GMCC
TOSHIBA

COMPRESORES ROTATIVOS TOSHIBA R410

reld SACIFIA
REFRIGERACION - AIRE ACONDICIONADO
Av. Chiclana 3174/76/80
C1259AAQ – Ciudad Autónoma de Bs As- Argentina
Tel/Fax: +54 11 911.0000 L. Rot
www.reld.com.ar

_____ DATE: _____

GMCC HERMETIC COMPRESSOR SPECIFICATION

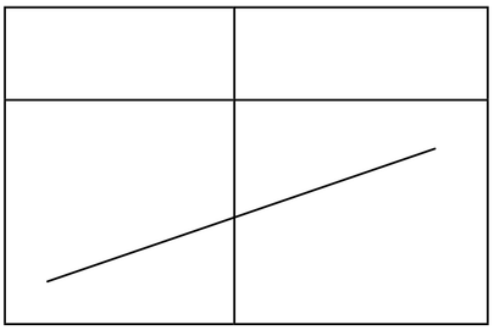
(Model) : **PA270G2CS-4MU1**
Issue NO.) : GMCC—

S I G N A T U R E
D A T E

This document will be effective with your authorized signature. Please return one (1) copy of this form , and keep the other two (2) copies for your records.

GUANGDONG MEIZHI COMPRESSOR LIMITED

Shunfengshan Industrial Development Area
Shunde City, Guangdong Province, P.R. CHINA



1. SPECIFICATION

1-1 PRINCIPAL ITEMS OF COMPRESSOR

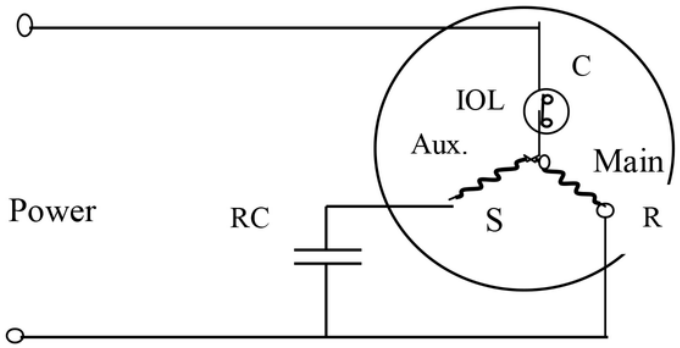
AIR CONDITIONER TYPE	COOLING & HEATING
COMPRESSOR TYPE	HERMETIC MOTOR COMPRESSOR
COMPRESSION TYPE	ROTARY
Safety Approval	**TUV、CCC**
REFRIGERANT	**R410A**
OIL·OIL CHARGE	**ESTER OIL VG74 · 850** ml
PAINTING	BLACK COLOR PAINT
NET MASS（OIL INCLUDED）	**19.2** kg
DISPLACEMENT	**27.0** cm^3/rev
CYLINDER BORE×HEIGHT	**φ62×28** mm
ORBITAL RADIUS	**5.40** mm
SUCTION TUBE(I.D)	**16.2** mm
DISCHARGE TUBE(I.D)	**9.8** mm

1-2 MOTOR

MOTOR TYPE·STARTING TYPE	SINGLE PHASE INDUCTION MOTOR · PSC
POLE	2 POLE
RATED VOLTAGE·FREQUENCY	**1φ-50Hz-220/240V**
RATED REVOLUTION	**48.2**±1% S-1
INSULATION GRADE	E GRADE
WINDING RESISTANCE(20℃)	Main: **1.28**±5% Ω Aux.: **1.78**±5% Ω
STARTING CURRENT	（at 1φ-50Hz-220/240V） **--/60**+10% A

1-3 ELECTRICAL COMPONENT & WIRING DIAGRAM

PARTS NAME	SPECIFICATION
RUNNING CAPACITOR	(Out of Supply) Capacity : 60 μF Withstanding Voltage: ⩾400VAC
OVER LOAD PROTECTOR	INTERNAL （IOL）



S：START（AUX WINDING）
R：RUN（MAIN WINDING）
C：COMMON
RC：RUNNING CAPACITOR
IOL: Internal Overload Protector

2. COMPRESSOR & STANDARD ACCESSORY

PARTS NAME	TYPE (MODEL)	PIECES	DRAWING CODE	PARTS CODE
DRAW EXTER	PA270G2CS-4MU1	1	1K329010Gr	……
RUBBER CUSHION	FOR BASE OF-TYPE	3	1K22910110	……
TERMINAL COVER	FOR FIXED FREQUENCY MODELS	1	1K14722211	……
TERMINAL PACKING	FOR FIXED FREQUENCY MODELS	1	1K14720132	……
TERMINAL NUT	FOR FIXED FREQUENCY MODELS	1	1K14300711	……
EARTHING BOLT	* NI-PLATED COPPER BOLT	1	1K14300210	……
WASHER FOR EARTHING BOLT	* NI-PLATED COPPER WASHER	1	1K14300310	……

USE COMPRESSOR PARTS AND ACCESSORIES SPECIFIED BY GMCC

*** Attention:!**

If the Earthing Hole on the Base of Compressor will have been connected with Earthing Wire, Please Remove and throw away the Antirust Steel Bolt and Washer which has been installed on Compressor, and Use the Copper Bolt and Washer listed above or Equivalent.

