

## YSH400C1G 100 Specification

产品规格书 Specification		备注 Notes
标准型号 Standard model	YSH400C1G-100	基础型号 Basic model
拓展型号 Extended model		
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修订记录 Revision record			
版本 Version	修订人 Reviser	描述 Description	日期 Date
REV002			12/16/2019

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审核人 Checked

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日期 Date

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批准人 Approved

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日期 Date

\*1 规格参数 Specifications

1.1 基本性能指标 Basic Performance	
型号 Model	YSH400C1G-100 (including extended model)
型式 Type	低压腔式全封闭涡旋压缩机 LP Cavity Hermetic Scroll Compressor
应用 Application	热泵热水器 Heating pump
制冷剂 Refrigerant	R410A
排量 Displacement m <sup>3</sup> /h (cm <sup>3</sup> /rev)	25.3 (145.4)
制热量 Heating Capacity(W) <sup>(a)</sup>	52040
制冷量 Cooling Capacity (W) <sup>(a)</sup>	39500
输入功率 Input Power (W) <sup>(a)</sup>	12540
运行电流 Running Current (A) <sup>(a)</sup>	22
制热能效比(HeatingCOP) <sup>(a)</sup>	4.15
制冷能效比(CoolingCOP) <sup>(a)</sup>	3.15
电源 Power(V/PH/Hz)	380~420V/3~/50Hz
最低运行电压 Lowest Running Voltage (V)	342
最高运行电压 Highest Running Voltage (V)	462
堵转电流 LRA (A)	148.5
最大运行电流 MOC <sup>(b)</sup> (A)	32.5
额定转速 Rated Speed (r/min) <sup>(c)</sup>	2900
压缩机重量 (含油) (kg) Compressor Weight With Oil	90
润滑油型号 Oil type	POE (32cst)
初次注油 First Charge(L)	3
重新注油 Recharge(L)	2.85
油循环率 Oil Circulation (%) <sup>(f)</sup>	<1
额定噪音(声功率级) <sup>(g)</sup> (dB) Rated Sound (Sound Power)	75
运行范围内最大运行噪音 (声功率级) (dB) Max Running Sound (Sound Power)	80
最大振动位移值 Peak-Peak (mm) <sup>(h)</sup> Max Vibration Displacement Peak-Peak	<0.12
最大水分含量 Maximum Moisture (mg)	<500
最大杂质含量 Maximum Impurity (mg)	< 100
最低启动电压 LVS (V) <sup>(d)</sup>	323
最大负载运行时最低电压 MOV (V) <sup>(e)</sup>	342
启动电容 μf/V Start Capacitor	-
启动继电器 Start Relay	-
运行电容 μf/V Run Capacitor	-

1.2 电气参数 Motor Parameters	
电机形式 Motor Type	感应电动机 Induction motor
电机级数 Pole	2
电机绝缘温度℃ Motor Insulation Temperature	130 (B Class)
端子之间电阻 UV(CS) Terminals Resistance UV(CS) ( $\Omega$ , 25℃)	0.7 (± 10%)
端子之间电阻 UW(CR) Terminals Resistance UW(CR) ( $\Omega$ , 25℃)	0.7 (± 10%)
端子之间电阻 VW(SR) Terminals Resistance VW(SR) ( $\Omega$ , 25℃)	0.7 (± 10%)
绝缘耐压 Insulation Voltage (V)	2000
泄露电流 Leakage Current (mA)	<5
绝缘电阻 Insulation Resistance (M $\Omega$ )	>20
接地电阻 Ground Resistance ( $\Omega$ )	<0.1
1.3 安全运行限制 Safe Running Conditions	
气密性检漏压力 Air tightness Test (Mpa)	3.8
最大运行压力 Highest Running Pressure	
高压侧 High Side (Mpa) 低压侧 Low Side (Mpa)	H4.3/L2.0
压缩机内空余容积(不含油)Spare volume (without oil)	
高压侧 High Side(L) 低压侧 Low Side (L)	H6.3/L0.9
最大冷媒充注量(kg)	2.5x 油量 Oil Weight
排气温度上限 Max Discharge Temperature	125℃
启停周期 Compressor Start-off Revolution	Above 3min

