Variable Frequency Condensing Unit Specification

Model：HQSD-150KBI40（a）

Model：HQSD-210KBI41（a）

Model：HQSD-285KBI40（a）

Model：HQSD-360KBI40（a）

Model：HQSD-460KBI40（a）

Customer Signature		
Design	**Examine**	**Approve**

Boyard Systems Co., LTD

Change History

No.	Before the change	After the change	Date
1	/		

1. Summary

The condensing unit designed by China national standard GB/T21363-2018《Positive displacement refrigerant compressor condensing unit》,GB4706.1-2005《Household and similar electric appliance-Safety》.It is suitable for refrigerating refrigerator,supermarket island cabinet,medium and low temperature experimental equipment and special equipment.Applicable to refrigeration equipment using environmentally friendly refrigerants R404A or Equivalent.The ambient temperature range 0~43℃, the evaporation temperature range -40~-5℃,and the condensation temperature range 30~60℃.

Horizontal Frequency Conversion Unit Technical Data

Model			HQSD-150KBI40(a)	HQSD-210KBI41(a)	HQSD-285KBI40(a)	HQSD-360KBI40(a)	HQSD-460KBI40(a)	HQSD-540KBI40(a)
① Nominal Input (W)			1200	1200	1550	1950	2550	2890
Power Supply			220V 50/60 Hz					
Refrigerant			R404A or Equivalent					
Refrigerant Max. (Kg)			1.5	1.8	2.5	3.5	3.5	4.5
② Max Running Current (A)			6	6	10.5	13.5	16.5	20.0
Evap.Temp(℃)			-40～-5℃					
Ambient Temp(℃)			10～43℃					
Compressor (Model)			JHSD150Z312	JHSD150Z312	KHSD203Z312	KHSD300Z312	KHSD300Z312	THSD456Z312
Condenser	Style		Copper tube fin condenser or microchannel condenser					
	Fam Motor	(mm) Diameter	Φ230*2 (EC)	Φ230*2 (EC)	Φ230*3 ((EC))	Φ230*3 ((EC))	Φ230*4 ((EC))	Φ254*4 ((EC))
		(m^3/hr) Air Flow	730*2	730*2	730*3	730*3	730*4	840*4
Basic configuration	Pressure Controller(Mpa)		Diaphragm type high pressure switch Low Pressure Sensor					
	Reservoir		0.6L	0.8L	1.1L			
	Oil separator		BLR/A-W 55833					
	Accumulator		650CC		1200CC	1L		
	Dryer filter		083S					
	Liquid Valve		1/4					
	Variable frequency control function		Compressor frequency control, electronic expansion valve control, condensing fan control, defrosting control, high and low pressure protection, spray control, exhaust temperature protection, current protection and fault code output.					
(mm) Pipe	Gas Inlet Diam OD		Φ12.7(1/2″)			Φ15.88(5/8″)		
	Liquid Outlet OD		Φ9.53(3/8″)					
(mm) Out Dimension	(mm) Length		680	790	940	1145	1350	1350
	(mm) Width		600	600	600	600	600	600
	(mm) Height		251					285
(Kg) Weight			29.5	33.5	47	53	62	66
(dB) Noise value			58	60	61	59	63	64
(W) Capacity	(℃) Evap Temp		Ambient Temp:32℃ Sub-cooling 0℃					
	-40		460	590	840	990	1320	1420
	-35		570	720	1040	1260	1570	1700
	-30		720	910	1250	1600	2000	2150
	-25		900	1150	1500	1950	2400	2600
	-20		1110	1410	1890	2450	2960	3240
	-15		1340	1700	2240	3050	3200	3700
	-10		1580	2000	2650	3650	4300	4720
	-5		1820	2320	2950	4230	5150	5600
Wiring Capacity	Leak Protector	(A) Rated Current	15	15	20	20	20	20
		(mA) Leak Current	30	30	30	30	30	30
	(mm^2) Diameter	L≤10m	2.0	2.0	4.0	4.0	4.0	4.0
		10<L≤20m	2.5	2.5	6.0	6.0	6.0	6.0
		20<L≤30m	2.5	2.5	6.0	6.0	6.0	6.0

