

Control No.	LGACC-091124-209
Rev. NO.	Rev. 0
Rev. Date	-

1.Specification

1.1 Compressor

1	Application	Cooling and Heating with BLDC Inverter System
2	Compressor Type	Hermetic Motor Compressor
3	Pump Type	Twin Rotary (Two Cylinder Rolling Piston Type)
4	Displacement	42.5 cm ³ / rev
5	Refrigerant	R410A
6	Oil / Oil Charging Amount	FVC68D / 1300 cc
7	Painting	Black Color Paint
8	Net Weight (Including Oil)	23.2 kg
9	Suction Tube I.D	Φ 16 $\begin{matrix} +0.15 \\ 0 \end{matrix}$ mm
10	Discharge Tube I.D	Φ 9.7 ± 0.15 mm

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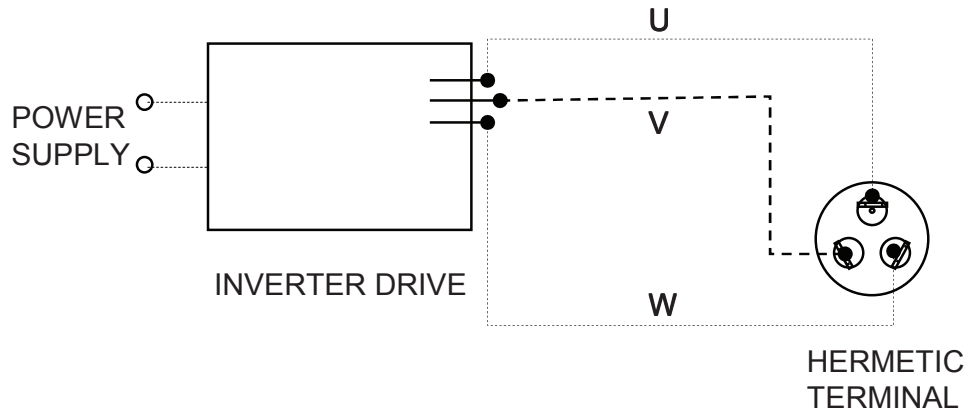
1.Specification

1.2 Motor

Motor Type / Starting Type	BLDC Motor / DC Inverter Starting	
Pole / Rated Output	4 Pole / 4,000 Watts	
Power Source	Brushless Inverter (3Φ 380 Volts)	
Winding type	Distributed Winding	
Insulation Class	E Class	
Windings Resistance (at 25 °C)	U-V	1.183 Ohms
	V-W	1.174 Ohms
	W-U	1.181 Ohms
BEMF (V)	76.4 Vrms / k rpm (Line-to-Line)	

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1.3 Wiring diagram



1.4 Performance

※ Electric source
 DC Link Voltage : 520 V , 180° Sine Wave Current Charge (Designed by LGE)

		60Hz
Cooling Capacity (-5%↑,Z Value : 4.0↑)	[BTU/h]	47,800
	[kW/h]	14,007
Power Input (+5%↓,Z Value : 4.0↑)	[watts]	4,310
EER (-5%↑,Z Value : 4.0↑)	[BTU/w · hr]	11.1
Running Current	[A]	9.0

☞ Rated Conditions (ARI Condition)

Cond. Temp. : 54.4 °C (130 °F)	Return Gas Temp. : 18.3 °C (65 °F)
Evap. Temp. : 7.2 °C (45 °F)	Liquid Temp. : 46.1 °C (115 °F)
	Ambient Temp. : 35.0 °C (95 °F)

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1.5 Others

Leak Tight Pressure	High Pressure Side	42 kgf / cm ² G
	Low Pressure Side	-
Hydrostatic Strength Pressure	High Pressure Side	170 kgf / cm ² G
	Low Pressure Side	80 kgf / cm ² G
Insulation Resistance (with 500V D.C Mega Tester)		50 MΩ Min.
Withstand Voltage		At 2,200 V / 1 Sec. (Sin Wave) Leakage Current is less than 5 mA
Residual Moisture (Karl Fisher Method)		150 mg Max.
* Residual Impurities		70 mg Max
Residual Oil		500 mg Max

*) Each part was measured separately

1.6 Revolution Range (By standard DC Inverter)

Operating Range	15 ~ 100 rps
Rated Condition	30 ~ 90 rps
Max Load Condition	40 ~ 80 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

