

Ref. NO.	LGETA-150119-1726
Issued Date	2015.01.19
Rev. NO.	Rev. 0
Rev. Date	-

# 1.Specification

## 1.1 Compressor

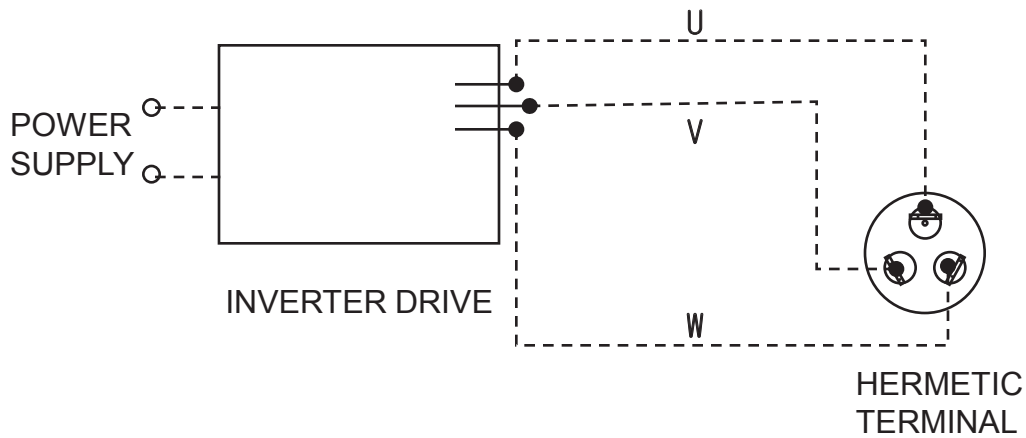
1	Compressor Model Name	GA072MFB
2	Compressor Type	Hermetic Motor Compressor
3	Compression Type	Single Rotary
4	Displacement	7.2 cm <sup>3</sup> / rev
5	Refrigerant	R410A
6	Oil / Oil Charging Amount	RB68A / 310 cc
7	Painting	Black Color Paint
8	Net Weight ( Including Oil )	7.08 kg
9	Suction Tube I.D	$\Phi 9.70 \begin{smallmatrix} +0.15 \\ 0 \end{smallmatrix}$ mm
10	Discharge Tube I.D	$\Phi 8.06 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$ mm
11	Application	Cooling and Heating with BLDC Inverter System

## 1.2 Motor

Motor Type / Starting Type	BLDC Motor / DC Inverter Starting	
Pole / Rated Output	6 Pole / 500 Watts (at 60Hz)	
Power Source	Sensorless Brushless Inverter	
Winding type	Concentrated Winding	
Insulation Class	E Class	
Windings Resistance ( at 25 °C )	U-V	0.967 ± 7% Ohms
	V-W	0.967 ± 7% Ohms
	W-U	0.967 ± 7% Ohms

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### 1.3 Wiring diagram



### 1.4 Performance

※ Electric source

DC Link Voltage : 280 V , 180° Sine Wave Current Charged (Designed by LGE)

		60rps
Cooling Capacity (-5%↑)	[ BTU/h ]	7,600
	[ kW ]	2,227
Power Input (+5%↓)	[ watts ]	684
EER (-5%↑)	[ BTU/w · hr ]	11.1
Running Current	[ A ]	4.7

☞ Rated Conditions (ASHRAE-T Condition)

Cond. Temp. : 54.4 °C ( 130 °F )

Evap. Temp. : 7.2 °C ( 45 °F )

Return Gas Temp. : 35.0 °C ( 95 °F )

Liquid Temp. : 46.1 °C ( 115 °F )

Ambient Temp. : 35.0 °C ( 95 °F )

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### 1.6 Others

Leak Tight Pressure	High Pressure Side	42 kgf / cm <sup>2</sup> G
	Low Pressure Side	-
Hydrostatic Strength Pressure	High Pressure Side	170 kgf / cm <sup>2</sup> G
	Low Pressure Side	80 kgf / cm <sup>2</sup> G
Insulation Resistance ( with 500V D.C Mega Tester )		50 MΩ Min.
Withstand Voltage		At 2,200 V / 1 Sec. Leakage Current is less than 5 mA
Residual Moisture ( Karl Fisher Method )		60 mg Max.
* Residual Impurities		70 mg Max

\*) Each part was measured separately

### 1.7 Revolution Range (By standard DC Inverter)

Operating Range	15 ~ 120 rps
Rated Condition	35 ~ 90 rps
Max Load Condition	40 ~ 85 rps

