

客户名称/Customer: \_\_\_\_\_

发行编号/NO. : \_\_\_\_\_

发行日期/DATE: \_\_\_\_\_

## 全封闭型压缩机技术规格书

### HERMETIC COMPRESSOR SPECIFICATION

机型/Model: **PJ250M2C-4FT**客户承认栏/Accept Marking:  
  
\_\_\_\_\_

本规格书从贵公司承认之日起生效，一式贰份。贵公司负责人承认签名之后请返回我公司一份，贵公司保留一份。

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

## 广东美芝制冷设备有限公司

承认/Approved	担当/Drafted

## 1、适用范围 (Application)

空调器类型 A/C Type	热泵热水器用压缩机 Compressor for heat pump
冷媒类型 Refrigerant Type	<b>R134a</b>
最大冷媒充注量 Maximal Refrigerant Charged	<b>1.2Kg Max</b>
电源类型 Power Source	单相 Single Phase <b>1<math>\phi</math>-220-240V-50Hz</b>
安全认证 Safety Approval	<b>TUV、CCC</b>

## 2、规格参数 (Specification)

压缩机类型 Compressor Type	全封闭型电动压缩机 Hermetic Motor Compressor
汽缸容积 Displacement	<b>25.0cm<sup>3</sup>/rev.</b>
冷冻机油充注量 Oil Charged	<b>ESTEL OIL VG74 或等同品 470 ml</b>
总重量 (含冷冻机油) Weight (Oil Included)	<b>15.0Kg</b>
排气管内径 I. D. of Discharge Pipe	<b>8.2 <math>\pm</math>0.1 mm</b>
吸气管内径 I. D. of Suction Pipe	<b>12.9 <math>\pm</math>0.2 / -0.1 mm</b>

## 3、电机参数 (Motor Specification)

电机类型 Motor Type	单相诱导电机·运转电容型 Single Phase Induction Motor·PSC
电机极数 Pole Numbers	2 极/Poles
绝缘等级 Insulation Grade	E 级/Grade
绕组阻值 (20°C时) Coil Resistance (at 20°C)	主绕组                      辅绕组 Main: <b>2.61<math>\pm</math>5% <math>\Omega</math></b> Aux. : <b>3.05<math>\pm</math>5% <math>\Omega</math></b>
堵转电流 Locked Rotor Amps	(at 1 $\phi$ -50Hz-240V) <b>26.5 <math>\pm</math>10% A</b>
运转电容 Ruing Capacitor	电容容量 Capacity : <b>35<math>\mu</math>F</b> 耐压 Withstanding Voltage: <b><math>\geq</math>370V</b>

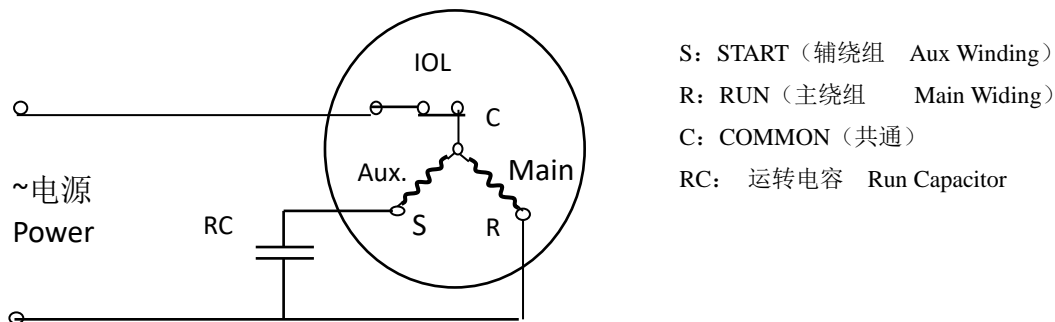
## 4、额定性能规格 (Rated Performance Parameters)

额定能力 Rated Capacity	3000/3005	±5% W
额定输入功率 Rated Input Power	1000/1025	±5% W
额定输入电流 Rated Input Current	4.60/4.40	±5% A
能效比 % COP %	300/293	±5%
噪音/NOISE (Sound Power Level)	★ 69 以下	MAX
振动 VIBRATION (法线方向振动实效值)	★ 3.3 以下	MAX

## 测定条件 (Rating Condition)

电源 Power Source	1φ-50Hz-220-240V
冷凝温度 Cond. Temp.	60°C
蒸发温度 Evap. Temp.	10°C
吸气温度 Return Gas Temp.	20°C
过冷却温度 Liquid Temp.	50°C
环境温度 Ambient Temp.	35°C
排气温度 Discharge Tube Temp.	不控制