性能指标工况说明 Running Condition Notes:

工况 Condition	工况说明 Notes
a	第一额定点 Test Condition: First Rated Running Point
b	最大负载工况 (运行范围右上角) @90%额定电压 Maxload condition (Right up corner of envelop) @90%rated voltage
c	第一额定点 Test Condition: First Rated Running Point
d	排气压力, 吸气压力=40℃制冷剂饱和压力 Discharge & Suction Pressure= Refrigerant 40℃ Saturation Absolute Pressure
e	最大负载工况 (运行范围右上角) Maxload condition (Right up corner of envelop)
f	第一额定点 Test Condition: First Rated Running Point

g	第一额定工况，A 加权声功率级平均值 First Rated Point, A class average sound power
h	第一额定工况，运行时压缩机外壳法向最大位移 First Rated Point, Maximal Shell Running Displacement Under Normal Direction

\*3 额定工况，性能与噪音值需在额定试验工况运行 48 小时磨合后进行测试  
Rated Condition, Performance And Sound Test Needed 48hrs Break In Running

序号 SN	工况说明 Notes
额定工况 Rated condition ET/CT/SH/SC/AT°C	7.2/54.4/11.1/8.3/35°C
制冷/制热量偏差 Capcitiy deviation	Min -5%
功率偏差 Power deviation	Max +5%
能效偏差 COP deviation	Min -5%

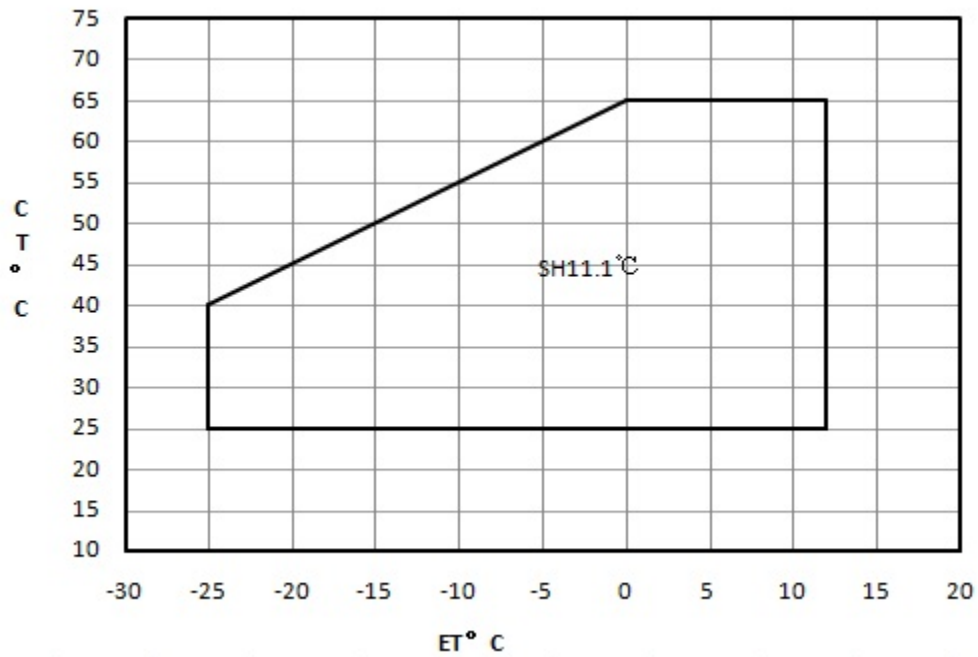
\*4 内置保护 Internal Protection Parts

保护方式	配置	数值
内置过载保护器 Internal protector Protection	有	-
内置压力保护器 Internal Pressure Release Valve Protection	有	575-625 (PSI)

\*5 压缩机附件 Standard Configuration:

YSH400C1G-100			
附件 Accessory	名称 Description	料号 P/N	数量 PCS
1	脚垫 Grommet	070-0020-00	4
2	平垫片	GB/T95 10	8
3	锁紧螺母	GB /T 889.1 M10	8
4	弹性垫片	GB 93-87 10	8
5			

\*6 压缩机运行范围 Compressor Running Envelop



\*7 压缩机性能参数表 Compressor Performance Sheet

		-20	-15	-10	-5	0	5	10
Cap w	65	6597	11004	15385	19955	24932	30532	36970
	55	11800	16149	20627	25447	30828	36985	44134
	50	13677	18038	22604	27590	33213	39688	47233
	45	15225	19624	24305	29483	35374	42195	50162
	40	16557	21022	25844	31241	37427	44620	53036
	35	17789	22346	27336	32978	39487	47078	55970
	25	20409	25229	30637	36849	44082	52551	62474
Power w	60	15806	15604	15391	15183	14993	14839	14733
	55	13924	13735	13538	13349	13181	13050	12971
	50	12300	12128	11951	11784	11641	11537	11487
	45	10894	10742	10588	10446	10331	10257	10241
	40	9663	9535	9407	9294	9209	9170	9190
	35	8566	8466	8367	8285	8235	8233	8292
	25	6608	6571	6541	6533	6562	6643	6791

基于运行范围内的吸气过热，热泵/空调系列过冷度 8.3°C，冷藏/冷冻系列过冷度 0°C。

Superheat based on envelop, subcooling of heating pump and air condition is 8.3°C ,subcooling of refrigeration is 0°C.

**\*8 注意事项 Notes**

1. 压缩机不得抽真空、真空运行、压缩空气、空转或逆转；

The compressor should not be used to be operated under vacuum, compress air, run without load or reverse;

2. 压缩机吸排气塞打开后，放置时间不超过 15 分钟；

The compressor should not be opened in the atmosphere for more than 15 minutes;

3. 压缩机连续运行需 10 分钟以上，停机再次启动间隔 3 分钟以上，不得频繁启停，以免压缩机内润滑油随冷媒被大量地排出压缩机；

The compressor continuous running time should be more than 10minutes, the duration between two start-ups shall exceed three minutes, the compressor should not start/stop frequently to avoiding oil being pumped together with the refrigerant;

4. 压缩机启动前，排气压力-吸气压力 $\leq 0.3\text{Mpa}$ ；

Before starting, discharge pressure – suction pressure $\leq 0.3\text{Mpa}$ ;

5. 运行电压范围，应在额定电压的 $\pm 10\%$ 以内；

The running voltage shall be within  $\pm 10\%$  of the rated voltage;

6. 低温工况的应用，由于大量冷媒可能会迁移到压缩机腔体内，沉积在压缩机底部，对于压缩机的启动会造成润滑及回油不良，建议加装曲轴加热装置；

In low temperature application, because lots of refrigerant may migrate to the compressor cavity, deposit at the bottom of the compressor, it may cause the problem of lubrication and oil return, it is better to install the crankshaft heating device;

