

1.Specification

Ref. No.	LGACC-150121-011
Issued Date	JAN.21.2015
Rev. No.	Rev.0
Rev. Date	-

1.1 Compressor

1	Compressor Model Name	ABA042DAA
2	Compressor Type	Hermetic Motor Compressor
3	Compression Type	Scroll Type
4	Displacement	40.46 cm ³ / rev(2.47 in ³ /rev)
5	Refrigerant	R410A
6	Safety Approval	-
7	Oil / Oil Charging Amount	FVC68D(PVE) 1,650 cc
8	Nitrogen Gas Holding Pressure	0.4 ± 0.2 kg/cm ² G
9	Painting	Black Color Paint
10	Net Weight (Including Oil , Reference)	29.5 ± 1 kg (65.04 ± 2.2 lb)
11	Suction Tube I.D	Φ22.6 ± 0.1 mm
12	Discharge Tube I.D	Φ12.8 ± 0.2 mm

1.2 Motor

Motor Type	Three phase BLDC Motor		
Pole / Rated input	4 Pole / 4200 watts @ 3600rpm		
Power Source	DC 540V Carrier Frequency: 6kHz		
Rated Revolution	3,600 rpm (at 60Hz)		
Insulation Class	B Class		
Winding Resistance	Temp.	25°C	75°C
	U-V	0.696 ± 7% ohm	0.830 ± 7% ohm
	V-W	0.692 ± 7% ohm	0.815 ± 7% ohm
	W-U	0.696 ± 7% ohm	0.830 ± 7% ohm

1.3 Material of Parts

Parts	Material
Fixed /Orbit Scroll	Gray Cast Iron
Main Frame	Gray Cast Iron
Lower Frame	Gray Cast Iron
Crank Shaft	SUM32

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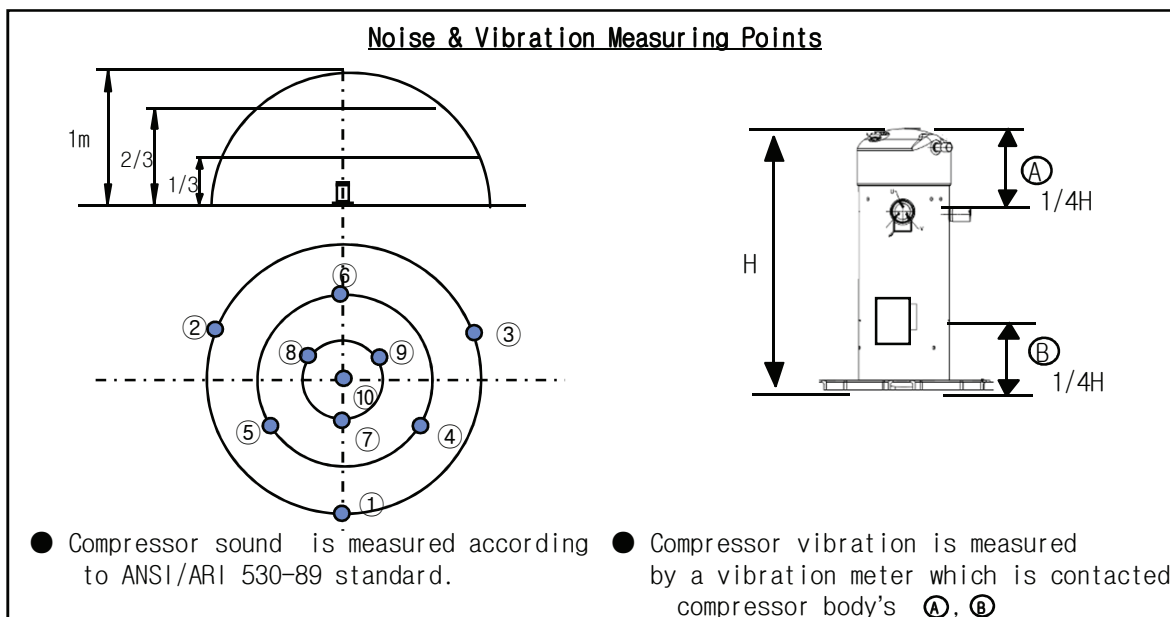
1.4 Performance(※)

Frequency	[Hz]	30Hz	60Hz	90Hz
Cooling Capacity (± 5%)	[BTU/h]	21,100	44,200	64,500
	[kcal/h]	5,317	11,138	16,254
Power Input (± 5%)	[Watts]	2,175	4,170	6,582
CHEER (± 5%)	[Btu/wh]	9.7	10.6	9.8
Running Current (Reference)	[A]	12.0	12.0	12.5
Sound Level (ARI)	[dB(A)]	70 max	77 max	84 max
Vibration (ARI)	[micron]	50 max	50 max	50 max
Oil circulation	[wt%,Max]	2.0	3.0	5.0

(※) Rating Conditions (ARI)

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)

(※) Oil circulation ratio should comply with OCR Measurement Standard of LG Scroll Compressor (ARI condition) (LG (72)-F0-5026)



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1.5 Others

Leak Tight Pressure	Air Pressure	40 kg/cm ² G
Hydrostatic Strength Pressure	High Pressure Side	170 kg/cm ² G
	Lower Pressure Side	80 kg/cm ² G
Insulation Resistance with 500V D.C Mega Tester (Nitrogen Gas is filled in Compressor)		50 M Ω Min.(Dry Condition)
Withstand Voltage (Nitrogen Gas is filled in Compressor)		2,200 V- 1 sec. Leakage Current is less than 5mA. Capacitance is less than 6.1 nF
Residual Moisture / Residual Impurities		200 mg Max. / 80 mg Max.