①Refrigerating capacity test condition; ②The biggest running current test condition。

(GB/T 21363-2008)TEST CONDITION:

	TEST CATION	AMBIENT TEMP.	Sub-cooling	RETURN GAS TEMP.	EVAP. TEMP.	TESTING POWER SUPPLY
①	STANDARD TEST CONDITIONS	32℃	0℃	18℃	-7℃	220V～50HZ
②	OVERLOAD RUNNING	43℃	0℃	18℃	0℃	198V～50HZ

①When the unit is used in freezing condition, it is recommended to add refrigeration solenoid valve and use negative pressure shutdown scheme;When used in refrigeration conditions, it is recommended to add refrigeration solenoid valve;
②Refrigerating capacity test condition;
③When the unit filling refrigerant exceeds the maximum filling amount, the quality of filling chilled oil should be confirmed with our company.
④The biggest running current test condition;
⑤When the ambient temperature is lower than 10℃, the condensation temperature control needs to be added;
⑥The position of noise detection point is shown in Figure 1.

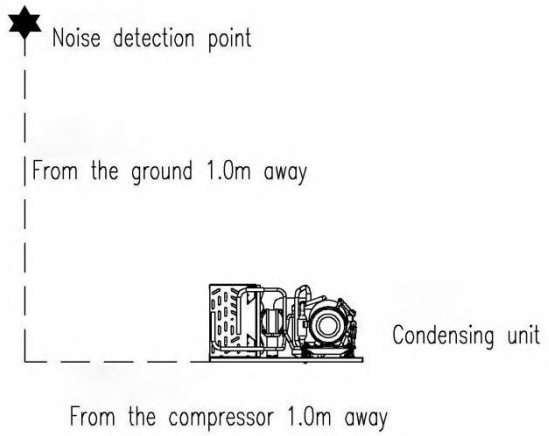

Figure 1

3. Attention:

1.Vacuum should be pumped to within 20Pa (it is recommended to pump below 5Pa), and the low pressure end pressure pressure should not exceed 1.5 Mpa (gauge pressure) to avoid damage to the low-pressure parts;
2.The start and stop times of the compressor should not exceed 6 times per hour, and the interval between each time should be more than 5 minutes;
3.When the unit is charged with refrigerant for the first time (charge from the high-pressure end), waiting for the high and low pressure balance, and then start debugging;
4.Condenser cleaning is recommended once a month.When there is catkin season or bad working places, the frequency of cleaning. When cleaning, you can use a long brush to wipe, or blow to clean the dust of the heat exchanger with compressed air. Don't rinse with tap water.
5.If the refrigerant filling amount exceeds the maximum filling amount of the unit, we shall negotiate with our company separately;
6.When the unit is used in freezing condition, it is recommended to add refrigeration solenoid valve and use negative pressure shutdown scheme;When used in refrigeration conditions, it is recommended to add refrigeration solenoid valve;
7.During the transportation of the unit, the foam block should be placed under the compressor to avoid the damage caused to the unit pipeline during the transportation process. After the equipment reaches the terminal, it should be removed before use.

4.The Period of Validity

This document shall be effective after the date confirmed by your company.If any change is made it must be reconfirmed to take effect, and the previous specification will automatically become invalid.