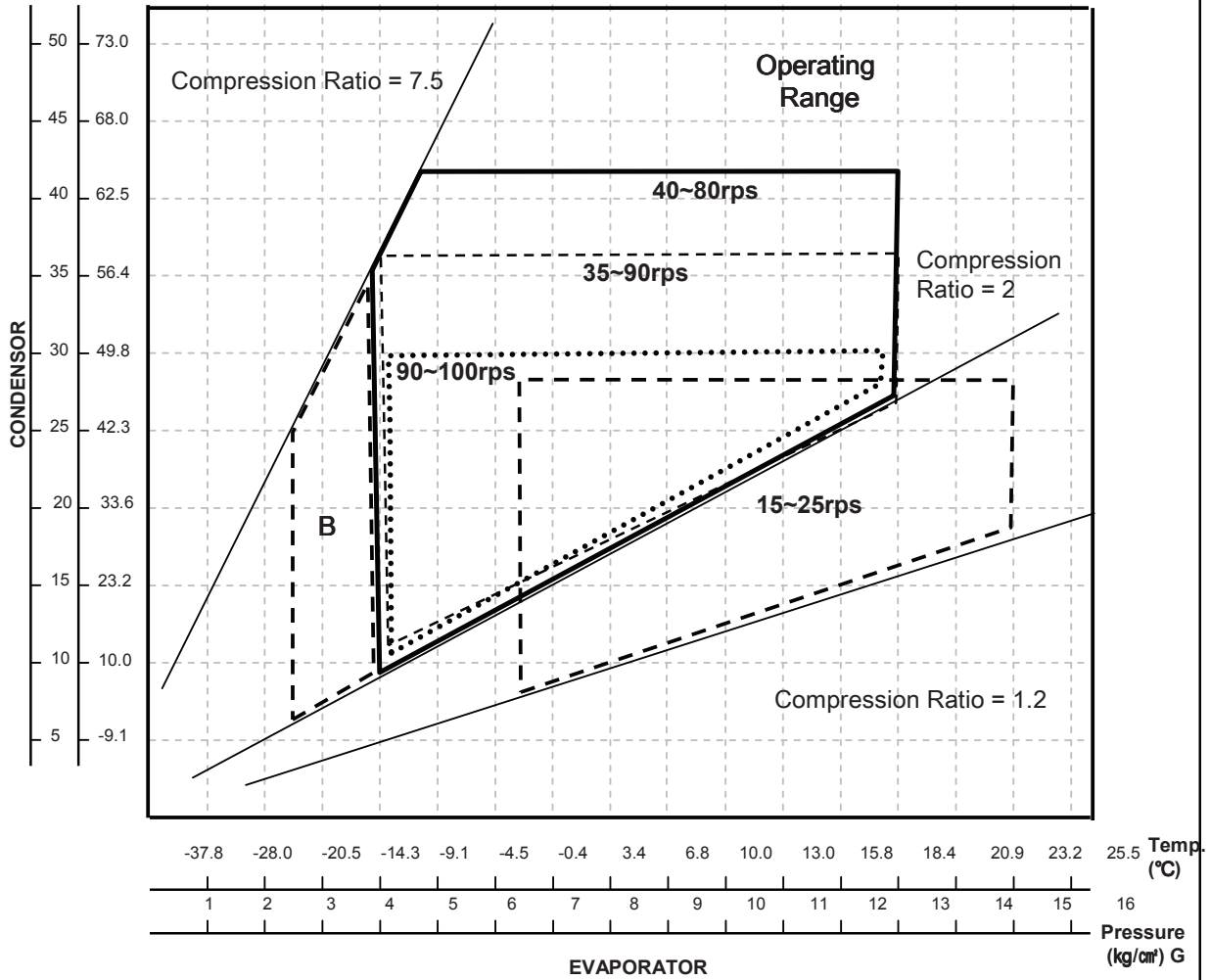
Application Limit

Discharge Pressure	[kgf/cm ² G]	42 Max.
Suction Pressure	[kgf/cm ² G]	4 ~ 12
Discharge Pipe Temp.	[°C]	105 Max.
Motor Coil Temp.	[°C]	130 Max.
Max load current	[A]	15 Max.

Operating Speed (rpm)	Discharge Pressure (kgf/cm ² G)
15 ~ 20 rpm	24 Max.
21 ~ 30 rpm	28 Max.
31 ~ 35 rpm	33 Max.
36 ~ 40 rpm	36 Max.
41 ~ 80 rpm	42 Max.
81 ~ 90 rpm	36 Max.
91 ~100 rpm	30 Max.

