



Ref. NO.	TBZ37034801
Issued Date	Jan. 29. 2015
Rev. NO.	Rev. 0
Rev. Date	-

LG Electronics Inc.

SPECIFICATION SHEET for APPROVAL

MODEL : GJT240MAB

Set P/No. : TBZ37034801

CUSTOMER : EMB

APPROVAL			
NAME			
Date			
AIR CONDITIONER MODEL			

LG Electronics Inc.

	Designed	Checked	Approved
NAME	안태경	구세진	안지용
Date	2015.01.27	2015.01.29	2015.01.29

Please read this specification sheet thoroughly before installation or operating.

Please Return 1 Copy on Your Approval.

LG Electronics Inc. Electric Component Business Unit
Tel : (055) 269 - 3863 Fax : (055) 268 - 4886

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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	24.0 cm ³ / rev
5	Refrigerant	R410A
6	Oil / Oil Charging Amount	FVC68D / 900 cc
7	Painting	Black Color Paint
8	Net Weight (Including Oil)	14.5 kg
9	Suction Tube I.D	$\Phi 16.0^{+0.15}_0$ mm
10	Discharge Tube I.D	$\Phi 9.7 \pm 0.15$ mm

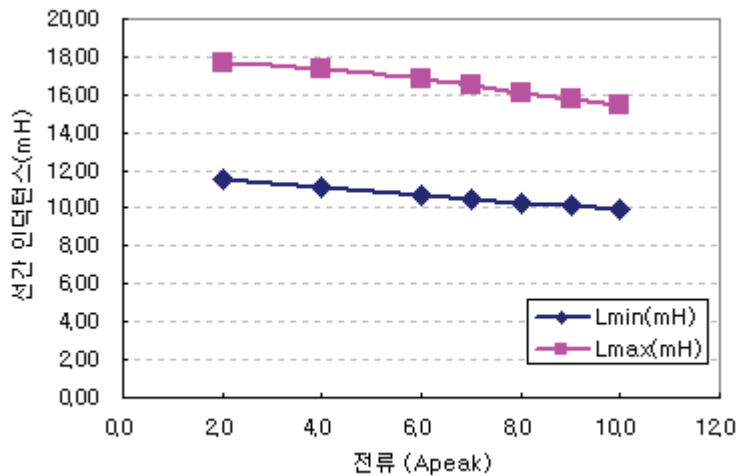
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1.Specification

1.2 Motor

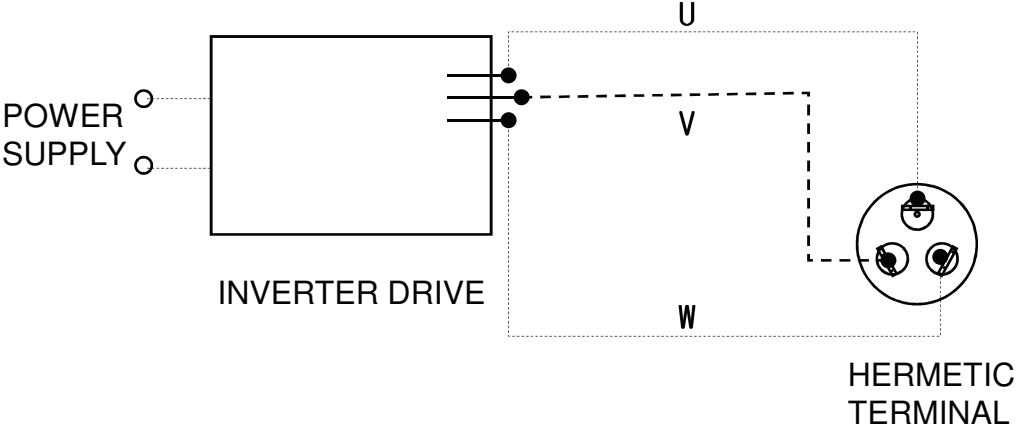
Motor Type / Starting Type	BLDC Motor / DC Inverter Starting	
Pole / Rated Output	6 Pole / 2,137 Watts(@60Hz)	
Power Source	Sensorless Brushless Inverter	
Winding type	Concentrated Winding	
Insulation Class	E Class	
Windings Resistance (at 25 °C)	U-V	0.628 ±7% Ohms
	V-W	0.628 ±7 % Ohms
	W-U	0. 628 ±7 % Ohms
BEMF (V) (at 1,000rpm)	52.6 [Vrms] k rpm (Line-to-Line)	

Inductance (Line to Line) (mH)	A (Arms)	Lmin(mH)	Lmax(mH)
	2.0	11.52	17.63
	4.0	11.12	17.37
	6.0	10.70	16.80
	7.0	10.50	16.51
	8.0	10.30	16.13
	9.0	10.13	15.78
	10.0	9.93	15.44



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1.3 Wiring diagram



※ Make Sure to connect right way same with the wiring diagram.

