



Rotary Compressor

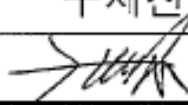
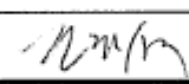
SPECIFICATION for APPROVAL

MODEL: DPT442MAB

CUSTOMER : SCORP

APPROVAL			
Name			
Date			


부품솔루션 사업부

	Designed	Checked	Approved
Name	장기환	구세진	정채석
Date	장기환		

Please return one copy on your approval.

Please read this specification thoroughly before installation or operating.

Revision History

Data	Rev. No	Rev. description	Write
2019. 04. 17		1. Add Nut, Hexagon Flange, Washer, Plain Cover Accessory 2. Marked on Power Input 4510W label according to TIS standard condition 3. Edit label text location	장기환

Safety Precaution

IMPORTANT SAFTY INSTRUCTIONS

The following precautions is to prevent unexpected hazard.

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

Service should be performed by trained personnel only.

Install the refrigerant, lubricant oil and electrical component (OLP, Capacitor, Terminal Cover, etc) specified by compressor manufacturer.
It can cause fire or electrical shock.

Connect the electrical wiring correctly in accordance with manufacturer's instruction.
It can cause fire or electrical shock.

Compressor must be grounded whenever power is supplied.
Do not use earth screw, except for ground.
It can cause electrical shock.

Before servicing, always remove the power plug from outlet.
It can cause electrical shock.

Before welding, always remove refrigerant in the compressor.
Do not operate compressor in the air or vacuum status.
It can cause explosion

Do not touch the compressor with bare hands during operation or after stoppage instantly.
It can cause get burnt.

1. Specification

1.1 Compressor

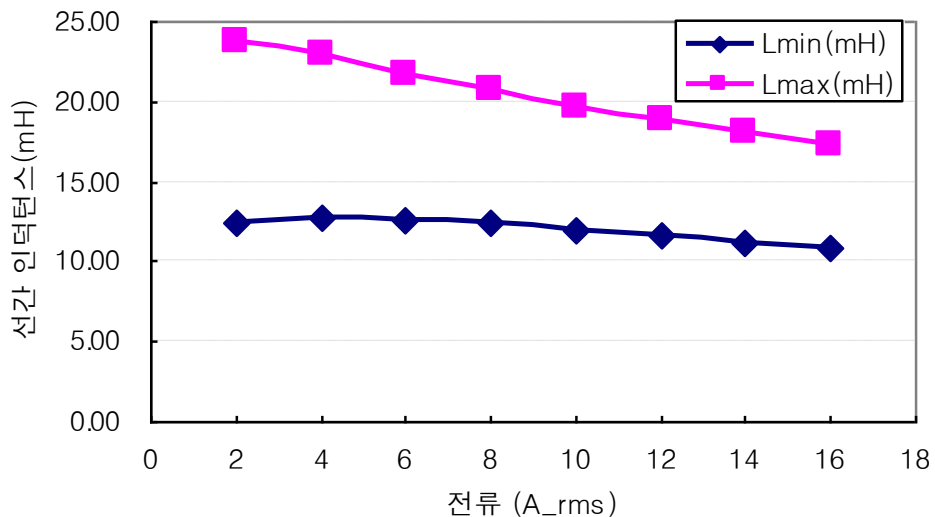
1	Application	Cooling and Heating with BLDC Inverter System
2	Compressor Type	Hermetic Motor Compressor
3	Pump Type	Twin Rotary (Two Cylinder Rolling Piston Type)
4	Displacement	44.2 cm ³ / rev
5	Refrigerant	R32
6	Oil / Oil Charging Amount	POE or PVE / 1,300cc
7	Painting	Black Color Paint
8	Net Weight (Including Oil)	20.5kg
9	Suction Tube I.D	$\Phi 16.0 \begin{smallmatrix} +0.15 \\ 0 \end{smallmatrix}$ mm
10	Discharge Tube I.D	$\Phi 12.75 \begin{smallmatrix} +0.15 \\ 0 \end{smallmatrix}$ mm

1.2 Motor

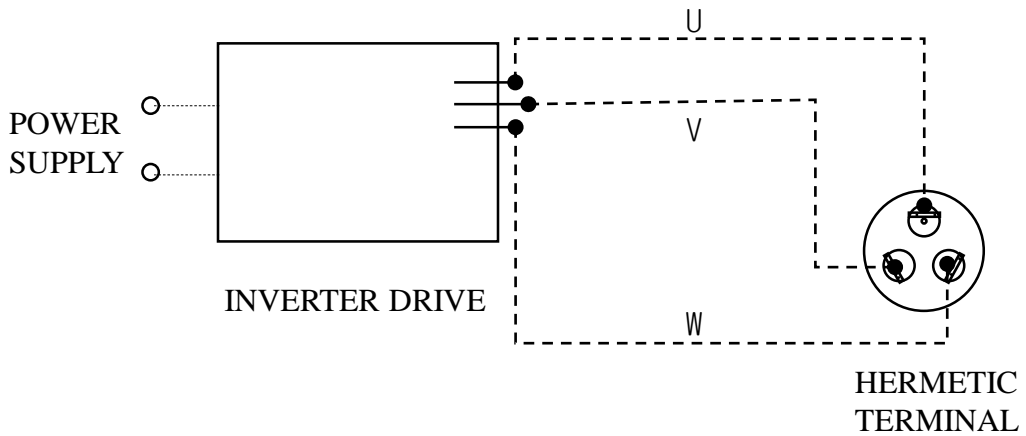
Motor Type / Starting Type	BLDC Motor / DC Inverter Starting	
Pole / Rated Output	6 Pole / 4,000 Watts(@60Hz)	
Power Source	Sensorless Brushless Inverter	
Winding type	Concentrated Winding	
Insulation Class	E Class	
Windings Resistance (at 25 °C)	U-V	0.845 ±7% Ohms
	V-W	0.845 ±7 % Ohms
	W-U	0.845 ±7 % Ohms

	A (Arms)	Lmin(mH)	Lmax(mH)
Inductance (Line to Line) (mH)	2.0	12.41	23.72
	6.0	12.63	21.70
	10.0	12.01	19.67
	14.0	11.16	18.00

Inductance characteristic curve



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	[BTU/h]	50,500
	[W]	14,800
Power Input (+2%↓)	[watts]	4,510
EER (-2%↑)	[BTU/w · hr]	11.20
Running Current	[A]	11.0

☞ ARI Condition (Ps/Pd = 9.35 / 34.38 kg/cm²G)

Cond. Temp. : 54.4 °C (130 °F)

Evap. Temp. : 7.2 °C (45 °F)

Return Gas Temp. : 18.3 °C (65 °F)

Liquid Temp. : 46.1 °C (115 °F)

Ambient Temp. : 35.0 °C (95 °F)

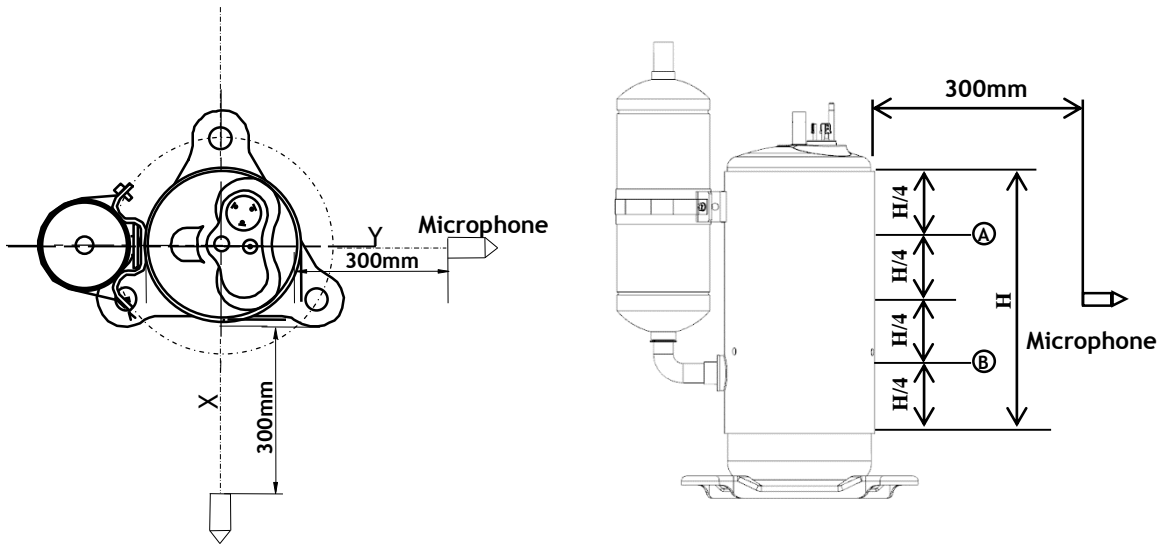
1.5 Noise , Vibration

※ Electric source

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

Sound Level	[dB(A)]	60Hz
		79+2↓
Vibration Standard Condition	[G]	1.5 ↓

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 :
 - Standard Condition (Ps/Pd = 9.12 / 33.45 kg/cm²G)
(Return Gas: 18.3°C)