2.Delivered Parts List

Parts Name	Type (Model)	EA	Part No.	Supply	
				YES	NO
Compressor	ABA042DAA	1	TBZ36974501	YES	NO
Cover, Terminal	-	1	MCK42672701	YES	NO
Gasket	-	1	MDS42672601	YES	NO
Damper, Rubber	-	4	4022U-L004C	YES	NO
Sleeve, Damper	-	4	4816U-L001E	YES	NO

※ Refer to Attachments (Accessory Parts Drawings .)

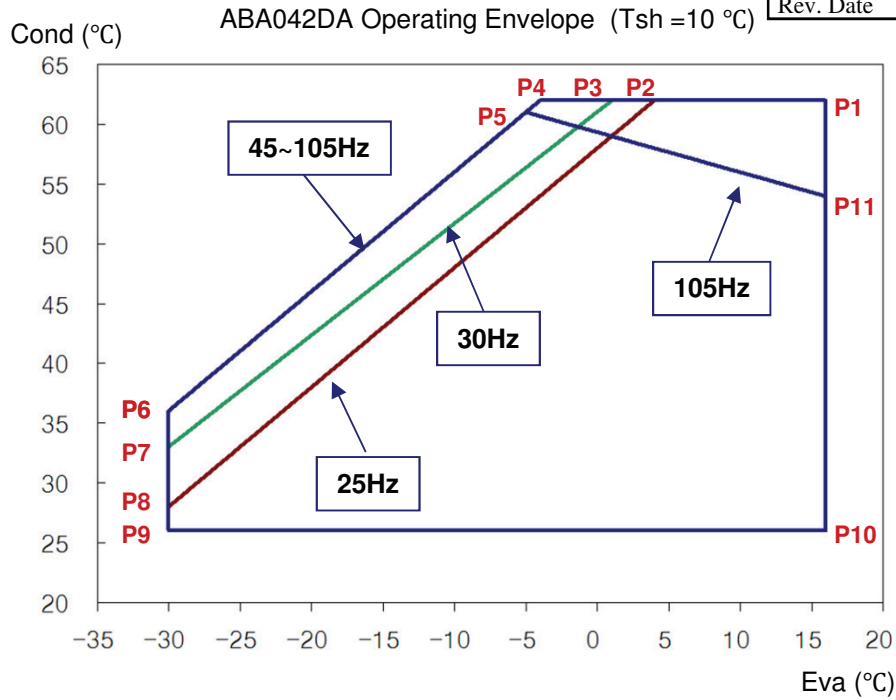
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3.Operating Limit

Variable Frequency Range	25 Hz~105 Hz
Start Frequency	25 Hz [Min] •Flooded_start must be avoided •Reversed_start must be avoided
On/Off Interval	• On / Off =3 Minutes / 3 Minutes (However, Except The Balanced Pressure) •10 times / Hr (Max.)
ON/OFF Cycle	Compressor should not be started for 3 minutes or more until balanced pressure after compressor stop or air conditioner plug in.
Voltage Range	3Φ 380V
Running Current[RMS]	17A [Max]
Refrigerant Charge Limit	•4,700g [Max.] •When Over-Charging Ref. Accumulator Must be Installed And Protect Income Liquid ref. To Comp.
Discharge Pressure	Refer to Operating Map (page 10)
Suction Pressure	Refer to Operating Map (page 10)
Discharge Temperature	Refer to Operating Guide (page 7)
Compression Ratio in Operating	Refer to Operating Guide (page 7)
Oil Temperature	Refer to Operating Guide (page 8)
Motor Coil Temperature	125°C [Max]
Continuous Flood Back	Continuous Flood Back before the compressor should not be more than 10% of the total circulation quantity of refrigerant.
Tilt in Operation	The allowable tilt of the compressor in operation shall be 3° or less
Earth Connection	Use compressor with grounded system only.