1.4 Performance

※ Electric source
 DC Link Voltage : 380 V , 180° Sine Wave Current Charge (Designed by LGE)

		60Hz
Cooling Capacity (-5%↑)	[BTU/h]	25,300
	[kW]	7414
Power Input (+5%↓)	[watts]	2,280
EER (-5%↑)	[BTU/w · hr]	11.1
Running Current	[A]	7.4

☞ 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. Leakage Current is less than 5 mA
Residual Moisture (Karl Fisher Method)		150 mg Max.
* Residual Impurities		70 mg Max
Oil circulation		1 % ↓ (60Hz)

*) Each part was measured separately

1.6 Revolution Range (By standard DC Inverter)

Operating Range	10 ~ 110 rps
Rated Condition	30 ~ 90 rps
Max Load Condition	40 ~ 80 rps

* Condition

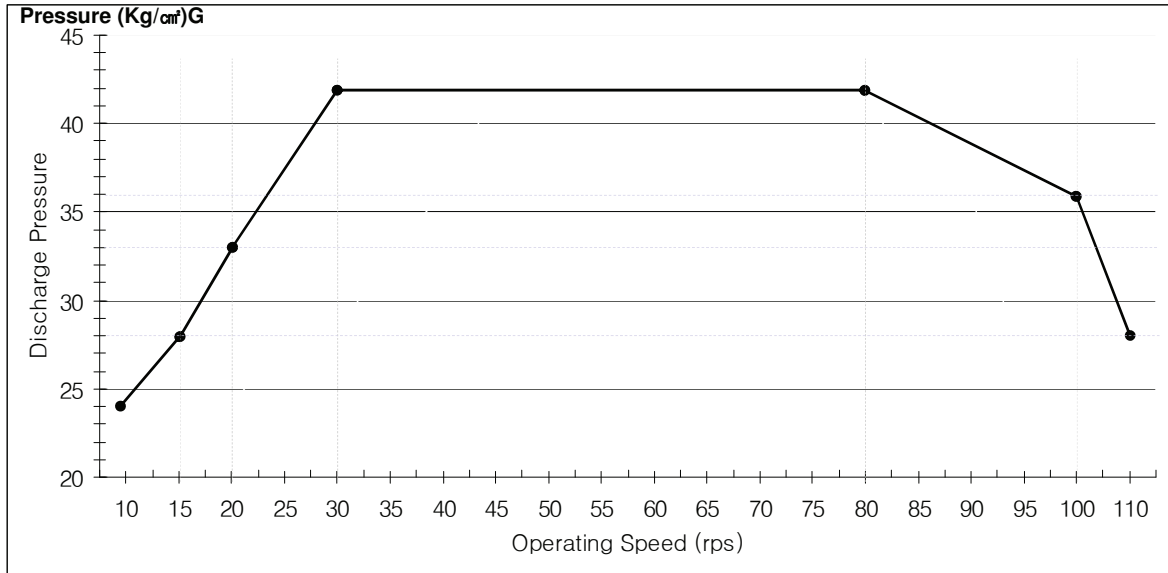
	Rated Condition	Max Load Condition
Con. Temp(°C)	55	65
Eva. Temp(°C)	7	12
Return Gas. Temp(°C)	18.3	25
Ambient Temp(°C)	35	35

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3. Operating Limit

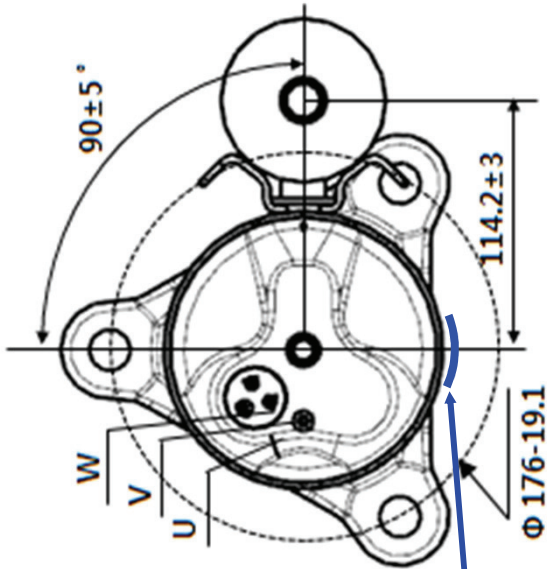
Application Limit

Discharge Pressure	[kgf/cm ² G]	42 Max.
Suction Pressure	[kgf/cm ² G]	2.4 ~ 14
Discharge Pipe Temp.	[°C]	115 Max.
Motor Coil Temp.	[°C]	130 Max.
Max load current	[A][rms]	14 Max.

