

Hitachi Highly

Rollkolbenverdichter

Rotary Compressors

Spezifikation

Installation Manual

WHP00990VCT-R1EN

R 134a - R 513A - R 1234yf - R 1234ze

6,45 cm³/rev

50/60 Hz

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PARTS AND DRAWING LIST

WHP00990VCT-R1EN	Drawing code	Q'ty	Remarks
◆ OUTLINE DWG.	4CYCA0***	–	Dimensioned sketch
◆ WIRING DIAGRAM	SC01D074	–	
◆ Electrical components			
Motor protector	SC01DA36H08	1	JUX-045F BF250-KC
Running capacitor	SC01DB62H19	*	8 μ F-450WV
◆ Terminal parts accessories			
Terminal cover	SC01D775	1	
Clip	SC01D076	1	
Packing	SC01D075	1	
◆ Mounting accessories			
Mount assy	SC01D750	–	
Rubber mount	SC01D024	3	

*Out of supply, for reference. (Separate Lieferung)

THE SPECIFICATION FOR WHP00990VCT-**** COMPRESSOR

General specification	SHEC-XG105 SHEC-EG009			
◆ Compressor data	Rolling piston type rotary			
Design	1			
Number of cylinder	6.45			
Displacement				
◆ Motor data	Permanent split capacitor			
Motor type	2			
Pole number P	2840/3385			
Nominal revolution	E			
Insulation class	Main 16.6/ Aux 30.4 (at20°C)			
Motor resistance Ω				
◆ Refrigerant	R-134a/R513A/R1234yf/ R1234ze			
Charge amount	(0.30)			
◆ Oil	HAF68 or equivalent			
Brand	135±5			
Charge amount				
◆ Mass(include.oil)	4.6 kg			
◆ Power source	230			
Rated voltage V	50/60			
Rated frequency	1			
Phase	50 Hz			
◆ Performance	R134a	R513A	R1234yf	R1234ze
Refrigerating capacity	710/860	725/880	682/826	580 W
Motor input W	355/390	364/400	340/368	270 W
Current A	1.65/1.70	1.66/1.70	1.65/1.70	1,58 A
COP w/w	2.00/2.21	1.99/2.20	2.00/2.21	2,15
Conditions	Evaporating temp. 7.2°C			
	Condensing temp. 54.4°C			
	Return gas temp. 35.0°C			
	Ambient temp. 35.0°C			
	Liquid temp. 46.1°C			
	Power source 1ph. 230V 50/60Hz			
Performance curve	SHEC-XQ143			
◆ Starting performance	5.4/5.3A			
L. R. A. A	≤ 195			
Lowest starting voltage V				

THE GENERAL SPECIFICATIONS FOR WHP00990VCT SERIES ROTARY COMPRESSOR

If a compressor is not operated properly, not only will it be impossible to display its performance to the full, but it may lead to a shortened service life and even malfunctions and breakdowns. These operating instructions have been prepared so that the rotary compressor will be used properly and efficiently without malfunctions and breakdowns, and here lists the operation standards and handling precautions. It is recommended that you acquire a full understanding of the special properties of the compressor and that you operate it properly.

1. Operation standards and operational limits

When the compressor is being used, check with the final test data of the application product to see whether or not the following standards are being maintained.

ITEM	OPERATIONAL LIMIT		
(1) Refrigerant used.	R134a	R513A	R1234yf
(2) Evaporating temperature range.	-10 ~ +25℃ (0.20 ~ 0.665MPa) Abs	-10 ~ +25℃ (0.226 ~ 0.713MPa) Abs	-10 ~ +25℃ (0.222 ~ 0.683MPa) Abs
(3) Condensing temperature range.	28~70℃ (0.727~2.117MPa) Abs	28~70℃ (0.777~2.178MPa) Abs	28~70℃ (0.742~2.045MPa) Abs
(4) Compression ratio.	This should be 8 or less.		
(5) Discharge gas temperature.	Not exceed 115℃(239° F), This temperature should be measured at the surface of the heat-insulated discharge pipe at 150mm distance from the shell surface.		
(6) Suction gas temperature.	The suction gas's superheat must be over 2℃(36° F) and the gas must be used on condition that discharge gas temperature is satisfied.		
(7) Motor wiring temperature.	Not exceed 125℃(257° F).		
(8) Supply voltage. (during operation)	The compressor must be operated on within the range of rated voltage $\pm 10\%$. But the compressor must be operated on the rated voltage of 85% or more at the time of start. The operating voltage shall be the terminal voltage of the compressor during operation. Therefore, leads should be wired to be range of the above mentioned rated voltage, considering the voltage drops due to leads wired power source.		
(9) Starting voltage.	A voltage of 85% or more of the rated voltage shall be supplied at start-up. The starting voltage shall be the terminal voltage of the compressor when the voltage drops due to starting. The starting voltage is provided for start-up on the high/low pressure balanced (R134a/R513A/R1234yf : 0.69/0.74/0.708MPa) (Abs) .		
(10) ON/OFF cycle.	The ON/OFF cycle shall be a maximum of 10 times an hour. The OFF period shall extend from start until the high/low pressure are balanced, and the balancing time is 3 min. or more at the standard system. In case a PTC starter is used for a start relay, it will take 3min. or more for the PTC starter to re-set. Operating time shall be maintained at least 3min.		

ITEM	OPERATIONAL LIMIT
(11) Amount of refrigerant charged.	The amount will be specified in the individual specification sheet. No flood-back will be checked out on condition that the compressor is installed in the system. To prevent flood-back a proper accumulator must be installed in the suction pipe side according to the refrigerant charging amount.
(12) ON/OFF frequency.	The equipment shall be designed with less than 200,000 cycles .
(13) Pipe stress.	The piping must be designed so that no damage will result from transporting of the product and the ON/OFF of the compressor. Recommendable tolerance of piping stress. At starting and stopping : 34.3N/mm ² or less During operation : 17.7N/mm ² or less
(14)Piping.	The unit pipes should be piped inside of discharge and suction pipes of the compressor.
(15) Pipe clearance	A clearance of at least 13mm must be left between the piping and active parts (compressor, fan, anti-resonance rubber, piping, etc.). A clearance of at least 10mm must be left between the piping and inactive parts.

The unit should be designed to satisfy above operational standard and operational limit in any condition.

The following conditions are hazard-causing example in particular.

- 1) In case of high or low supply voltage at the high ambient temperature(e.g.43℃).
- 2) Flood-back at the low ambient temperature(e.g.-5℃).
- 3) In case of hard condition such as closing fan filter.
- 4) In case of transitional condition such as pull-down and defrost.
- 5) The phenomenon of abnormal low pressure to be caused by bad defrosts.

2. Electrical parts

Use the designated electrical parts properly. The following electrical parts are used in a rotary compressor and the specifications of each are given in the individual specification sheet of the compressor.

ELECTRICAL PART	PRECAUTIONS
Motor protector	Connect the wires properly and mount inside the terminal box on the top of the compressor. (See the winding diagram.)
Running capacitor	Use capacitors with the required capacitance and withstanding voltage. Use capacitors under the heat-withstanding temperature.

Use heat-resistant cable for the leads which are connected to the compressor terminal, motor protectors attached to compressor (Heat-withstanding temperature of the leads \geq 105℃).

(Example) Ethylene tetrafluoride or polypropylene hexafluoride resin cable.

Please use the lead terminal with soft insulation tube.

3. Precautions with equipment assembly.

The following points must be borne in mind when incorporating the rotary compressor into the application product.

3-1. Refrigeration system

- (1) The virgin unit should be used absolutely.
Especially the compressor must not be set in the used unit which has been experienced CFC or HCFC refrigerant such as R12,R22,R502.

