible cooling value-temperature table								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	3459	3469	3478	3280	3289	3327	3193	3089
18/14°C	3891	3901	3961	3736	3702	3586	3486	3409
20/15°C	4323	4334	4346	4261	4116	3972	3850	3728
22/16°C	4275	4289	4303	4243	4087	3902	3777	3719
25/18°C	4227	4244	4261	4224	4057	3890	3780	3694
27/19°C	4460	4380	4424	4278	4200	4053	3942	3832
30/22°C	4708	4575	4744	4481	4365	4248	4094	4052
32/23°C	4798	4561	4749	4455	4404	4307	4192	4077
32/24°C	4869	4628	4819	4519	4467	4368	4250	4133



### 9.10 Air outlet temp. curves

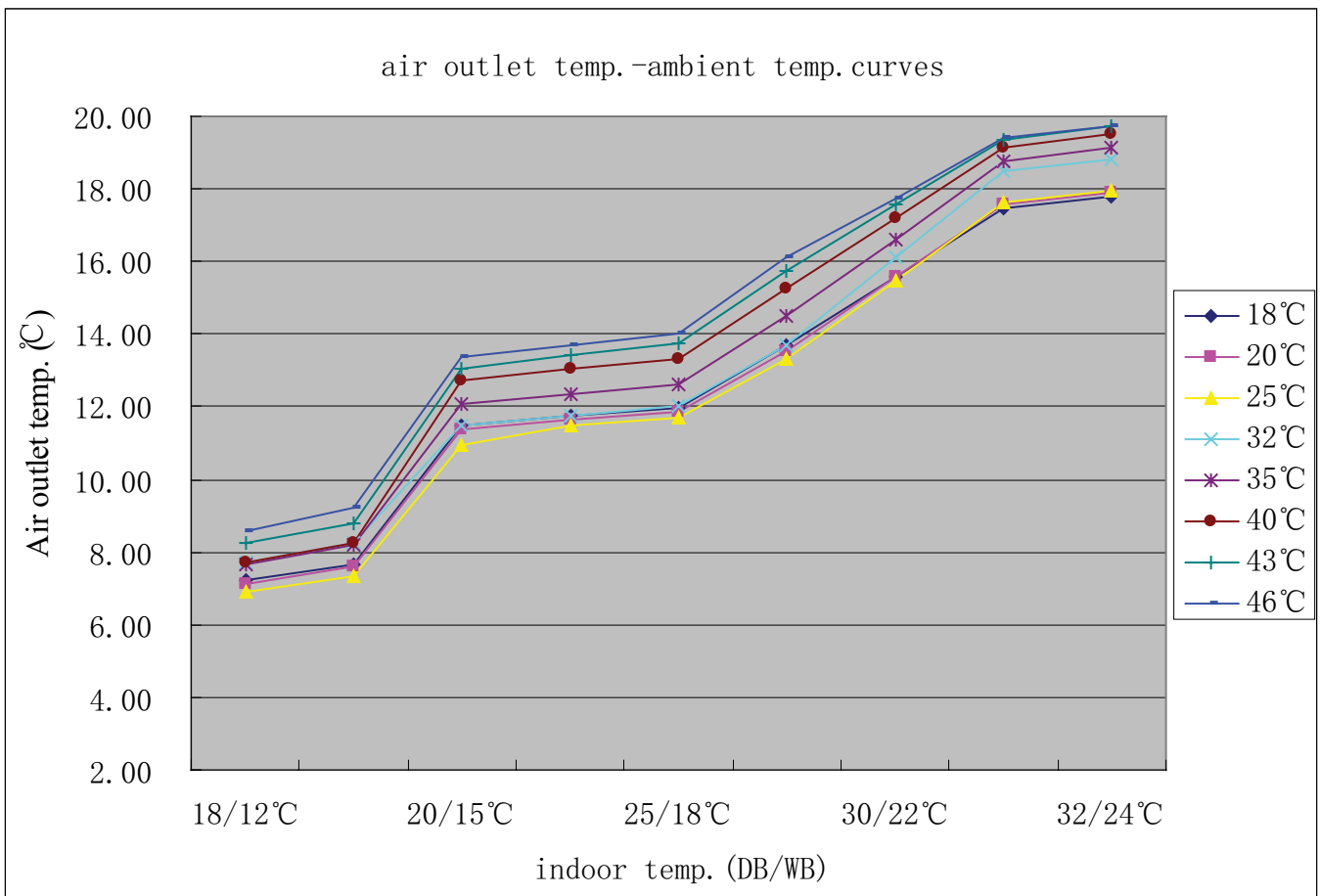
HSU-18L/HEA03 performance curves								
air outlet temp.-ambient teme.talbe								
indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	8.83	9.22	9.34	9.63	11.63	11.91	11.05	10.20
18/14°C	9.00	9.27	9.39	10.17	11.69	12.22	11.30	10.72
20/15°C	10.00	10.17	10.44	11.18	12.99	13.31	12.35	11.92
22/16°C	10.27	10.73	11.04	11.84	13.72	14.53	13.04	12.33
25/18°C	11.16	11.67	12.05	12.46	14.38	15.03	13.97	13.63
27/19°C	11.94	12.33	12.95	13.42	15.52	15.90	14.76	14.13
30/22°C	12.22	12.57	13.28	13.82	15.61	15.99	14.84	14.28
32/23°C	12.22	12.68	13.33	13.80	15.85	16.24	15.07	14.65
32/24°C	12.29	12.68	13.20	13.93	15.95	16.34	15.17	14.64



