



# Rotary Compressor SPECIFICATION for APPROVAL

## MODEL: DST102MAA

### LG Electronics

Designed	Approved
Sign 	Sign 
Date 09-May-19	Date 09-5-2019

### SCORP

APPROVAL	
Sign	
Date	

090519  
**ORIGINAL**

Please return one copy on your approval.  
Please read this specification thoroughly before installation or operating.

Rotary Compressor

# **SPECIFICATION for APPROVAL**

**MODEL: DST102MAA**

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### Revision History

Data	Rev. No	Rev. description	Write

# 1.Specification

## 1.1 Compressor

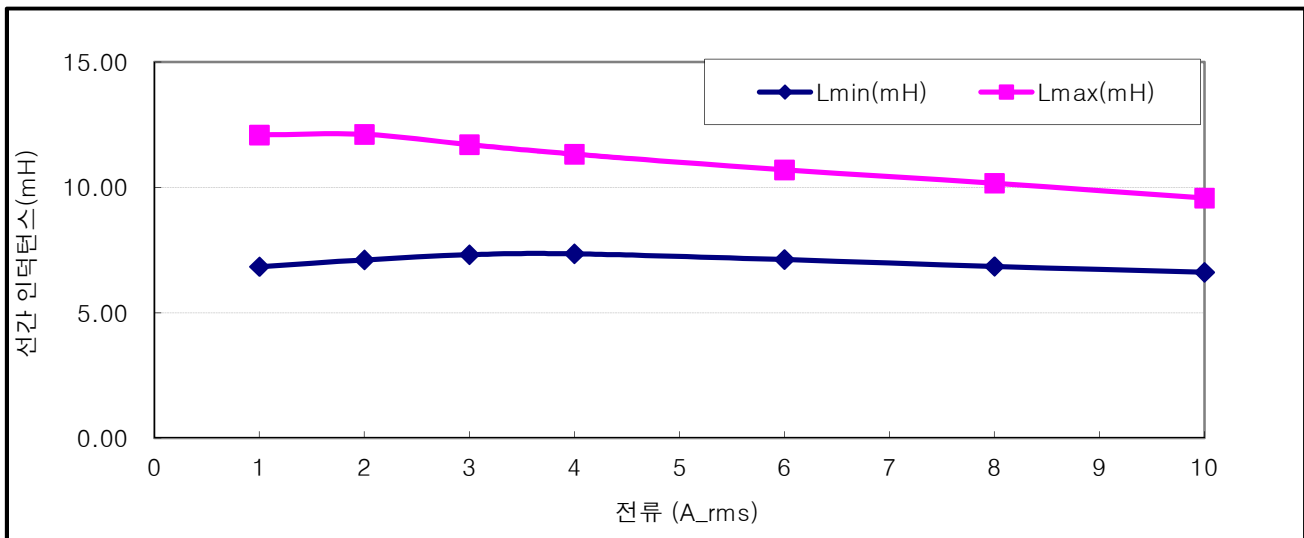
1	Model Name	DST102MAA
2	Application	Cooling and Heating with BLDC Inverter System
3	Compressor Type	Hermetic Motor Compressor
4	Pump Type	Twin Rotary
5	Displacement	10.2 cm <sup>3</sup> / rev
6	Refrigerant	R32
7	Safety Approval	TISI
8	Oil / Oil Charging Amount	POE or PVE / 280 cc
9	Painting	Black Color Paint
10	Net Weight ( Including Oil )	6. 4 kg
11	Suction Tube I.D	Ø 9.7 mm
12	Discharge Tube I.D	Ø8.06 mm

# 1.Specification

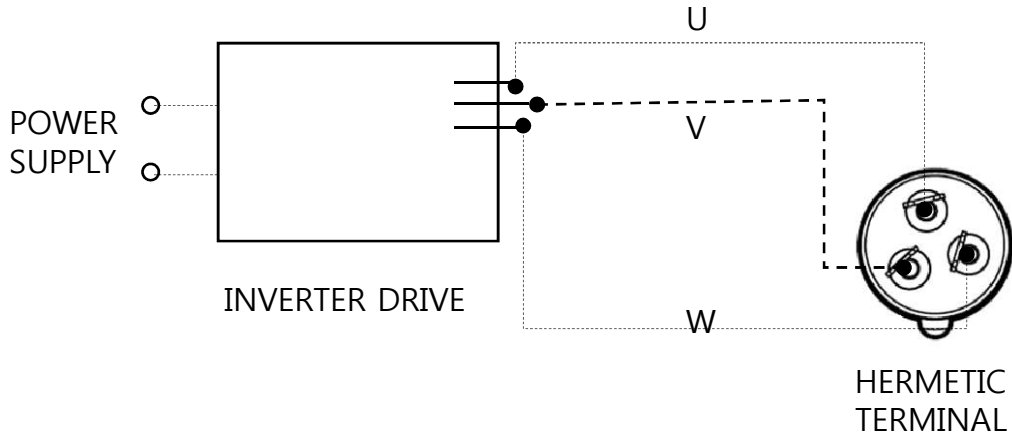
## 1.2 Motor

Motor Type / Starting Type	BLDC Motor / DC Inverter Starting	
Pole / Rated Output	6 Pole / 900 Watts (@60 rps)	
Power Source	Sensorless Brushless Inverter	
Winding type	Concentrated Winding	
Insulation Class	E Class	
Windings Resistance ( at 75 °C )	U-V	2.99± 7% Ohms
	V-W	2.99± 7% Ohms
	W-U	2.99± 7% Ohms
BEMF(V)	45.4Vrms/k rpm(line-to-line)at 25°C	

Arms	1	2	3	4	6	8	10
Lmin(mH)	6.84	7.11	7.32	7.36	7.13	6.85	6.62
Lmax(mH)	12.10	12.12	11.71	11.33	10.70	10.17	9.58



### 1.3 Wiring diagram



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

### 1.4 Performance

※ Electric source

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

Item	35 rps	60 rps	100 rps
Cooling Capacity (98% ↑) [ BTU/h ] [ kW ]	8,950	13,350	14,600
	2,623	3,912	4,278
Power Input (103% ↓ Zlt 3.0) [watts]	411	830	1,480
EER (98% ↑ Zlt 3.5) [BTU/w · hr]	21.8	16.1	9.9
Running Current [ A ]	2.7	3.1	3.8

※ When calculate Z value, use below USL and LSL

USL : 105% of target spec

LSL : 95% of target spec

☞ Rated Conditions (Set Condition) @60rps

Cond. Temp. : 44.4 °C ( 112 °F )

Evap. Temp. : 8.8 °C ( 48 °F )

Return Gas Temp. : 17.0 °C ( 63 °F )

Liquid Temp. : 38.0 °C ( 100 °F )

Ambient Temp. : 35.0 °C ( 95 °F )

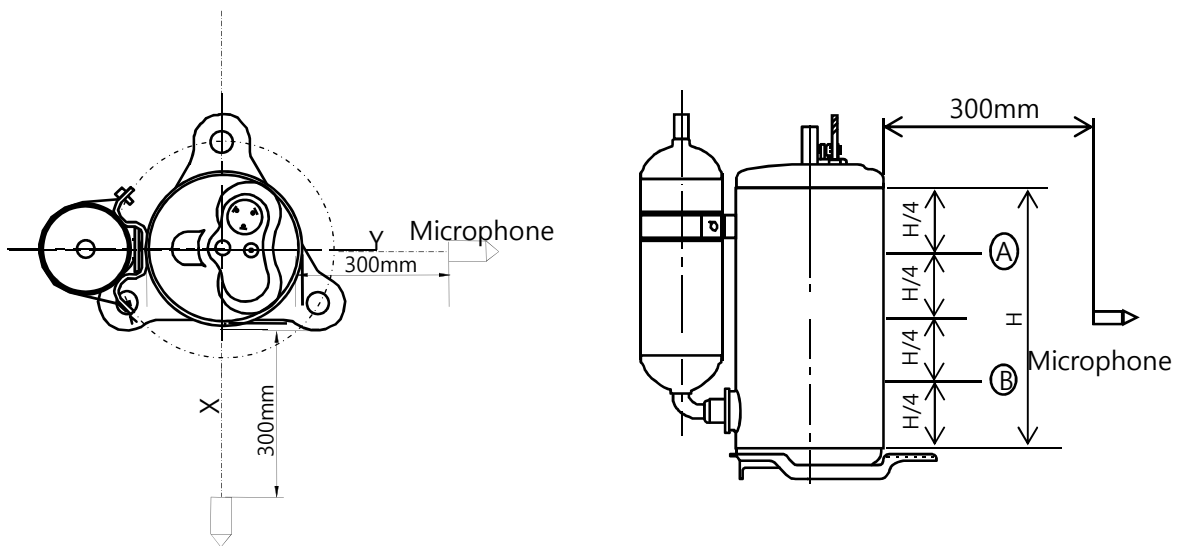
### 1.5 Noise , Vibration

※ Electric source

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

Sound Level [ dB(A) ]	rps	40rps	60rps	80rps
	Total	63 + 2	68 + 2	73 + 2
	1kHz ↓	53 + 3	58 + 3	63 + 3
Vibration [ μm ]		200 ↓	100 ↓	70 ↓
Acceleration [ gal ]		700 ↓	700 ↓	800 ↓