*** The manufacturing process of refrigerating system must comply with the regulations related to flammable refrigerants, since R1234yf is flammable refrigerant.**

- (2) Solvents which contain chlorine should not be applied for cleaning the apparatus.
If applying the solvents by any means, it should be considered sufficiently that chlorine is not remained in the apparatus.
*Chloride remnants should be less than 100ppm of charged refrigerant (Including the chloride contained in refrigerant).
- (3) Organic material parts which are unknown concerning to compatibility with HFC-134a refrigeration system, should not be applied. (Please let us confirm it if necessary.)
- (4) Dryer for HFC-134a should be applied. The dryer can absorb 50mg moisture per 1g and use sufficient the dryer to absorb the moisture in refrigerant circuit. The dryer should be installed as soon as possible after the package is opened.
(e.g. "XH-9" made by UNION SHOWA)
- (5) Process oil (machining oil) used for forming pipes and equipment must be removed.
It should be confirmed that the oil complies with HFC134a refrigeration system.
(Please let us confirm if it is necessary.)
Especially as remained high viscosity oil may causes choke of refrigerant cycle, do not remain it. HFC refrigerant does not solves almost all oil.

3-2. Removal of rubber plugs

The rubber plugs must be removed from the high pressure side (dis.pipe and process pipe). The compressor is filled with dry-air at the pressure of 0.05~0.1MPaG. If the rubber plugs are removed from the lower pressure side (suction pipe), it is feared that oil in the compressor is gushed out.

3-3. Welding method

Take care not to allow flux, dirt, foreign matter or moisture to enter the refrigeration circuit while welding between pipes or welding the pipes to the compressor.

3-4. Refrigerant charging method

The compressor is supplied with oil. Check the "OIL IN" mark.

Create the vacuum from both the high and low pressure side. (If it is possible to create the vacuum from one side only, take sufficient time at the high pressure side and check that the prescribed vacuum gas has been created.)

Always charge the refrigerant from the high pressure side (condenser) of the unit.

Do not use the refrigerant charger which has been used for HCFC or CFC.

The below substances shall be provided on the final appliance's accessing parts expected to be subject to this maintenance and in the instruction sheet(s) of the final appliance:

WARNING:

When recharge the refrigerant, the processing must be done by the manufacturer or manufacturer appointed repair shop* or service agent* because correct type of refrigerant must be ensured.

Provide the contact and address of the repair shops/agent.

Prohibition of mixing the refrigerants

3-5. Parts securing

Secure the compressor properly with the prescribed method and using the prescribed anti-vibration rubber pieces.

The secured compressor must lean less than 5° from the perpendicular.

3-6. Starting method

- (1) Connect the proper circuits and then start up the compressor.
- (2) Make the time span from power OFF to re-start the same as the time taken for the high and low pressure to be balanced (about 3min.), then balanced starting.

3-7. Moisture

Keep the amount of balanced moisture inside the refrigeration circuit (including compressor) within 350mg(Cold-trap test).

Moisture level in the refrigeration system should be maintained as low as possible.

3-8. Contaminants / foreign obstacles

- (1) Carefully avoid the fluxes, contaminants (such as metal or fiber scraps) to mingle inside the refrigerant circuit.
- (2) Install a strainer (with about 100 mesh) within the refrigeration circuit and avoid the clogging of capillary tube, etc..

3-9. Evacuation

A degree of vacuum about 133Pa[abs] is desirable.

3-10. Packings used for couplings in the vacuum pump and the refrigerant charger.

The material of packings (O-ring) used for couplings in the vacuum pump and the refrigerant charger should be not applied to chloroprene rubber (CR).

The packing made of CR may not be a durability. Acryl-nitryl butadiene rubber (H-NBR) is recommended as its material.

Please ask the couplings manufacturer in detail.

3-11. General handling precautions

- (1) The compressor should be installed in the refrigeration system within 1 year from the manufactured date.
- (2) The compressor should not be left for more than 30 minutes unsealed.
- (3) Do not carry out compressor self-actuated vacuum condition.
- (4) Never operate the compressor as an air compressor.
- (5) Never supply electricity under the vacuum condition.
- (6) Do not severely tilt the compressor, drop it or cause it to topple over while transporting.
- (7) Do not scratch the painted surfaces.
- (8) Do not use the compressor in cars, trains and small size ships.

3-12. Refrigerant

Refrigerant **R134a/R513A/R1234yf** 99.9% in purity should be used for apparatus. 99.95% is recommended, if possible. In particular, the refrigerant containing the minimum volume of chloride should be used.

3-13. Refrigeration oil

In order to maintain a high reliability, one specially developed refrigeration oil for rotary compressors is used. This oil has excellent load-withstanding and heat stability properties. No other type of oil must therefore be used.

As HFC refrigerant does not solve this oil, confirm following "Oil returns".

3-14. Oil returns

It is important for the piping to be designed with sufficient consideration given to oil return during the refrigeration cycle since the refrigeration oil in the compressor is sometimes discharged in volume inside the equipment as a transitional phenomenon (due to the storing of the refrigerant) during start-up, etc.

Oil is liable to collect when an auxiliary accumulator is attached within the refrigerating cycle, which necessitates an oil-return structure. Care is required with short ON/OFF cycles.

It is necessary to confirm oil return with above care. Please confirm that the oil level is sufficient to the operation standard, running with the compressor equipped with sight glass, in the unit operation limit condition that high to low ambient temperature, on the mode pull-down, On-Off cycle.

3-15. Immunity from vibration during transportation firm

Sufficient consideration in design must be given so that mounting parts and connected parts are not damaged as a result of vibration or shock sustained while transporting the fully assembled equipment. It should be confirmed no damage by the transporting test.

4. Quality of compressor

4-1.Noise and vibration

The compressors should not bear the abnormal noise or vibration in normal operation.

4-2. Insulation

(1) Insulation resistance

Insulation resistance should be more than $10M\Omega$ between each of the terminals and the ground (or the shell), and between each of the terminals with a 500V megger.

(2) Dielectric withstand

A 50 or 60Hz potential as indicated below should be applied between live parts and dead metal parts.

1250v for 1 minute, or 1500v for 1 second (Nominal 100~120v)

1500v for 1 minute, or 1800v for 1 second (Nominal 200~240v)

4-3. Airtightness and Strength Test

(1) Airtightness test pressure : 2.2MPaG

(2) Hydrostatic strength test pressure : 5.35MPaG

4-4. Dryness

The inside of compressor is dried up. The remaining quantity of moisture measured by cold-trap procedure should be below 100mg.

4-5. Cleanness

The inside of compressor is cleaned, there should be no dust or any harmful matter.

