

Inverter Model

YIW60E1G-V100

1.1 Compressor Specifications	
Model	YIW60E1G-V100
Type	BLDC Hermetic Scroll Compressor
Application	Heat Pump
Refrigerant	R134a
Displacement (cm ³ /rev)	60.0
Cap(W) (a)	32670
Power Input (W) (a)	8620
Running Current (a) (a)	13.8
COP (a)	3.96
Rated Voltage (V)	380-420V
Phase (Hz)	3~ 50/60 HZ
Lowest Running Voltage (V)	342
Highest Running Voltage (V)	462
Lock Rotor Current (a)	13.3
Rated Motor Speed (R/Min) (c)	4500
Comp Weight With Oil (kg)	27.0
Oil	POE (Coefficient Of Viscosity 32)
Oil Charge (First Charge, L)	1.40
(Recharge, L)	1.30
Oil Circulation (%) (f)	<1%
Rated Sound (Sound Power) (g)	75
Max Running Sound (Sound Power)	80
Maximal Vib (mm, Peak-Peak) (h)	0.10
Maximal Moisture (mg)	500
Maximal Impurity (mg)	100
Lowest Voltage Start (V) (d)	323



MOV (V) ^(e)	342
1.2 Motor Specifications	
Motor Type	Permanent Magnets Motor
Pole	4
Running frequency (Hz)	40~200
Running speed (RPM)	1200~6000
Running voltage (V)	51~380
Start voltage (V)@900RPM/8N·m	51
Magnet flux (mWb.t)@20°C	662.1
Demagnetization current(A)@110°C	97
Q axis inductance (mH)	5.94
D axis inductance (mH)	2.89
Highest Running Current (A)	25
Motor Insulation Temperature °C	130 (B 级)
Resistance @ 25°C Ambient (Ω)	0.248 (± 10%)
Insulation Voltage (V)	2000
Leakage Current (mA)	<5
Insulation Resistance (MΩ)	>20
1.3 Safe Running Conditions	
Highest Running Pressure:	
High Side (Mpa)	3.0
Low Side (Mpa)	2.0
Air pressure test (Mpa)	3.8
Max Discharge Temperature	125°C
Compressor Start-off Revolution	3min
deceleration limit (r/s)	2-5

Running Condition Notes:

- a) Test Condition: First Rated Running Point;
- b) Test Condition: ET/CT/SH/SC/AT 11.9/65/11.9/8.3/46.1°C, 90% Rated Voltage;
- c) Test Condition: First Rated Running Point
- d) Discharge Pressure & Suction Pressure= Refrigerant 40°C Saturation Absolute Pressure
- e) Running Over Load Condition: ET/CT/SH/SC/AT11.9/65/11.9/8.3/46.1°C
- f) First Rated Point, Oil circulation
- g) First Rated Point, A class average sound power
- h) First Rated Point, Maximal Shell Running Displacement Under Normal Direction



Rated Condition, Allowed capacity and cop $\geq 95\%$ Rated, power ≤ 105 Rated (Performance And Sound Test Needed 48hrs Break In Running)

Seq	Parameter	First Rated Running Point
1	Evaporating T	5.0
2	Condensing T	55.0
3	Ambient T	35.0
4	Return Gas T	18.3
5	Superheat K	11.1
6	Subcooling K	8.3
7	Rated Voltage(V) ~ Phase (Hz)	380V 3~ 50/60Hz
8	Motor Speed RPM	4500

*2 Internal Protection Parts

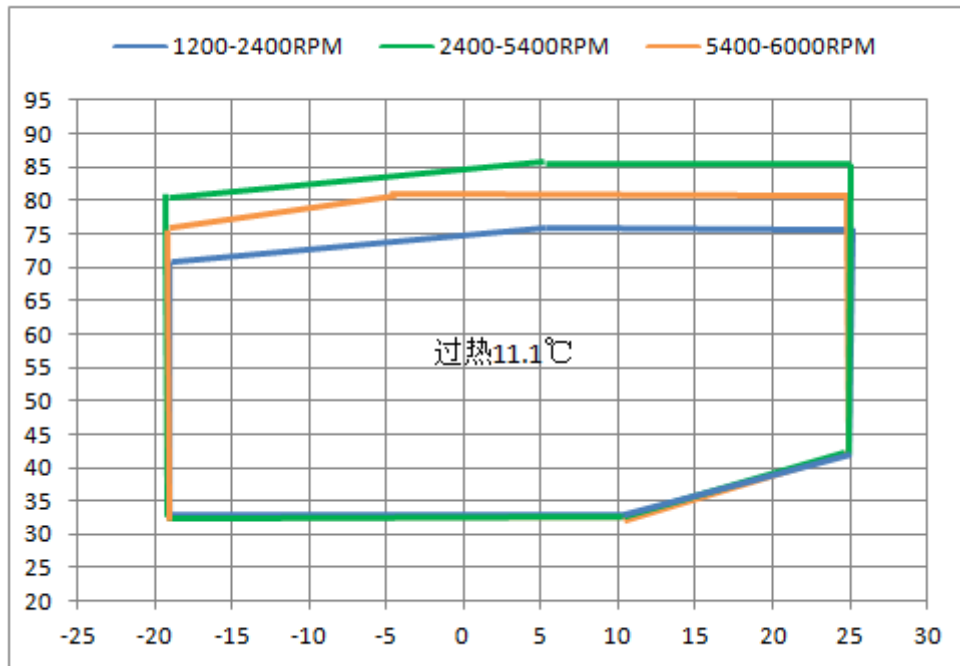
- Internal protector Protection
- Internal Pressure Release Valve Protection

Pressure Release Valve Open Range: 3.97—4.31Mpa

*3 Accessories

YIH72C1G-100			
Accessory	Description	P/N	PCS
1	Rubber Grommet	070-0003-00	4
2	Sleeve	010-0014-00	4

*6 Compressor Running Envelope



*7 Performance Curve

7.1 4500RPM

制热量W (制冷量 +功率)	80	6372	7273	8699	10073	11657	13572	15482	17623	17311	19696
	70	6654	7737	8928	10390	11949	14024	16074	18398	21005	23917
	60	6907	8092	9144	10606	12360	14259	16308	18657	21272	24168
	50	6846	8011	9289	10912	12665	14607	16801	19324	22125	25218
	40	6638	7944	9473	11166	13078	15190	17801	20552	23583	
	30	6419	7973	9642	11553	13693	16209	18998			
功率W	80	4593	4672	5123	5418	5492	5709	5769	5869	5889	5922
	70	3626	3893	4102	4296	4426	4596	4716	4881	5107	5415
	60	2836	3217	3265	3446	3599	3724	3876	4076	4344	4701
	50	2298	2523	2677	2804	2926	3056	3208	3415	3697	4072
	40	1976	2106	2236	2343	2439	2542	2663	2845	3105	
	30	1815	1885	1968	2023	2066	2110	2172			

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

*8 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.
- 9) Starting Speed Control
 - 9.1 Ambient Temperature $\geq 10^{\circ}\text{C}$, 3000RPM
 - 9.2 $0^{\circ}\text{C} \leq$ Ambient Temperature $< 10^{\circ}\text{C}$, 4500RPM
 - 9.3 Ambient Temperature $< 0^{\circ}\text{C}$, 4800RPM

*10 Drawings