\* Condition

	Rated Condition	Max Load Condition
Con. Temp(°C)	55	65
Eva. Temp(°C)	7	12
Return Gas. Temp(°C)	35	25
Ambient Temp(°C)	35	35

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### 3. Operating Limit

#### Application Limit

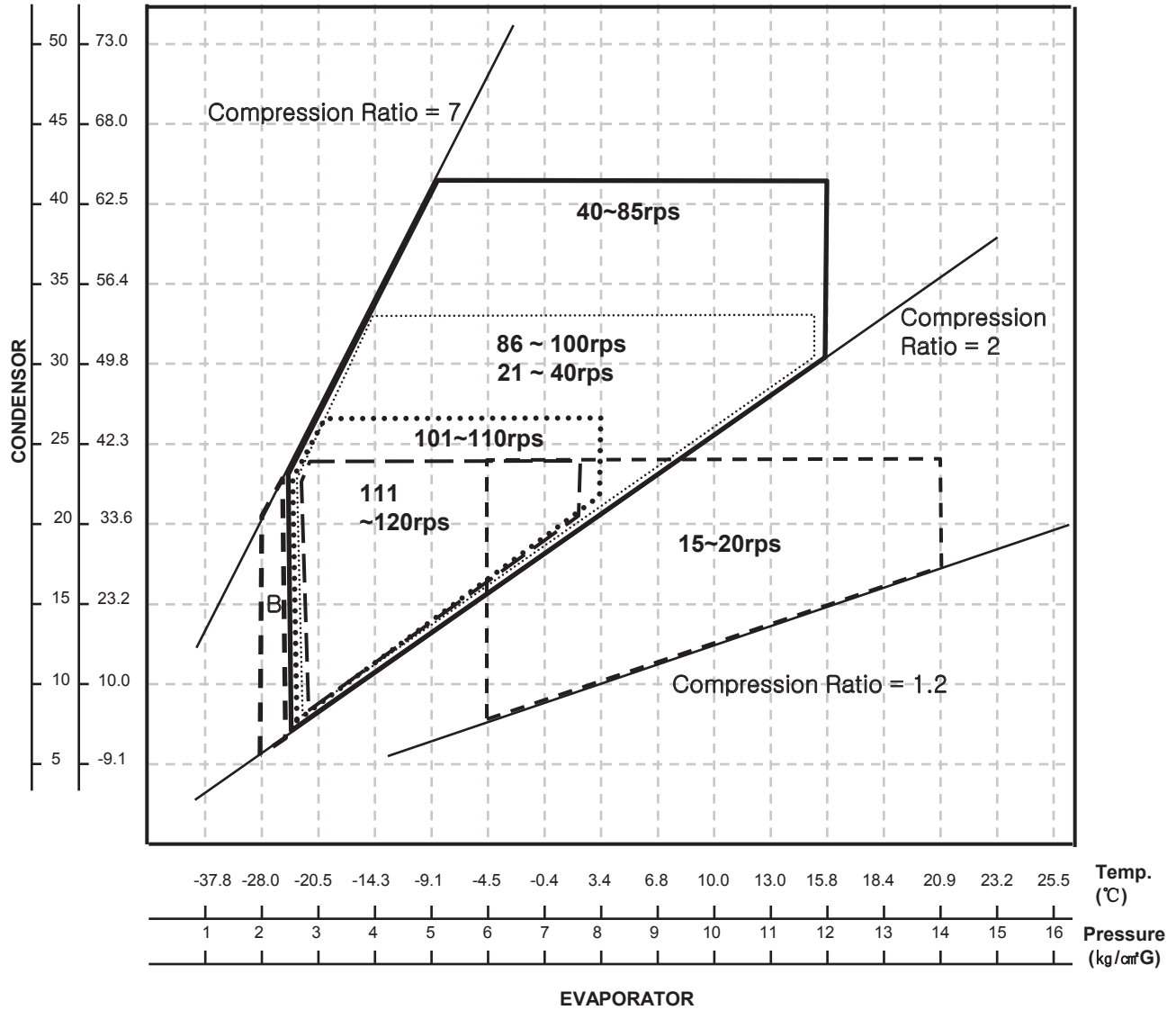
Discharge Pressure	[ kgf / cm <sup>2</sup> G ]	42 Max
Suction Pressure	[ kgf / cm <sup>2</sup> G ]	4.0 ~ 12
Discharge Pipe Temp.	Rated Condition	105 Max.
	Max. load Condition	115 Max.
Motor Coil Temp.	[ °C ]	130 Max.
Maximum Load Current (Before Flux Weakening Control)	[ A rms ]	5.7 Max.