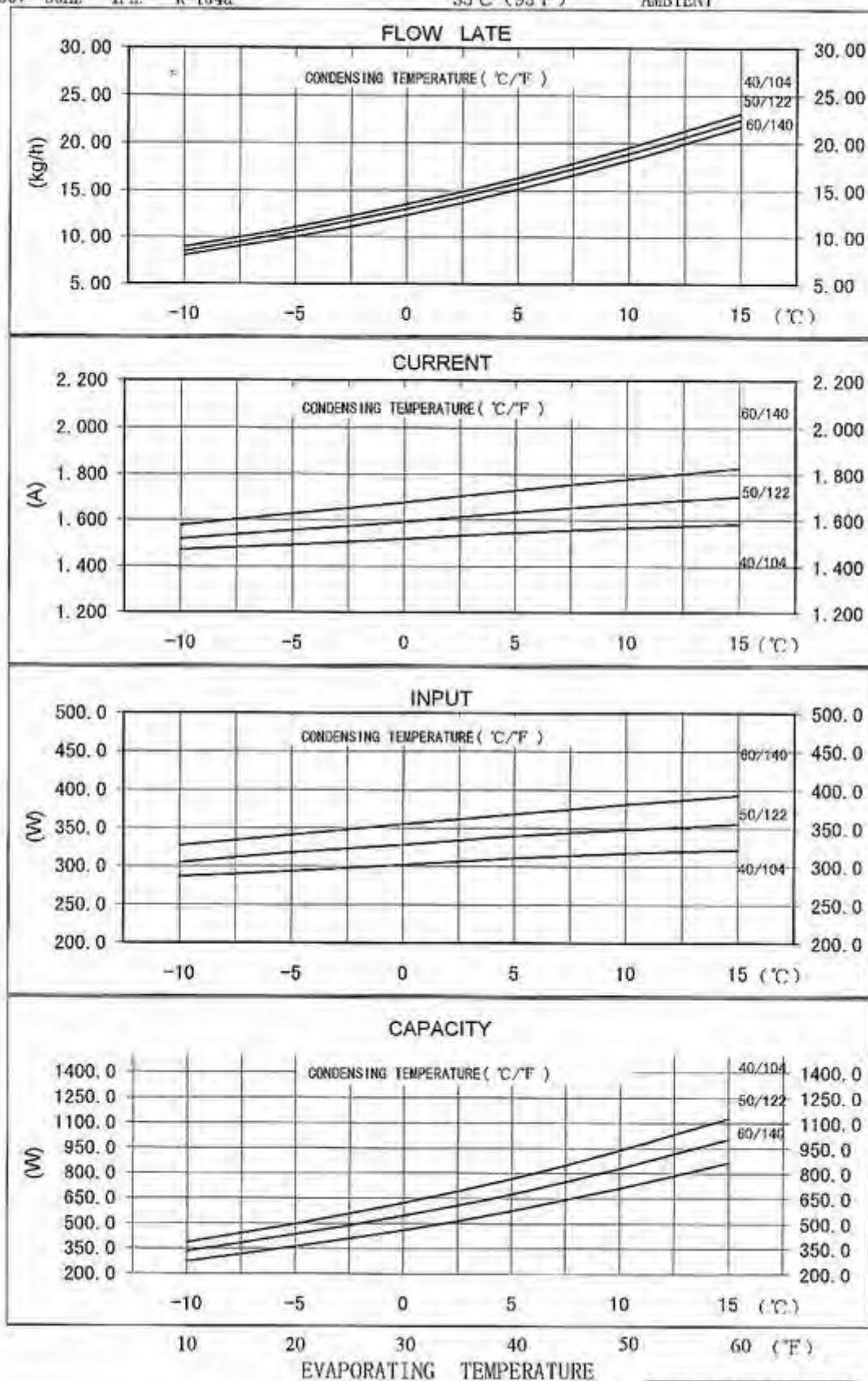
4-6. Endurance in transportation

The compressors are proof against vibration and a shock in normal transportation.

SHANGHAI HIGHLY ELECTRICAL APPLIANCES CO., LTD

WHP00990VCT* COMPRESSOR PERFORMANCE CURVE

RATING CONDITION: 11°C (20°F) RETURN GAS SUPERHEATED
 8.3°C (15°F) LIQUID SUBCOOLED
 230V 50Hz 1Ph. R-134a 35°C (95°F) AMBIENT

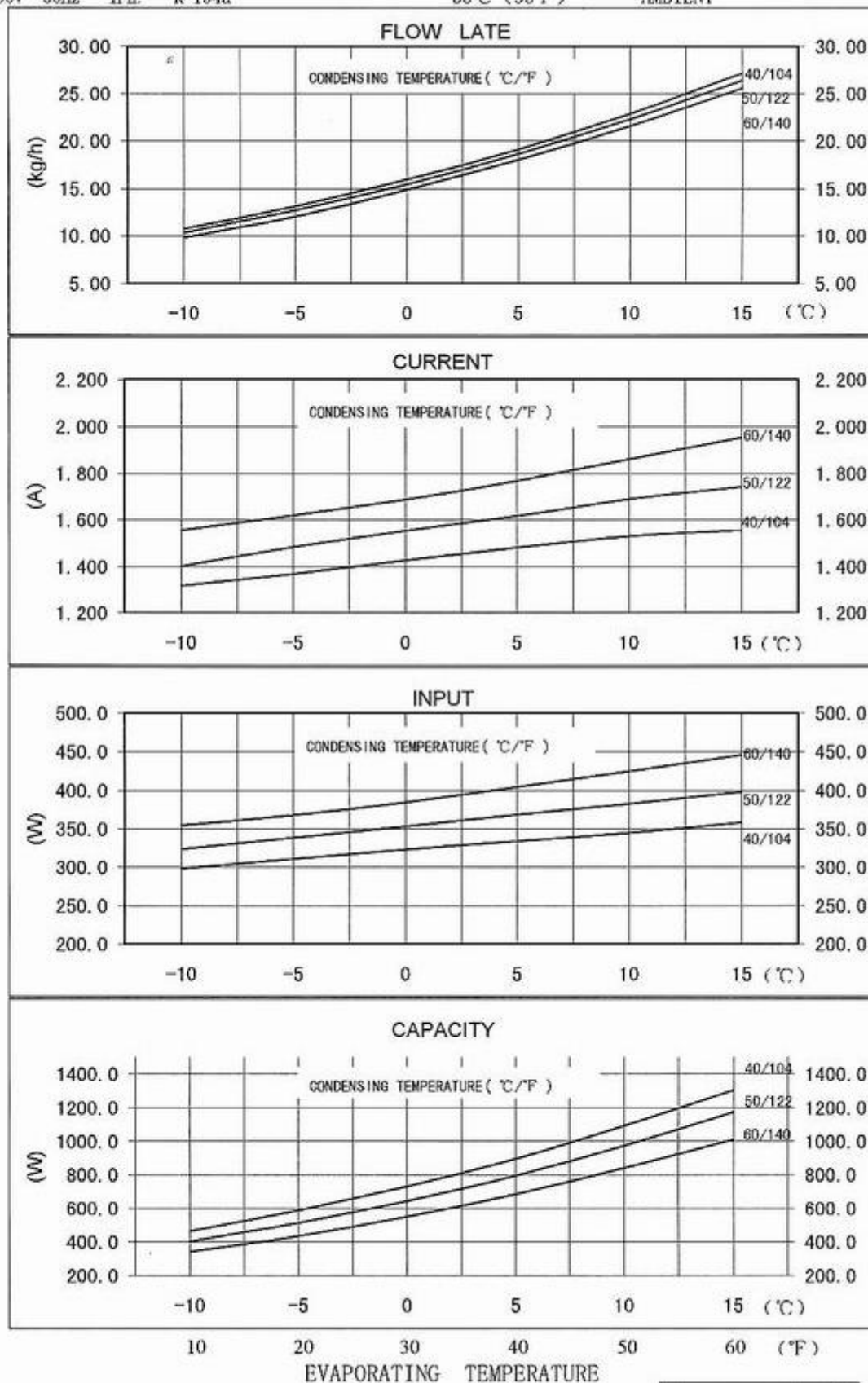


SHEC-XQ158 (1/2)