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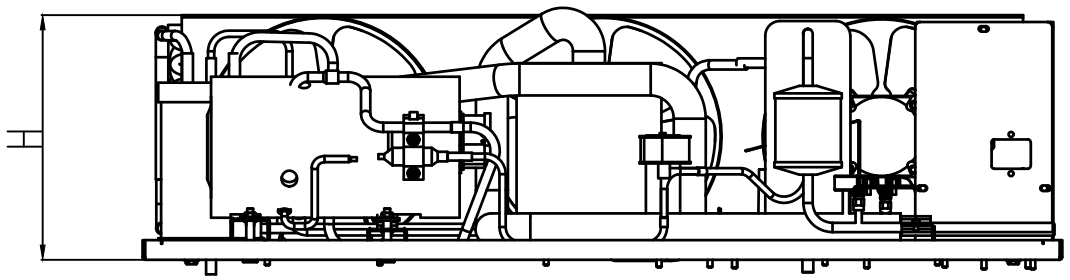
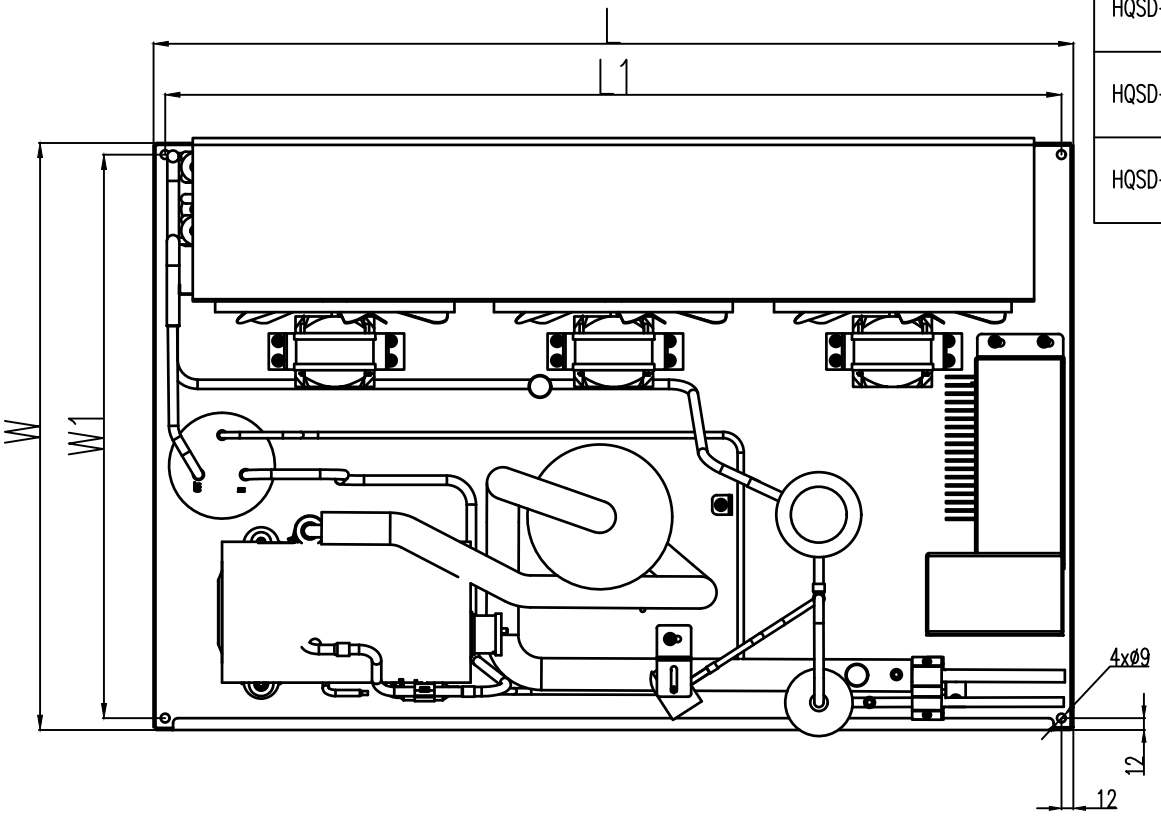
The contour map





Modle	Compress	(mm)			(mm)	
		L	W	H	L1	W1
HQSD-150KBI40(a)	JHSD150Z312	680	600	251	656	576
HQSD-210KBI41(a)	JHSD150Z312	790	600	251	766	576
HQSD-285KBI40(a)	KHSD203Z312	940	600	251	916	576
HQSD-360KBI40(a)	KHSD300Z312	1145	600	251	1121	576
HQSD-460KBI40(a)	KHSD300Z312	1350	600	251	1326	576
HQSD-540KBI40(a)	THSD456Z312	1350	600	285	1326	576

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Electrical Schematic Diagram