



产品规格书 Specification		备注 Notes
标准型号 Standard model	YW650C1G-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		2019/7/24
B	JXW	中英文版 Chinese and English versions	2019/8/28

审核人 Checked

日期 Date

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	YW650C1G-100
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 ³ /h (cm ³ /rev)	46.2 (265.4)
制热量 Heating Capacity (W) ^(a)	85873
输入功率 Input Power (W) ^(a)	22019
运行电流 Running Current (A) ^(a)	39.0
能效比(COP) ^(a)	3.89
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 ^(b) (A)	55
额定转速 Rated Speed (r/min) ^(c)	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 (%) ^(f)	<1%
额定噪音(声功率级) ^(g) (dB) Rated Sound (Sound Power)	82
运行范围内最大运行噪音 (声功率级) (dB) Max Running Sound (Sound Power)	89
最大振动位移值 Peak-Peak (mm) ^(h) 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) ^(d)	323
最大负载运行时最低电压 MOV (V) ^(e)	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
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)	4.3
低压侧 Low Side (Mpa)	2.0
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)	
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:

- 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 15/65/11.9/8.3/46.1℃,运行电压为额定电压 90%；
Test Condition: ET/CT/SH/SC/AT 15/65/11.9/8.3/46.1℃, 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 15/65/11.9/8.3/46.1℃；
Running Over Load Condition: ET/CT/SH/SC/AT15/65/11.9/8.3/46.1℃
- 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，制热量和能效比不高于名义值 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)	5°C
2	冷凝温度 CT (°C)	55 °C
3	环境温度 AT (°C)	35.0 °C
4	回气温度 RG (°C)	16.1°C
5	过热 SH (°C)	11.1
6	过冷 SC (°C)	8.3

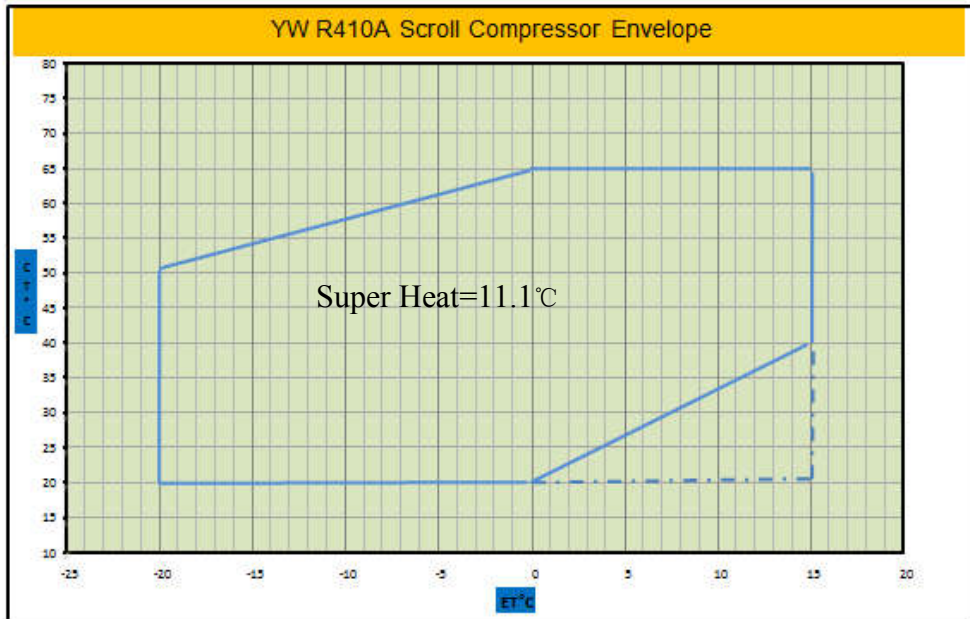
*3 内置保护 Internal Protection Parts

- 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: 3.97—4.31Mpa

*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 YW650C1G-100 Scroll compressor performance sheet 英华特 YW650C1G-V100 压缩机性能参数表									
		-20	-15	-10	-5	0	5	10	15
Heating Capacity W (Cooling Capacity + Power)	65					68697	78395	89609	102467
	55		48781	55972	64409	74222	85873	98492	113207
	50	43033	49626	57395	66470	76980	89055	102824	118415
	45	43498	50574	58887	68565	79738	92535	107085	123518
	40	44104	51629	60450	70696	82496	95980	111277	128516
	35	44853	52792	62086	72865	85258	99393	115401	
Power W 功率 W	65					25897	26597	27260	27891
	55		19354	20121	20855	21561	22019	22910	23565
	50	16947	17700	18424	19126	19810	20481	21147	21811
	45	15565	16263	16943	17610	18270	18928	19590	20262
	40	14353	14994	15627	16258	16892	17535	18193	18870
	35	13260	13841	14426	15019	15626	16252	16903	
	25	11232	11691	12173	12685	13231	13817		