SHANGHAI HIGHLY ELECTRICAL APPLIANCES CO., LTD

WHP00990VCT* COMPRESSOR PERFORMANCE CURVE

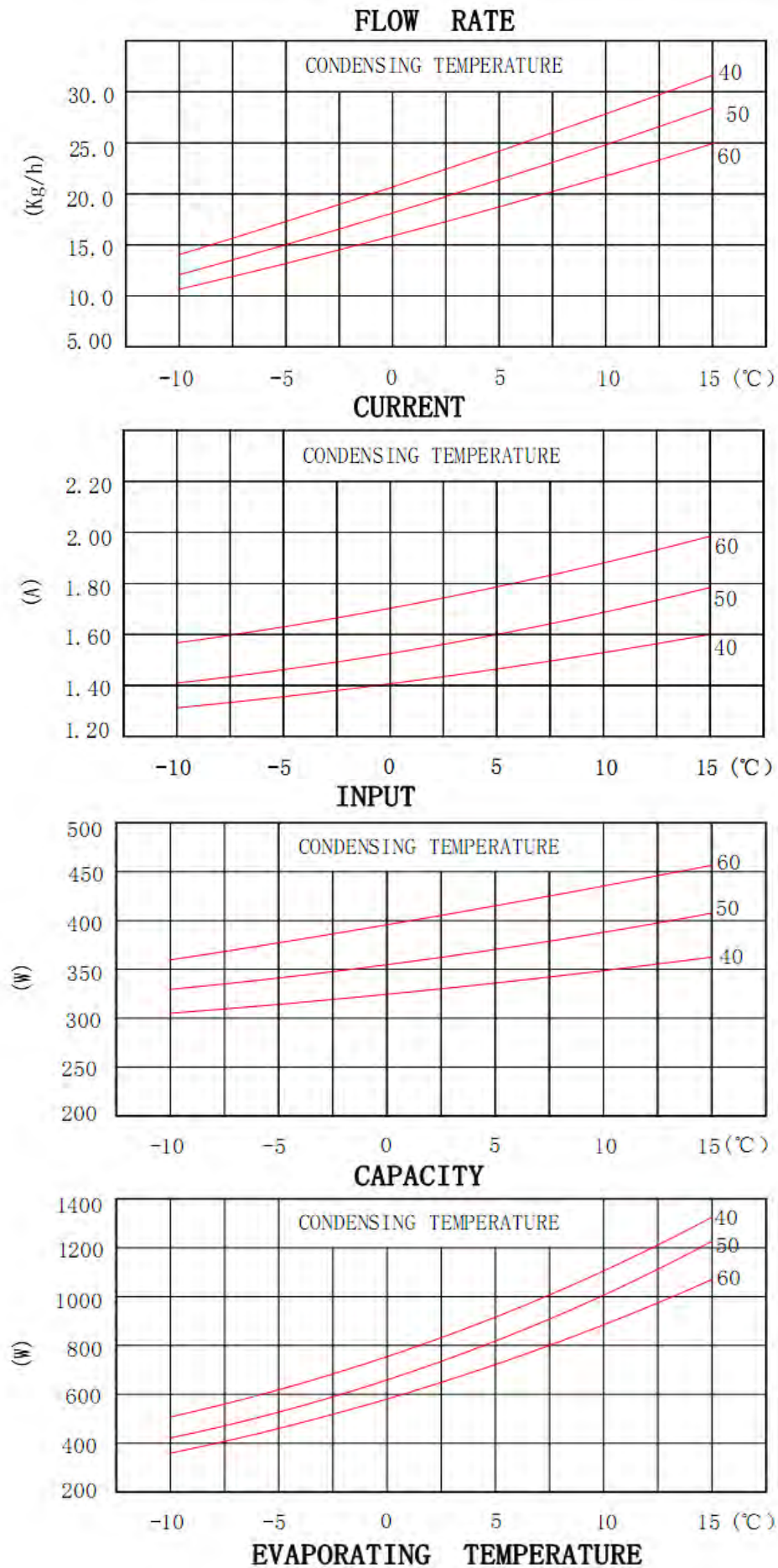
230V 60Hz 1Ph. R-134a
 RATING CONTIDION: 11°C (20°F) RETURN GAS SUPERHEATED
 8.3°C (15°F) LIQUID SUBCOOLED
 35°C (95°F) AMBIENT



SHEC-XQ158 (2/2)

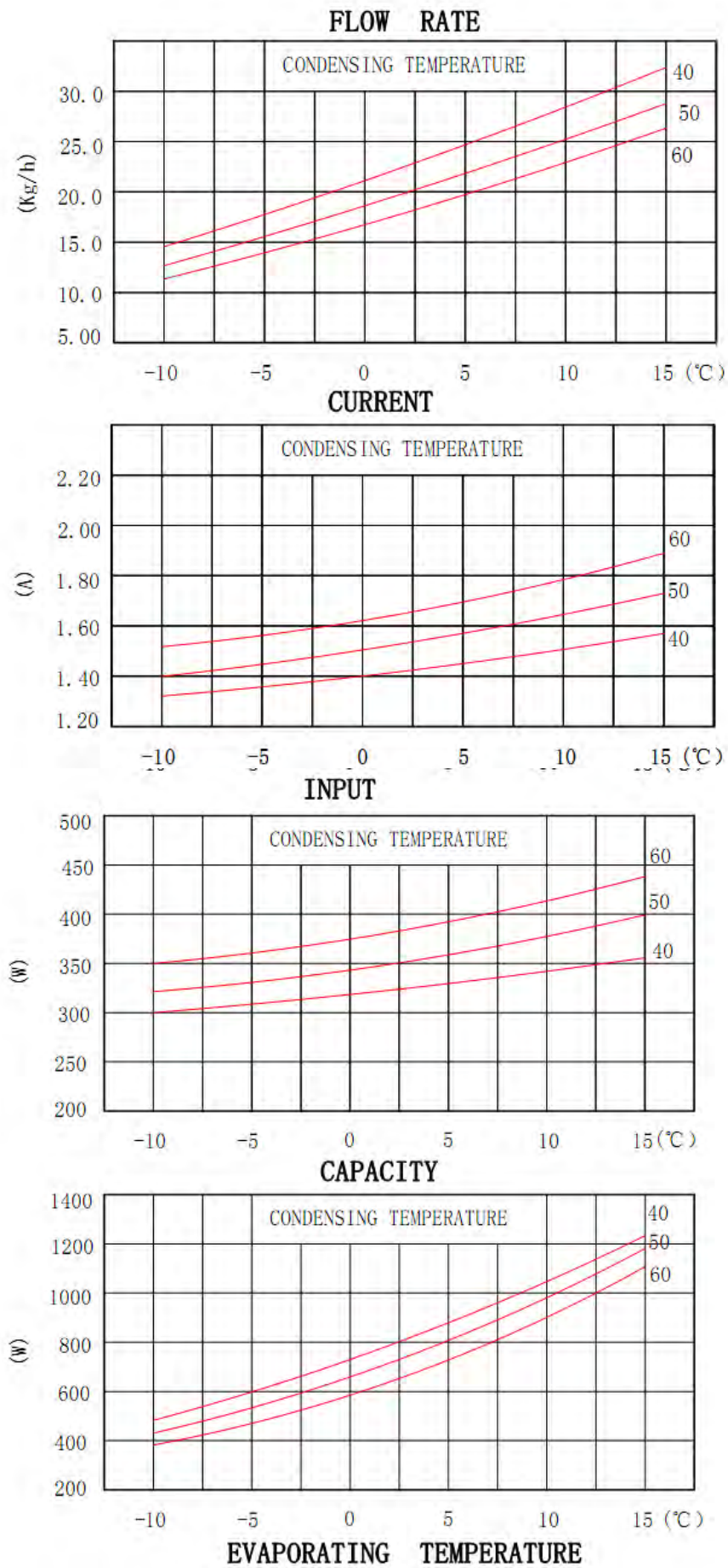
WHP00990VCT* COMPRESSOR PREFORMANCE CURVE