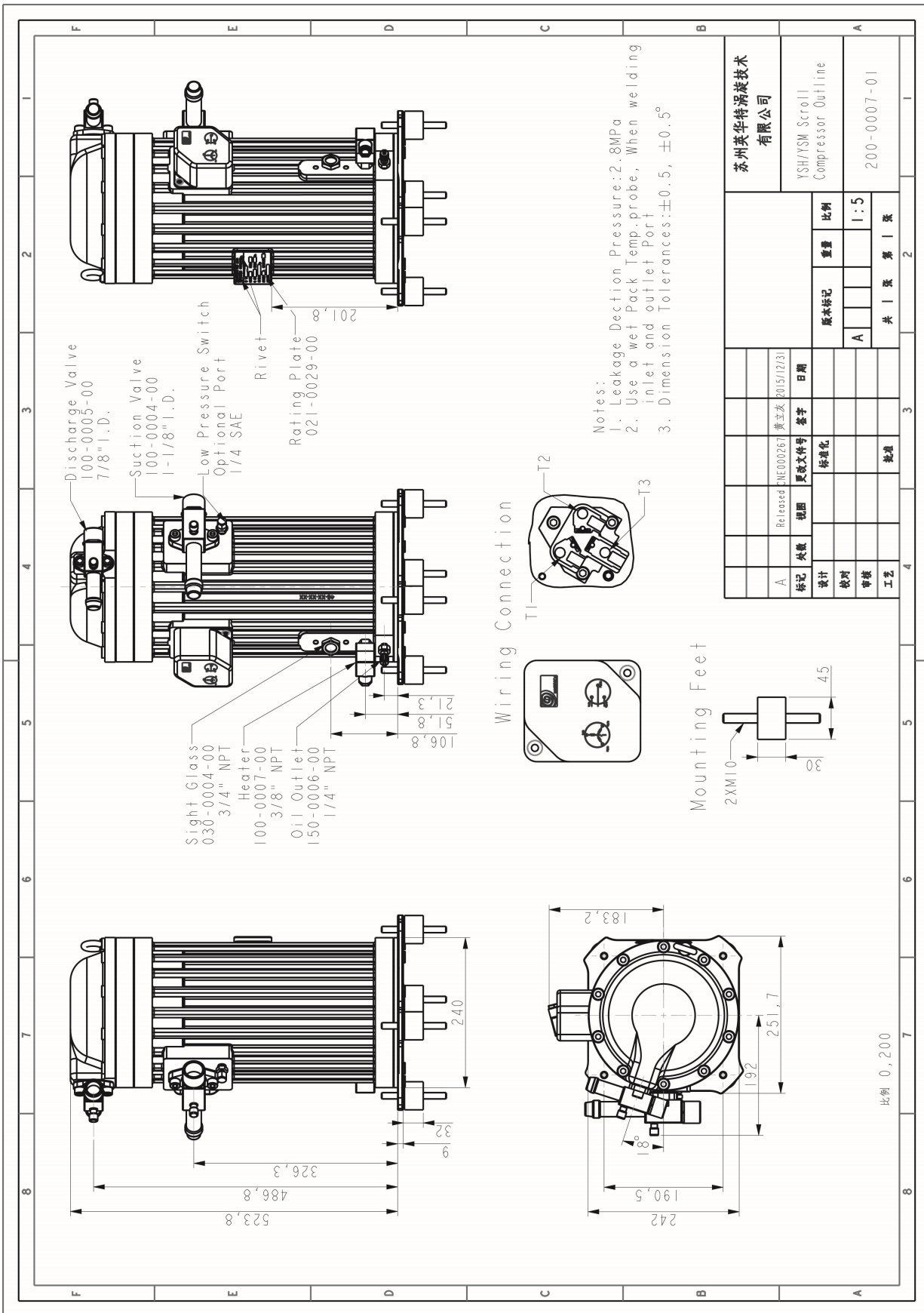
7. 系统应配置必要的压力、温度、过流、缺相等保护及回油装置等；

The system should set basic protection of pressure, temperature, over-current, phase-loss and oil return device etc.

8. 压缩搬运，安装过程中不得平放、倒置；

Do not put the compressor horizontally or put it upside down.

\*10 压缩机外形图 Compressor Outline Dimensions



Notes:  
 1. Leakage Dection Pressure: 2.8MPa  
 2. Use a wet Pack Temp. probe, When welding inlet and outlet Port  
 3. Dimension Tolerances:  $\pm 0.5$ ,  $\pm 0.5^\circ$

苏州英华特涡旋技术有限公司		YSH/YSM Scroll Compressor Outline	
图号	021-0029-00	图名	YSH/YSM Scroll Compressor Outline
设计	陈立东	日期	2015/12/31
校对		审核	
工艺		批准	
原图比例	1:5	原图比例	1:5
重量		重量	
共 1 张	第 1 张	共 1 张	第 1 张

比例 0,200