#### Noise & Vibration Measuring Points



- Measuring points for specification approval
  - Noise : 2 points ( X , Y )
  - Vibration : 2 points ( A , B )
- Compressor vibration is measured by a vibration meter which is contacted compressor A ~ B
- Test Condition :
  - Set Condition Cond. Temp : 2.41°C , Eva Temp : 44.48°C (Return Gas: 15.0°C)

1.6 Others

Leak Tight Pressure	High Pressure Side	45 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	69 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
Oil Circulation	60rps	0.6wt% ↓
	90rps	1.2wt% ↓

\*) Each part was measured separately



2.Delivered Parts List

Parts Name	Type ( Model )	EA	Parts Dwg. NO.	Supply	
			LG	YES	NO
Compressor	DST102MAA	1	-	<input checked="" type="radio"/>	<input type="radio"/>
O.L.P	-	-	-	YES	<input type="radio"/>
Cover, Terminal	-	1	MCK67529101	<input checked="" type="radio"/>	<input type="radio"/>
Gasket	-	1	MDS66651003	<input checked="" type="radio"/>	<input type="radio"/>
Nut, Common	-	1	FAD30241201	<input checked="" type="radio"/>	<input type="radio"/>
Washer, Customized	-	1	FAF30240201	<input checked="" type="radio"/>	<input type="radio"/>
Damper, Rubber	-	3	MCQ66473401	<input checked="" type="radio"/>	<input type="radio"/>
Sleeve, Damper	-	-	-	YES	<input type="radio"/>
Bolt, Stud	-	-	-	YES	<input type="radio"/>
Washer, Plain	-	-	-	YES	<input type="radio"/>
Nut, Hexagon	-	-	-	YES	<input type="radio"/>
Capacitor	-	-	-	YES	<input type="radio"/>
Screw, Earth	M4*0.7 Length : Max 6 mm.	-	-	YES	<input type="radio"/>

※ ) Refer to Attachments ( Accessory Parts Drawings. )

### 3.Operating Limit

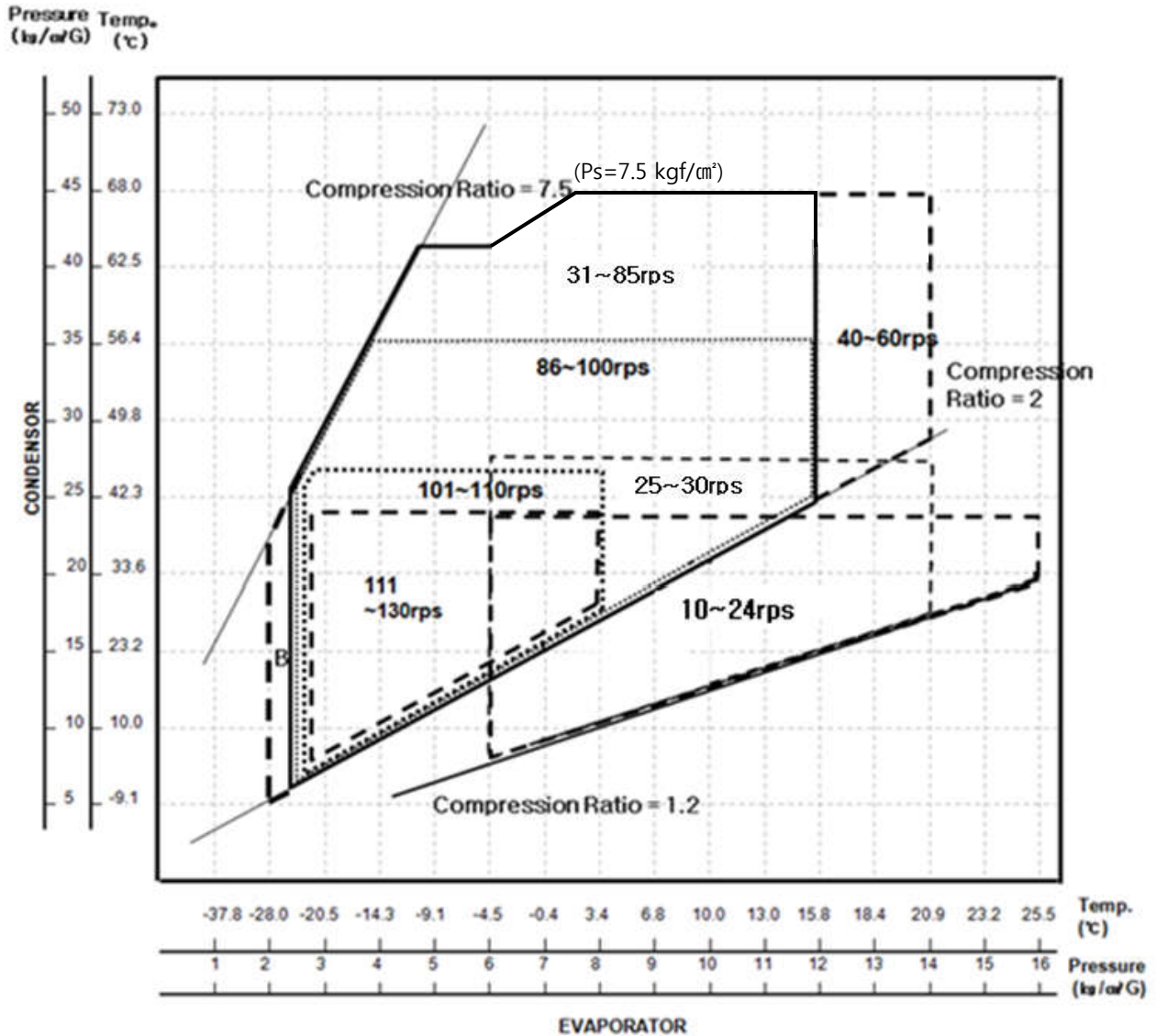
#### Application Limit

Discharge Pressure	[ kgf/cm <sup>2</sup> G ]	45 Max.
Suction Pressure	[ kgf/cm <sup>2</sup> G ]	2.4 ~ 14
Discharge Pipe Temp.	[ °C ]	115 Max.
Motor Coil Temp.	[ °C ]	130 Max.
Max load current	[ A rms]	6.5 Max.

#### Pressure Limit

Operating Speed (rps)	Discharge Pressure (kgf/cm <sup>2</sup> G)
10 ~ 24 rps	24 Max.
25 ~ 30 rps	27 Max.
31 ~ 85 rps	45 Max.
86 ~ 100 rps	35 Max.
101 ~ 110 rps	27 Max.
111 ~ 130 rps	24 Max.

### Application Limit



- 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.

※ This guide contains many important safety messages. Always read and obey all safety messages.

**▲ WARNING** You can be killed or seriously injured if you don't follow instructions..

**Application Limit**

Refrigerant Charge Limit	Max 1020g
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.
Δ T : Temp. Difference °C	Δ T = Case Bottom Temp. - Condensing Temp. It must be kept Δ T ≥ 5°C
Compression Ratio	Compression ratio is Max. 7.5
Operating Range Limit	10rps ~130rps
Pressure Difference in Operating	The Pressure difference in operating shall be 5.0kgf/cm <sup>2</sup> or more, but 3 minutes starting excluded. Only, The Pressure difference below 18Hz shall be allowable 2.0kgf/cm <sup>2</sup>
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. Ratio coefficient 'K' should be over 0.6. -In case of ' 0.4 < K < 0.6 ' System must be deigned preventing from Liquid Refrigerant Back in Accumulator at any condition. -Effective volume : 380cc Effective Volume of Accum. × Specific gravity of Refrigerant K = ----- Charged Weight of Refrigerant  ※ Specific Gravity of Refrigerant (R32) = 1.10 ( 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.

※ This guide contains many important safety messages. Always read and obey all safety messages.

**⚠ WARNING**

**Application Limit**

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Power source voltage	The applied voltage phase of stator must be synchronized with the phase of rotor. ※ Do not apply general AC power on terminals.
Carrier Frequency	Carrier frequency must be selected so as not to resonate the Compressor & Pipe.
Acceleration rate & Deceleration	Acceleration rate & deceleration rate Refer to * note 1.
Pipe Stress	Don't allow any force on discharge & suction pipe . The piping stress must be less than 300kgf/cm <sup>2</sup> at starting and stopping. And less than 200kgf/cm <sup>2</sup> at running. (Peak to Peak)
Oil Level	It must be checked oil level by the compressor with sight glass we supply. And oil level must be kept over guide line level ***note 3. at any condition.
Protection device	Air conditioner system must has the compressor protection device like over current , high temperature, sensing locked pump in the controller. When starting & running fail by abnormal overload, controller must be able to cut off power of compressor before motor burn out.
Protection for demagnetization	Compressor should not be applied over current 31A(Peak) at 120°C
Pump down refrigerant	If pump down time is too long, compressor can be damaged due to excessive temperature increase or poor lubrication. Guideline of pump down process. - Time : less than 30 seconds - Suction Pressure : It should not run under below 1kgf/cm <sup>2</sup> G. And before closing a service valve, compressor running for more than 5 minutes is recommended.