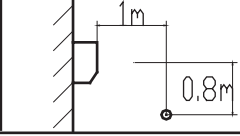
**HSU-22L/HEA03** performance curves

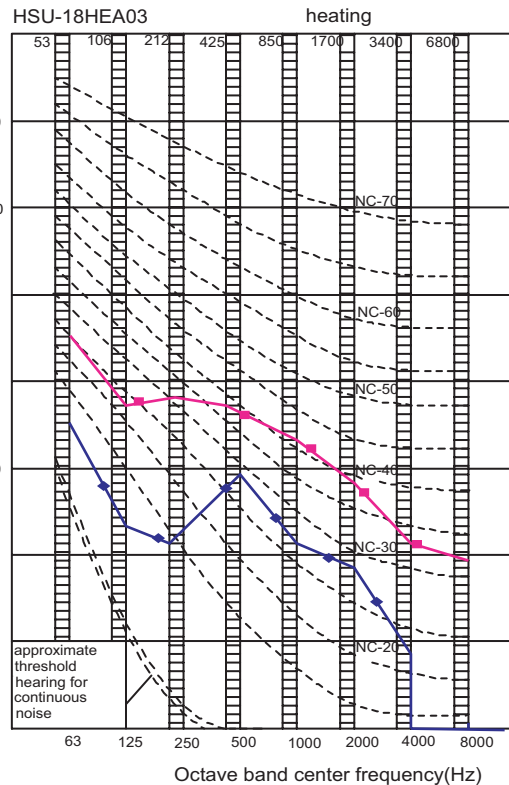
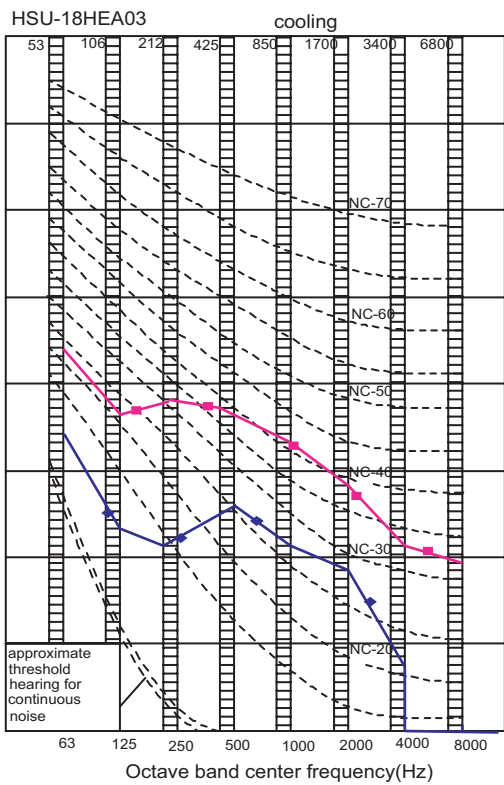
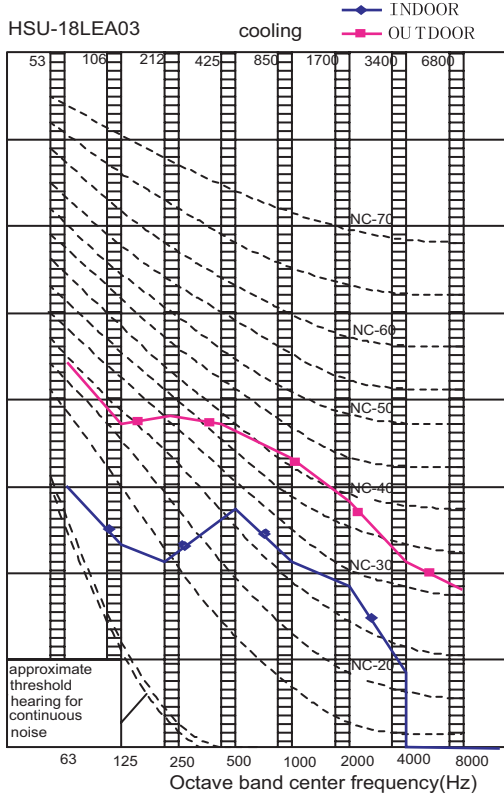
air outlet temp.-ambient temp. table