230V 60Hz R513A



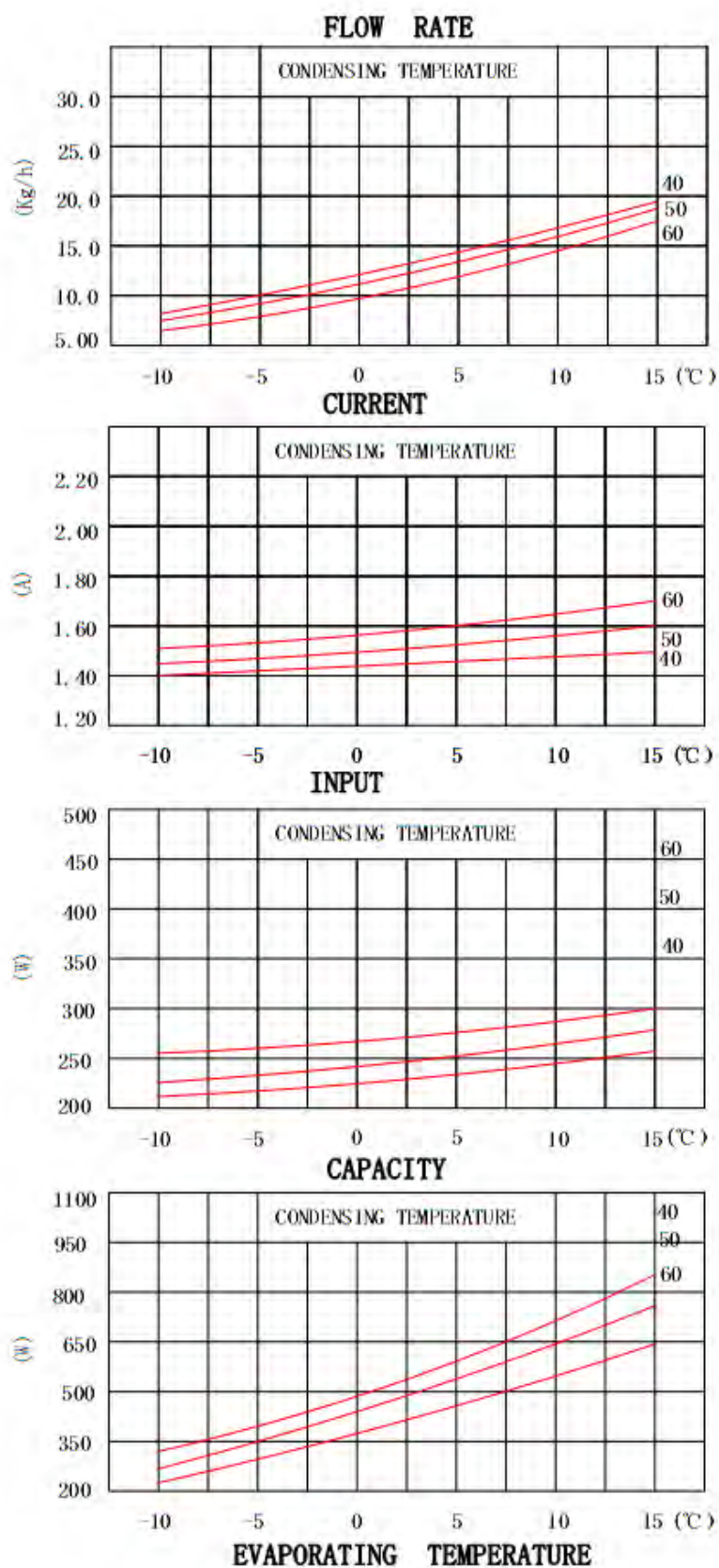
WHP00990VCT* COMPRESSOR PREFORMANCE CURVE

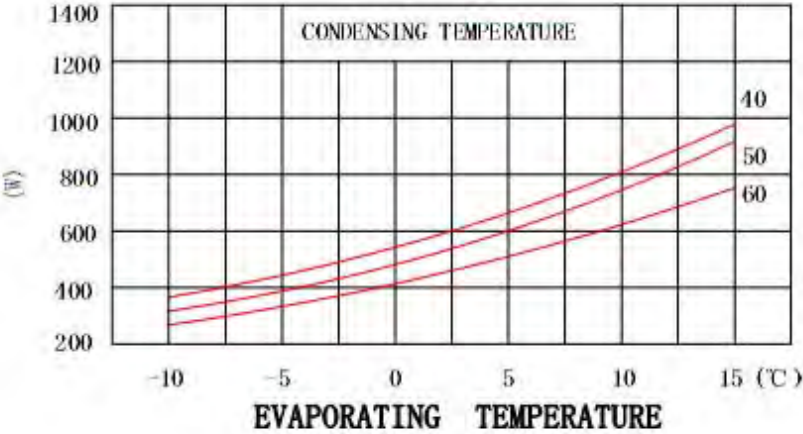
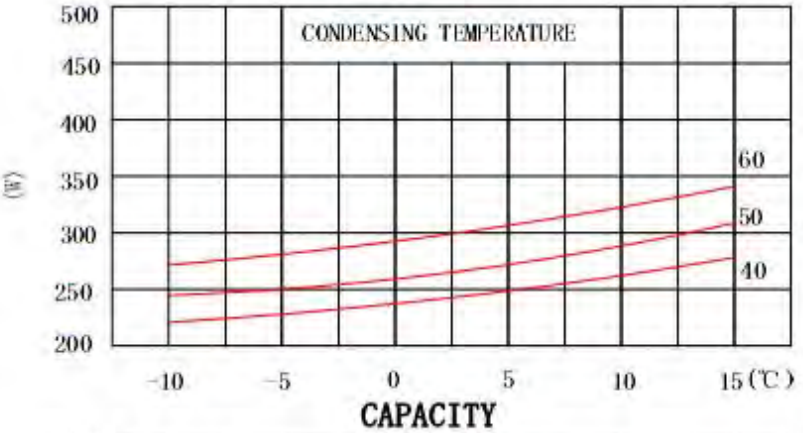
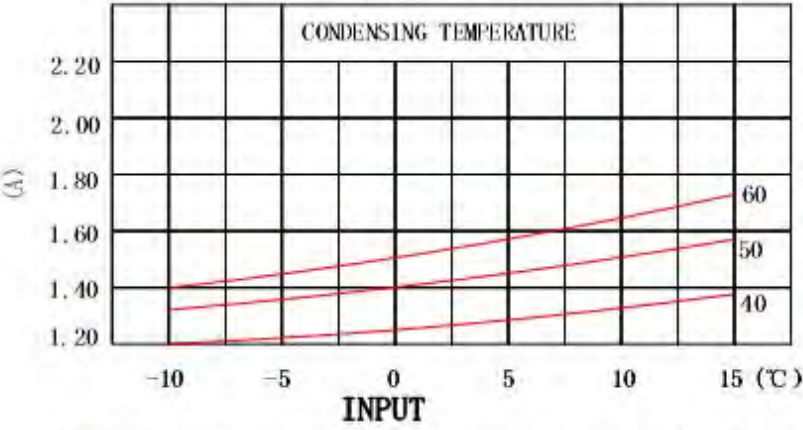
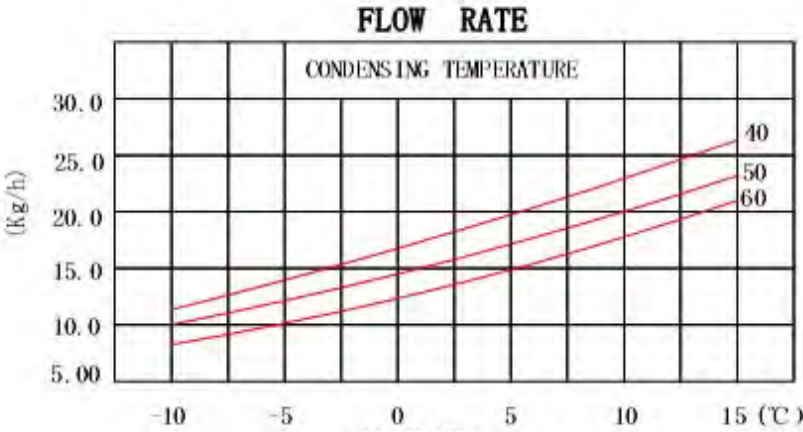
230V 60Hz R1234yf