**\* Effective Period of This Document \***

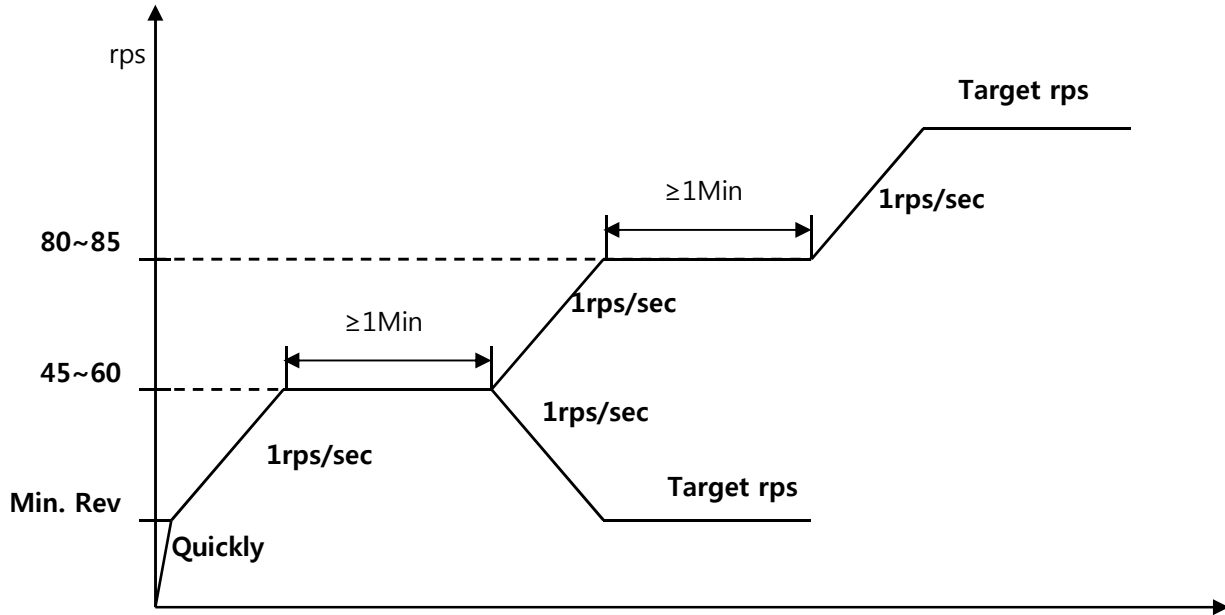
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**▲ WARNING**

3.3 Process Limit

Use defined Refrigerant and oil	Any process in where the HCFC's refrigerant or the different kind of oil against the defined. Compressor oil are mixed should be avoided.
Avoid Damage running	The running operation that inspection and the protector inspection that affect a damage to the function and durability of the compressor should be avoided
Running dummy indoor	When the outdoor unit is operated with the indoor dummy unit, the discharged oil should be recovered enough
Prevent oxidation in pipe	Always purge the system and the compressor with the dry nitrogen in order to prevent oxidation of the piping
Charging Refrigerant	When charging refrigerant into the cycle, make sure that refrigerant always be filled from the higher pressure side (condenser exit) of the cycle. If liquid refrigerant is sucked in to the compressor liquid compression occurs, The discharge valve is damaged, lubrication effectiveness degenerates and reliability drops noticeably
Avoid Vacuum running	Do not operate the compressor in a vacuum state. Furthermore do not apply high voltage to a vacuum state compressor. There is a danger that insulation could degenerate, causing electric shock
Avoid Air compression	Do not compress the air including the case of leakage in the refrigeration cycle. If compressors run with air mixed, inside the compressor is heated and pressurized , which may cause an explosion
Promptly Assemble compressor in line	After removing rubber plugs from compressor tubes, Promptly use the compressor. And do not leave in the atmosphere for 10 minutes over. If Air gets into the compressor , accelerating degeneration of the inside of the cycle or compressor
Wiring	Wires connected to the compressor, follow the compressor specification manual and instructions
Storage temperature	-10°C ~ 65°C
Earth connection	Use compressor with grounded system only.

**\*Note 1. Operating Pattern**



Rapid change of compressor revolution may result in lower oil level or breakdown of compressor. Revolution change rate depends on A/C system's order logic.

Basically, guide line of change rate is lower than 1rps/sec. But from compressor starting to main running revolution (state of revolution speed being increased), if compressor breakdown won't happen, the revolution change speed rate can be 2rps/sec.

If target revolution is above 60rps, compressor should be run and last more than 1 minutes at 45~60rps and above 85rps, it must stay at 85rps or so. Above chart explain how to change revolution rate.

Most important thing is keeping stable compressor oil level, so it must be observed at all running conditions built into A/C systems and main logic of speed change must be designed to maintain stable compressor oil level.

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**\*\* Note 2 OIL Dilution rate**

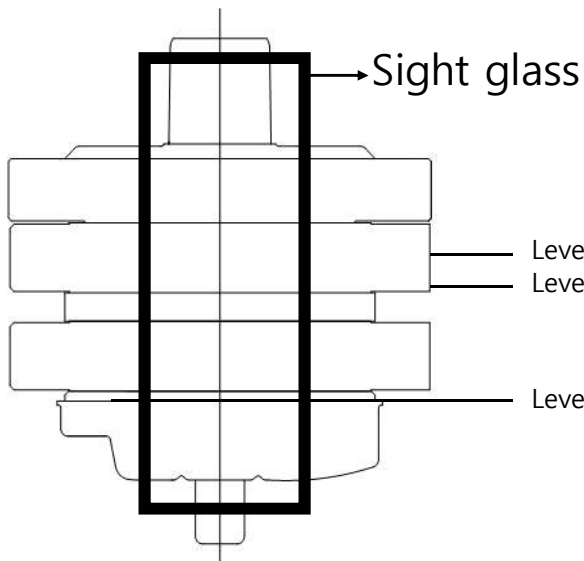
$$\frac{\text{Oil Weight}}{\text{Refrigerant Weight} + \text{Oil Weight}} \geq 0.22$$

※ Specific Gravity of PVE or POE = 0.9 (at 20°C)

[ Unit ]

- ☞ Oil Weight : [ g ]
- ☞ Refrigerant Weight : [ g ]

**\*\*\* Note 3 Oil Level Guide Line**



Level A : Operated below 30Hz

Level B : Steady state at any condition.  
30~130Hz

Level C : Limit level of transition period  
within 3minutes.

**\* Effective Period of This Document \***

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4. LABEL

[UNIT : mm]



All safety messages will identify the hazard, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed. You are strongly advised to follow these safety instructions.

**\* Note \***



This is the Safety alert symbol. It indicates a hazardous situation which, if not avoided, could result in death or serious injury.



This is the Electric shock hazard symbol. It indicates a hazardous situation which, if not avoided, could result in the electric shock.



This is the Getting burnt symbol. It indicates a hazardous situation which, if not avoided, could cause fire.



This is the Explosion or Fire symbol. It indicates a hazardous situation which, if not avoided, could cause explosion or fire.

**\*1. Effective Period of This Document \***

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**\*2. Compressor operating range \***

The Compressor can operate within the limits of the outlined area. Outside these operating fields, the system cause early defects in the compressor. The compressor defects caused by applications operating outside the outlined area will not be considered under the warranty. If the appliance be operated out of the operating range, it must be agreed with the supplier.

# Attachment

	PAGE
1. Performance Characteristic	: A-1~6
2. Compressor Drawing	: A-7
3. Accessory Fitting	: A-8
4. Part Drawings	: A-9~13
5. Motor Parameter	: A-14