indoor temp.	outdoor temp. (humidity 46%)							
DB/WB	18°C	20°C	25°C	32°C	35°C	40°C	43°C	46°C
18/12°C	7.22	7.13	6.89	7.73	7.67	7.72	8.23	8.60
18/14°C	7.68	7.58	7.32	8.25	8.19	8.23	8.79	9.20
20/15°C	11.50	11.39	10.96	11.46	12.06	12.74	13.06	13.38
22/16°C	11.74	11.62	11.47	11.73	12.33	13.02	13.41	13.71
25/18°C	11.99	11.86	11.67	12.00	12.61	13.31	13.76	14.03
27/19°C	13.67	13.52	13.31	13.70	14.52	15.24	15.77	16.11
30/22°C	15.58	15.55	15.48	16.10	16.60	17.20	17.57	17.75
32/23°C	17.49	17.59	17.66	18.49	18.78	19.16	19.37	19.39
32/24°C	17.79	17.89	17.96	18.82	19.11	19.50	19.71	19.73

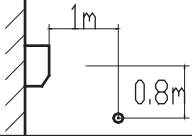


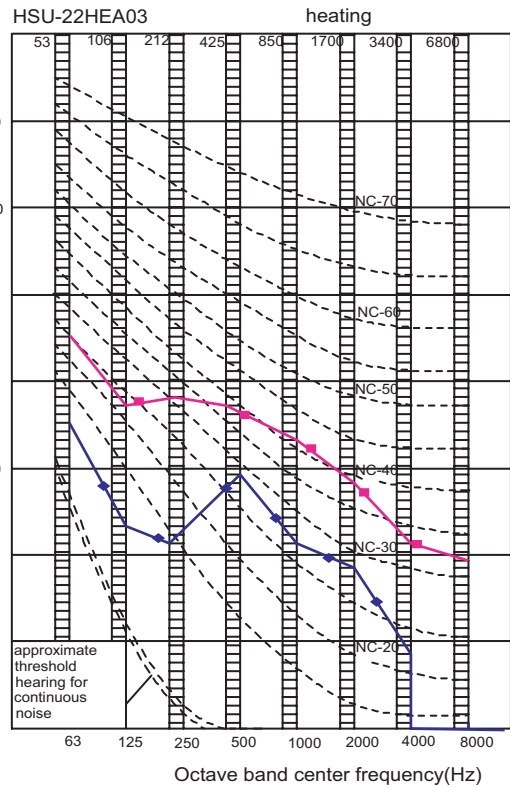
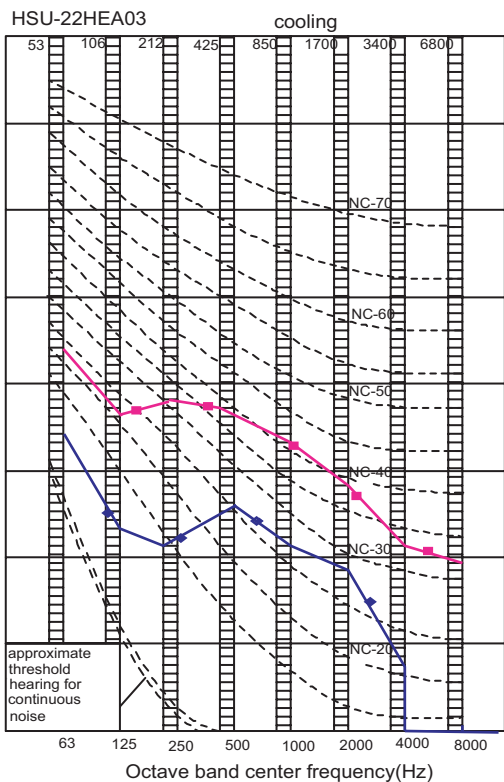
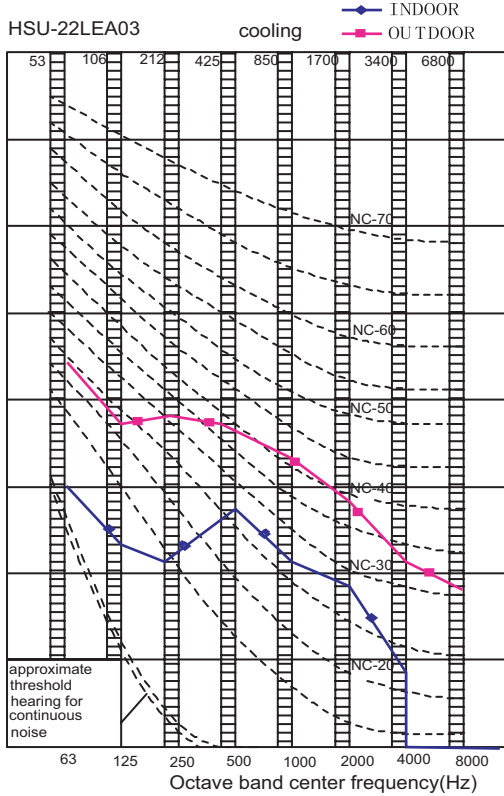
# 10 Sound level

