



产品规格书 Specification		备注 Notes
标准型号 Standard model	YH89T1-100	基础型号 Basic model
拓展型号 Extended model		
拓展型号 Extended model		

修订记录 Revision record			
版本 Version	修订人 Reviser	描述 Description	日期 Date

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	YH89T1-100	
型式 Type	低压腔式全封闭涡旋压缩机 LP Cavity Hermetic Scroll Compressor	
应用 Application	空调专用 Air-condition Used Comp	
制冷剂 Refrigerant	R407C	
排量 Displacement m ³ /h (cm ³ /rev)	8.6 (49.4)	10.3 (49.4)
制冷量 Cooling Capacity (W) ^(a)	8540	10419
输入功率 Input Power (W) ^(a)	2680	3243
运行电流 Running Current (A) ^(a)	5.3	5.3
能效比(COP) ^(a)	3.19	3.21
电源 Power(V/PH/Hz)	380-420V/3~/50Hz	460V/3~/60Hz
最低运行电压 Lowest Running Voltage (V)	342	414
最高运行电压 Highest Running Voltage (V)	462	506
堵转电流 LRA (A)	45	45
最大运行电流 MOC ^(b) (A)	7.6	7.6
额定转速 Rated Speed (r/min) ^(c)	2900	3500
压缩机重量 (含油) (kg) Compressor Weight With Oil	30	30
润滑油型号 Oil type	POE (32cst)	
压缩机加油量 Oil Charge (L)		
初次注油 First Charge	1.40	1.40
重新注油 Recharge	1.25	1.25
油循环率 Oil Circulation (%) ^(f)	<1%	
额定噪音(声功率级) ^(g) (dB) Rated Sound (Sound Power)	68	70
运行范围内最大运行噪音 (声功率级) (dB) Max Running Sound (Sound Power)	73	75
最大振动位移值 Peak-Peak (mm) ^(h) Max Vibration Displacement Peak-Peak	<0.09	<0.09
最大水分含量 Maximum Moisture (mg)	< 500	< 500
最大杂质含量 Maximum Impurity (mg)	< 100	< 100
最低启动电压 LVS (V) ^(d)	323	391
最大负载运行时最低电压 MOV (V) ^(e)	342	414
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 $^{\circ}\text{C}$)	3.3 (\pm 10%)
绝缘耐压 Insulation Voltage (V)	2000
泄露电流 Leakage Current (mA)	<5
绝缘电阻 Insulation Resistance (M Ω)	>20
接地电阻 Ground Resistance (Ω)	<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)	3.0
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)	0.9
低压侧 Low Side (L)	6.3
最大冷媒充注量(kg)	2.5x 油量 Oil Weight
排气温度上限 Max Discharge Temperature	125 $^{\circ}\text{C}$
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 11.9/65/11.9/8.3/46.1 $^{\circ}\text{C}$,运行电压为额定电压 90%;

Test Condition: ET/CT/SH/SC/AT 11.9/65/11.9/8.3/46.1 $^{\circ}\text{C}$, 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 $^{\circ}\text{C}$ 制冷剂饱和压力;

Discharge Pressure & Suction Pressure= Refrigerant 40 $^{\circ}\text{C}$ Saturation Absolute Pressure

e) 过负荷试验工况：蒸发/冷凝/过热/过冷/环境温度 11.9/65/11.9/8.3/46.1 $^{\circ}\text{C}$;

Running Over Load Condition: ET/CT/SH/SC/AT11.9/65/11.9/8.3/46.1 $^{\circ}\text{C}$

f) 第一额定工况，油循环率;

First Rated Point, Oil circulation

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

*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 \geq 95% Rated, power \leq 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
2	冷凝温度 CT (°C)	54.4
3	环境温度 AT (°C)	35.0
4	回气温度 SH (°C)	18.3
5	过热 SC (°C)	11.1
6	过冷 (°C)	8.3