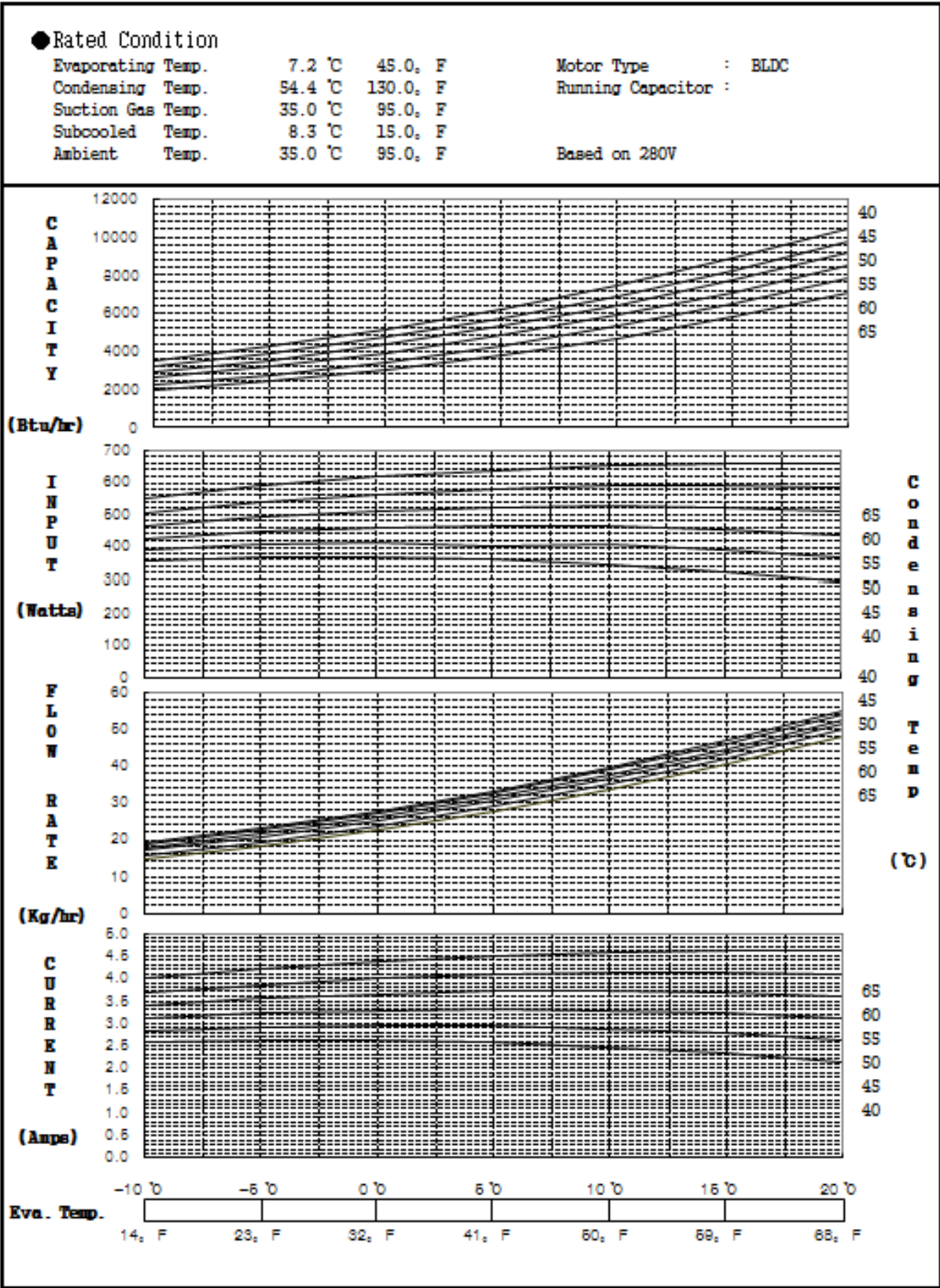
## PERFORMANCE TABLE

**MODEL : DST102MAA (3PH DC , 280V - 30Hz)**

Saturated Evaporating Temperature	Items		Saturated Condensing Temperature					
			40°C (104°F)	45°C (113°F)	50°C (122°F)	55°C (131°F)	60°C (140°F)	65°C (149°F)
-10°C (14°F)	Capacity	(Btu/h)	3464	3200	2916	2611	2287	1943
	Input	(Watts)	355	390	427	465	506	547
	Flow Rate	(kg/h)	19.20	18.60	17.84	16.94	15.88	14.68
	EER	(Btu/W.h)	9.77	8.20	6.83	5.61	4.52	3.55
	Current	(Amps)	2.57	2.83	3.10	3.38	3.68	3.99
-5°C (23°F)	Capacity	(Btu/h)	4204	3880	3536	3173	2788	2386
	Input	(Watts)	363	405	448	492	538	585
	Flow Rate	(kg/h)	23.05	22.38	21.56	20.59	19.46	18.19
	EER	(Btu/W.h)	11.57	9.57	7.89	6.44	5.19	4.08
	Current	(Amps)	2.61	2.91	3.21	3.53	3.87	4.22
0°C (32°F)	Capacity	(Btu/h)	5111	4728	4325	3901	3458	2996
	Input	(Watts)	366	413	461	511	562	615
	Flow Rate	(kg/h)	27.73	26.99	26.10	25.06	23.87	22.53
	EER	(Btu/W.h)	13.98	11.45	9.38	7.64	6.15	4.87
	Current	(Amps)	2.61	2.94	3.28	3.64	4.01	4.39
5°C (41°F)	Capacity	(Btu/h)	6187	5744	5280	4798	4296	3773
	Input	(Watts)	359	401	465	521	578	636
	Flow Rate	(kg/h)	33.24	32.43	31.47	30.36	29.10	27.69
	EER	(Btu/W.h)	17.23	14.32	11.34	9.20	7.43	5.93
	Current	(Amps)	2.57	2.93	3.31	3.70	4.10	4.52
10°C (50°F)	Capacity	(Btu/h)	7429	6927	6405	5863	5302	4719
	Input	(Watts)	346	404	463	525	587	650
	Flow Rate	(kg/h)	39.57	38.69	37.66	36.48	35.15	33.67
	EER	(Btu/W.h)	21.46	17.14	13.82	11.18	9.03	7.26
	Current	(Amps)	2.47	2.87	3.28	3.71	4.15	4.60
15°C (59°F)	Capacity	(Btu/h)	8840	8278	7697	7095	6474	5833
	Input	(Watts)	325	388	453	519	588	657
	Flow Rate	(kg/h)	46.72	45.77	44.68	43.43	42.03	40.48
	EER	(Btu/W.h)	27.23	21.33	17.01	13.66	11.01	8.88
	Current	(Amps)	2.33	2.76	3.21	3.67	4.15	4.64
20°C (68°F)	Capacity	(Btu/h)	10418	9797	9157	8496	7815	7115
	Input	(Watts)	296	364	435	507	581	656
	Flow Rate	(kg/h)	54.70	53.68	52.52	51.20	49.73	48.12
	EER	(Btu/W.h)	35.24	26.88	21.03	16.74	13.46	10.85
	Current	(Amps)	2.14	2.61	3.09	3.59	4.10	4.63

# PERFORMANCE CURVE

**MODEL : DST102MAA (3PH DC , 280V - 30Hz)**



## PERFORMANCE TABLE

**MODEL : DST102MAA (3PH DC , 280V - 60Hz) )**

Saturated Evaporating Temperature	Items	Saturated Condensing Temperature					
		40°C (104°F)	45°C (113°F)	50°C (122°F)	55°C (131°F)	60°C (140°F)	65°C (149°F)
-10°C (14°F)	Capacity (Btu/h)	7224	6714	6153	5541	4879	4167
	Input (Watts)	719	784	850	916	983	1050
	Flow Rate (kg/h)	39.89	38.97	37.89	36.64	35.22	33.64
	EER (Btu/W.h)	10.05	8.56	7.24	6.05	4.96	3.97
	Current (amps)	2.68	2.93	3.20	3.47	3.76	4.06
-5°C (23°F)	Capacity (Btu/h)	8756	8161	7516	6820	6074	5277
	Input (Watts)	738	813	889	965	1042	1119
	Flow Rate (kg/h)	47.76	46.85	45.76	44.51	43.10	41.51
	EER (Btu/W.h)	11.87	10.04	8.45	7.07	5.83	4.72
	Current (amps)	2.73	3.02	3.32	3.63	3.95	4.28
0°C (32°F)	Capacity (Btu/h)	10602	9923	9194	8414	7583	6703
	Input (Watts)	742	827	913	1000	1087	1174
	Flow Rate (kg/h)	57.22	56.31	55.22	53.97	52.56	50.97
	EER (Btu/W.h)	14.29	11.99	10.06	8.41	6.98	5.71
	Current (amps)	2.73	3.05	3.39	3.73	4.09	4.45
5°C (41°F)	Capacity (Btu/h)	12763	12000	11187	10322	9408	8443
	Input (Watts)	732	828	924	1020	1117	1215
	Flow Rate (kg/h)	68.26	67.35	66.26	65.01	63.60	62.01
	EER (Btu/W.h)	17.44	14.50	12.11	10.12	8.42	6.95
	Current (amps)	2.68	3.04	3.41	3.79	4.18	4.58
10°C (50°F)	Capacity (Btu/h)	15239	14392	13494	12546	11547	10497
	Input (Watts)	708	813	920	1026	1133	1241
	Flow Rate (kg/h)	80.89	79.97	78.89	77.64	76.22	74.64
	EER (Btu/W.h)	21.54	17.69	14.67	12.22	10.19	8.46
	Current (amps)	2.59	2.98	3.38	3.80	4.22	4.66
15°C (59°F)	Capacity (Btu/h)	18030	17099	16116	15084	14001	12867
	Input (Watts)	669	785	901	1018	1135	1253
	Flow Rate (kg/h)	95.10	94.18	93.10	91.85	90.43	88.85
	EER (Btu/W.h)	26.95	21.78	17.88	14.82	12.33	10.27
	Current (amps)	2.45	2.87	3.31	3.76	4.22	4.69
20°C (68°F)	Capacity (Btu/h)	21136	20120	19054	17937	16769	15552
	Input (Watts)	616	742	869	996	1123	1251
	Flow Rate (kg/h)	110.89	109.97	108.89	107.64	106.22	104.64
	EER (Btu/W.h)	34.30	27.11	21.94	18.02	14.93	12.43
	Current (amps)	2.26	2.72	3.19	3.67	4.16	4.67



