



产品规格书 Specification		备注 Notes
标准型号 Standard model	YH720T1G-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
A	JXW		2019/8/28

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审核人 Checked

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日期 Date

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批准人 Approved

\_\_\_\_\_  
日期 Date



\*1 规格参数 Specifications

1.1 基本性能指标 Basic Performance	
型号 Model	YH720T1G-100
型式 Type	低压腔式全封闭涡旋压缩机 LP Cavity Hermetic Scroll Compressor
应用 Application	空调应用 AIR condition
制冷剂 Refrigerant	R407C
排量 Displacement m <sup>3</sup> /h (cm <sup>3</sup> /rev)	68.2 (391.8)
制冷量 Capacity (W) <sup>(a)</sup>	68356
输入功率 Input Power (W) <sup>(a)</sup>	20547
运行电流 Running Current (A) <sup>(a)</sup>	36.7
能效比(COP) <sup>(a)</sup>	3.32
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)	418
堵转电流 LRA (A)	266
最大运行电流 MOC <sup>(b)</sup> (A)	51.5
额定转速 Rated Speed (r/min) <sup>(c)</sup>	2900
压缩机重量 (含油) (kg) Compressor Weight With Oil	104
润滑油型号 Oil type	POE (32cst)
压缩机加油量 Oil Charge (L)	
初次注油 First Charge	5.2
重新注油 Recharge	5.0
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)	78
运行范围内最大运行噪音 (声功率级) (dB) Max Running Sound (Sound Power)	85
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)	< 1100
最大杂质含量 Maximum Impurity (mg)	< 140
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
1.2 电气参数 Motor Parameters	
电机形式 Motor Type	三相感应电动机 3ph 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 Terminals Resistance (Ω, 25℃)	0.46 ( ± 10%)

绝缘耐压 Insulation Voltage (V)	2000
泄露电流 Leakage Current (mA)	<5
绝缘电阻 Insulation Resistance (MΩ)	>20
接地电阻 Ground Resistance (Ω)	<0.1
电器盒防护等级 protection grades	IP54
<b>1.3 安全运行限制 Safe Running Conditions</b>	
气密性检漏压力 Air tightness Test (Mpa)	3.8
<b>最大运行压力 Highest Running Pressure</b>	
高压侧 High Side (Mpa)	3.0
低压侧 Low Side (Mpa)	2.0
<b>压缩机内空余容积(不含油)Spare volume (without oil)</b>	
高压侧 High Side(L)	
低压侧 Low Side (L)	
最大冷媒充注量(kg)	2.5×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:

- a) 试验工况：第一额定点；  
Test Condition: First Rated Running Point;
- b) 试验工况：蒸发/冷凝/过热/过冷/环境温度 11.9/65.5/11.9/8.3/46.1℃,运行电压为额定电压90%；  
Test Condition: ET/CT/SH/SC/AT 11.9/65.5/11.9/8.3/46.1℃, 90% Rated Voltage;
- c) 试验工况：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 Pressure & Suction Pressure= Refrigerant 40℃ Saturation Absolute Pressure
- e) 过负荷试验工况：蒸发/冷凝/过热/过冷/环境温度 11.9/65.5/11.9/8.3/46.1℃；  
Running Over Load Condition: ET/CT/SH/SC/AT11.9/65.5/11.9/8.3/46.1℃
- f) 第一额定点工况，油循环率；  
First Rated Point, Oil circulation
- g) 第一额定点工况，A 加权声功率级平均值；  
First Rated Point, A class average sound power
- h) 第一额定点工况，运行时压缩机外壳法向最大位移；  
First Rated Point, Maximal Shell Running Displacement Under Normal Direction

\*2 额定工况，制冷量和能效比不低于名义值 95%，功率不高于名义值 105% (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, Allowed capacity and cop ≥95% Rated, power≤105 Rated (Performance And Sound Test Needed 48hrs Break In Running)

序号 SN	参数 Parameter	第一额定点 First Rated Condition
1	蒸发温度 ET (°C)	7.2°C
2	冷凝温度 CT (°C)	54.4°C
3	环境温度 AT (°C)	35.0 °C
4	回气温度 RG (°C)	18.3°C
5	过热 SH (°C)	11.1
6	过冷 SC (°C)	8.3