Model	Sound pressure level			Measuring location Location of microphone 	sound power level (cooling/heating)
	230V,50Hz				
	Cooling/heating				
	H	L	SL		
HSU-18LEA03	46	38	36		56
HSU-18HEA03	46.1/46.5	42/42.3	38/38.2		56/57





Model	Sound pressure level			Measuring location Location of microphone 	sound power level (cooling/heating)
	230V,50Hz				
	Cooling/heating				
	H	L	SL		
HSU-22LEA03	50	40	37		60
HSU-22HEA03	50/50.4	40.3/42.2	37/37.1		60/60.4

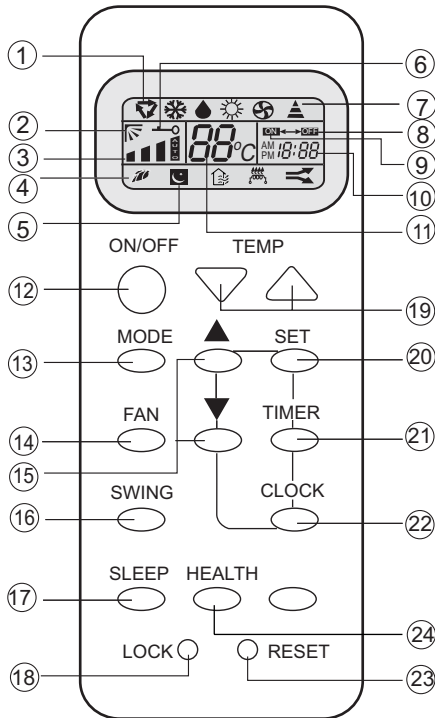


# 11 Accessories

Standard name	HSU-18/22LEA03	HSU-18/22HEA03
Drain hose	1	1
Plastic bag	1	1
screw assembly	1	1
Air purifier	2	2
Change for fresh airtube(suit)	1	1
Mounting plate	1	1
Remote controller	1	1
Installation manual	1	1
Operation manual	1	1
R-03 dry battery	2	2
Steel nail	6	6
Plastic cap	4	4
Cover	1	1
Cushion	4	4
Pipe supporting plate	1	1
Drain-elbow	0	1

# 12 Control systems

## Remote controller



1. Operation mode display

Operation mode	AUTO	COOL	DRY	HEAT	FAN
Remote controller					
Display board					

2. SWING display

3. FAN SPEED display

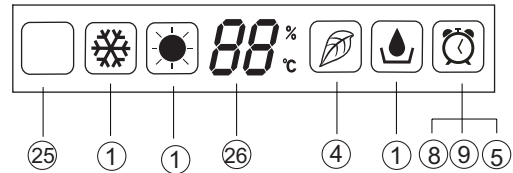
4. HEALTH display

5. SLEEP 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 AUTO run, COOL, DRY and FAN operation

14. FAN  
Used to select fan speed LO, MED, HI, AUTO

15. HOUR  
Used to set clock and timer setting.

16. SWING  
Used to set auto fan direction.

17. SLEEP  
Used to select sleep mode.

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, TIMER ON-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