#### Pressure Limit

Operating Speed ( rps )	Discharge Pressure ( kgf/cm <sup>2</sup> G )
15 ~ 20 rps	24 Max.
21 ~ 40 rps	33 Max.
40 ~ 85 rps	42 Max
86 ~ 100 rps	33 Max
101 ~ 110 rps	27 Max
111 ~ 120 rps	24 Max

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Pressure Temp.  
(kg/cm<sup>2</sup>G) (°C)



In case of B Area,

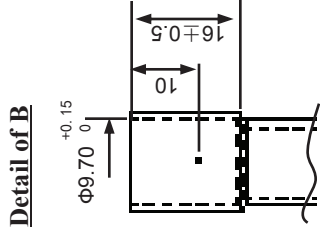
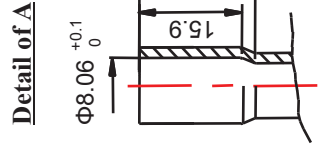
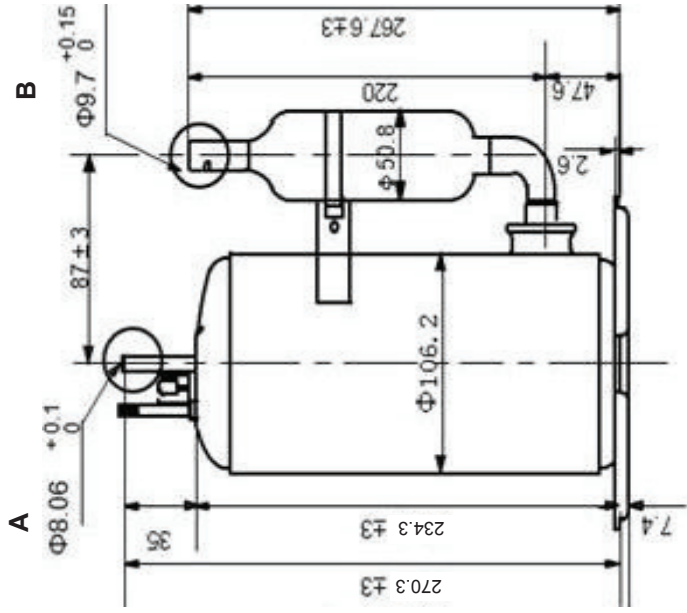
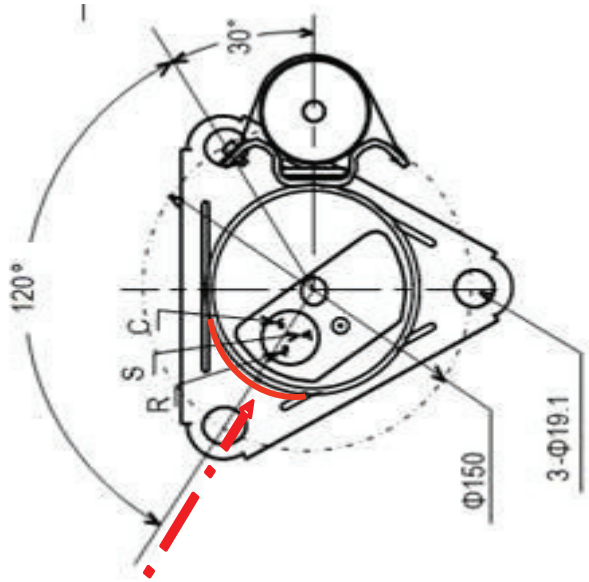
- less than 3 min. at defrosting and restarting after defrosting
- Motor wire temperature less than 130°C
- Do not occur liquid refrigerant back
- Must keep Minimum oil level

Below 40rps operation

- It must be operated within pipe stress limit.

Ref. NO.	LGETA-130405-1441
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Label position (140 degree)



- NOTES
1. PAINTING : BLACK PAINT ( ELECTRO DEPOSITION )
  2. OIL : RB68A 310 cc CHARGED
  3. NITROGEN CHARGED AFTER DEHYDRATION
  4. DIMENSIONS ARE mm UNITS.

UNIT	mm	SCALE	N/S
DES. ENGR.	CHAO.YUAN	CHF. ENGR.	Byun,Sangmyung
2015.01.19		2015.01.19	
LG Electronics(Tianjin) Appliance Co.,Ltd		CUSTOMER	
		Embrital	
<b>COMP. OUT LINE</b>			
<b>GA072MFB</b>			