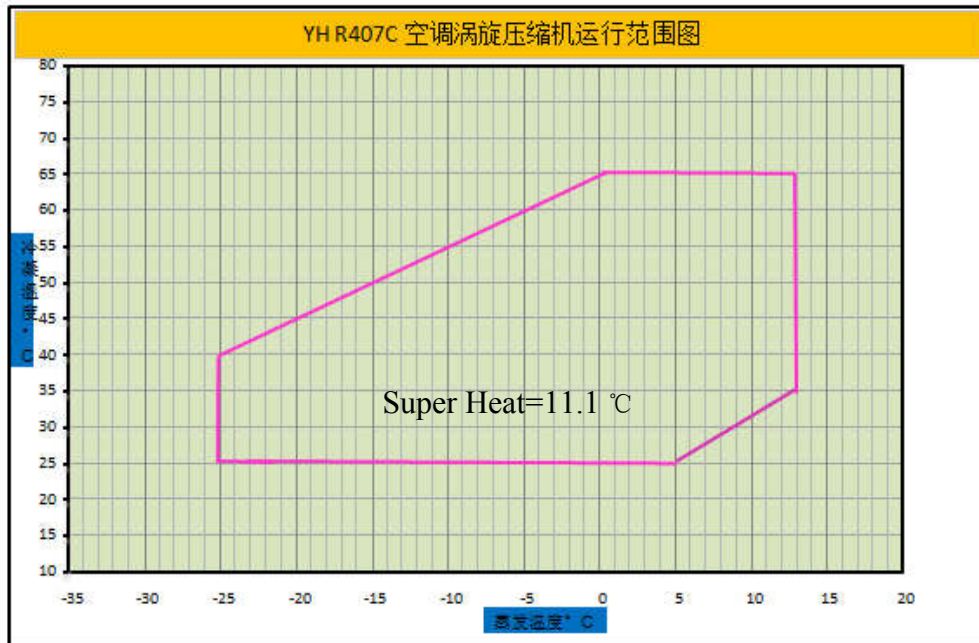
\*3 内置保护 Internal Protection Parts

- 内置过载保护器 Internal protector Protection
- 内置压力保护器 Internal Pressure Release Valve Protection  
打开压力 Pressure Release Valve Open Range: 2.76—3.10Mpa

\*4 压缩机附件 Standard Configuration:

名称 Description	图号 P/N	规格 Specifications	数量 PCS
T 型接头 T-Block	070-3009-00	/	1
格兰头 Cable gland	070-3013-00	M40×1.5	1
脚垫 Mounting Kits	070-3016-00	/	4
导套 Guide ring	010-0014-00	/	4
底脚螺钉 Screws for Mounting Kits	GB/T5783-2000	M8×70 8.8 级发黑处理	4
螺母 nut	GB/T6170-2000	M8 发黑处理	4
底脚螺钉垫片 Nord-lock group for Mounting Kits	GB/T96.1 10	/	8
防松垫片 Nord-lock group	GB/T862.2	5MM	1
T 型接头螺钉 T-Block Screws	050-3027-00	六角法兰面螺栓 #10-32UNF	4

\*5 压缩机运行范围 Compressor Running Envelop



\*6 压缩机性能参数表 Compressor Performance Sheet

Invotech Scroll YH720T1G-100 Compressor Performance Sheet 英华特 YH720T1G-100 压缩机性能参数表								
		-20	-15	-10	-5	0	5	10
Cap W 制冷量 W	65					43395	53674	65406
	55			35063	43087	52419	62936	74515
	50		30912	38050	46425	55913	66392	77737
	45	26555	32971	40550	49171	58710	69045	80051
	40	27687	34633	42548	51310	60795	70880	81443
	35	28512	35884	44031	52828	62154	71885	
	25	29189	37097	45390	53943	62635		
Power W 功率 W	65					24999	25259	25531
	55			19503	19798	20044	20301	20628
	50		17326	17650	17895	18121	18387	18752
	45	15409	15771	16024	16227	16439	16720	17130
	40	14072	14341	14529	14696	14901	15206	15668
	35	12757	12938	13068	13206	13413	13747	
	25	9802	9830	9865	9967	10196		