3. STANDARD OF PERFORMANCE

3-1 RATED PERFORMANCE

				AT GB STANDARD
CAPACITY	W	☆	**6830/6850**±5%	
MOTOR INPUT	W	☆	**2285/2500**±5%	
CURRENT	A	☆	**10.95/12.10**±5%	
COP	W/W %	☆	**299/274**±5%	
SOUND LEVEL dB(A) （A RANGE） SOUND POWER LEVEL	dB(A)	★	**74** MAX	
V I B R A T I O N	m/s^2	★	**3.3** MAX	

☆ RATING CONDITIONS

- RATED VOLTAGE :1φ-50Hz-220/240V
- COND.TEMP. :54.4℃
- EVAP.TEMP :7.2℃
- RETURN GAS TEMP :35℃
- LIQUID TEMP. :46.1 ℃
- AMBIENT TEMP. :35℃
- FORCED AIR

※ ACCORDING TO GMCC'S CALORIEMETER STANDARD

★ RATING CONDITIONS

- RATED VOLTAGE :1φ-50Hz-220/240V
- COND. TEMP. :54.4℃
- EVAP. TEMP :7.2℃
- RETURN GAS TEMP :18℃
- DISCHARGE TUBE TEMP. :80.0℃
- AMBIENT TEMP. :20.0℃

※ DISCHARGE TUBE TEMP IS CONTROLLED BY FLOOD BACK AMOUNT OF REFRIGERANT

B.D.V	V	**187.0** MAX	Pd/Ps=4.15/1.15 MPa
STARTING VOLTAGE	V	**187.0** MAX	Pd=Ps=1.57±0.1 MPa Pd-Ps≤0.05 MPa

3-2 CHARACTERISTICS

（AP） LEAK TIGHT PRESSURE	HIGHER PRESSURE SIDE	4.3 MPa
	LOWER PRESSURE SIDE	2.1 MPa
（TP） HYDROSTATIC STRENGTH PREESSURE	HIGHER PRESSURE SIDE	6.3 MPa
	LOWER PRESSURE SIDE	3.2 MPa
INSULATION RESISTANCE （FILLED WITH NITROGEN GAS）		20 MΩ MIN
WITHSTAND VOLTAGE		AC1500V-1min
RESIDUAL MOITSTURE • RESIDUAL IMPURITIES		**300.0**mg MAX • **60.0**mg MAX
EARTHING RESISTANCE		0.1 Ω MAX

4 OPERATING CONDITIONS

ITENS LOAD	STANDARD	MAX.
DISCHARGE PRESSURE MPa(G)	3.28 MAX	4.15 MAX
SUCTION PRESSURE MPa(G)	0.89	0.23~1.15
COMPRESSION RATIO	8 MAX	8 MAX
MOTOR COIL TEMP. ℃	100 MAX	125 MAX
DISCHARGE TUBE TEMP. ℃	100 MAX	115 MAX

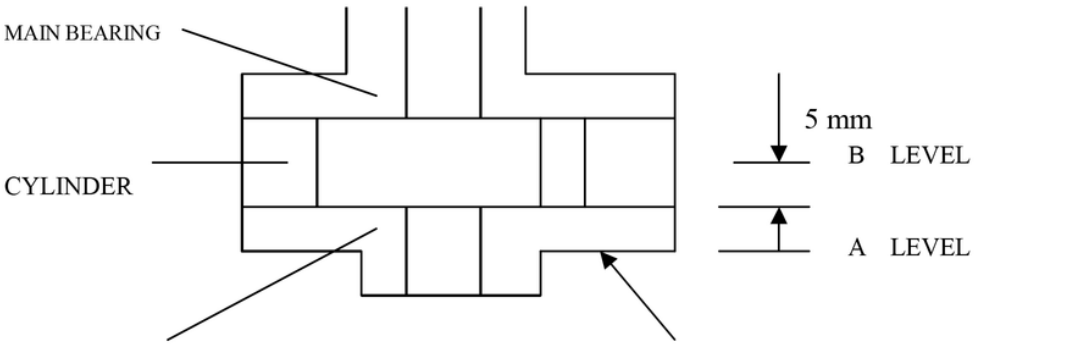
※ SYSTEM DESIGN AND PROCESS LIMITATIONS

LIMIT OF REFRIGERANT AMOUNT kg	**2.10** MAX
CONTINUOUS FLOOD BACK	CONTINUOUS FLUID BACK BEFORE THE ACCUMULATOR NOT BE MORE THAN 10% OF TOTAL CIRCULATION QUANTITY OF REFRIGERANT.
ABNORMAL NOISE & CURRENT	KNOCKING NOISE OR OVERCURRENT SHOULD NOT OCCUR AT START-UP OR REVERSING CYCLE.
TEMP.DIFFERENT℃ （△T=CASE BOTTOM TEMP -CONDENSING TEMP）	5 OR MORE：CONTINUOUS OPERATION 5 OR MORE：DEFROSTING OPERATION 5 OR MORE：DRY OPERATION 0 OR MORE：CONTROLLED INTERMITTENT OPERATION
INTERMITTENT OPERATION TIMES	200000 CYCLES OR LESS，5 MINUTES OR MORE （ON：2MINUTES OR MORE，OFF：2MINUTES MORE）
SUPPLY VOLTAGE RANGE	**220V-15%～240V+10%(187～264V)**以内 THE SUPPLY VOLTAGE SHOULD BE **220V-15%～240V+10%(187～264V)**
POWER FREQUENCY	THE POWER FREQUENCY SHOULD BE THE RATED VALUE ±2%
PRESSURE DIFFERENCE AT START-UP	THE PERSSURE SHOULD BE BALANCED THE HIGH-PRESSURE AND LOW-PRESSURE SIDES AT START-UP
TILT IN OPERATION	COMPRESSOR SHOULD BE RUN AT A GRANDIENT OF UP TO 5^0