## 5、电气配线接线图 (Wire Connection Figure)



## 6、一般特性(Charateristic)

绝缘阻抗 Insulation Resistance	≥30 MΩ	封入氮气时 /Nitrogen Charged
绝缘耐压 Withstanding Voltage	AC1500V-1min	
接地阻抗 EARTHING RESISTANCE	以下 <b>0.1</b> Ω MAX	
残留水分量 Residual Moisture	冷凝法 ≤200mg	
含尘量 Residual Impurities	≤45mg	

## 7、系统使用条件(Limit of System Application)

NO.	项目 Item	标准 (参考) Standard (reference)	极限状况下 Limit Cond.	说明 Note
1	排气压力 Discharge Pressure (对应饱和温度).	1.58 MPa (60°C)	2.42 MPa (78°C)	详细压力使用范围见 附纸! See the attached chart of limitation of operation pressure.
2	吸气压力 Suction Pressure. (对应饱和温度)	----	0.1~0.47 MPa (-25~20°C)	
3	压缩比 Compressing Ratio	13 Max	15.4Max	
4	电机绕组温度 Motor Coil Temp.	100°C	125°C	
5	排气温度 Discharge Temp.	100°C	115°C	

## 8、注意事项 Application Notice:

- 整个运行过程中无液压缩发生。  
No liquid refrigerant go back to compressor during the whole time.
- 连续运转时（包括除霜、除湿）压缩机底部温度-冷凝器中部温度需大于等于 5°C 以上；  
When continuous running (include defrost and dehumidify), compressor bottom temp. subtract condensing temp. should be more than 5°C.  
断续运转时压缩机底部温度-冷凝器中部温度需大于等于 0°C 以上。  
When intermittent running, compressor bottom temp. subtract condensing temp. should be more than 0°C.
- 断续运转，每一周期 5 分钟以上，开 2 分钟以上，停 2 分钟以上。  
When intermittent running, each cycle should be longer than 5 minutes. (On: over 2 min, Off: over 2 min)
- 运转电压波动允许范围 **220V-10%~240V+10%(198~264V)**  
The supply voltage should be **220V-10%~240V+10%(198~264V)**
- 高压侧和低压侧压力需保持平衡后才能启动。

Pressure should be balanced between high and low pressure side.

6. 运转过程中不能有异常噪音发生。

In operation, abnormal noise is not allowed.

7. 最大允许倾斜角度：5°。

Tilt angle should be less than 5°.

8. 当压缩机以下状态时，需确认油面水平：

Oil level confirmation should be tested at:

- 1) 超负荷、低负荷时；

Overload and low load running;

- 2) 冷媒沉积启动时；

Refrigerant soaking starting;

- 3) 除霜开始、恢复时；

Defrost starting and resuming;

- 4) 超过最长配管时；

Connection pipe over 15m;

- 5) 超过最大落差时；

Elevation over 5m;

使用带视窗镜的压缩机进行确认；

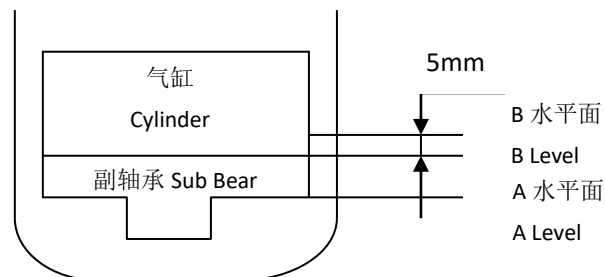
Oil level confirmation test performed with side glass compressor:

- 1) 在稳定运转状态（包括连续/断续运行），油面需在水平面 B 以上；

At steady running (include continuous or intermittent operation): oil level should be higher than B level.

- 2) 在启动的 3 分钟以内，油面需在水平面 A 以上；

Within 3 minutes at starting: oil level should be higher than A level.



9. 请确认本产品已满足贵司的生产效率及性能下线率要求。

Please confirm that this product can meet your requirements of the productive efficiency and the performance pass rate.