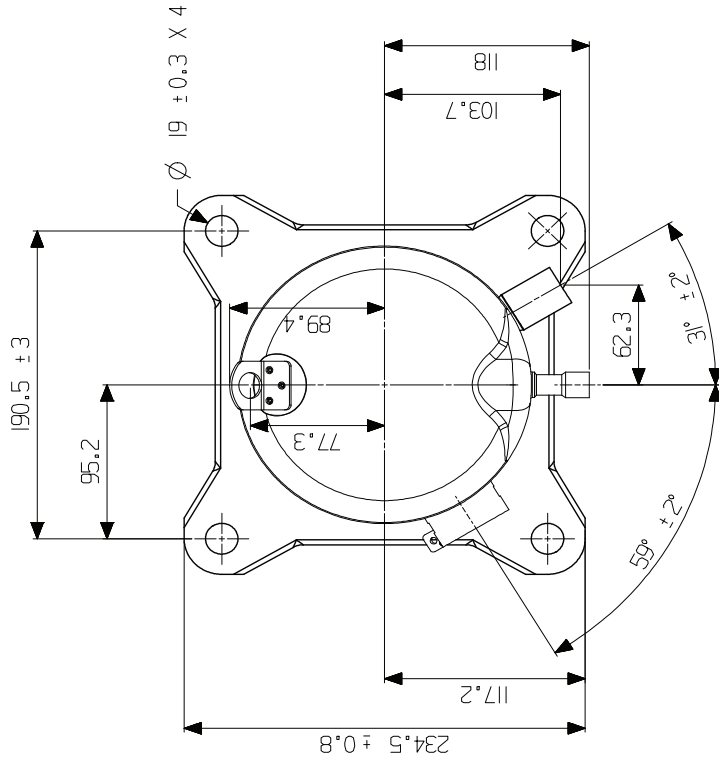
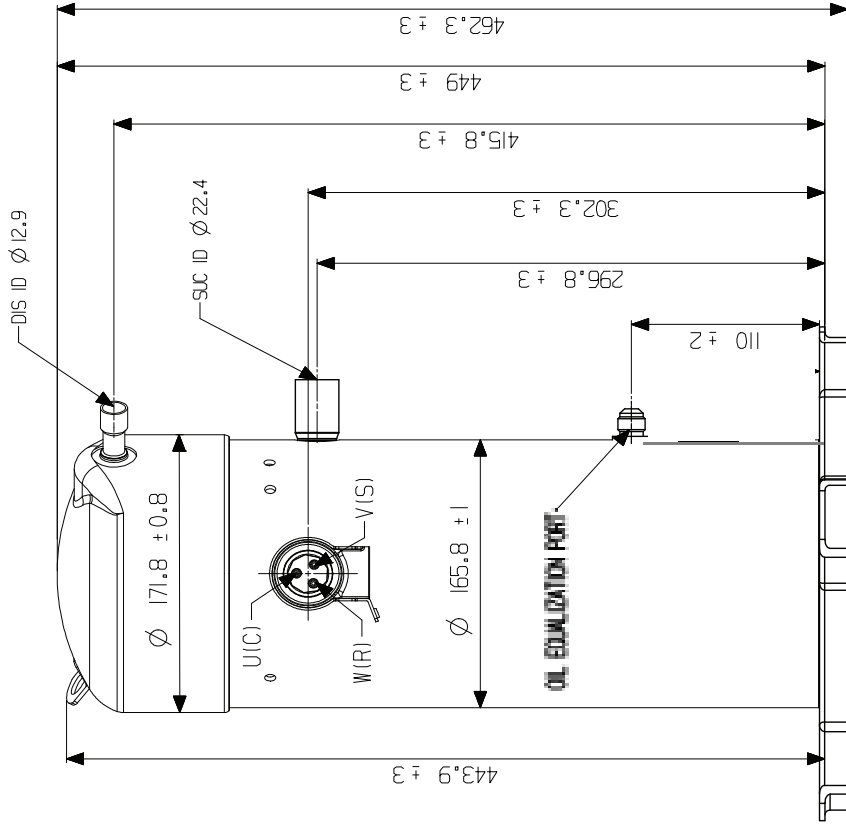
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5. Operating Range



	Point	Teva(°C)	Tcond(°C)	Ps(kgf/cm2,G)	Pd(kgf/cm2,G)
25Hz	P1	16	62	12.1	39.7
	P2	4	62	8.2	39.7
	P8	-30	28	1.7	16.7
	P9	-30	26	1.7	16.2
	P10	16	26	12.1	16.2
	P1	16	62	12.1	39.7
30Hz	P1	16	62	12.1	39.7
	P3	1	62	7.3	39.7
	P7	-30	33	1.7	19.1
	P9	-30	26	1.7	16.2
	P10	16	26	12.1	16.2
	P1	16	62	12.1	39.7
45~105Hz	P1	16	62	12.1	39.7
	P4	-4	62	6.1	39.7
	P6	-30	36	1.7	20.7
	P9	-30	26	1.7	16.2
	P10	16	26	13.1	16.2
	P1	16	62	12.1	39.7
105Hz	P11	16	54	12.1	33.1
	P5	-5	61	5.9	38.8

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UNIT : mm

COMP. OUT LINE			
UNIT	mm	SCALE	N / S
ABA042DAA			

NOTES

1. PAINTING : BLACK PAINT (ELECTRO DEPOSITION)
2. OIL : FVC68D(PVE) OR EQUIVALENT 1,650 cc CHARGED
3. NITROGEN CHARGED AFTER DEHYDRATION