LUBRICATION OIL LEVEL

THE LUBRICATION OIL LEVEL IN A COMPRESSOR SHOULD BE AS LISTED BELOW IF THE LUBRICATION OIL IS FOAMING FOAM SHOULD BE EXCLUDED FROM THE OIL LEVEL

OPERATING CONDITION		OIL LEVEL
IN CONTINUOUS OPERATION		B LEVEL OR HIGHER
WHEN STARTING	CONTROLLED START	B LEVEL OR HIGHER
	AFTER SOAKING	B LEVEL OR HIGHER，A LEVEL OR HIGHER WITHIN 3MINUTES AFTER START-UP
DEF-ROSTING	DEFROSTING-HOT GAS	B LEVEL OR HIGHER
	REVERSE CYCLE	B LEVEL OR HIGHER



TUBE STRESS

TUBE TO BE CONNECTED WITH A COMPRESSOR SHOULD BE FREE OF RESON-ANCE. THE TUBE STRESS SHOULD NOT EXCEED THE VALUES LISTED BELOW TUBE SHOULD NOT BREAK DURING OPERATION，AT START-UP，AND AT STOP

VIBRATION MODE	ALLOWABLE TUBING STRESS（HALF AMPLITUDE）
OPERATING	$20N/mm^2$ OR LESS
START-UP STOP	$30N/mm^2$ OR LESS
IN TRANSIT	$30N/mm^2$ OR LESS

DO NOT PUT A COMPRESSOR ON ITS SIDE OR TURN OVER.

AN IMPACT TO COMPRESSOR SHOULD BE LIMITED TO 590m/s^2 OR LESS ,NOT GIVE A SHOCK TO ACCESSORIES.
DO NOT LEAVE THE PLUGS OF THE COMPRESSOR IN THE ATMOSPHERE FOR MANY HOURS AFTER OPEN FOR PREVENTING WATER FROM GETTING INSIDE。
AVOID OPERATION WITH AIR FOR PREVENTING THE LUBRICATION OIL'S DETERIORATION FROM ACCELERATING。
REFRIGERANT MUST ALWAYS BE FILLED FROM THE HIGHER SIDE OF THE REFRIGERATION CYCLE
DO NOT REVERS COMPRESSOR OPERATION. DO NOT REUSE THE COMPRESSOR THAT ROTATED IN REVERS。
DO NOT ALLOW COMPRESSOR TO BE WEATHERED；STORE COMPRESSORS INDOOR AT -10~+65℃
LEAD WIRE CONNECTED TO A COMPRESSOR SHOULD HAVE A SUFFICIENT ALLOWANCE AGAINST VIBRATIONS OF A COMPRESSOR。
SINCE THE COMPRESSOR TEMPERTURE MAY RISE AS HIGH AS 150℃，DO NOT ALLOW ELECTRIC CABLES OR THE LIKE TO DIRECTLY TOUCH COMPRESSORS。
TAKE PRORER MOISTURE-PROOF OR DUST-PROOF MEASURES FOR THE COMPRESSOR TERMINAL BOX IF WATER DROPLETS，DUST，OR THE LIKE MAY OTHERWISE ENTER。
TURN ATTENTION TO GATHERING RUST ON IT' S SHELL WHEN ALLOWED COMPRESSOR TO COME IN TOUCH WITH HYGROSCOPIC MATERIALS。NOT BE EXPOSED TO CORROSIVE GASES OR ORGANIC SUBSTANCES。
FOR SPLIT TYPE AIR-CONDITIONERS，THE MAXIMUM PIPING LENGTH SHOULD BE 15m， AN ELEVATION DIFFERENCE SHOULD BE WITHIN 5m， ALSO THE REQUIREMENTS HEREIN SHOULD BE MET。
IF GAS CHARGE AMOUNT OF REFRIGERANT SPECIFIED IS EXCEEDED，BOTH PARTIES SHOULD DISCUSS THE MATTER TO DETERMINE COMPRESSOR SPECIFICATION（ACCUMULATOR VOLUME，LUBRICATING OIL AMOUNT） AND SYSTEM SPECIFICATIONS（CRANK CASE HEATER，OIL SEPERATOR，ADDITONAL ACCUMULATOR，ETC.）。
DO NOT MODIFY A COMPRESSOR WITHOUT TOSHIBA'S AUTHORIZATION. DO NOT FILL THE REFRIGERATION CYCLES WITH GAS EXCEPT R410A, AS A COMPRESSOR MAY GO-UP IN A BLAST。（ESPECIALY COMPRESSING AIR IS NOT PERMITTED）

DO NOT PROVIDE ANY FORCE ON DISCHARGE TUBE WHEN COMPRESSOR IS MOVED AND OR TRANSFERRED

5 THE OTHERS

5-1 SEALING WITH NITROGEN GAS

THE ROTARY COMPPRESSOR ARE SEALED WITH NITROGEN GAS FOR RUST PREVENTION WHEN REMOVING THE RUBBER CAP，IT SHALL BE MADE SURE AUDIBLY THAT THE NITROGEN GAS REMAINS。