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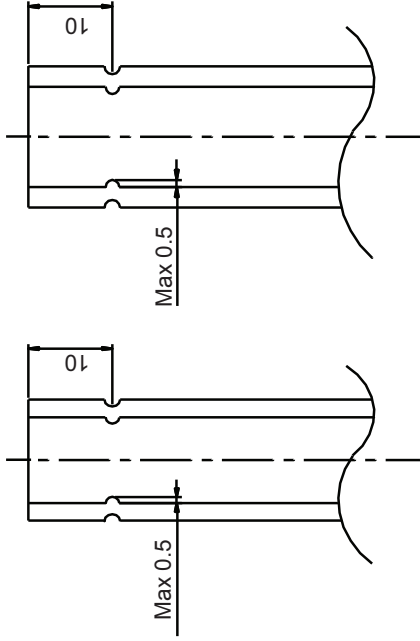
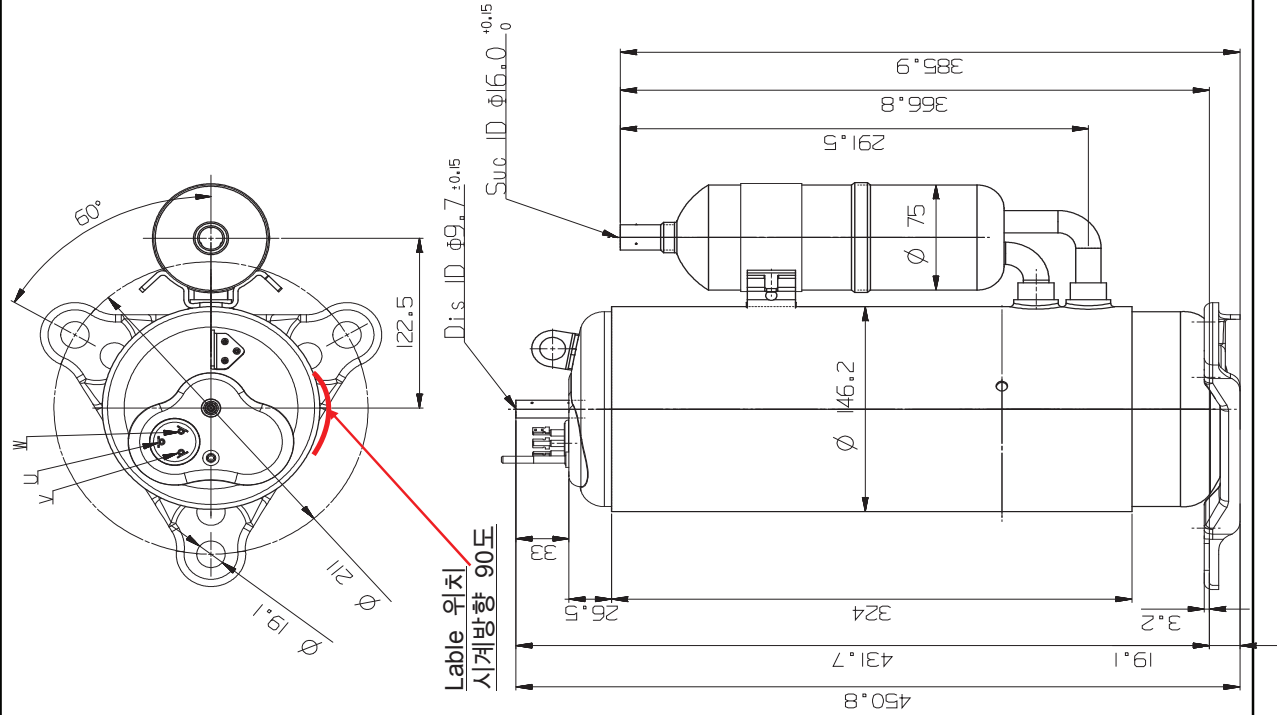
Pressure Temp.
(kg/cm²) G (°C)



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 oil level guide line.

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NOTES

1. PAINTING : BLACK PAINT (ELECTRO DEPOSITION)
2. OIL : FVC68D 1300 ±10 cc CHARGED
3. NITROGEN CHARGED AFTER DEHYDRATION
4. DIMENSIONS ARE mm UNITS

UNIT	mm	SCALE	N / S
DES. ENGR.	CHF. ENGR.	COMP. OUT LINE	
Sep. 10. 2008	Sep. 10. 2008	GPT425DAA	
Y. B. YEOM	W.H. JEONG		
LG Electronics Inc.	CUSTOMER		
C&M. Division	A/C Div.		