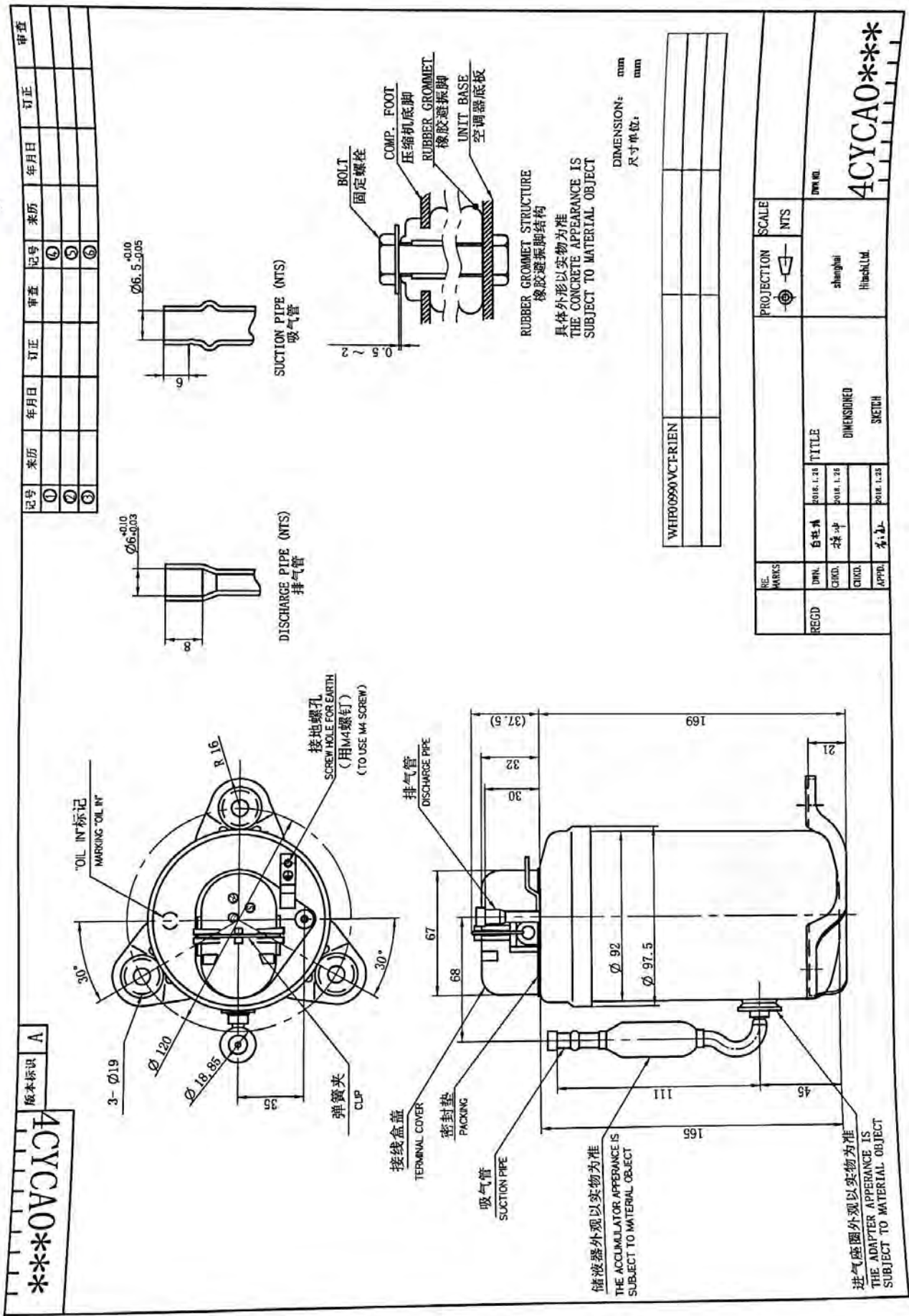



WHP00990VCT* COMPRESSOR PREFORMANCE CURVE


230V/50Hz R1234ze

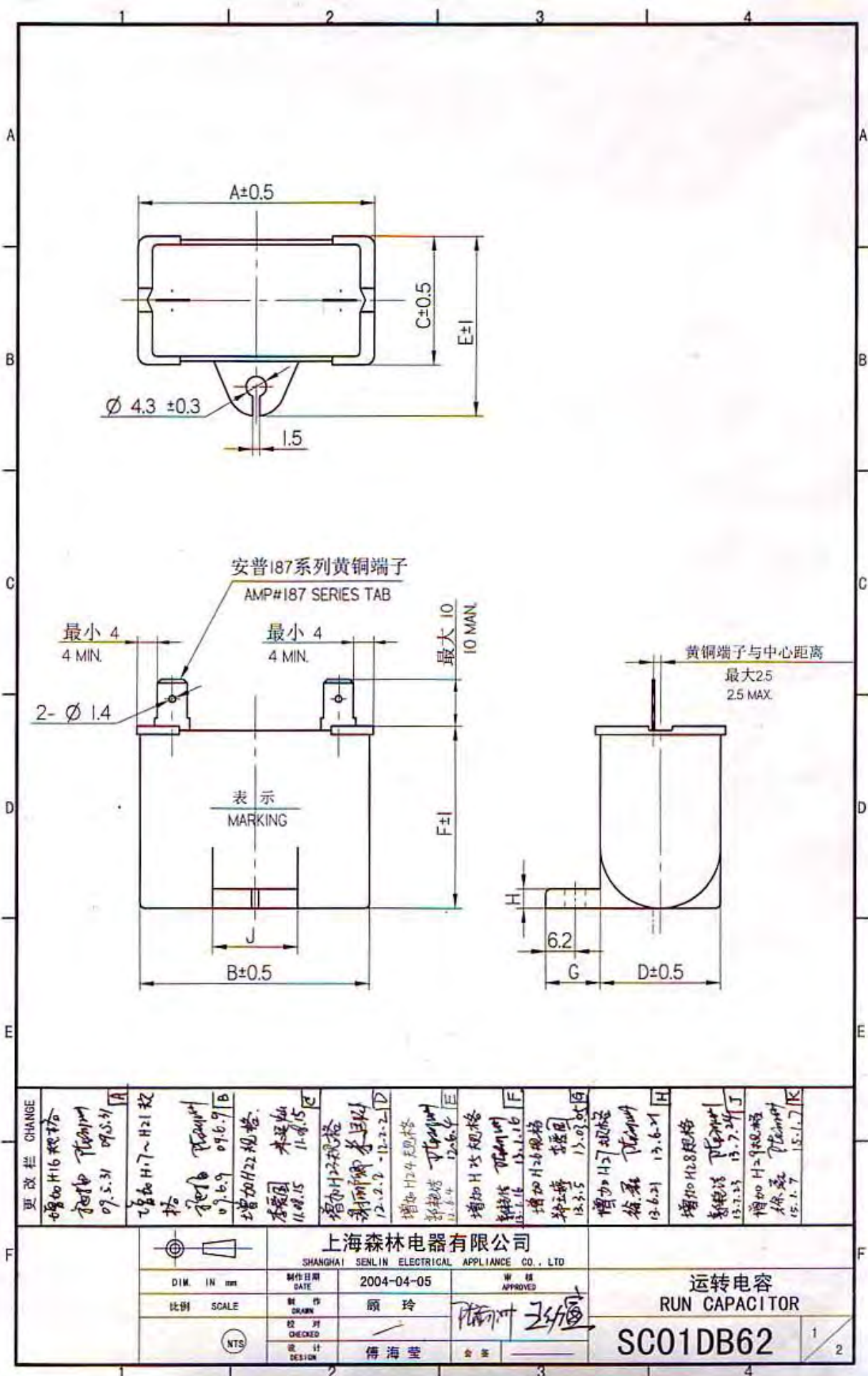


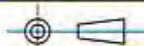


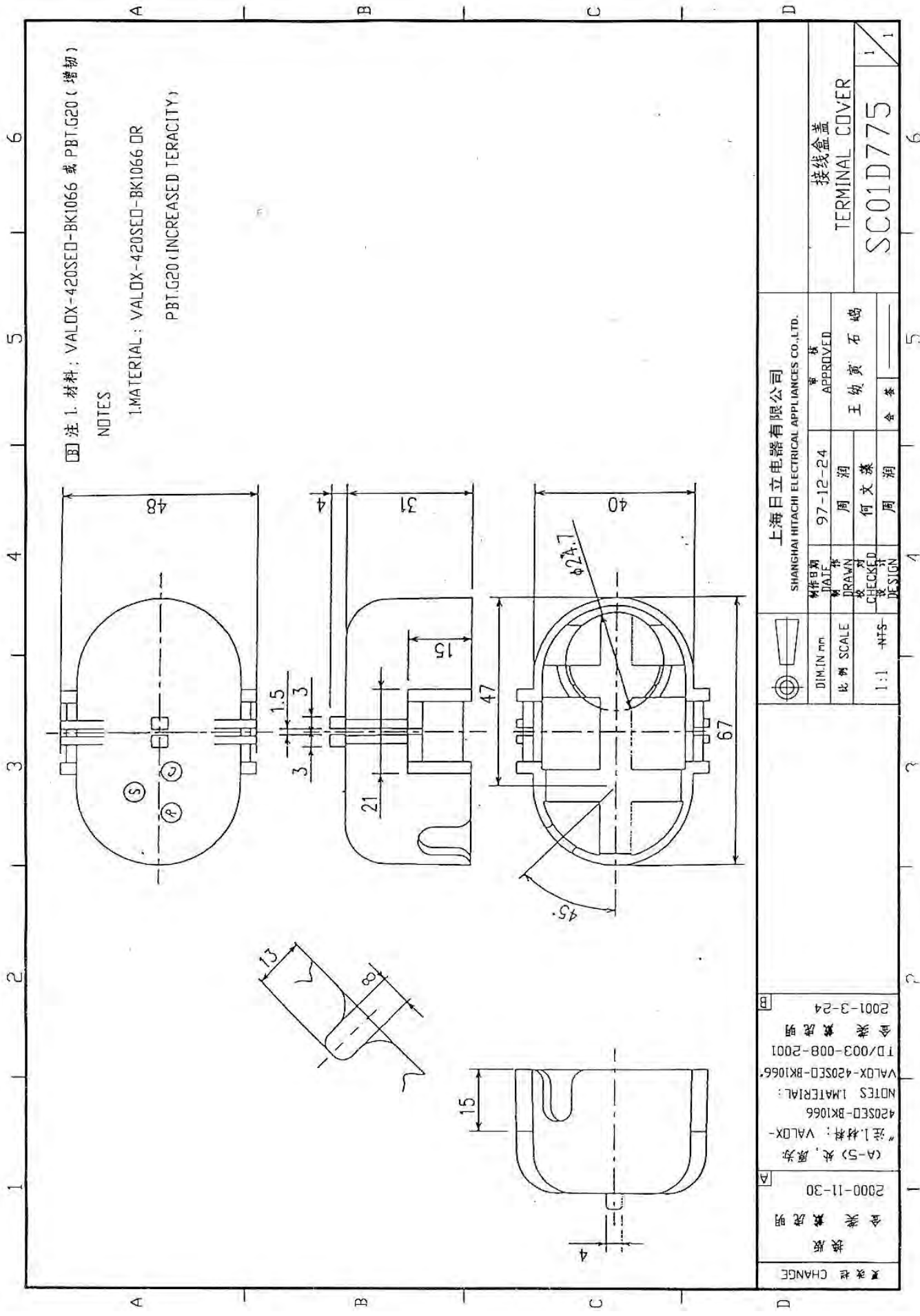




零件号 ITEM		型 号 TYPE	最小动作电流 U. T. C	动作时间 TRIPPING TIME	双金属片动作温度 BIMETAL TRIPPING TEMP.		备注 REMARKS
					OPEN	CLOSE	
H01	JUX-045F	BF690-KB	5.0~6.9 (100°C)	5~15sec (15.0A, 25°C)	160±10°C	70±10°C	
H02	JUX-045F	BF125-JB	0.9~1.25 (100°C)	3~15sec (3.5A, 25°C)	150±10°C	70±10°C	
H03	JUX-045F	BF225-KB	1.75~2.25 (100°C)	5~15sec (7.0A, 25°C)	160±10°C	70±10°C	
H04	JUX-045F	BF156-JC	1.15~1.56 (100°C)	5~15sec (4.7A, 25°C)	150±10°C	80±10°C	
H05	JUX-045F	BF200-LB	1.5~2.0 (100°C)	5~20sec (5.0A, 25°C)	165±10°C	70±10°C	
H06	JUX-045F	BF480-KB	3.3~4.8 (100°C)	5~15sec (12 A, 25°C)	160±10°C	70±10°C	
H07	JUX-045F	BF165-JB	1.35~1.65 (100°C)	5~15sec (4.0 A, 25°C)	150±10°C	70±10°C	
H08	JUX-045F	BF250-KC	1.9~2.5 (100°C)	5~15sec (7.2 A, 25°C)	160±10°C	80±10°C	
H09	JUX-045F	BF320-KC	2.6~3.2 (100°C)	5~15sec (9.0 A, 25°C)	160±10°C	80±10°C	
H10	JUX-045F	BF560-JB	4.3~5.6 (100°C)	5~15sec (14.5 A, 25°C)	150±10°C	70±10°C	
H11	JUX-045F	BF220-JB	1.4~2.2 (100°C)	5~15sec (4.8 A, 25°C)	150±10°C	70±10°C	
H12	JUX-045F	BF250-JB	1.9~2.5 (80°C)	5~15sec (6.2 A, 25°C)	150±10°C	70±10°C	
H13	JUX-045F	BF180-LB	1.4~1.8 (100°C)	5~20sec (4.0 A, 25°C)	165±10°C	70±10°C	
H14	JUX-045F	BF90-JC	0.7~0.9 (100°C)	5~15sec (2.3 A, 25°C) 	150±10°C	80±10°C	

更改 CHANGE			制作日期 DATE	2000-12-4	审 核 APPROVED
			制 作 DRAWN	金 英	
			校 对 CHECKED		
			设 计 DESIGN	金 英	会 签
			马达保护器 MOTOR PRO		
SC01DA36			2	2	

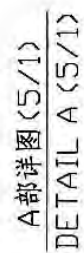


			2		3		4				
副号 ITEM	电压 VOLTAGE	电容 CAPACITANCE	尺寸变化 DIMENSION TABLE								
			A	B	C	D	E	F	G	H	J
H01	AC380V	4 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H02	AC380V	4.7 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H03	AC380V	6.5 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H04	AC400V	4.7 μ F $^{+10}_{-5}$ %	49.7	48.3	24.0	22.5	34.5	34.5	11.5	4	18