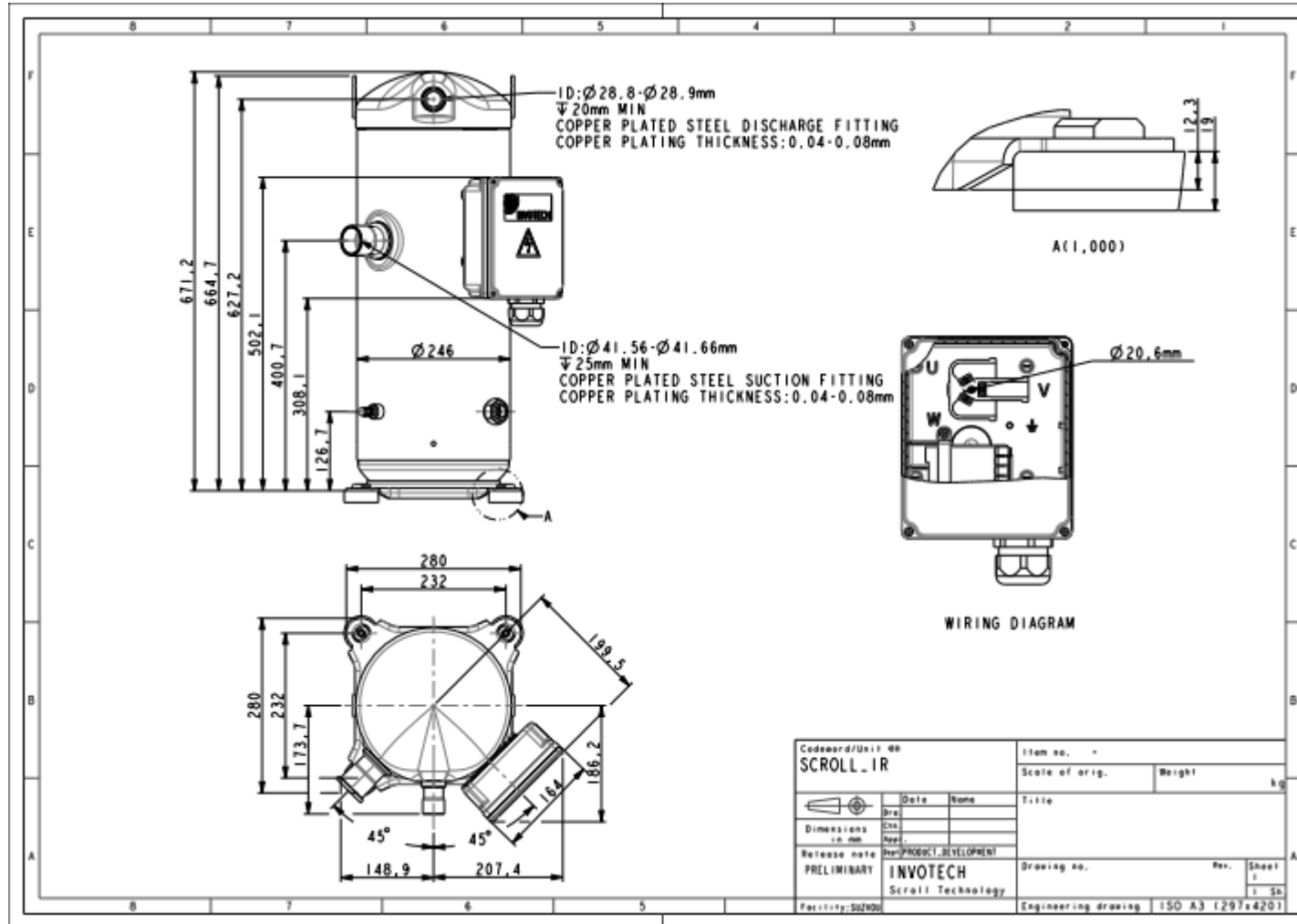
基于 11.1°C 吸气过热度, 8.3°C 过冷度, 环境温度 35°C

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