1.6 Others

Leak Tight Pressure	High Pressure Side	42 kgf / cm ² G
	Low Pressure Side	-
Hydrostatic Strength Pressure	High Pressure Side	175 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)		60 mg Max.
* Residual Impurities		70 mg Max
Oil circulation		0.8 % ↓ (60Hz)

*) Each part was measured separately

2. Delivered Parts List

Parts Name	Type (Model)	EA	Parts Dwg. NO.	Supply	
			LG		
Compressor	DPT442MAB	1		<input checked="" type="radio"/> Yes	<input type="radio"/> No
Cover ,Terminal	-	1	3550U - L005B	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Gasket	-	1	MDS64933201	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Nut, Hexagon Flange	-	1	1NFZU-L001A	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Washer, Plain Cover	-	1	1WPZU-L001A	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Grommet	-	3	4022U-L005B	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Sleeve, Grommet	-	0	-	<input type="radio"/> Yes	<input checked="" type="radio"/> No
Bolt, Stud	-	0	-	<input type="radio"/> Yes	<input checked="" type="radio"/> No
Washer, Plain	-	0	-	<input type="radio"/> Yes	<input checked="" type="radio"/> No
Nut, Hexagon	-	0	-	<input type="radio"/> Yes	<input checked="" type="radio"/> No
Taptite Screw, Earth	-	0	-	<input type="radio"/> Yes	<input checked="" type="radio"/> No



※) Refer to Attachments (Accessory Parts Drawings.)

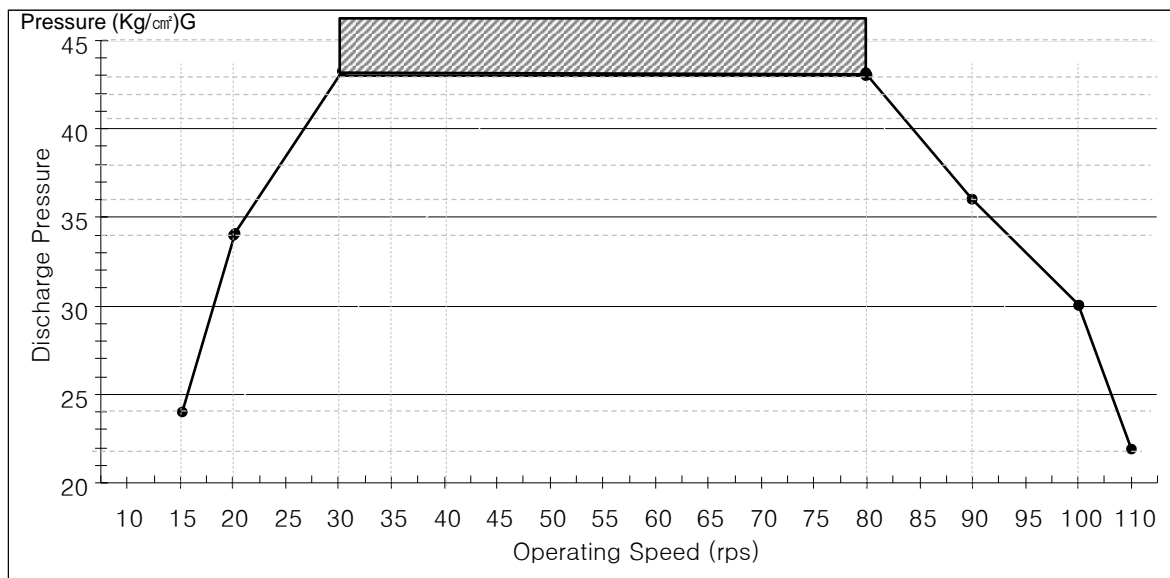
3. Operating Limit

Application Limit

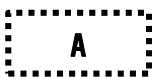
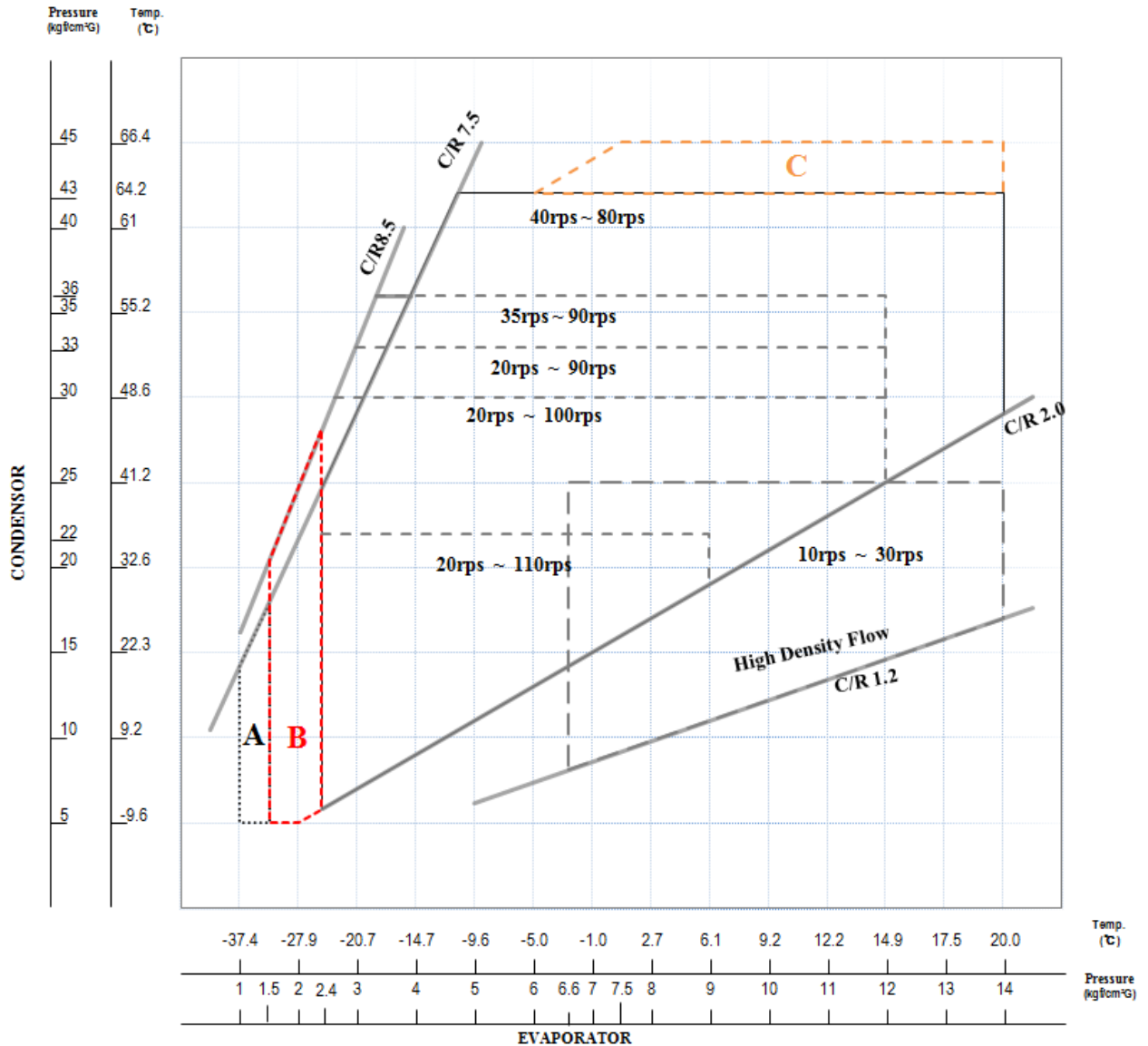
Discharge Pressure	[kgf/cm ² G]	43 Max.
Suction Pressure	[kgf/cm ² G]	2.4 ~ 14
Discharge Pipe Temp.	[°C]	115 Max.
Motor Coil Temp.	[°C]	130 Max.
Max load current	[A][rms]	16 Max.