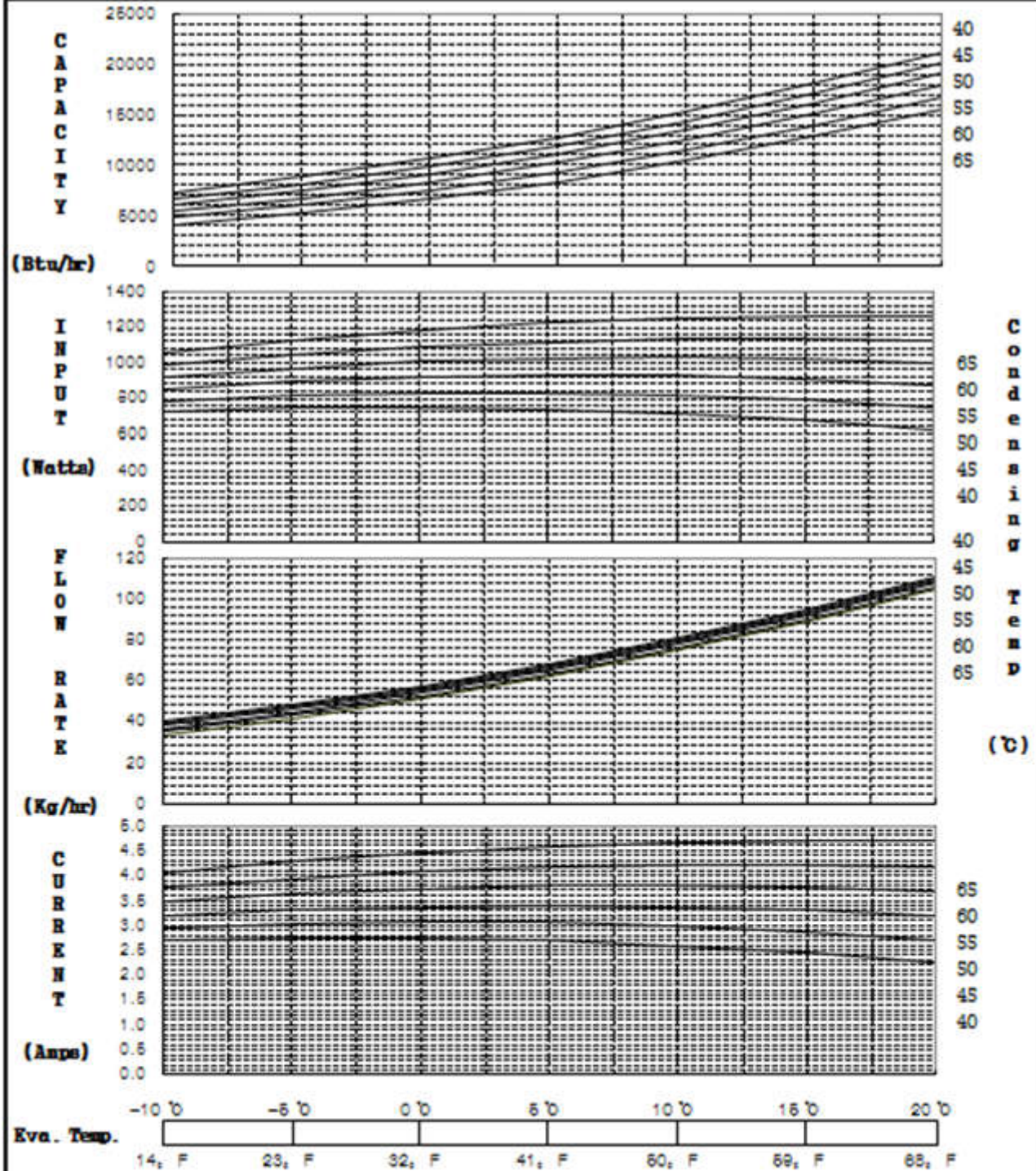
# PERFORMANCE CURVE

**MODEL : DST102MAA (3PH DC , 280V - 60Hz)**

● **Rated Condition**

Evaporating Temp.	7.2 °C	45.0, F	Motor Type	: BLDC
Condensing Temp.	54.4 °C	130.0, F	Running Capacitor	:
Suction Gas Temp.	35.0 °C	95.0, F		
Subcooled Temp.	8.3 °C	15.0, F		
Ambient Temp.	35.0 °C	95.0, F		

Based on 280V



## PERFORMANCE TABLE

**MODEL : DST102MAA (3PH DC , 280V - 90Hz)**

Saturated Evaporating Temperature	Items	Saturated Condensing Temperature					
		40°C (104°F)	45°C (113°F)	50°C (122°F)	55°C (131°F)	60°C (140°F)	65°C (149°F)
-10°C (14°F)	Capacity (Btu/h)	11288	10600	9912	9225	8538	7852
	Input (Watts)	1153	1258	1369	1486	1608	1735
	Flow Rate (kg/h)	62.33	61.58	60.83	60.08	59.33	58.58
	EER (Btu/W.h)	9.79	8.43	7.24	6.21	5.31	4.52
	Current (Amps)	2.87	3.16	3.46	3.78	4.12	4.48
-5°C (23°F)	Capacity (Btu/h)	13716	12870	12025	11180	10336	9493
	Input (Watts)	1184	1303	1429	1559	1696	1838
	Flow Rate (kg/h)	74.54	73.67	72.79	71.92	71.04	70.17
	EER (Btu/W.h)	11.59	9.87	8.42	7.17	6.10	5.17
	Current (Amps)	2.93	3.25	3.59	3.95	4.32	4.71
0°C (32°F)	Capacity (Btu/h)	16568	15564	14562	13560	12558	11558
	Input (Watts)	1194	1328	1468	1613	1763	1920
	Flow Rate (kg/h)	89.00	88.00	87.00	86.00	85.00	84.00
	EER (Btu/W.h)	13.87	11.72	9.92	8.41	7.12	6.02
	Current (Amps)	2.95	3.30	3.67	4.06	4.47	4.90
5°C (41°F)	Capacity (Btu/h)	19843	18683	17523	16363	15204	14046
	Input (Watts)	1184	1333	1487	1646	1811	1981
	Flow Rate (kg/h)	105.71	104.58	103.46	102.33	101.21	100.08
	EER (Btu/W.h)	16.75	14.02	11.79	9.94	8.40	7.09
	Current (Amps)	2.92	3.30	3.71	4.13	4.58	5.04
10°C (50°F)	Capacity (Btu/h)	23543	22225	20907	19590	18274	16958
	Input (Watts)	1154	1317	1485	1658	1837	2022
	Flow Rate (kg/h)	124.67	123.42	122.17	120.92	119.67	118.42
	EER (Btu/W.h)	20.40	16.88	14.08	11.81	9.95	8.39
	Current (Amps)	2.84	3.26	3.70	4.15	4.63	5.13
15°C (59°F)	Capacity (Btu/h)	27666	26191	24716	23241	21768	20295
	Input (Watts)	1104	1280	1463	1651	1844	2043
	Flow Rate (kg/h)	145.88	144.50	143.13	141.75	140.38	139.00
	EER (Btu/W.h)	25.07	20.45	16.90	14.08	11.81	9.94
	Current (Amps)	2.71	3.16	3.63	4.13	4.64	5.17
20°C (68°F)	Capacity (Btu/h)	32213	30580	28948	27316	25685	24055
	Input (Watts)	1033	1224	1420	1622	1830	2043
	Flow Rate (kg/h)	169.33	167.83	166.33	164.83	163.33	161.83
	EER (Btu/W.h)	31.19	24.99	20.38	16.84	14.04	11.77
	Current (Amps)	2.53	3.02	3.53	4.05	4.60	5.16