5-2 CONTAINER

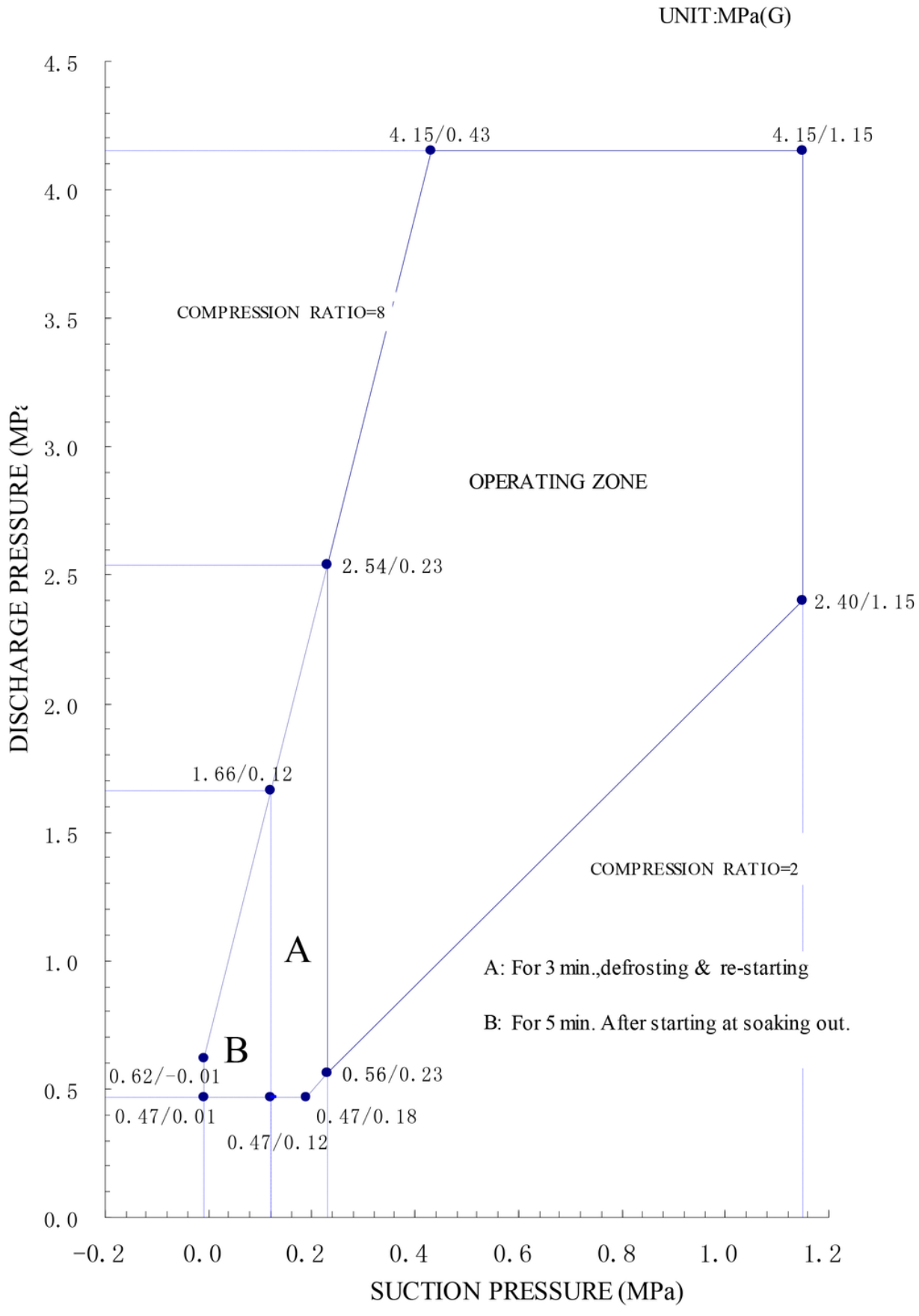
A STANDARD CONTAINER SPECIFFIED IN TOSHIBA IS USED。

5-3

THIS DOCUMENT WILL EFFECTIVE AFTER TOSHIBA'S RECEIPT WITH YOUR AUTHORIZED SIGNATURE WHEN DESIGN MODIFICATION IS APPROVED BY THE CUSTOMER ， THE CURRENT DOCUMENT IS UNAVAILABLE.