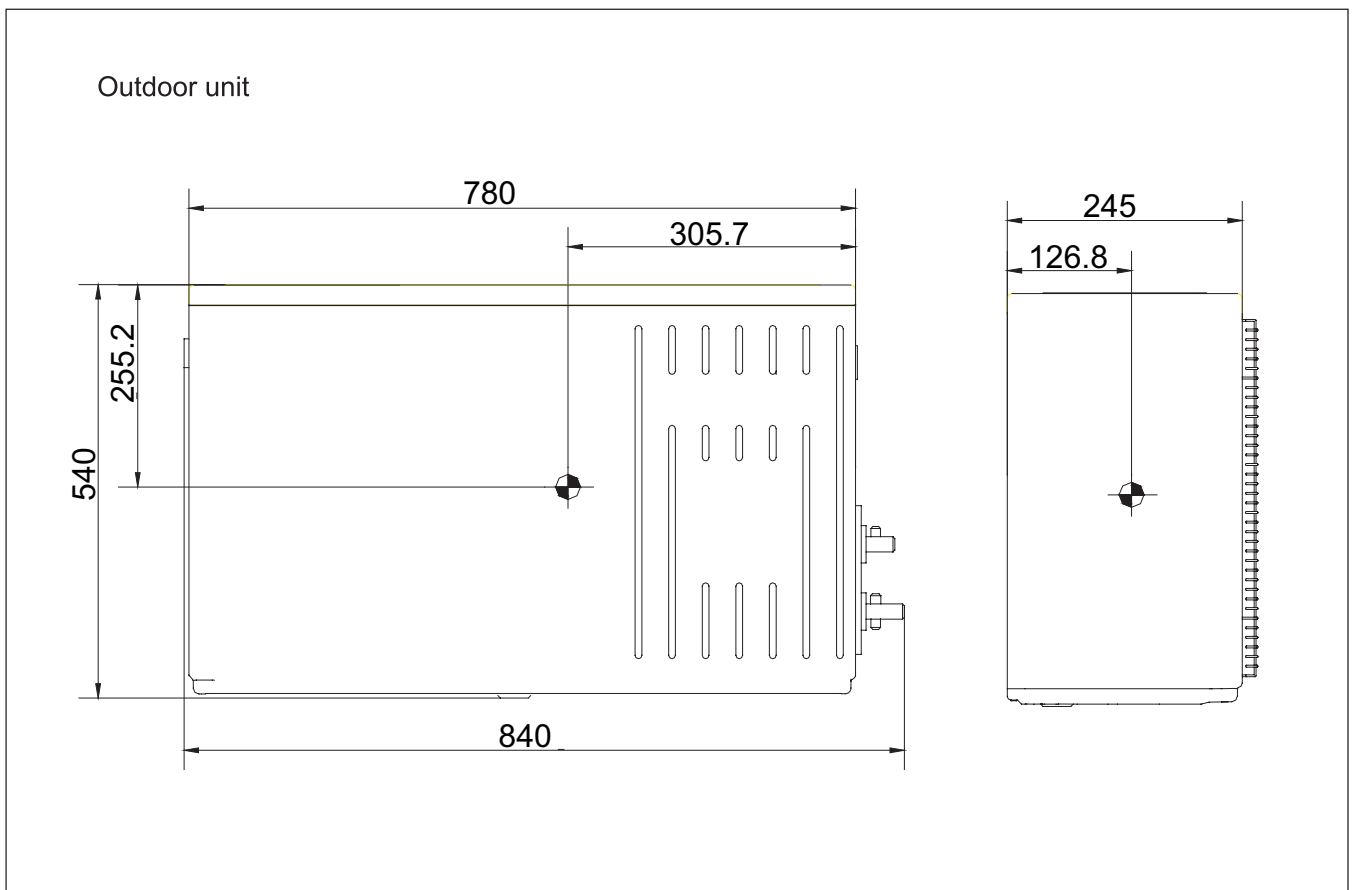
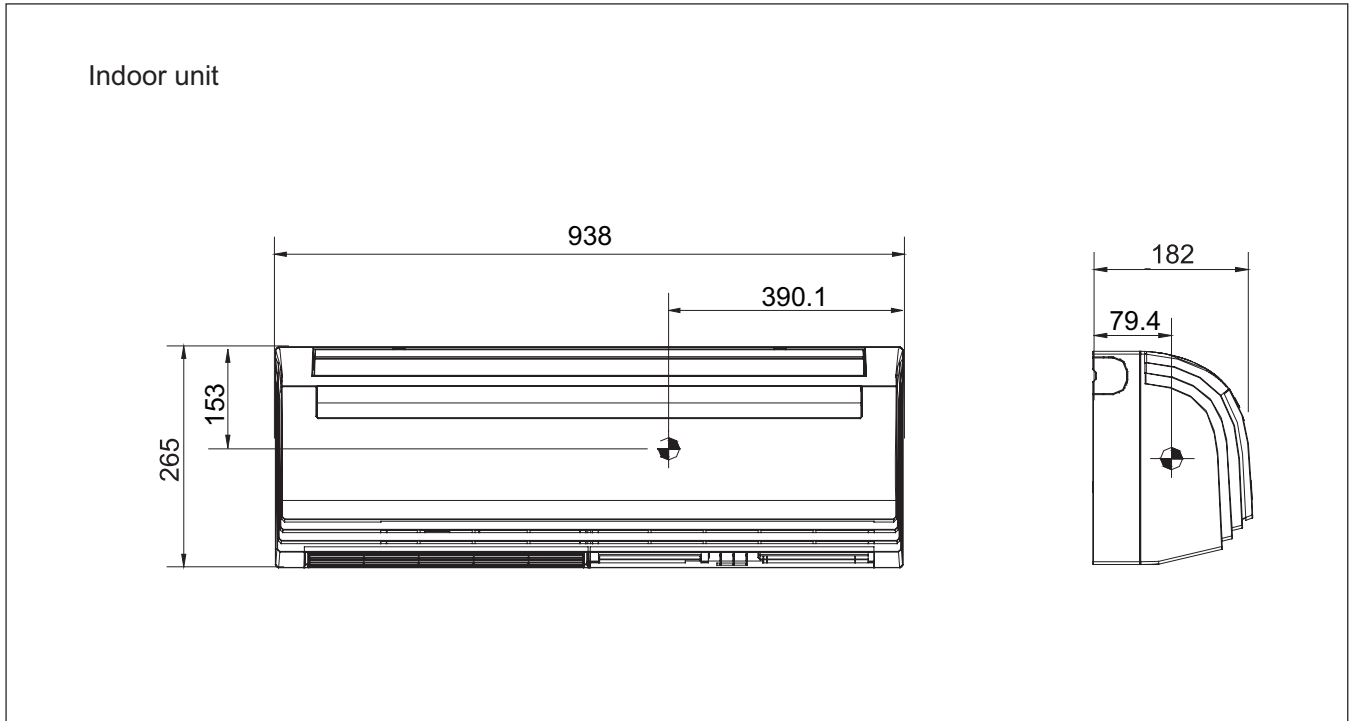
26. Ambient temp.display