Operating Speed (Discharge Pressure)

Pressure Limit



- The RAC division's Middle East model limits the discharge pressure
 - Allow continuous operation up to discharge pressure 43kgf / cm²
 - Pressure limit up to 45kgf / cm²
 - It must escape within the transient period of less than 43kgf / cm² in the operation area with a shaded area of more than 43 kgf / cm². The duration of transient driving shall not exceed 10 minutes.



In case of “ A “ Area.
 - Within 5 min. after starting in soaking-out.



In case of “ B “ Area.
 - Less than 3 min, at defrosting and restarting after defrosting
 - Discharge gas temperature should be maintained below 80°C.
 (Motor wire temperature less than 100°C)
 - The dryness of the suction gas must be 95% or more and do not occur liquid refrigerant back.
 - Oil surface height should be at least lower than the sub bearing section.
 (Over ‘Level C’ in ‘Oil level Guide’)
 ※ Allow transient operation in B area only in cold oriented model : 40 ~ 100rps



In case of “ C “ Area.
 - Middel East model permissible range of transient operation : 30 ~ 80rps

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

▲ WARNING

Application Limit

Refrigerant Charge Limit (Oil Dilution rate)	3,700g Max. (When using refrigerant 3,700g, additional Suction Accumulator must be used) Cooling Only & Heat Pump(Oil Dilution rate = 0.25 ** note2) ※ 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	$\Delta T = \text{Case Bottom Temp.} - \text{Condensing Temp.}$ It must be kept $\Delta T \geq 5^\circ\text{C}$
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. Ratio coefficient 'K' should be over 0.6. $K = \frac{\text{Effective Volume of Accum.} \times \text{Specific gravity of Refrigerant}}{\text{Charged Weight of Refrigerant}}$ ※ 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.

▲ WARNING

Application Limit

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 ² at starting and stopping. And less than 200kgf/cm ² 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 40A(peak) under temperature of 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 ² G. And before closing a service valve, compressor running for more than 5 minutes is recommended.
Earth Connection	Use Compressor with grounded system only.

*** Effective Period of This Document ***

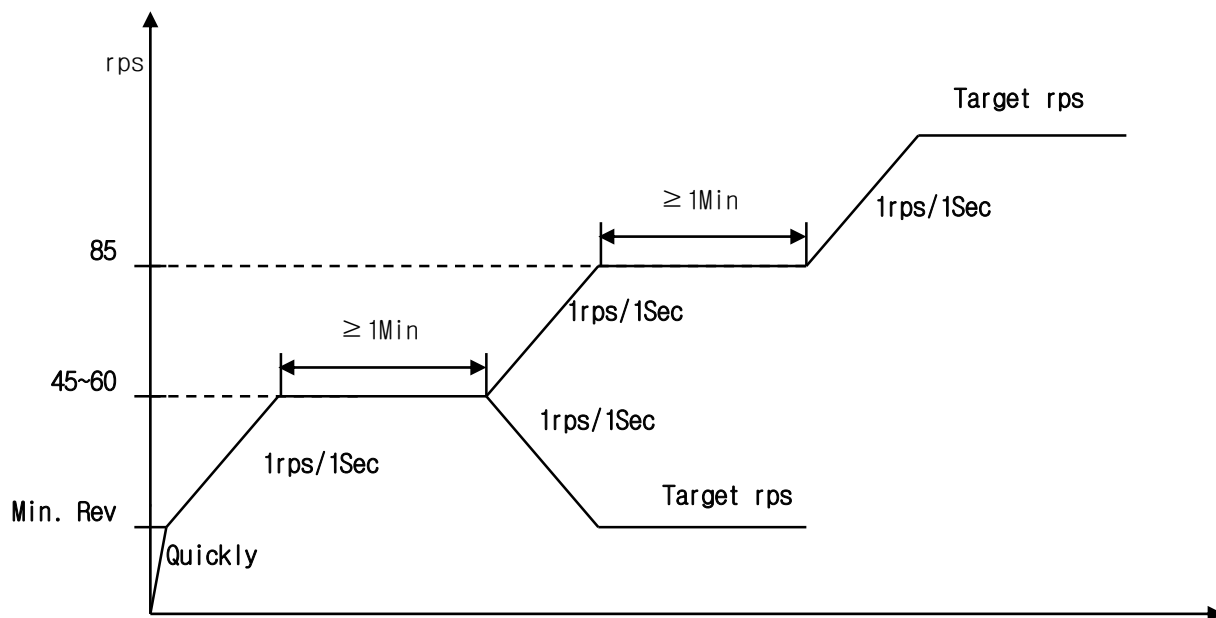
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▲ WARNING

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 Air conditioner 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℃ ~ 65℃

***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 about 1rps/1sec. But from compressor starting to main running revolution (state of revolution speed increasing), if compressor breakdown won't happen, the revolution change speed rate can be 3rps/s.

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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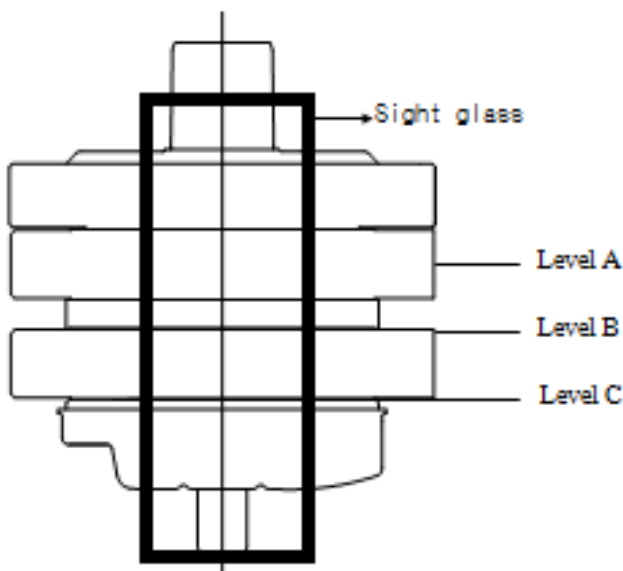
** Note 2 OIL Dilution rate

$\frac{\text{Oil Weight}}{\text{Refrigerant Weight} + \text{Oil Weight}} \geq 0.22$
※ Specific Gravity of POE or PVE = 0.9 (at 20°C)

[Unit]

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

*** Note 3 Oil Level Guide Line



Level A : Operated below 30Hz

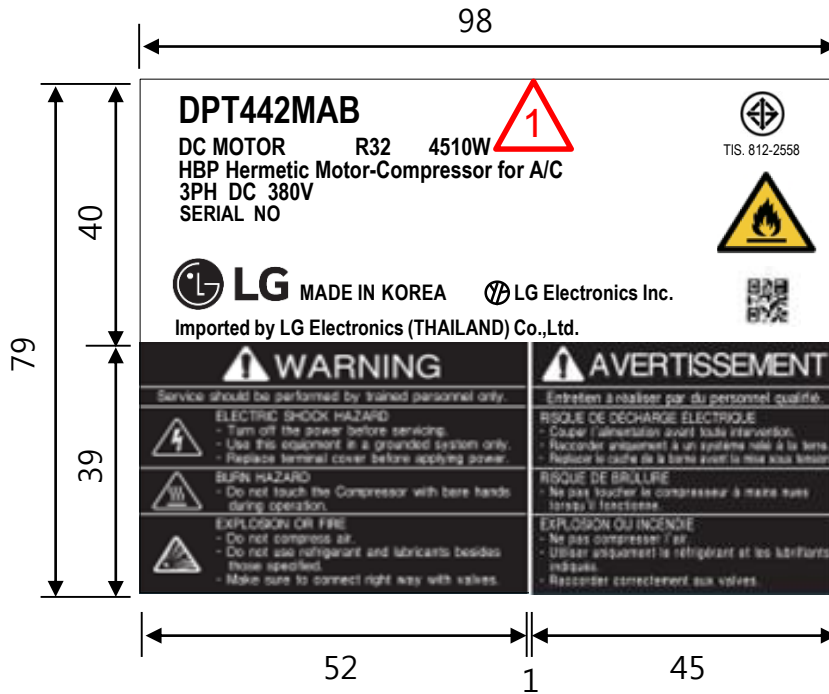
Level B : Steady state at any condition.
30 ~ 110Hz

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

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4. Label



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.



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

이 기호는 안전 주의 기호입니다. 위험한 상황에서 피하지 않으면 사망이나 중상을 초래할 수 있습니다.