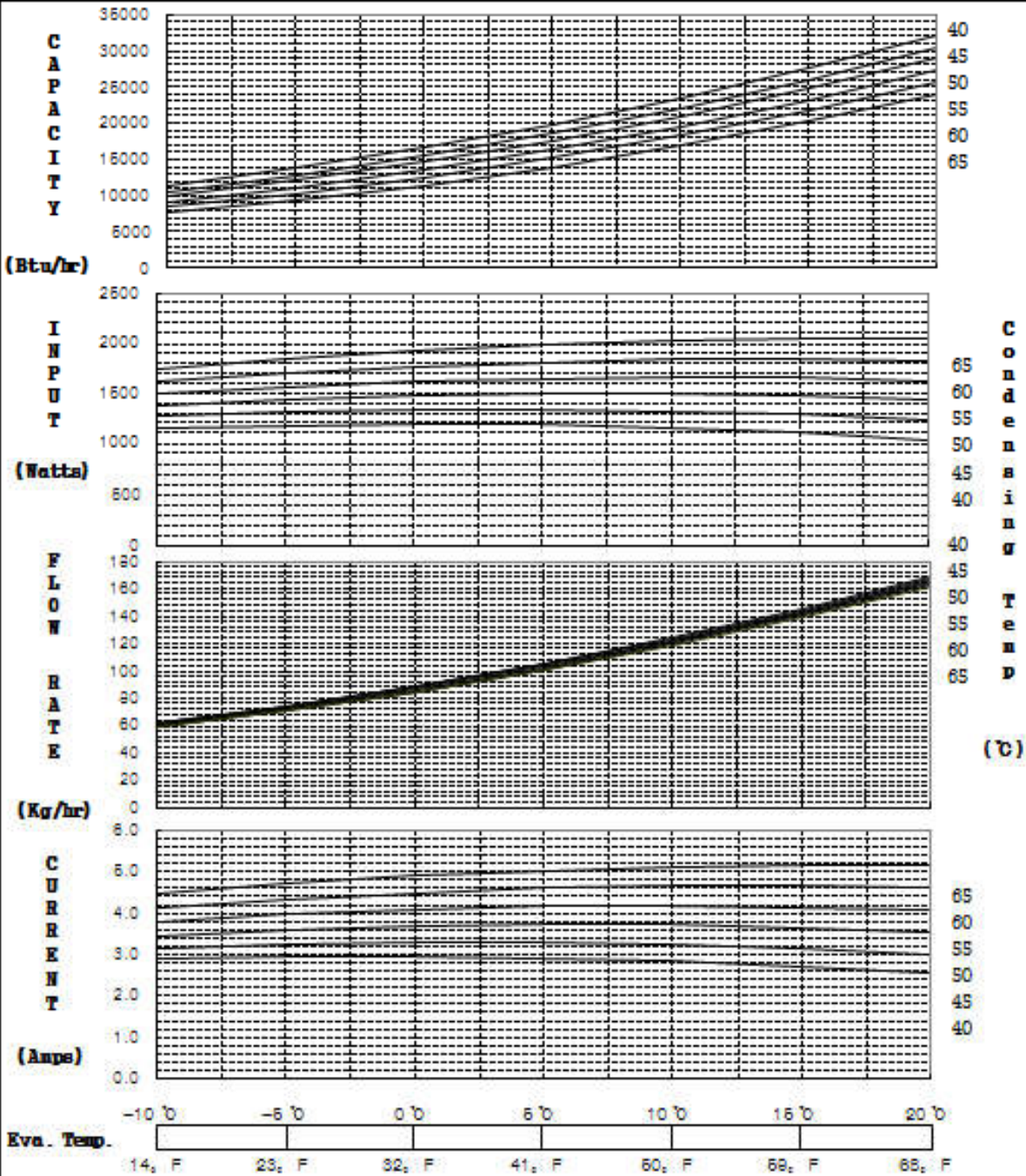


# PERFORMANCE CURVE

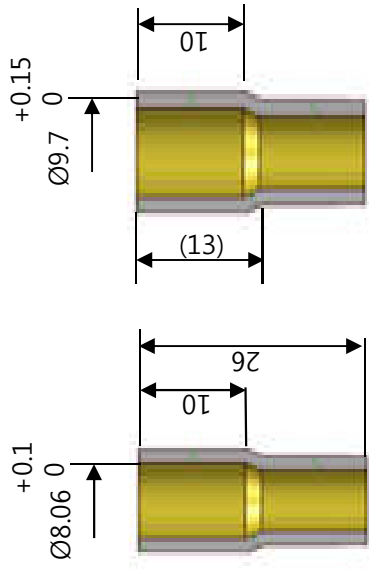
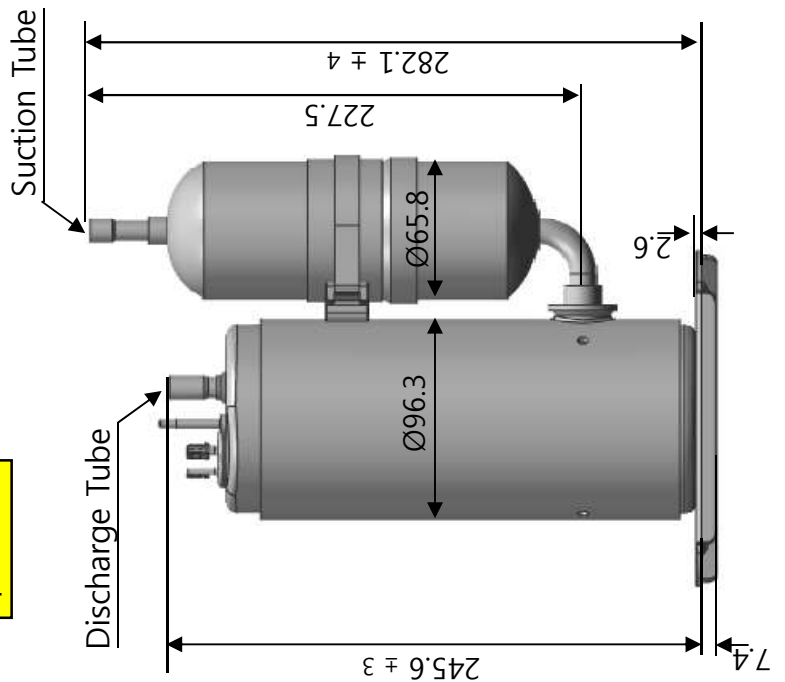
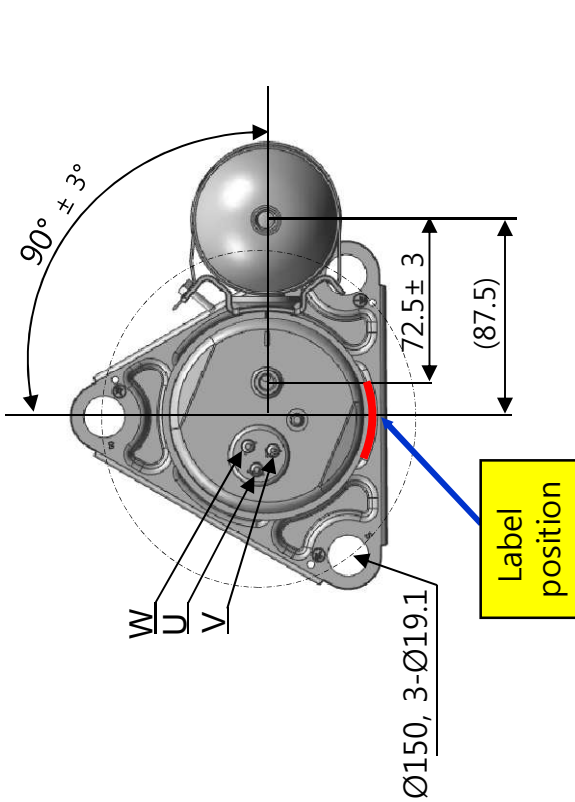
**MODEL : DST102MAA (3PH DC , 280V - 90Hz)**

● **Rated Condition**

Evaporating Temp.	7.2 °C	45.0, F	Motor Type	: BLDC
Condensing Temp.	54.4 °C	130.0, F	Running Capacitor	:
Suction Gas Temp.	35.0 °C	95.0, F		
Subcooled Temp.	8.3 °C	15.0, F		
Ambient Temp.	35.0 °C	95.0, F		
				Based on 280V







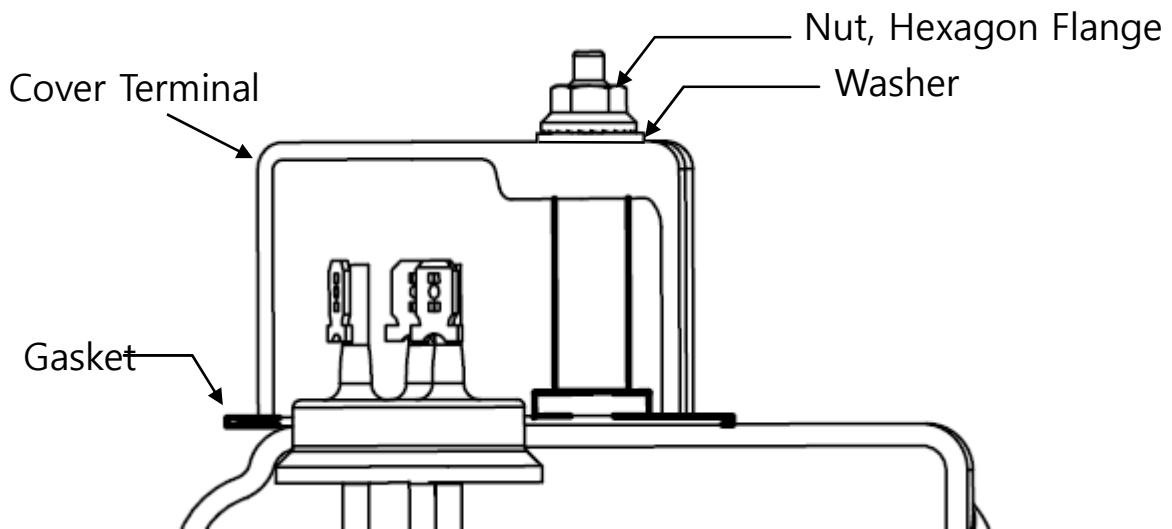
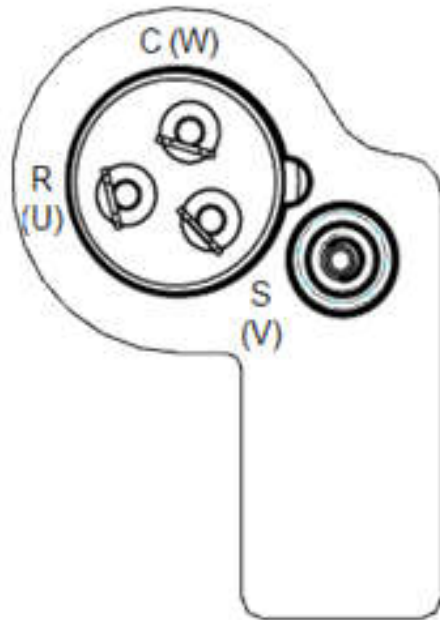
Detail of Discharge Tube      Detail of Suction Tube