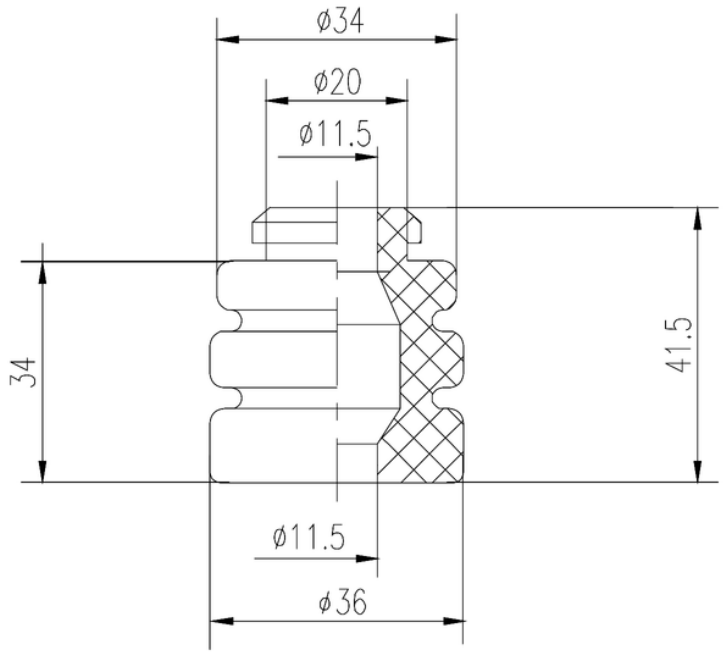
R410A

OPERATING CONDITIONS OF R410A REFRIGERANT COMPRESSOR



RUBBER CUSHION

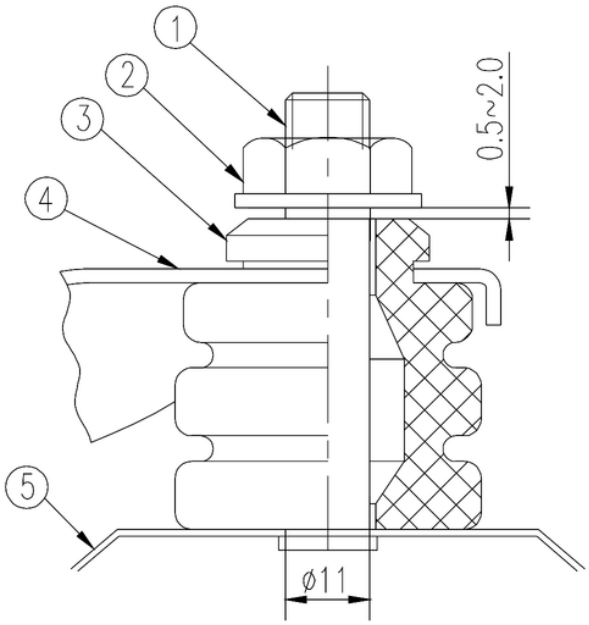
Drawing No. 1K22910110



NOTES

MATERIAL : EPDM

HARDNESS : HS=46

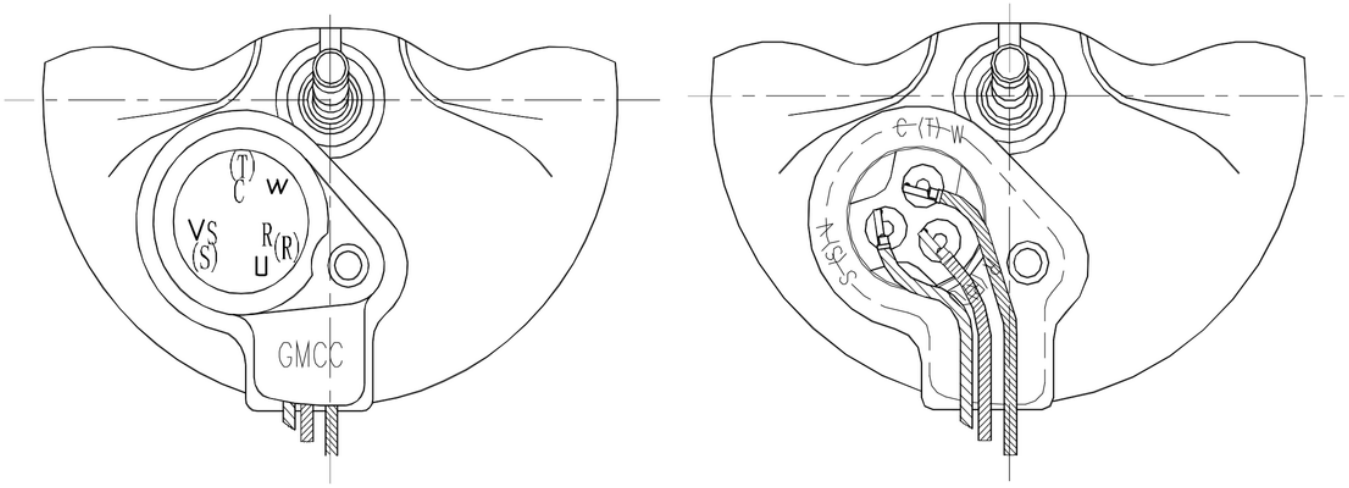


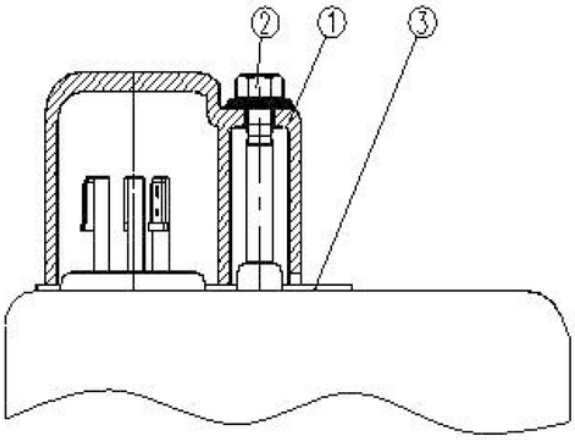
①	STUD BOLT
②	NUT
③	RUBBER CUSHION
④	COMPRESSOR BASE
⑤	BASE PLATE