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.

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

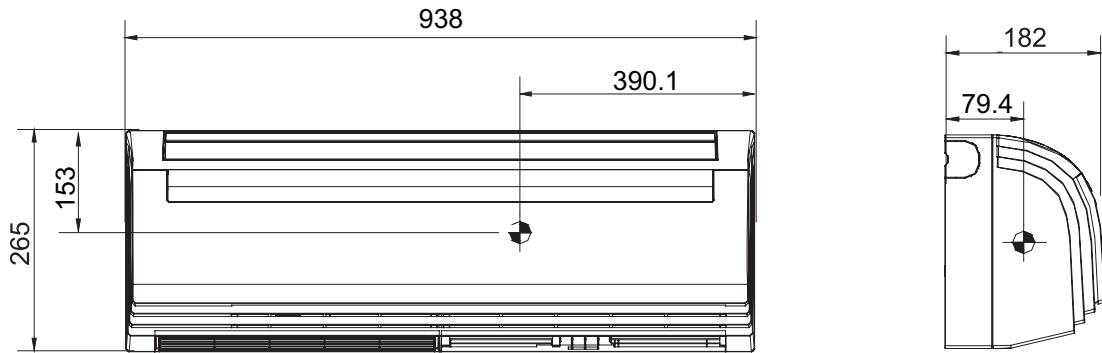
# 13 Center of gravity

HSU-18L/HEA03

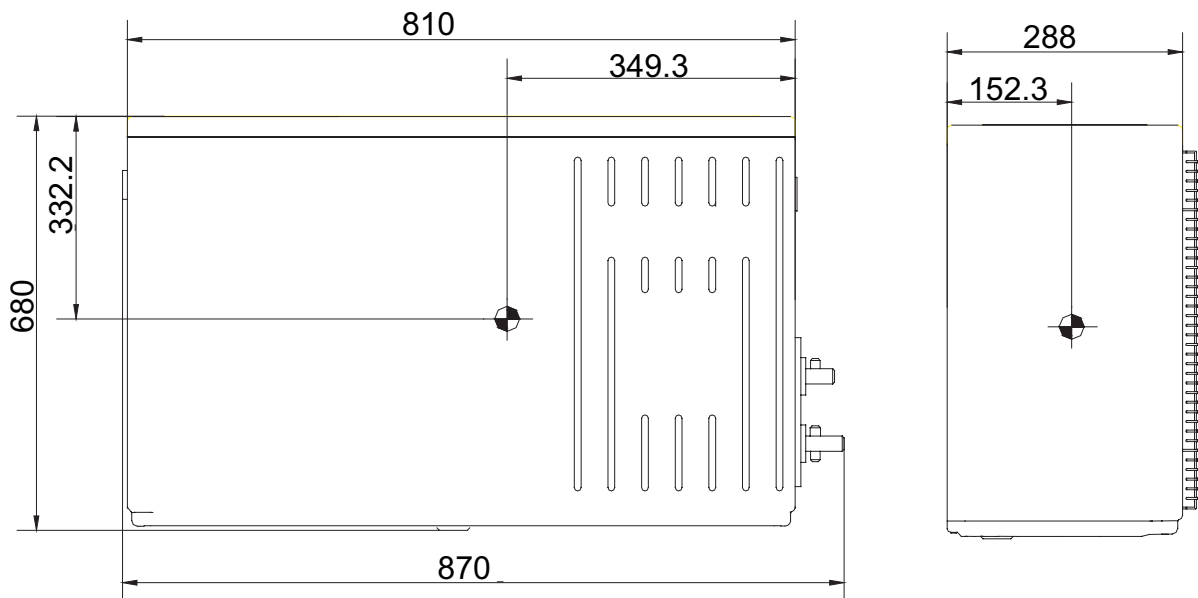


HSU-22L/HEA03

Indoor unit



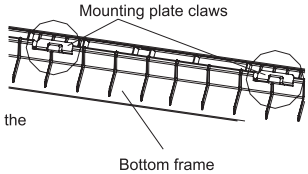
Outdoor unit



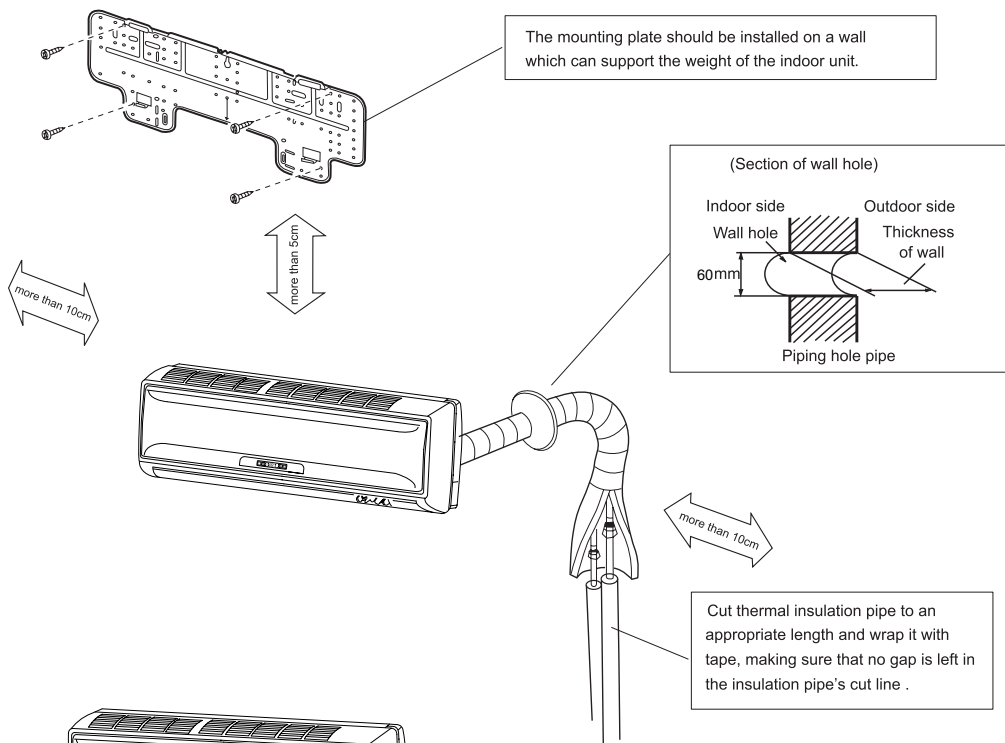
# 14 Installation

## 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 claws . If it is difficult to release ,remove the front panel .



Labels: Mounting plate claws, Bottom frame



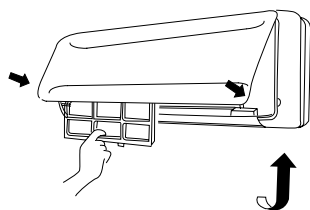
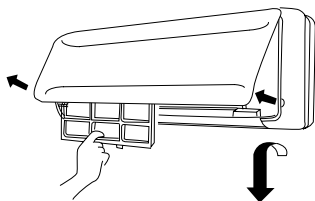
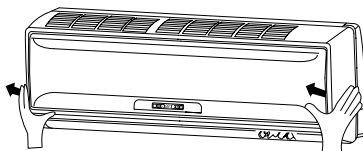
The mounting plate should be installed on a wall which can support the weight of the indoor unit.