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

이 기호는 감전 위험 기호입니다. 위험한 상황에서 피하지 않으면 감전을 초래할 수 있습니다.



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

이 기호는 화재 발생 주의 기호입니다. 특정 조건 하에서 화재가 발생할 가능성이 있으므로 주의하라는 기호입니다..



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

이 기호는 폭발 및 화재 위험 기호입니다. 특정 조건 하에서 폭발 및 화재의 가능성이 있으므로 주의하라는 기호입니다..

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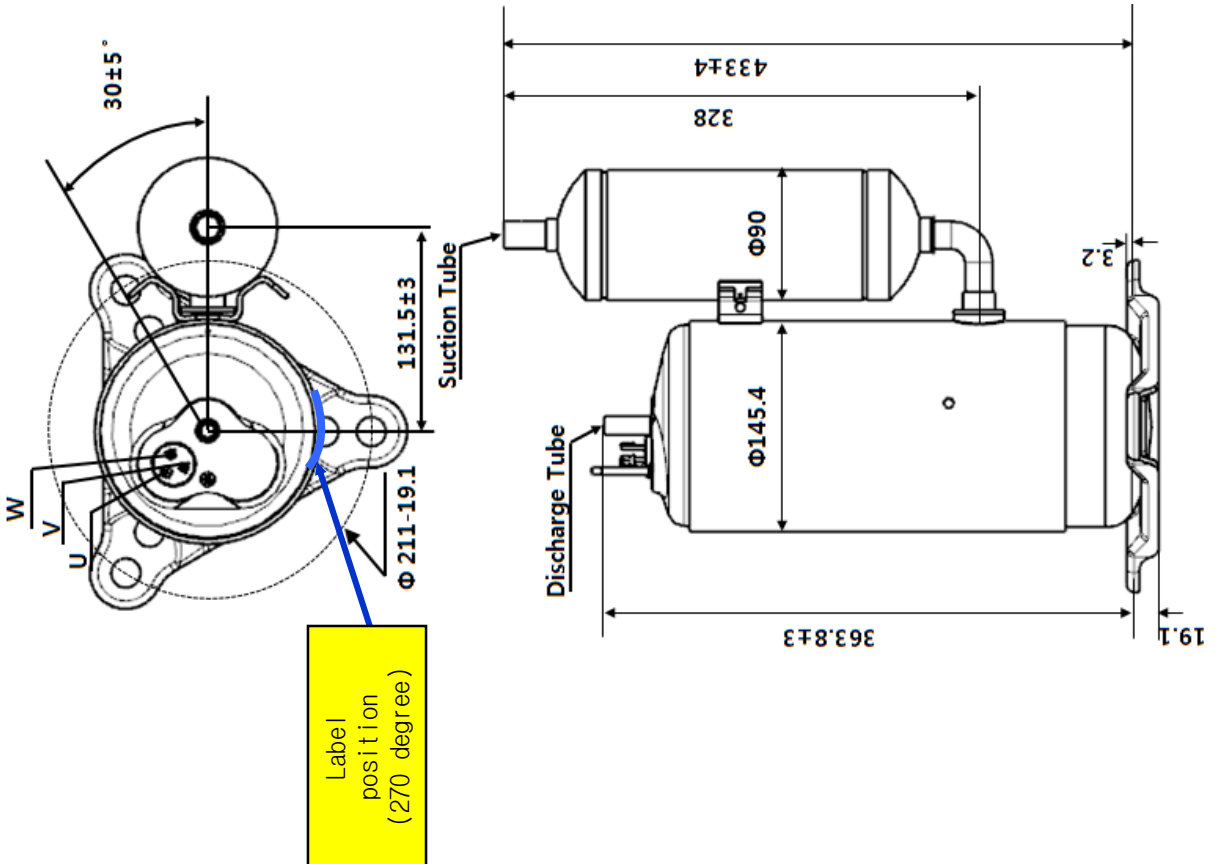
*2. Compressor operating range *

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.

5. Attachment

	PAGE
5.1 Compressor Drawing	: 19
5.2 Accessory Fitting	: 20
5.3 Part Drawings	: 21 ~ 25
5.4 Motor Parameter	: 26

Ref. No.	LGACC-190311-168
Date	2019.03.11
Rev. No.	Rev. 0
Rev. Date	-



Detail of Discharge Tube

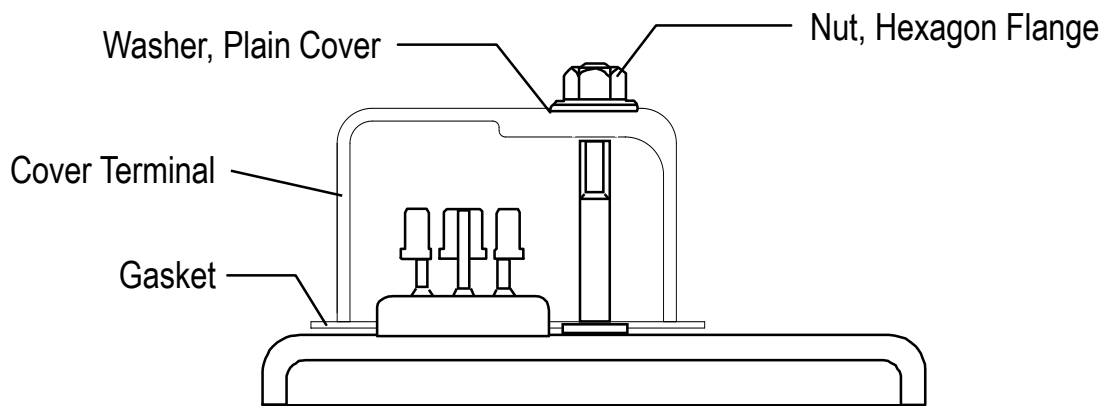
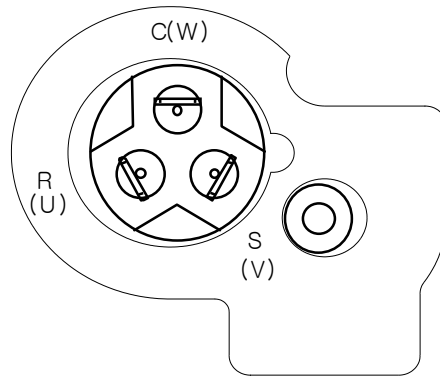
Detail of Suction Tube

NOTES

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

UNIT	mm	SCALE	N / S
DES. ENGR.	G. H. Jang	CHF. ENGR.	Mar. 11. 2019 T.Y. NOH
LG Electronics Inc. C&M Div.		CUSTOMER Scorp	
COMP. OUT LINE			DPT442MAB

Accessory Fitting



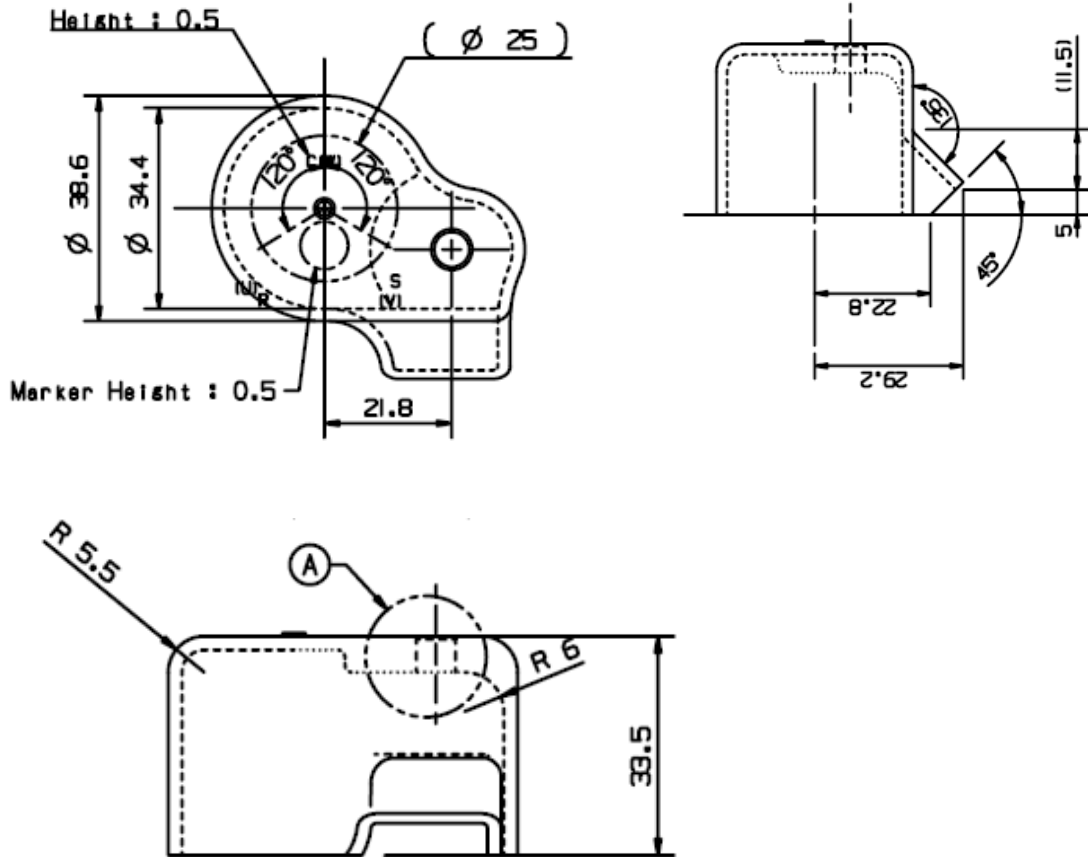
**C(W),R(U),S(V) Mark Embossed
on Cover Terminal**