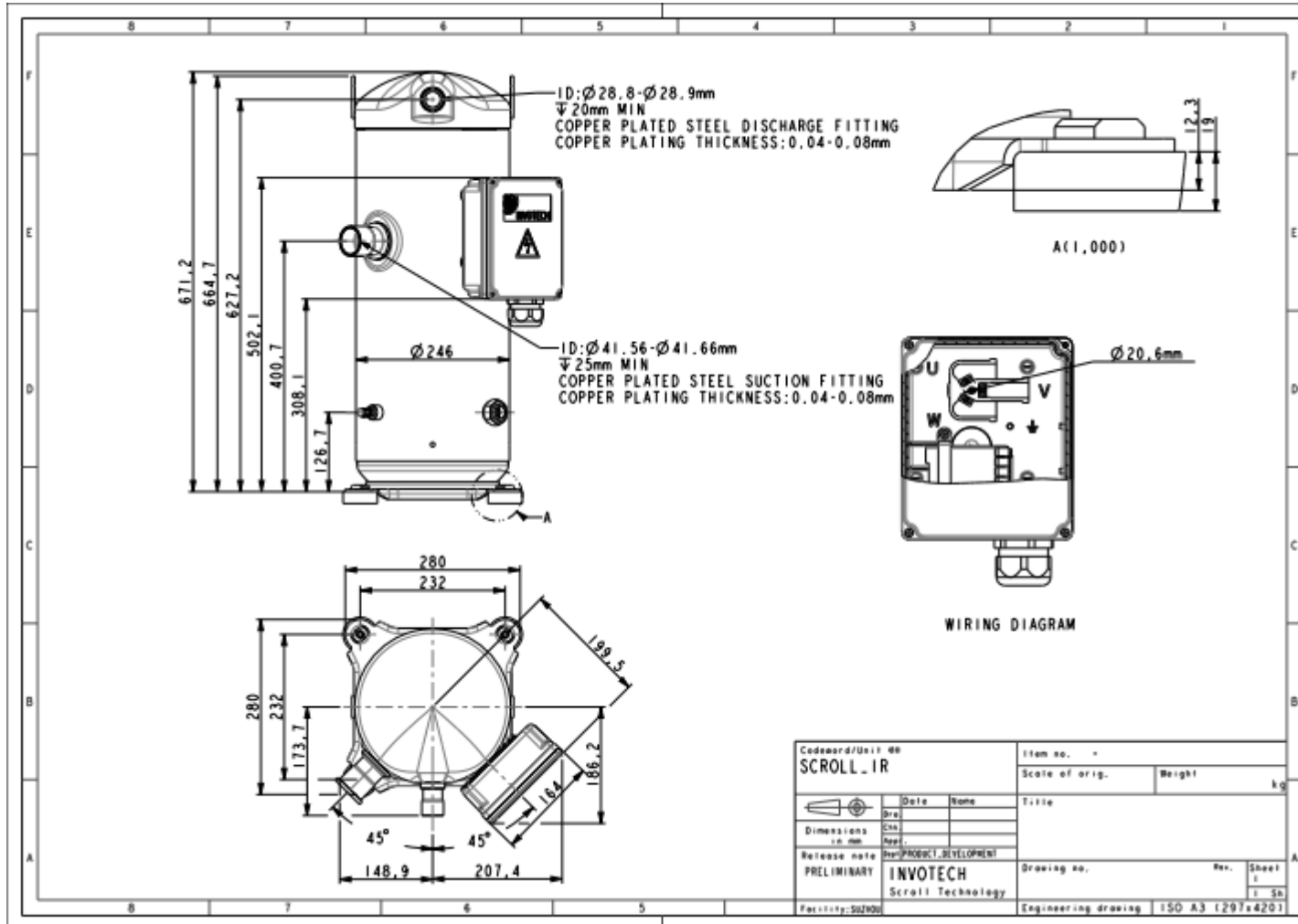
基于 11.1°C 吸气过热度, 8.3°C 过冷度, 环境温度 35°C

Cap And Power Is Under 11.1°C Superheat, 8.3°C sub cooling, ambient temperature 35°C

\*7 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.

\*8 Compressor Outline Dimensions



\*9 Wiring Diagram