(Section of wall hole)

Indoor side, Outdoor side, Wall hole, Thickness of wall, Piping hole pipe, 60mm

more than 10cm, more than 5cm, more than 10cm

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.**

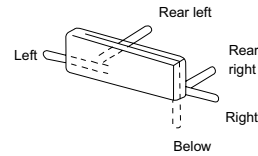
Attach the filter correctly so that the "FRONT" indication is facing to the front. Make sure that the filter is completely fixed behind the stopper. If the right and left filters are not attached correctly, that may cause defects.

Close the inlet grille.

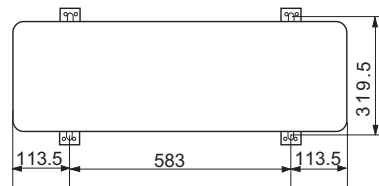
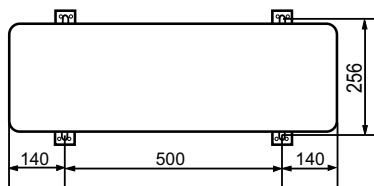
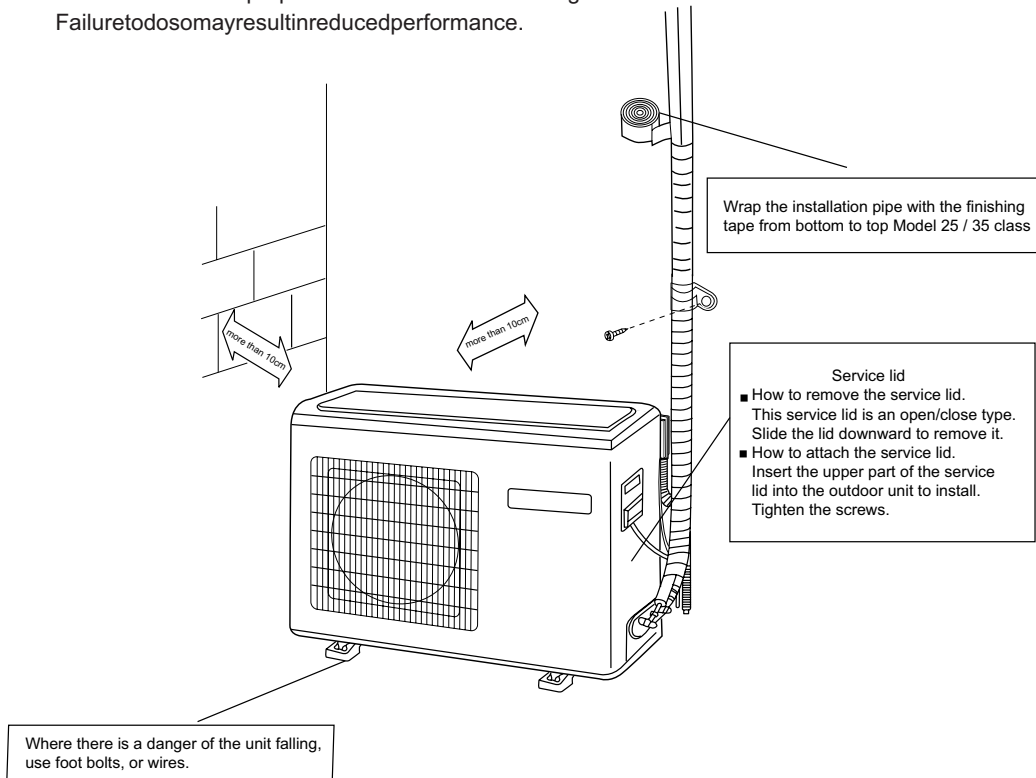
### Outdoor

Model	35 class(18k)	50 class(22k)
Max.allowable length	Cooling only: 20m Heat pump: 25m	Cooling only: 20m Heat pump: 25m
Max.allowable height	15m	15m
Additional refrigerant required for refrigerant pipe exceeding 5m in length	20g/m	60g/m
Gas pipe	O.D. 12.7	O.D. 15.88
Liquid pipe	O.D. 6.35	O.D. 9.52

Arrangement of piping directions



\*Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.



- 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



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