NOTES

1. PAINTING : BLACK PAINT ( ELECTRO DEPOSITION)
2. OIL : POE or PVE 280 cc
3. NITROGEN CHARGED AFTER DEHYDRATION
4. DIMENSIONS ARE mm UNITS

UNIT	mm	SCALE	N / S	COMP. OUT LINE
DES. ENGR.		CHF. ENGR.		
May. 09. 2019 Nattawoot W.		May. 09. 2019 Samornchai T.		DST102MAA
LG Electronics Inc. CUSTOMER		A/C COMP. DIV. SCORP		

# Accessory Fitting



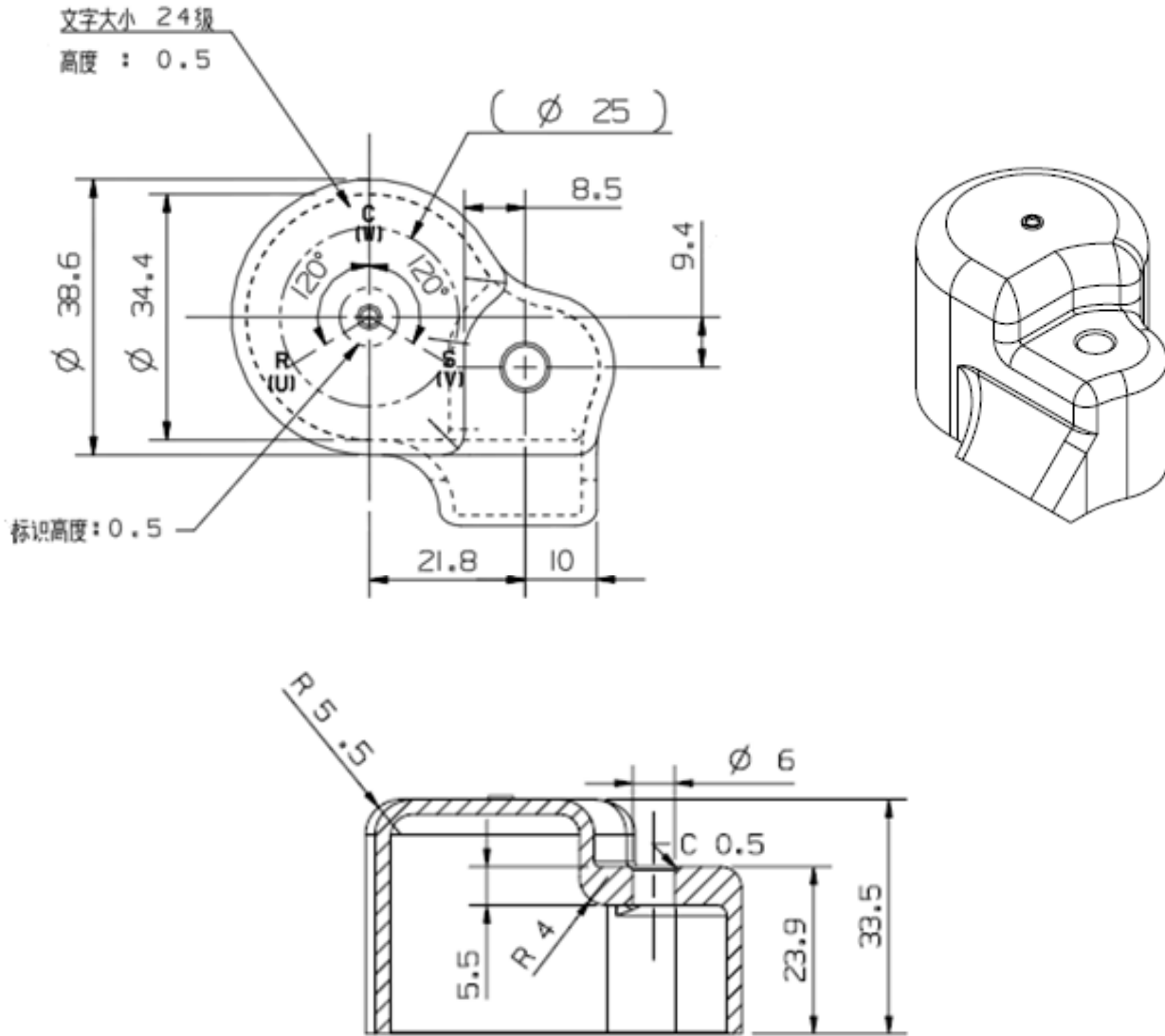
C(W),R(U),S(V) Mark Embossed on Cover Terminal

※ Nut assembly Should be below 20kgfcm.

# Cover, Terminal

Drawing No. MCK67529101

( UNIT : mm )

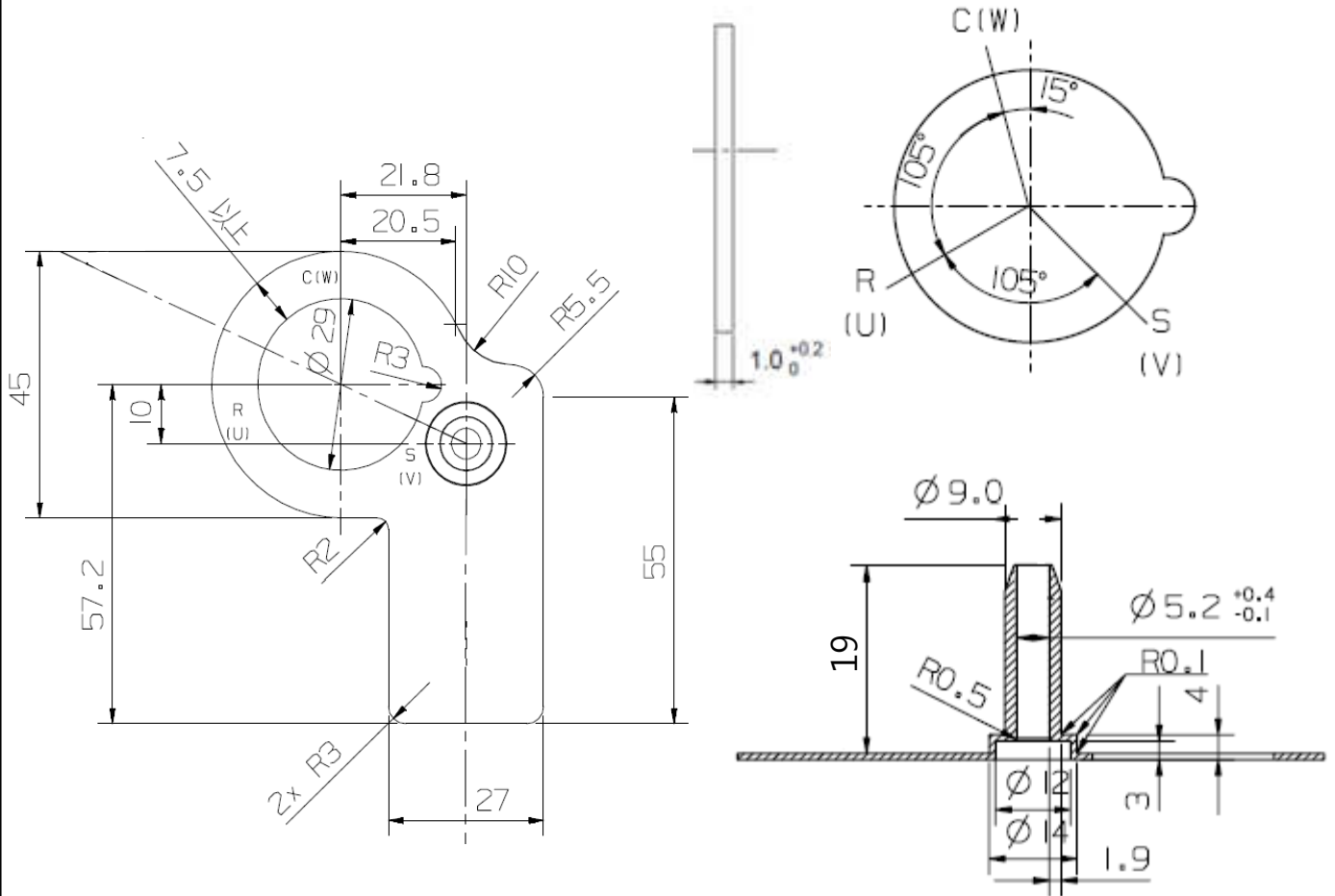


MATERIAL	COLOR	REMARK
Lupox TE-5006F (polybutylene terephthalate)	BLACK	MARKS(C(W),R(U),S(V))