Nut assembly Should be below 20kgfcm.

Cover, Terminal

Drawing No. 3550U-L005B

(UNIT : mm)



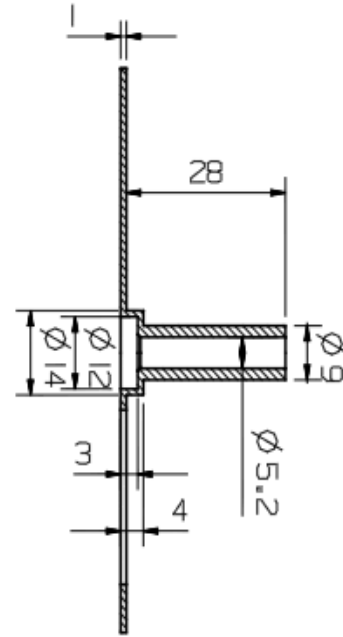
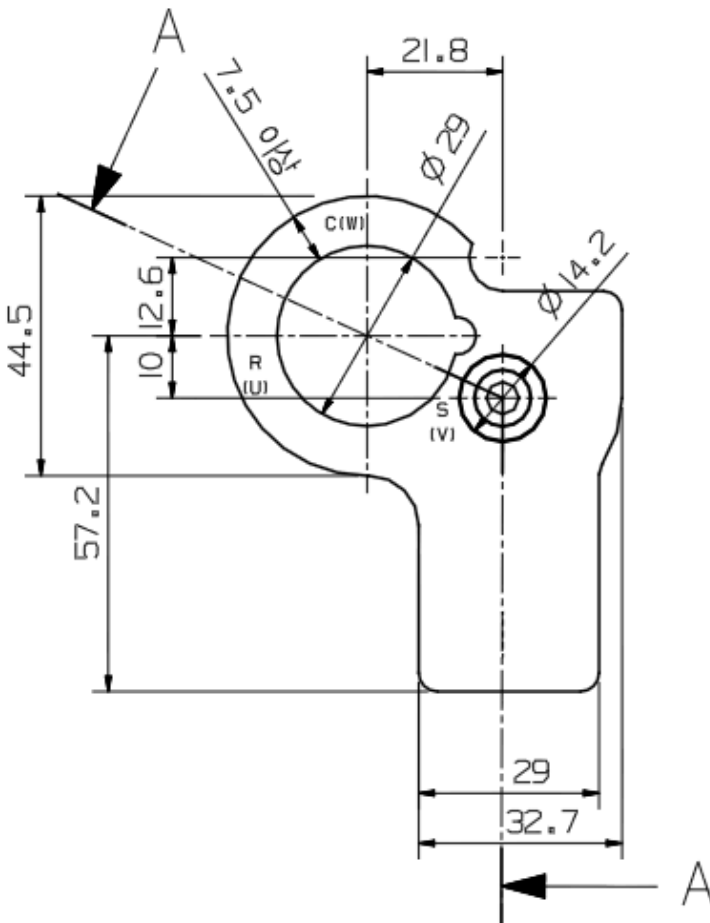
MATERIAL	COLOR	REMARK
LG CHEM LUPOX TE-5006F	BLACK	MARKS(C(W),R(U),S(V))

LG Electronics Inc.

Gasket

Drawing No. MDS64933201

(UNIT : mm)



SECTION A - A

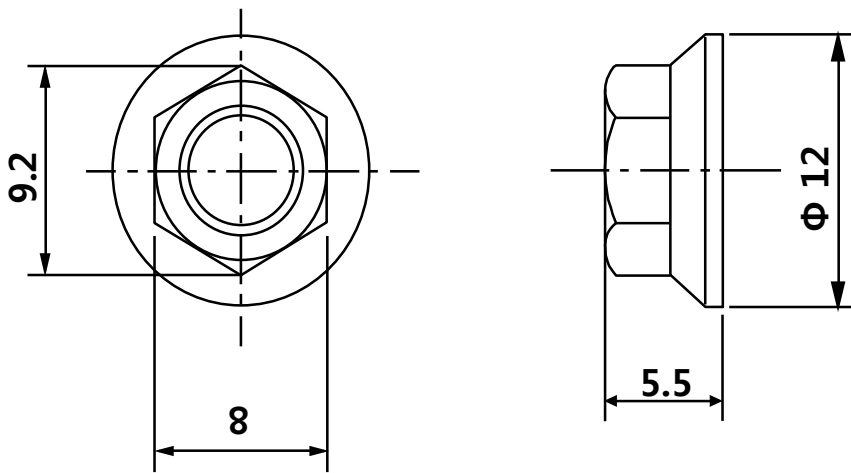


MATERIAL	REMARK
SILICON	MARKS(C(W),R(U),S(V))

Nut, Commom

Drawing No. . 1NFZU-L001A

(UNIT : mm)

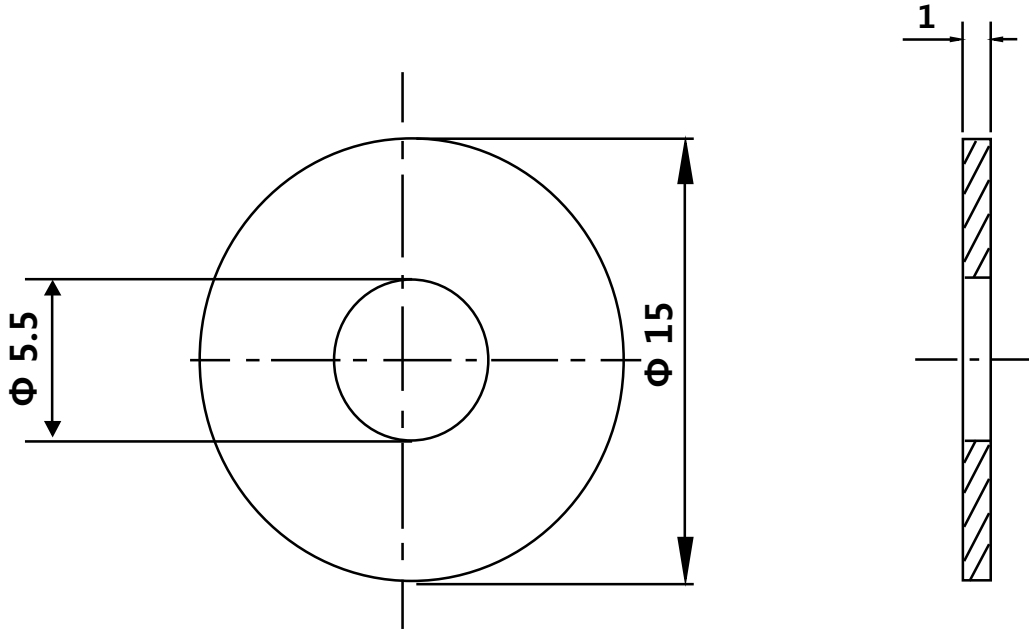


* MATERIAL : STEEL (ELECTRIC PLATING OF ZINC)

