



Specification		Notes
Standard model	YSH450C1G-100	Base model
Extended model		
Extended model		

Revision record			
Version	Reviser	Description	Date
001	YH	Release	2016.10.8
002	YH	Modify oil charge volume	2019.1.21

Checked

Date

Approved

Date

*1 Specifications

1.1 Basic Performance	
Model	YSH450C1G-100
Type	Semi-Hermetic Scroll Compressor
Application	Air condition
Refrigerant	R410A
Displacement m ³ /h (cm ³ /rev)	29.1 (167.2)
Capacity(W) ^(a)	44500
Input Power(W) ^(a)	14127
Running Current(A) ^(a)	24.5
COP ^(a)	3.15
Rated Voltage (V)	380V
Phase- Hertz	3 P - 50 HZ
Lowest Running Voltage (V)	342
Highest Running Voltage (V)	418
Lock Rotor Current (A)	148.5
Highest Running Current ^(b) (A)	36.0
Motor Speed (r/min) ^(c)	2900
Compressor Weight With Oil (kg)	90
Oil	POE (Coefficient Of Viscosity 32)
Oil Charge (First Charge, L)	3.20
(Recharge, L)	3.00
Oil Circulation (%) ^(f)	<1%
Rated Sound (Sound Power) ^(g)	75
Max Running Sound (Sound Power)	80
Maximum Vib (mm, Peak-Peak) ^(h)	<0.10
Maximum Moisture (mg)	< 1100
Maximum Impurity (mg)	< 130
Lowest Voltage Start (V) ^(d)	323
MOV (V) ^(e)	342
1.2 Motor Specifications	
Motor Type	Induction motor
Pole	2
Motor Insulation Temperature °C	130 (B Class)
Resistance @ 25 °C Ambient (Ω)	0.7 (± 10%)
Insulation Voltage (V)	2000
Leakage Current (mA)	<5
Insulation Resistance (MΩ)	>20
Ground Resistance (Ω)	<0.1

1.3 Safe Running Conditions	
Highest Running Pressure	
High Side (Mpa)	4.3
Low Side (Mpa)	2.0
Max Discharge Temperature	125°C
Compressor Start-off Revolution	Above 3min

NOTES:

- a) Test Condition: First Rated Running Point,EVI open
- b) Test Condition: ET:11.9°C, CT:65.5°C, Running Voltage @ 90% Rated Voltage
- c) Test Condition: 380V, 50HZ, First Rated Running Point
- d) Discharge Pressure / Suction Pressure= Refrigerant Saturation Pressure @40°C (Absolute Pressure) .
- e) Test Condition: Suction Pressure / Discharge Pressure = Refrigerant Saturation Pressure @11.9°C / Refrigerant Saturation Pressure @65.5°C, Superheat 11.9°C, Sub cooling 8.3°C
- f) Oil Circulating Rate Under First Rated Point
- g) Running @ First Rated Running Point, Average Of Sound Power , Maximal Sound Power Is Less Than 5dB Added.
- h) Running @ First Rated Running Point, Maximal Displacement Under Normal Direction When Compressor Running.

*2 Test Condition (380V, 50 HZ), Capacity And COP Allowed Normal Specification Tolerance Is - 5%, Power And Current Allowed Normal Specification Tolerance Is + 5% (Performance And Sound Test after 48hrs Break-In-Run)

Seq	Parameter	First Rated Running Point
1	Evaporating T	7.2 °C
2	Condensing T	54.4°C
3	Ambient T	35.0 °C
4	Return Gas T	18.3°C
5	Superheat K	11.1
6	Subcooling K	0

*3 Internal Protection Parts

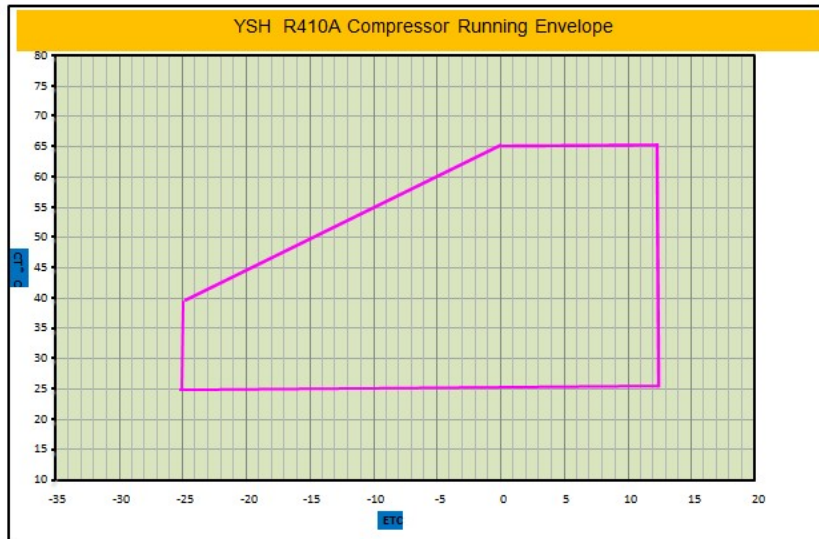
- Internal Motor Protector
- Internal Pressure Release Valve
Pressure Release Valve Open Range: 2.76--3.10Mpa

*4 Standard Configuration:

YSH450C1G-100			
Accessory	Description	P/N	PCS
1	Mount Kits	070-0020-00	4
2	Flat Gasket	GB/T95 10	8
3	Lock Nut	GB /T 889.1 M10	8
4	Spring Washer	GB 93-87 10	8

*5 Compressor Running Envelope

In This Envelop, All Of The Test Condition Under The 11.1°C superheating



*6 Compressor Performance Data Sheet

Invotech Scroll Compressor YSH450C1-100 Performance Sheet								
	工况	-20	-15	-10	-5	0	5	10
Cap W	65					25784	32656	39912
	55			20427	27418	33560	40047	47841
	50		18008	23652	30311	36561	43272	51470
	45	15355	20872	26071	32791	39289	46229	54964
	40	17549	22987	28087	35134	41745	49185	58323
	35	19811	24760	29968	37200	44201	52007	61683
	25	20839	26534	31849	39267	46656	54829	65042
Power W	65					17985	17894	17894
	55			14315	14319	14250	14177	14177
	50		12654	12691	12756	12742	12677	12691
	45	11372	11444	11342	11386	11372	11314	11356
	40	10127	10234	10131	10169	10169	10131	10186
	35	9062	9136	9043	9090	9103	9098	9181
	25	7997	8037	7956	8010	8038	8066	8176



Cap And Power Is Under 20°C Return Gas Temperature, 0°C Sub cooling, ambient temperature 35°C

X-axis Ordinate Is Evaporating T (°C), Y-axis Ordinates Is Condensing T (°C)

*7 Notes

- 1) The compressor should not be used to be operated under vacuum, compress air, run without load or reverse;
- 2) The compressor should not be opened in the atmosphere for more than 15 minutes;
- 3) 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) Before starting, discharge pressure – suction pressure $\leq 0.3\text{Mpa}$;
- 5) The running voltage shall be within $\pm 10\%$ of the rated voltage;
- 6) 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) The system should set basic protection of pressure, temperature, over-current, phase-loss and oil return device etc.
- 8) Do not put the compressor horizontally or put it upside down.

*8 Compressor Outline Dimensions