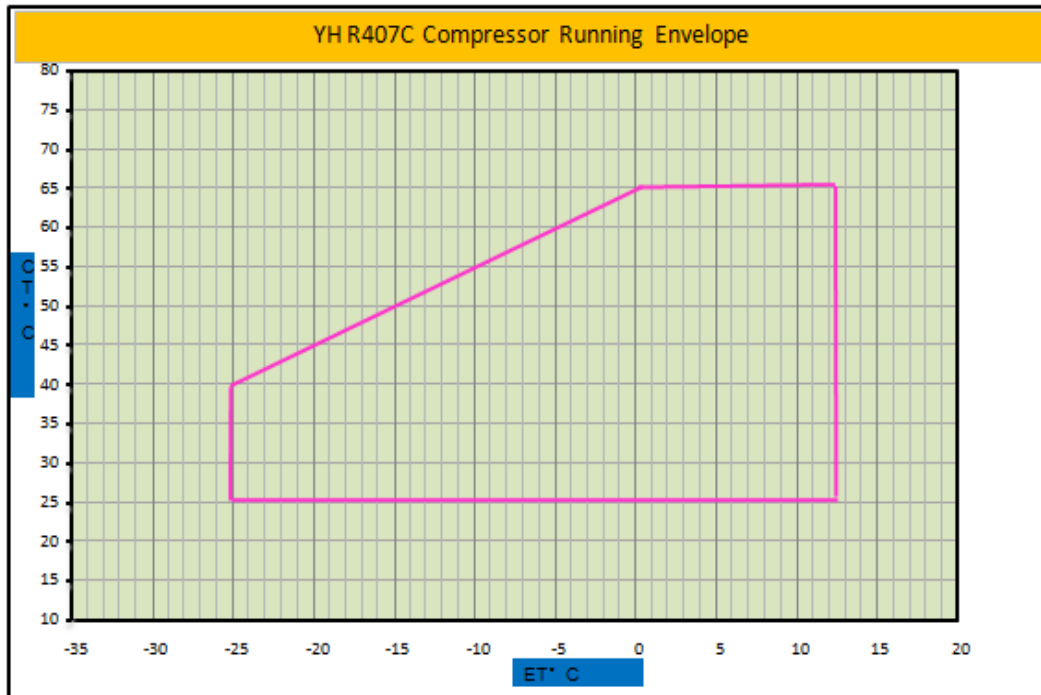
*3 内置保护 Internal Protection Parts

- 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:

YH89T1-100			
附件 Accessory	名称 Description	料号 P/N	数量 PCS
1	脚垫 Rubber Grommet	070-0003-00	4
2	导套 Sleeve	010-0014-00	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 Compressor YH89T1-100 Performance Sheet 380V/3~/50Hz								
	工况	-20	-15	-10	-5	0	5	10
Cap w	65					5615	7066	8529
	55			4703	5498	6557	7836	9558
	50		3706	4846	5800	6914	8381	10036
	45	3287	3942	4954	6112	7281	8761	10506
	40	3402	4179	5263	6420	7643	9128	10928
	35	3517	4415	5572	6729	8005	9496	11350
25	3632	4652	5671	7299	8652	10135	11142	
Power w	65					3038	3127	3240
	55			2611	2638	2666	2694	2747
	50		2307	2368	2390	2443	2496	2575
	45	2068	2104	2239	2125	2204	2283	2388
	40	1921	1982	2101	2026	2084	2142	2226
	35	1774	1860	1962	1927	1964	2001	2064
25	1483	1587	1703	1729	1760	1791	1847	

Invotech Scroll Compressor YH89T1-100 Performance Sheet 460V/3~/60Hz								
		-20	-15	-10	-5	0	5	10
Cap w	65					6738	8479	10235
	55			5644	6597	7868	9403	11470
	50		4447	5815	6960	8297	10057	12044
	45	3944	4731	5944	7334	8738	10513	12607
	40	4083	5015	6315	7704	9172	10954	13114
	35	4221	5298	6686	8074	9606	11395	13620
25	4359	5582	6805	8759	10383	12162	13370	
Power w	65					3646	3752	3888
	55			3133	3166	3199	3233	3297
	50		2769	2842	2867	2931	2995	3090
	45	2482	2525	2687	2550	2645	2740	2865
	40	2305	2378	2521	2431	2501	2571	2671
	35	2128	2232	2355	2312	2357	2402	2476
25	1779	1904	2044	2075	2112	2149	2216	

基于 11.1℃吸气过热度,8.3℃过冷度, 环境温度 35℃

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

*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 压缩机外形图 Compressor Outline Dimensions