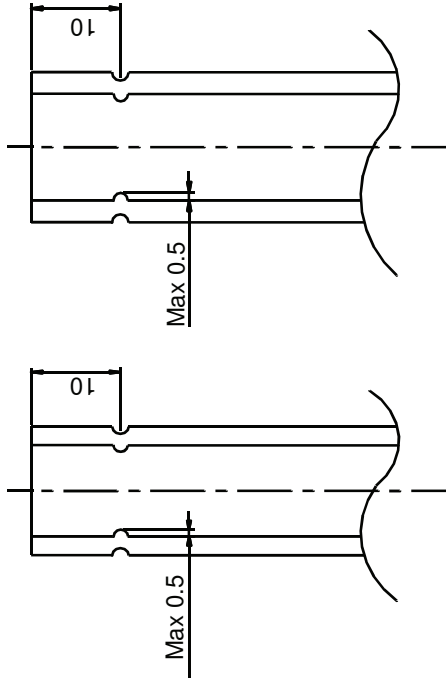


Application Limit	Ref. NO.	TBZ37034801
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Refrigerant Charge Limit (Oil Dilution rate)	2500g Max. (Oil Dilution rate = 0.25 ** note2) Cooling Only & Heat Pump ※ It must be kept following to Oil Level Guide Line *** note3	
Liquid Refrigerant Back	System should be designed not to allow the liquid to go back to compressor which cause knocking noise , current increase or undesirable vibration and make short compressor life time.	
ΔT : Temp. Difference °C	ΔT = Case Bottom Temp. – Condensing Temp. It must be kept $\Delta T \geq 5^{\circ}\text{C}$	
Compression Ratio	Compression ratio is Max. 7.5	
Operating Range Limit	10rps ~110rps	
Pressure Difference in Operating	The Pressure difference in operating shall be 5.0kgf/cm ² or more, but 3 minutes starting excluded.	
ON/OFF Operation	-In case over 30Hz : Each cycle should be at least 5 minutes (ON : at least 2 minute , OFF : at least 3 minutes) - In case below 30Hz : Each cycle should be at least 8 minutes (ON : at least 5 minute , OFF : at least 3 minutes)	
Pressure Difference at Starting	When starting, discharge pressure is balanced with suction pressure.	
Tilt in Operation	The allowable tilt of the compressor in operation shall be 5° or less.	
System Accumulator	The Accumulator volume should be enough to cover 60% of maximum system refrigerant volume. (Accumulator Effective Volume : 660cc) Ratio coefficient 'K' should be over 0.6. Effective Volume of Accum. \times Specific gravity of Refrigerant $K = \frac{\text{Effective Volume of Accum.} \times \text{Specific gravity of Refrigerant}}{\text{Charged Weight of Refrigerant}}$ ※ Specific Gravity of Refrigerant (R410A) = 1.20 (at 20°C)	
Protecting Reverse Operation	The Compressor must be operated by proper voltage in accordance with the frequency without reverse revolution condition. The reverse revolution condition can be avoided by just keeping right order of phase supplied power source.	

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Label position (270 degree)

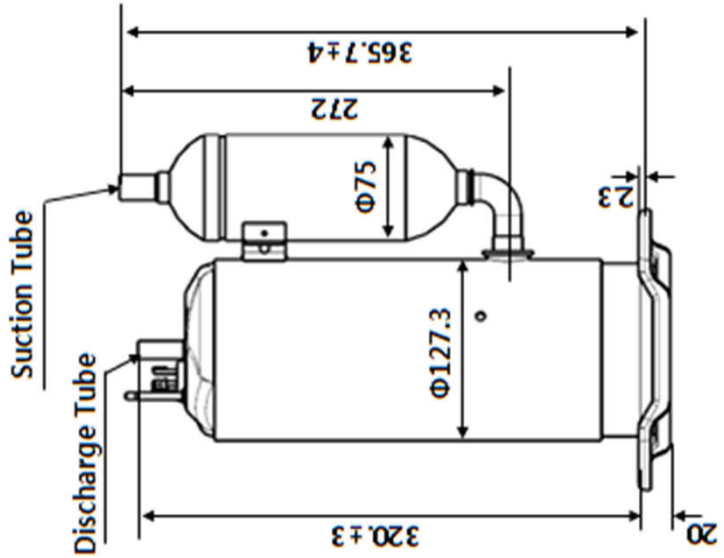


Detail for dimple of Suction tube

Detail for dimple of Discharge tube

NOTES

1. PAINTING : BLACK PAINT (ELECTRO DEPOSITION)
2. OIL : FVC68D or EQUIVALENT 900 cc CHARGED
3. NITROGEN CHARGED AFTER DEHYDRATION



UNIT	mm	SCALE	N / S	COMP. OUT LINE	
DES. ENGR.	CHF. ENGR.				
Jan. 10. 2012 Y.B.YEOM	Jan. 10. 2012 T.Y.NHO			GJT240MAB	
LG Electronics Inc. ACC BIZ TEAM	CUSTOMER EMB				