# Gasket

## Drawing No. MDS66651003 1

( UNIT : mm )

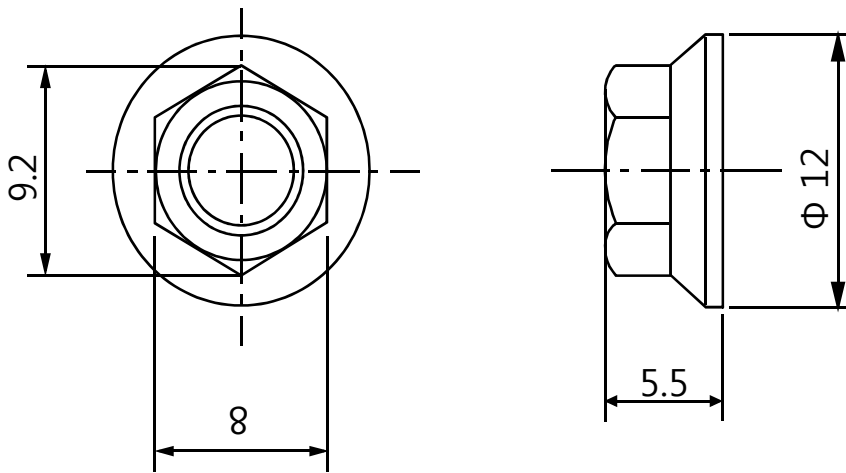


MATERIAL	REMARK
SILICONE	MARKS(C(W),R(U),S(V))

# Nut, Common

Drawing No. FAD30241201

( UNIT : mm )

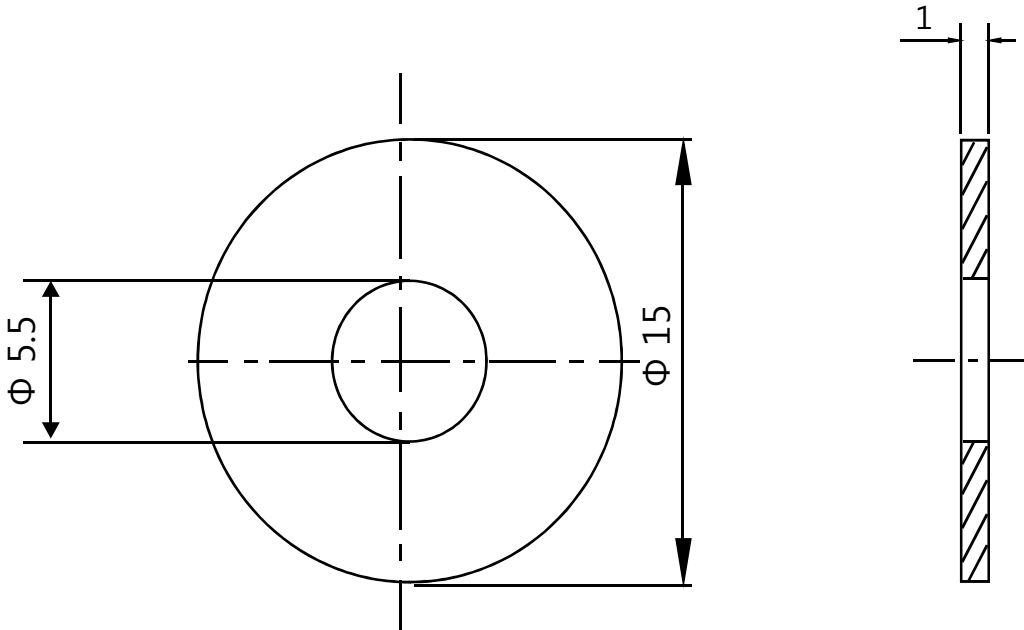


\* MATERIAL : STEEL ( ELECTRIC PLATING OF ZINC )

# Washer, Customized

Drawing No. FAF30240201

( UNIT : mm )

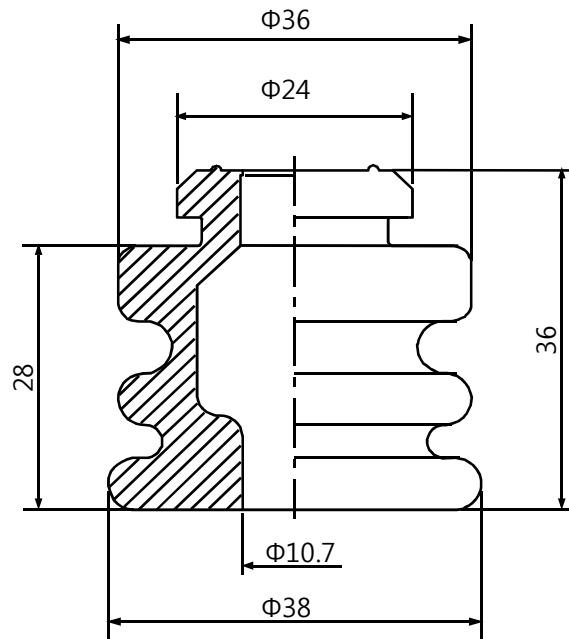


\* MATERIAL : POLYAMIDE ( NYLON )

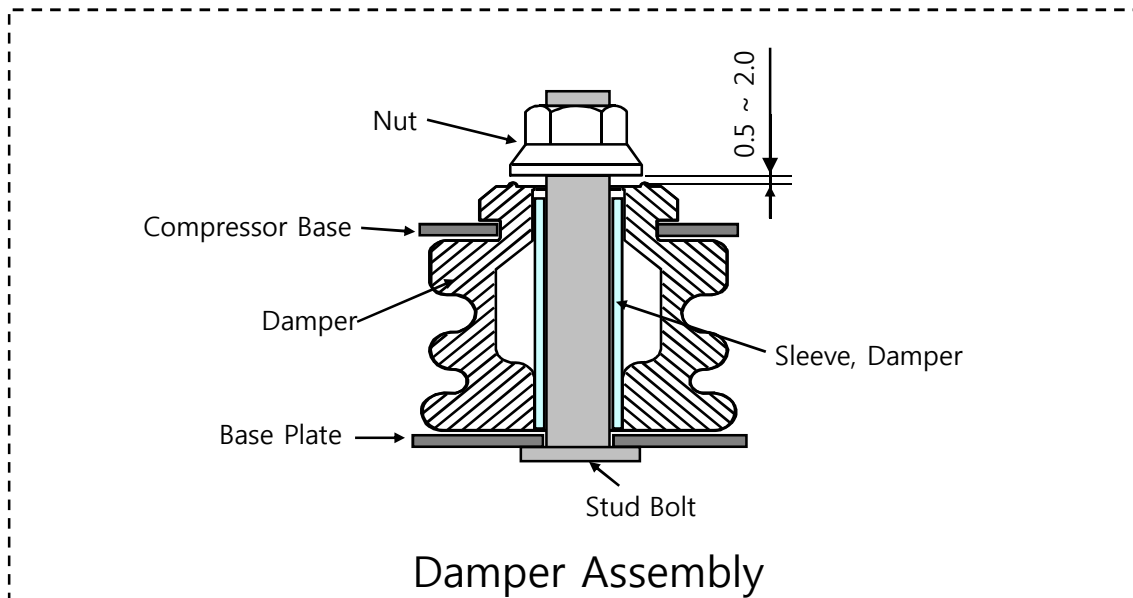
# Damper, Rubber

Drawing NO. MCQ66473401

( UNIT : mm )



\* MATERIAL : NATURAL RUBBER



### Motor Spec

No.	Item	Parameter	Remark
1	Compressor Model	DST102MA	
2	Rotor Pole	6 Pole	
3	Rated Frequency Range	10 ~ 130 Hz	
4	Magnet Material	NdFeB	
5	Demagnetizing Current	31 Apeak@120°C	At 120°C, -4% demagnetizing rate.
6	Inductance-Ld (per phase)	Table	Below Table and Picture
7	Inductance-Lq (per phase)	Table	
8	Winding Resistance	2.99 Ω	line-to-line(at 75°C)
9	Voltage Constant	45.4Vrms / Krpm	line-to-line

### Inductance characteristic curve

■ 电感 Ld, Lq		Ld_ph (mH)	Lq_ph (mH)
Apeak	Arms		
1.4	1	6.84	12.10
2.8	2	7.11	12.12
4.2	3	7.32	11.71
5.7	4	7.36	11.33
7.1	6	7.13	10.70
8.5	8	6.85	10.17
9.9	10	6.62	9.58