H05	AC380V	3 μ F $^{+10}_{-5}$ %	49.7	48.3	24.0	22.5	34.5	34.5	11.5	4	18
H06	AC400V	5.5 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H07	AC400V	8 μ F $^{+10}_{-5}$ %	50.0	48.5	30.5	28.8	41.0	41.5	11.5	4	18
H08	AC250V	12 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H09	AC400V	6.5 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H10	AC250V	17 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H11	AC250V	15 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H12	AC220V	17 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H13	AC220V	12 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H14	AC220V	15 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H15	AC400V	4 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H16	AC450V	6.5 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H17	AC450V	4 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H18	AC450V	4.7 μ F $^{+10}_{-5}$ %	49.7	48.3	24.0	22.5	34.5	34.5	11.5	4	18
H19	AC450V	8 μ F $^{+10}_{-5}$ %	50.0	48.5	30.5	28.8	41.0	41.5	11.5	4	18
H20	AC300V	15 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H21	AC300V	17 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H22	AC400V	6 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H23	AC450V	6 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H24	AC300V	13 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H25	AC450V	5 μ F $^{+10}_{-5}$ %	49.7	48.3	24.0	22.5	34.5	34.5	11.5	4	18
H26	AC450V	7 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H27	AC500V	6.5 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H28	AC500V	8 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
H29	AC400V	12 μ F $^{+10}_{-5}$ %	50.0	48.5	26.7	25.3	37.5	38.0	11.5	4	18
CHANGE 更改栏											
			上海森林电器有限公司 SHANGHAI SENLIN ELECTRICAL APPLIANCE CO., LTD					运转电容 RUN CAPACITOR			
DIM IN mm			制作日期 DATE		2004-04-05		审核 APPROVED		SC01DB62		
比例 SCALE			制 作 DRAWN		顾 玲						
NTS			校 对 CHECKED								
			设 计 DESIGN		顾 玲		会 签		2 2		