MOUNTING ASSEMBLY

ELE COMPONENTS

Drawing No.1K14722114





PART NO	TITLE	DRAWN NO
①	TERMINAL COVER	1K14722211
②	TERMINAL NUT	1K14300711
③	TERMINAL PACKING	1K14720132

NOTES

Tightening torque of terminal nut:1.2±0.2Nm

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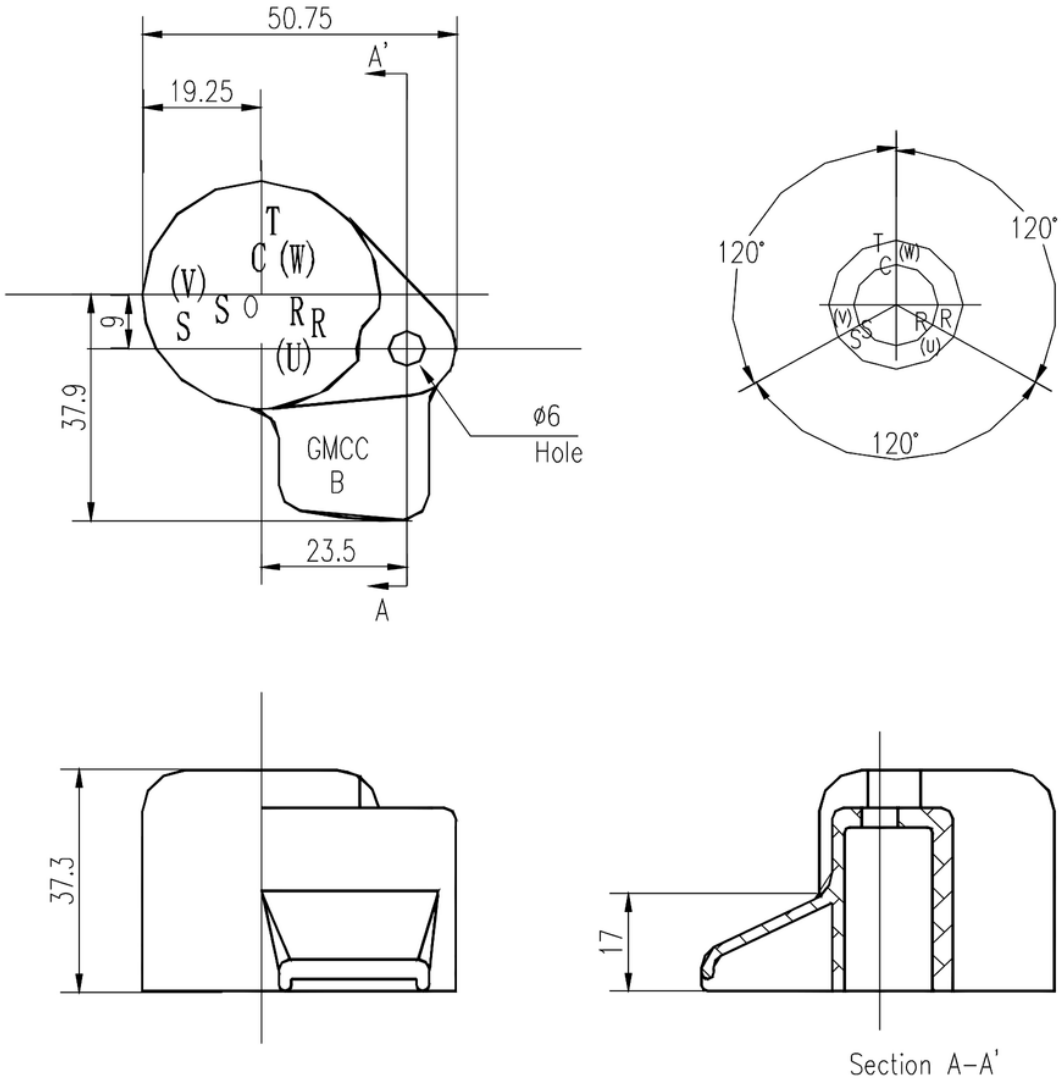
TERMINAL COVER

Drawing No. 1K14722211



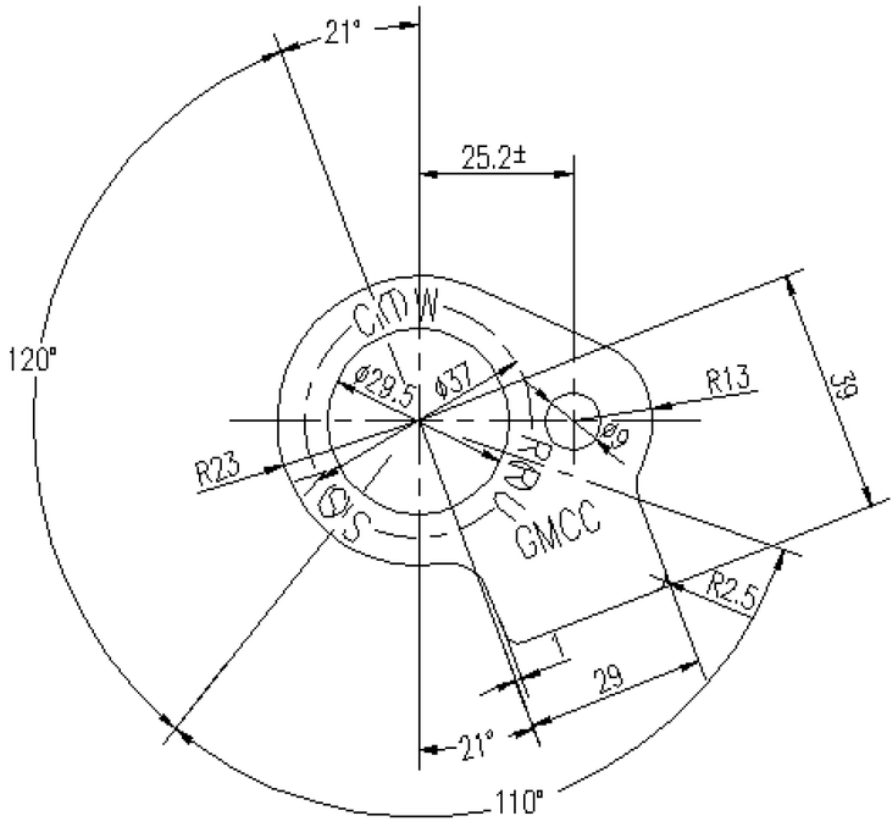
NOTES
MATERIAL:POLYBUTYLENE TEREI
COLOR:BLACK