Washer, Customized

Drawing No. 1WPZU-L001A

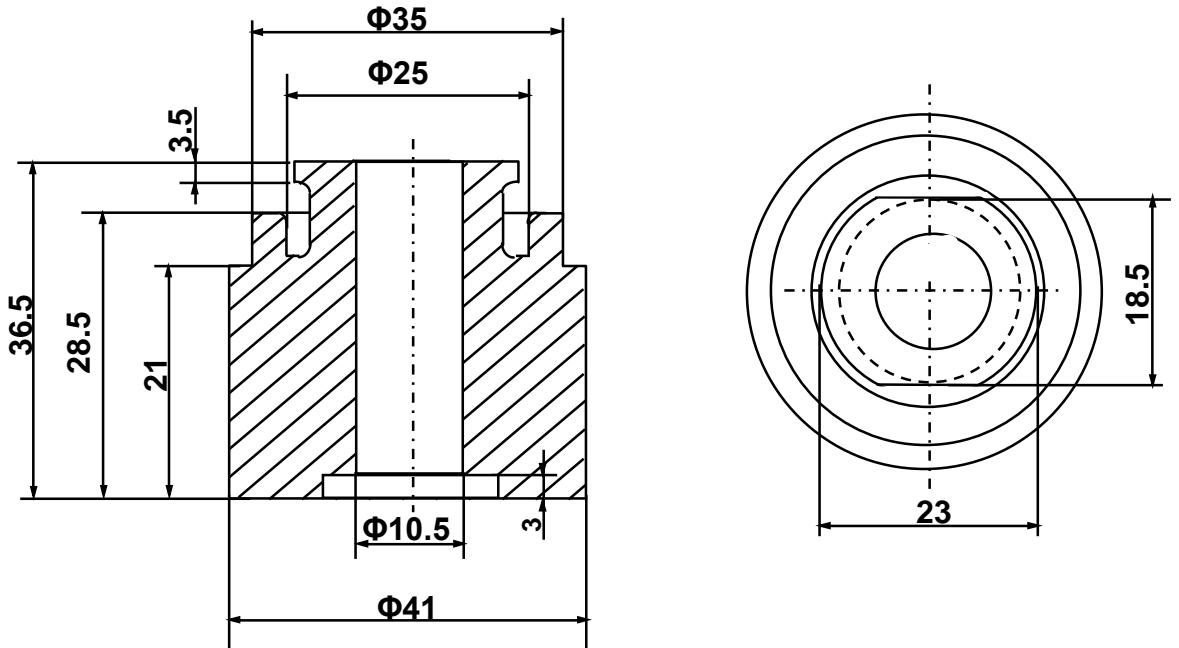
(UNIT : mm)



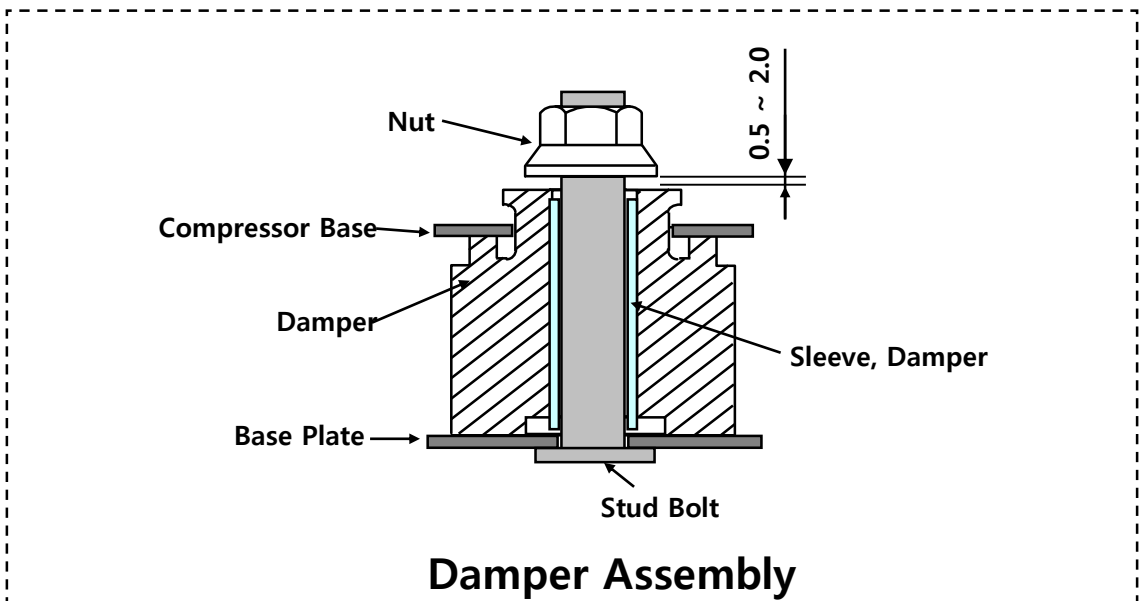
* MATERIAL : POLYAMIDE (NYLON)

Damper, Rubber

Drawing NO. 4022U-L005A(B)
(UNIT : mm)



* MATERIAL : NATURAL RUBBER



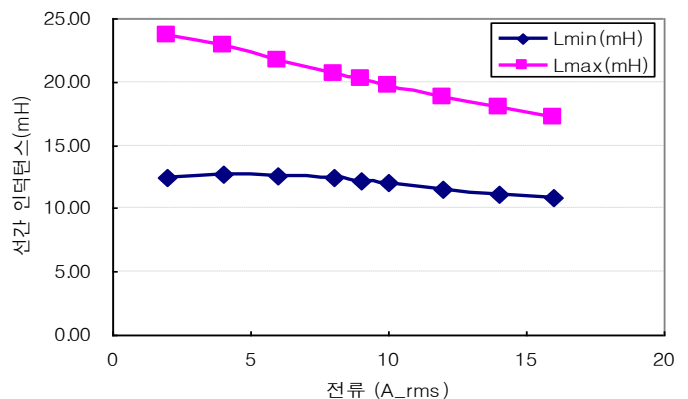
Motor Parameter (DPT442MA*)

Shape		Pole slot winding type	
S T A T O R	Outer diameter (mm)	Φ 139.2	
	Lamination (mm)	65	
	Winding resistance (Ω) at 75 °C	R-S (U-V)	0.845
		R-T (U-W)	0.859
		S-T (V-W)	0.864
	Inner diameter (mm)	Φ 75	
	Winding(1 equivalent)	142	
Slot insulation paper	PET		
R O T O R	Form	IPM or SPM	
	Lamination (mm)	65	
	Magnet	NdFeB	
Air gap (mm)	0.70		
Rated load torque (kg-cm)	110		
Number of revolutions at the rated point (rpm)	3600		
Induced voltage (V) (at1000rpm Mg센터줄 : 0mm)	73.3		
capacitance (nF)	-		
Minimum guaranteed reduced magnetic current (A)(-4%reduced magnetic current at120 °C)	40 Apeak		
Inductance Lmin. (mH)	↓		
Inductance Lmax. (mH)	↓		

Inductance characteristic curve

Arms	Apeak	Lmin(mH)	Lmax(mH)
2	2.8	12.41	23.72
4	5.7	12.73	22.90
6	8.5	12.63	21.70
8	11.3	12.38	20.68
9	12.7	12.20	20.18
10	14.1	12.01	19.67
12	17.0	11.57	18.83
14	19.8	11.16	18.00
16	22.6	10.79	17.23