更改栏 CHANGE		2000-11-30 金凌 黄虎明		A		(A-5) 处, 原为 "注1.材料: VALDX- 420SED-BK1066 NOTES 1.MATERIAL: VALDX-420SED-BK1066"		B		2001-3-24 金凌 黄虎明 TD/003-008-2001									
		上海日立电器有限公司		SHANGHAI HITACHI ELECTRICAL APPLIANCES CO.,LTD.				制作日期 DATE 97-12-24		审核 APPROVED 王幼寅 石 崎		接线盒盖 TERMINAL COVER							
DIM IN mm		比例 SCALE		1:1		NTS-		周 润		何文藻		周 润		金 泰		SC01D775		1	

1.MATERIAL: SUS 304Wpb ϕ 1.2

[illegible]

NOTES 1. MATERIAL: EPTR

(ETHYLENE PROPYLENE TERPOLYMER RUBBER)

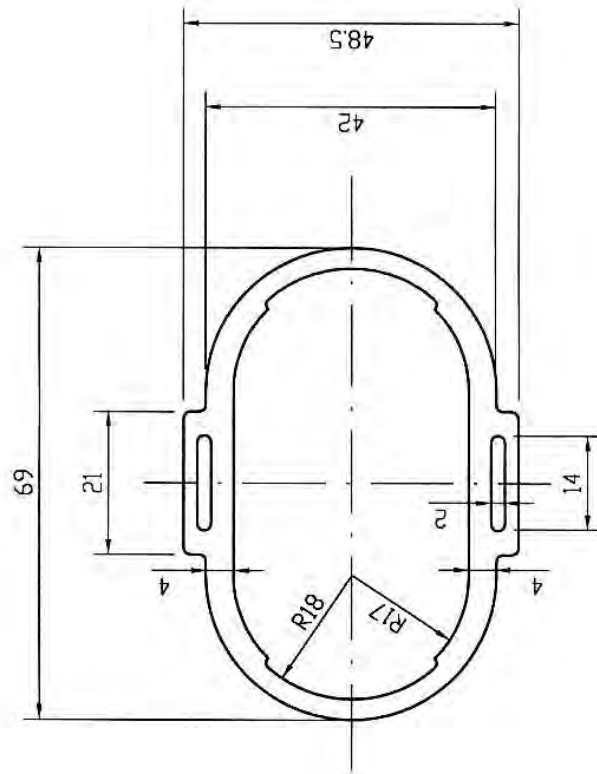
2. THICKNESS: 1.0mm

3. FLAME RETARDANT MATERIAL

注: 1. 材料: 三元乙丙橡胶

2. 厚度: 1.0mm

3. 阻燃



更改 变更

命 黄 虎 明

2000-12-4



DIM IN mm

比例 SCALE

1:1

DATE

97-12-24

周 润

何 文 强

DESIGN

周 润

何 文 强

CHECKED

周 润

何 文 强

APPROVED

王 幼 寅

石 崎

SHANGHAI HITACHI ELECTRICAL APPLIANCES CO., LTD.

上海日立电器有限公司

密封垫

PACKING

SC01D075

1

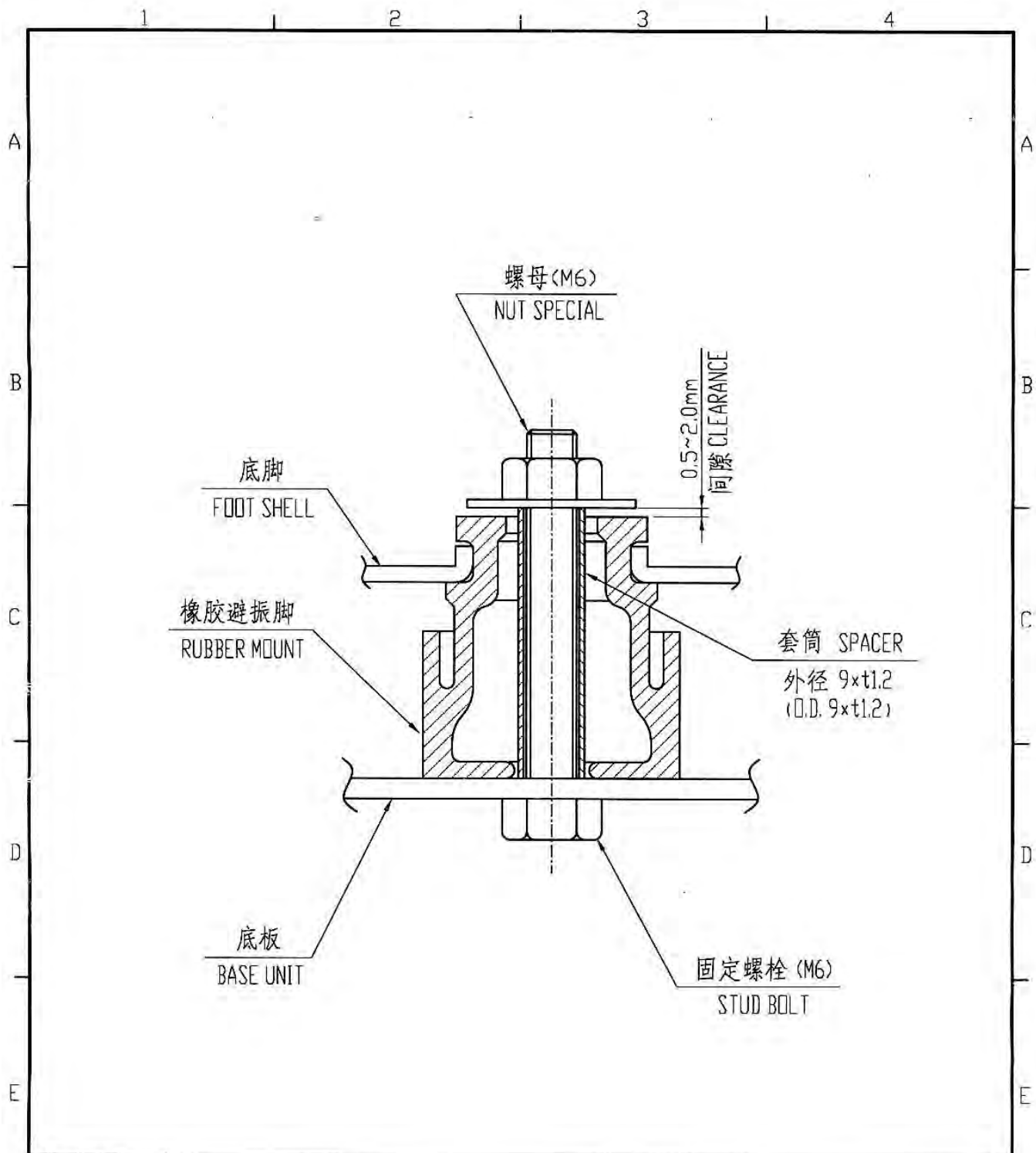
2

3

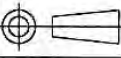
4

5

6



更改栏 CHANGE
换版
金奖 戴虎明
2000-12-5

 DIM. IN mm 比例 SCALE	上海日立电器有限公司 SHANGHAI HITACHI ELECTRICAL APPLIANCES CO., LTD.	安装脚组件 MOUNT ASSY SC01D750
	制作日期 DATE	97-12-24
	制作 DRAWN	周润
	校对 CHECKED	何文藻
NTS 设计 DESIGN	周润	审核 王幼寅 石嶋 会签

Specification Revision Record				
No.	Date	Page in Spec	Revision Reason	Conclusion Date
A				
B				
C				
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