GUANGDONG MEIZHI COMPRESSOR LTD

TERMI PACKING

Drawing No.1K14720132

THICKNESS 1mm

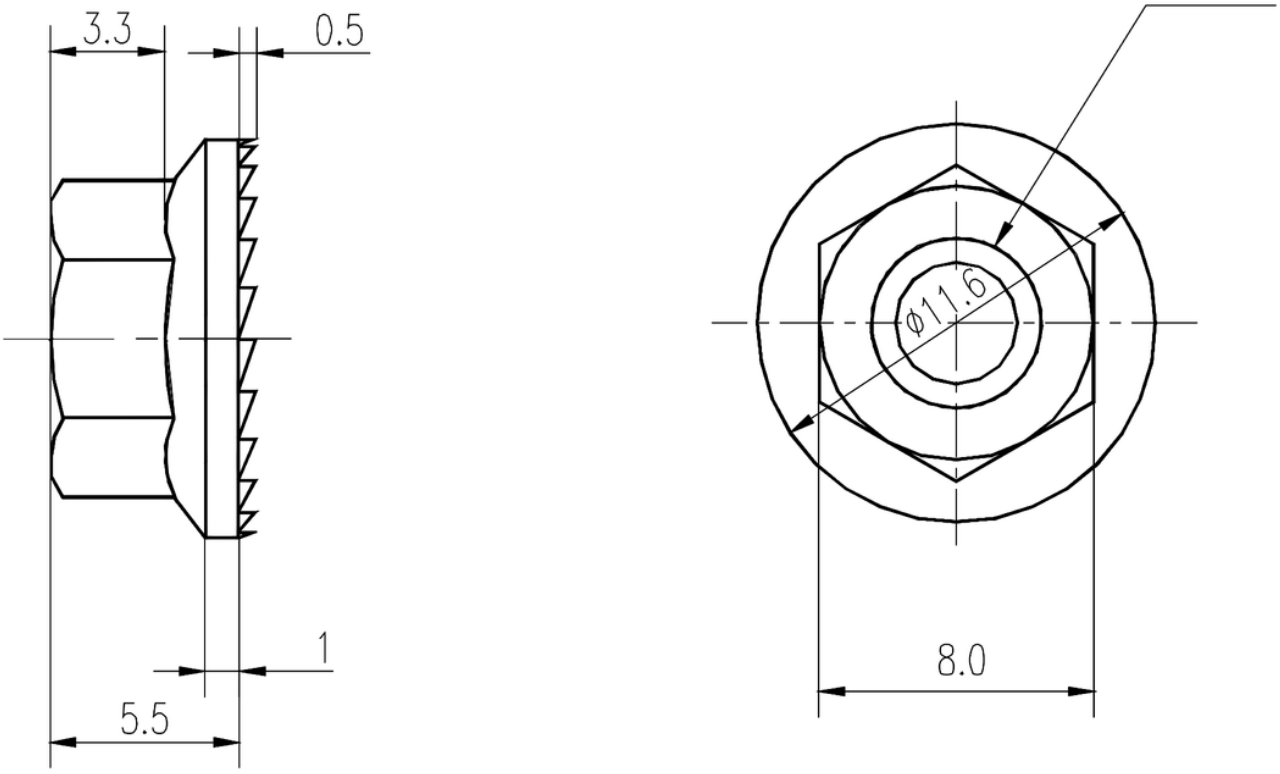


NOTES
MATERIAL:SI
COLOR:BLACK

GUANGDONG MEIZHI COMPRESSOR LTD

TERMINAL NUT

Drawing No. 1K14300711



NOTES
MATERIAL:SWCH10
TREATMENT: WITHOUT HEXAVALENT CHROMIUM COMPOUNDS

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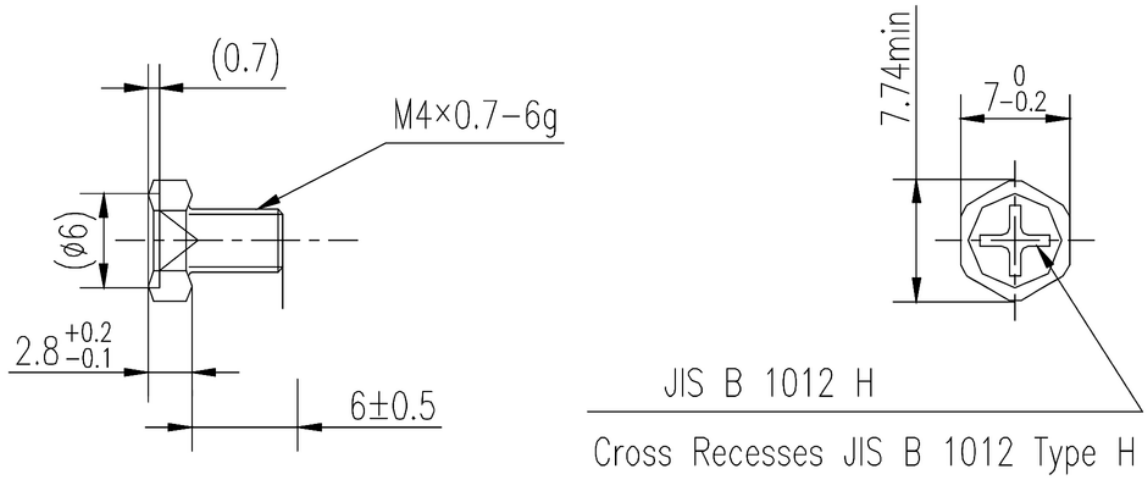
HEX BOLT

Drawing No.1K14300210



NOTES
MATERIAL:C2700W-1/4H
TREATMENT:ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)