Inductance characteristic curve



PERFORMANCE TABLE

MODEL : DPT442HA (3PH, D.C 520V), 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)	15690	14643	13536	12370	11144	9859
	Input (Watts)	1480	1618	1802	2032	2307	2629
	Flow Rate (kg/h)	88.28	86.16	83.59	80.55	77.05	73.09
	EER (Btu/W.h)	10.60	9.05	7.51	6.09	4.83	3.75
	Current (Amps)	6.97	7.66	8.54	9.61	10.89	12.37
-5°C (23°F)	Capacity (Btu/h)	19299	17975	16591	15148	13646	12084
	Input (Watts)	1514	1650	1831	2058	2331	2650
	Flow Rate (kg/h)	106.80	104.40	101.54	98.22	94.44	90.19
	EER (Btu/W.h)	12.75	10.90	9.06	7.36	5.85	4.56
	Current (Amps)	7.11	7.79	8.67	9.75	11.02	12.50
0°C (32°F)	Capacity (Btu/h)	23561	21960	20299	18579	16800	14961
	Input (Watts)	1555	1688	1867	2092	2362	2678
	Flow Rate (kg/h)	128.69	126.01	122.86	119.25	115.18	110.65
	EER (Btu/W.h)	15.15	13.01	10.87	8.88	7.11	5.59
	Current (Amps)	7.26	7.94	8.82	9.89	11.17	12.64
5°C (41°F)	Capacity (Btu/h)	28475	26597	24660	22663	20607	18491
	Input (Watts)	1603	1734	1910	2132	2400	2713
	Flow Rate (kg/h)	153.94	150.97	147.54	143.65	139.29	134.48
	EER (Btu/W.h)	17.76	15.34	12.91	10.63	8.59	6.82
	Current (Amps)	7.42	8.10	8.98	10.05	11.33	12.80
10°C (50°F)	Capacity (Btu/h)	34043	31888	29673	27399	25066	22673
	Input (Watts)	1658	1786	1960	2179	2444	2755
	Flow Rate (kg/h)	182.55	179.30	175.58	171.41	166.77	161.66
	EER (Btu/W.h)	20.53	17.85	15.14	12.57	10.25	8.23
	Current (Amps)	7.60	8.28	9.15	10.23	11.50	12.97
15°C (59°F)	Capacity (Btu/h)	40262	37830	35339	32788	30178	27509
	Input (Watts)	1720	1846	2017	2234	2496	2804
	Flow Rate (kg/h)	214.53	210.99	206.99	202.53	197.60	192.21
	EER (Btu/W.h)	23.40	20.49	17.52	14.68	12.09	9.81
	Current (Amps)	7.79	8.47	9.34	10.41	11.69	13.16
20°C (68°F)	Capacity (Btu/h)	47135	44426	41658	38830	35943	32997
	Input (Watts)	1790	1913	2081	2295	2555	2861
	Flow Rate (kg/h)	249.86	246.04	241.76	237.01	231.80	226.13
	EER (Btu/W.h)	26.34	23.23	20.02	16.92	14.07	11.53
	Current (Amps)	7.99	8.67	9.54	10.61	11.89	13.35

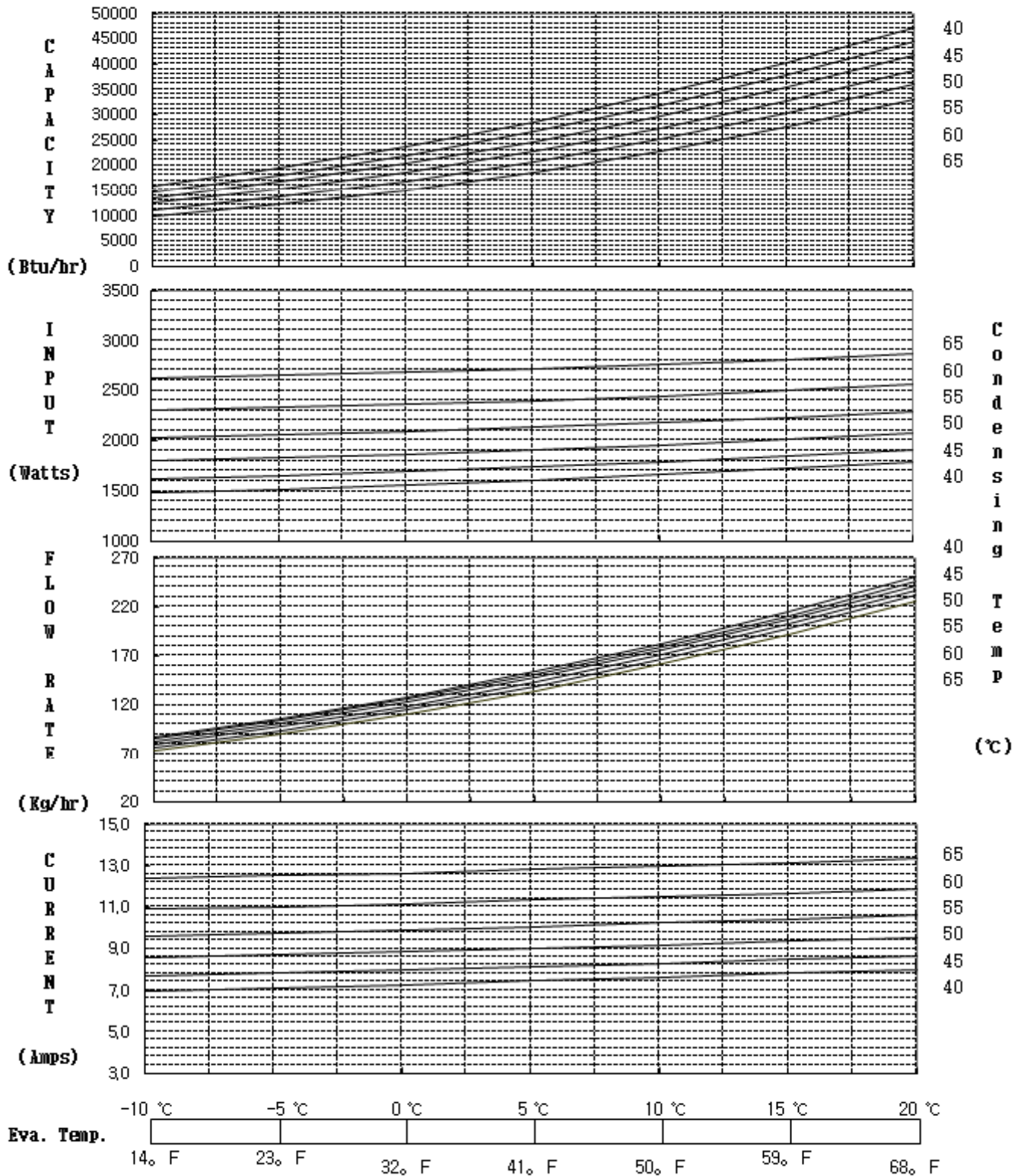
PERFORMANCE CURVE

MODEL : DPT442HA (3PH, D.C 520V), 30Hz

● **Rated Condition**

Suction Gas Temp. 18.3 °C 64.94 °F
 Subcooled Temp. 8.3 °C 15.0 °F
 Ambient Temp. 35.0 °C 95.0 °F

Motor Type : BLDC INVERTER
 Based on 520V at 30Hz



PERFORMANCE TABLE

MODEL : DPT442HA (3PH, D.C 520V), 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)	31860	29936	27945	25887	23763	21573
	Input	(Watts)	3131	3387	3661	3951	4259	4584
	Flow Rate	(kg/h)	179.38	176.29	172.78	168.86	164.52	159.77
	EER	(Btu/W.h)	10.18	8.84	7.63	6.55	5.58	4.71
	Current	(Amps)	7.65	8.33	9.04	9.76	10.51	11.28
-5°C (23°F)	Capacity	(Btu/h)	38811	36369	33861	31287	28645	25938
	Input	(Watts)	3215	3514	3831	4164	4514	4881
	Flow Rate	(kg/h)	214.93	211.28	207.31	202.93	198.13	192.92
	EER	(Btu/W.h)	12.07	10.35	8.84	7.51	6.35	5.31
	Current	(Amps)	7.87	8.64	9.44	10.25	11.09	11.94
0°C (32°F)	Capacity	(Btu/h)	47013	44055	41030	37938	34780	31555
	Input	(Watts)	3253	3595	3954	4330	4723	5133
	Flow Rate	(kg/h)	256.79	252.78	248.35	243.51	238.25	232.58
	EER	(Btu/W.h)	14.45	12.25	10.38	8.76	7.36	6.15
	Current	(Amps)	7.96	8.82	9.71	10.61	11.53	12.48
5°C (41°F)	Capacity	(Btu/h)	56468	52993	49450	45841	42166	38424
	Input	(Watts)	3245	3630	4032	4450	4886	5338
	Flow Rate	(kg/h)	305.26	300.79	295.90	290.60	284.89	278.75
	EER	(Btu/W.h)	17.40	14.60	12.27	10.30	8.63	7.20
	Current	(Amps)	7.92	8.87	9.84	10.84	11.85	12.89
10°C (50°F)	Capacity	(Btu/h)	67175	63182	59123	54997	50804	46545
	Input	(Watts)	3191	3619	4063	4524	5002	5497
	Flow Rate	(kg/h)	360.25	355.32	349.97	344.21	338.03	331.44
	EER	(Btu/W.h)	21.05	17.46	14.55	12.16	10.16	8.47
	Current	(Amps)	7.75	8.79	9.85	10.94	12.04	13.16
15°C (59°F)	Capacity	(Btu/h)	79134	74624	70048	65404	60695	55918
	Input	(Watts)	3091	3561	4048	4552	5073	5611
	Flow Rate	(kg/h)	421.75	416.36	410.55	404.33	397.69	390.64
	EER	(Btu/W.h)	25.60	20.96	17.30	14.37	11.96	9.97
	Current	(Amps)	7.45	8.58	9.73	10.90	12.09	13.31
20°C (68°F)	Capacity	(Btu/h)	92345	87318	82224	77064	71837	66544
	Input	(Watts)	2945	3457	3987	4534	5097	5678
	Flow Rate	(kg/h)	489.76	483.91	477.64	470.96	463.87	456.36
	EER	(Btu/W.h)	31.36	25.26	20.62	17.00	14.09	11.72
	Current	(Amps)	7.02	8.24	9.48	10.74	12.02	13.32