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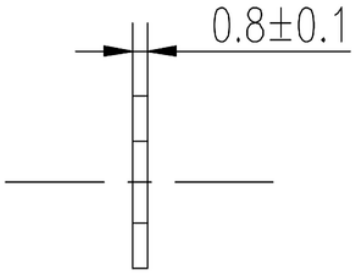
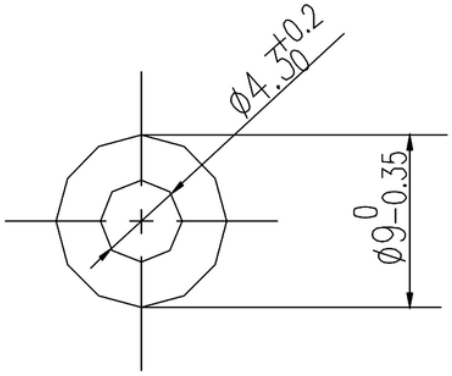
WASHER

Drawing No.1K14300310





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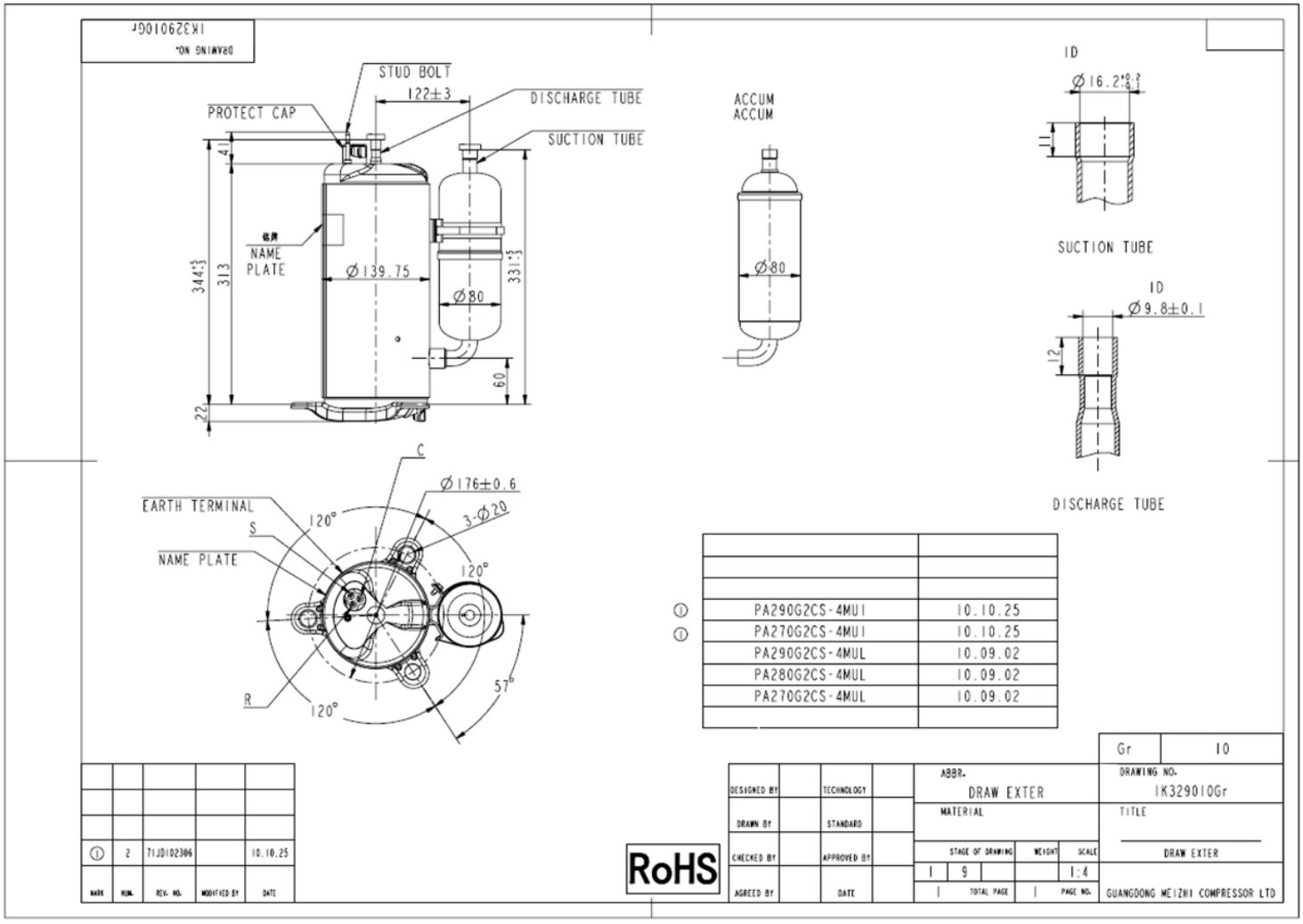

PA290G2CS-4MU1	10.10.25
PA270G2CS-4MU1	10.10.25
PA290G2CS-4MUL	10.09.02
PA280G2CS-4MUL	10.09.02
PA270G2CS-4MUL	10.09.02

①	2	71JD102306		10.10.25
MARK	NUM.	REV. NO.	MODIFIED BY	DATE

DESIGNED BY		TECHNOLOGY		ABBR. DRAW EXTER	DRAWING NO. IK329010Gr
DRAWN BY		STANDARD		MATERIAL	TITLE
CHECKED BY		APPROVED BY		STAGE OF DRAWING / WEIGHT / SCALE	DRAW EXTER
AGREED BY		DATE		1 / 9 / 1:4	GUANGDONG MEIZHI COMPRESSOR LTD
				TOTAL PAGE / PAGE NO.	

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