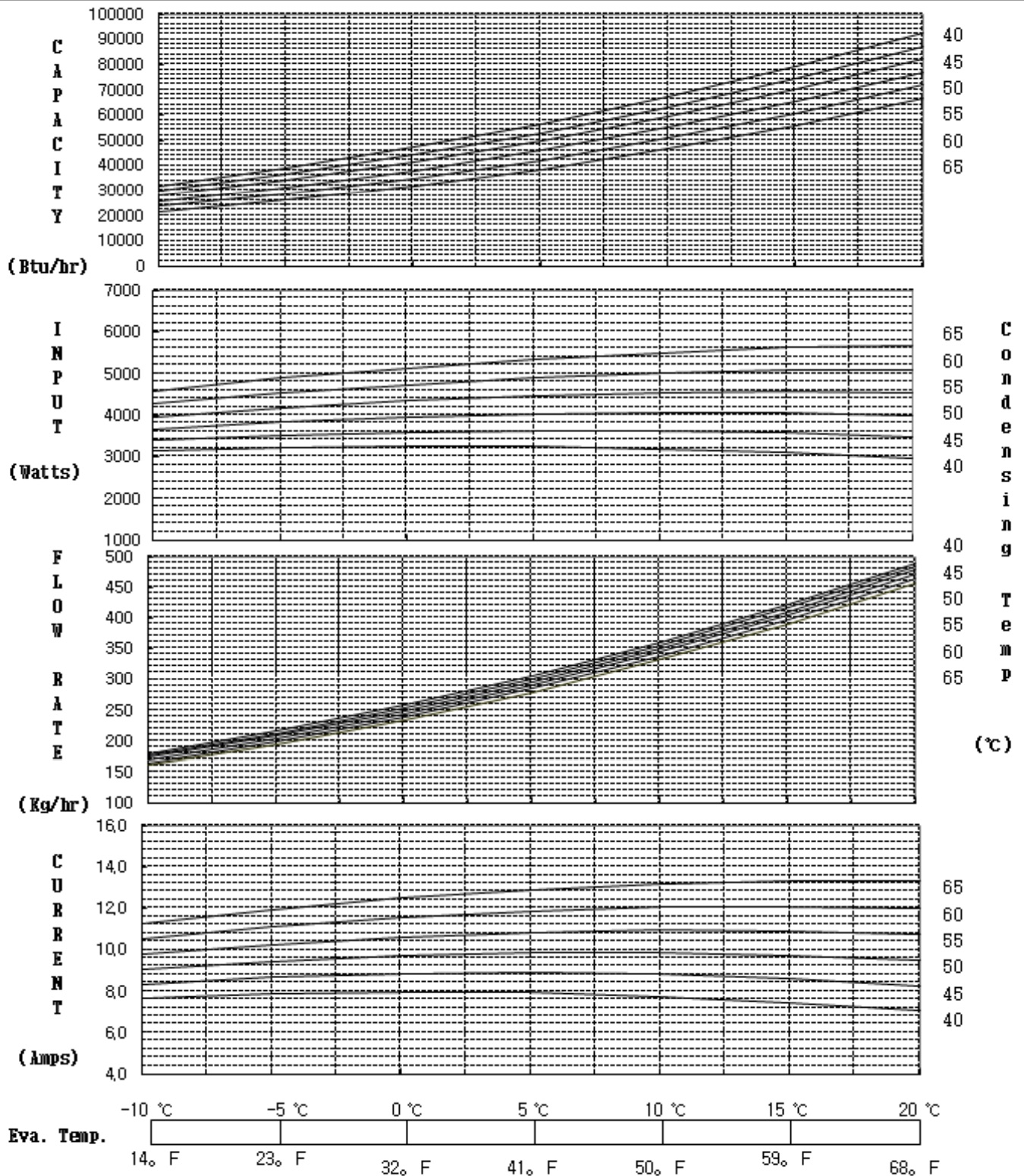
PERFORMANCE CURVE

MODEL : DPT442HA (3PH, D.C 520V), 60Hz

● Rated Condition

Suction Gas Temp. 18.3 °C 64.94 °F
 Subcooled Temp. 8.3 °C 15.0 °F
 Ambient Temp. 35.0 °C 95.0 °F

Motor Type : BLDC INVERTER
 Based on 520V at 60Hz



PERFORMANCE TABLE

MODEL : DPT442HA (3PH, D.C 520V), 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)	48520	45877	43034	39993	36751	33311
	Input	(Watts)	4924	5308	5723	6169	6646	7153
	Flow Rate	(kg/h)	274.00	270.69	266.44	261.25	255.13	248.06
	EER	(Btu/W.h)	9.85	8.64	7.52	6.48	5.53	4.66
	Current	(Amps)	9.22	10.01	10.87	11.80	12.79	13.84
-5°C (23°F)	Capacity	(Btu/h)	58927	55539	51952	48166	44180	39995
	Input	(Watts)	5129	5573	6049	6555	7092	7660
	Flow Rate	(kg/h)	326.59	322.83	318.12	312.48	305.91	299.39
	EER	(Btu/W.h)	11.49	9.97	8.59	7.35	6.23	5.22
	Current	(Amps)	9.63	10.53	11.50	12.54	13.64	14.81
0°C (32°F)	Capacity	(Btu/h)	71155	67023	62691	58160	53429	48499
	Input	(Watts)	5258	5762	6298	6865	7462	8091
	Flow Rate	(kg/h)	388.82	384.60	379.45	373.35	366.32	358.35
	EER	(Btu/W.h)	13.53	11.63	9.95	8.47	7.16	5.99
	Current	(Amps)	9.89	10.90	11.99	13.13	14.35	15.63
5°C (41°F)	Capacity	(Btu/h)	85204	80327	75250	69974	64499	58825
	Input	(Watts)	5310	5875	6471	7098	7755	8444
	Flow Rate	(kg/h)	460.69	456.02	450.41	443.86	436.38	427.96
	EER	(Btu/W.h)	16.05	13.67	11.63	9.86	8.32	6.97
	Current	(Amps)	10.01	11.13	12.33	13.58	14.91	16.30
10°C (50°F)	Capacity	(Btu/h)	101073	95451	89630	83610	77390	70971
	Input	(Watts)	5285	5911	6567	7254	7972	8721
	Flow Rate	(kg/h)	542.19	537.07	531.01	524.01	516.07	507.20
	EER	(Btu/W.h)	19.12	16.15	13.65	11.53	9.71	8.14
	Current	(Amps)	9.98	11.21	12.52	13.89	15.32	16.83
15°C (59°F)	Capacity	(Btu/h)	118763	112397	105831	99066	92101	84937
	Input	(Watts)	5184	5870	6586	7333	8112	8921
	Flow Rate	(kg/h)	633.34	627.76	621.24	613.79	605.40	596.07
	EER	(Btu/W.h)	22.91	19.15	16.07	13.51	11.35	9.52
	Current	(Amps)	9.80	11.15	12.57	14.05	15.60	17.21
20°C (68°F)	Capacity	(Btu/h)	138274	131163	123852	116342	108633	100724
	Input	(Watts)	5006	5752	6529	7336	8175	9045
	Flow Rate	(kg/h)	734.11	728.08	721.12	713.21	704.37	694.59
	EER	(Btu/W.h)	27.62	22.80	18.97	15.86	13.29	11.14
	Current	(Amps)	9.48	10.94	12.47	14.06	15.72	17.44

PERFORMANCE CURVE

MODEL : DPT442HA (3PH, D.C 520V), 90Hz

● **Rated Condition**

Suction Gas Temp.	18.3 °C	64.94 °F	Motor Type	: BLDC INVERTER
Subcooled Temp.	8.3 °C	15.0 °F		
Ambient Temp.	35.0 °C	95.0 °F	Based on	520V at 90Hz