## 9、其他注意事项 Other Application Notice

1. 不要给吐出管、吸入管施加弯曲的力，强制其弯曲。

配管设计时，要考虑产品在始动、运转停止以及运输搬运时的振动应力，不致发生损坏。

推荐各配管许容应力如下：始动、停止时 34.3N/mm<sup>2</sup> 以下，运转时 19.6N/mm<sup>2</sup> 以下

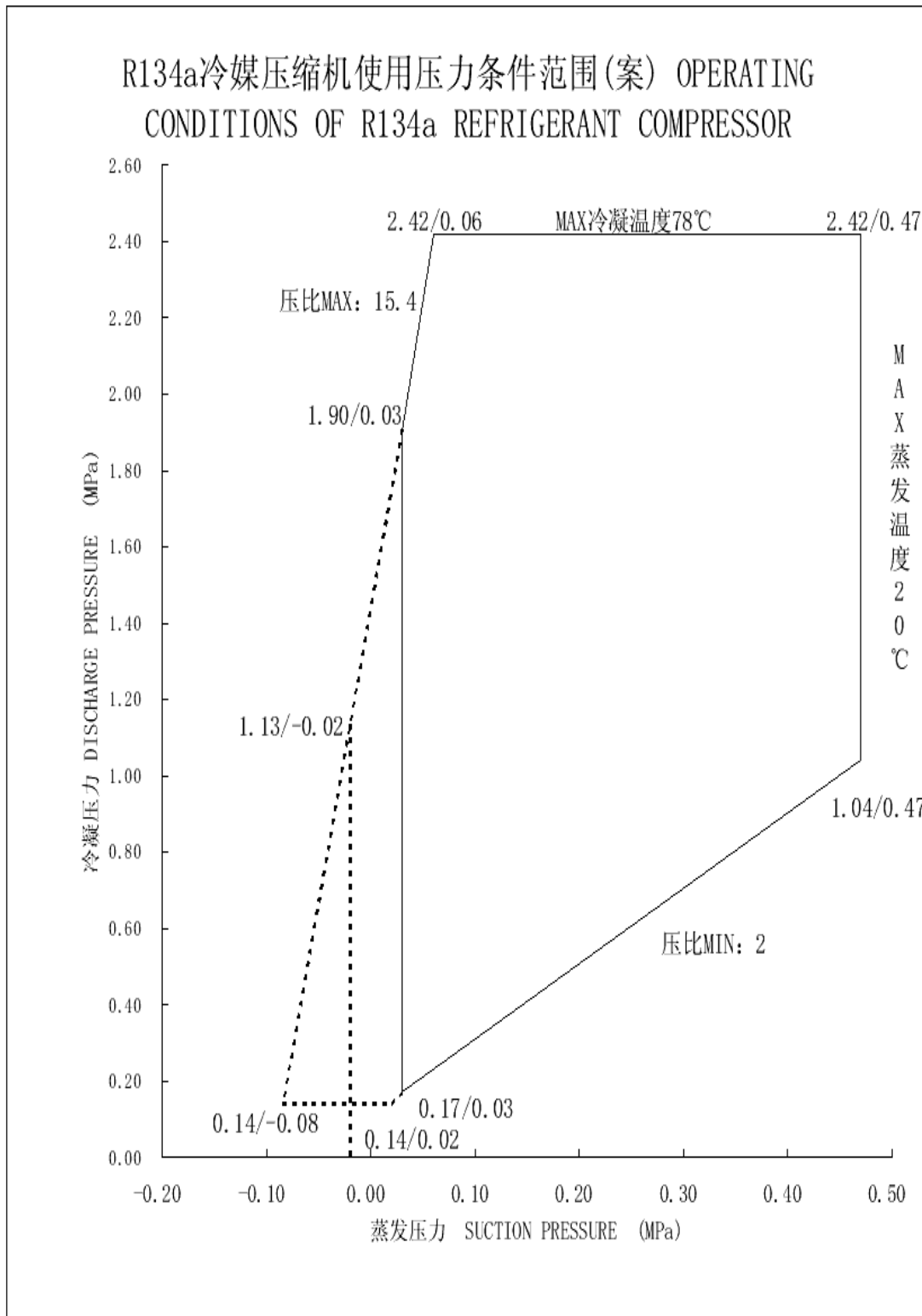
When design the connection tube, the system should be consider the vibration stress at the compressor start, stop and the system transportation status, ensure it doesn't be damaged. The recommendation value of the connection tube stress is below 34.3N/mm<sup>2</sup> at

- the start, stop status and below 19.6N/mm<sup>2</sup> at the running status.
2. 压缩机不允许横置、倒置，在搬运时不允许跌落。  
Do not put a compressor on its side or turn it over. And do not fall it off when moving.
  3. 绝对不允许空气中运转。  
Compressing air is not permitted.
  4. 压缩机密封塞拔除后，请尽快使用，不要将压缩机长时间放置。  
Please assemble the compressor in your Air Conditioner rapidly after removing the plugs.  
Don't place the compressor in air for a long time.
  5. 电气品要使用弊社所指定的规格同等品。  
Please use the accessories indicated by Our Company.
  6. 冷媒量超过规定量时，需另行协商决定压缩机规格。（此时要考虑增加储液器、油加热器）  
When the amount of refrigerant charged in the Air Conditioner is over the max amount allowable, compressor specification should be discussed. (Install additional accumulator, oil heater, etc.)
  7. 冷媒填充原则上从高压侧开始实行。  
Refrigerant must always be filled from the higher side of the refrigeration cycle.
  8. 避免因误配线发生逆转。（若发生逆转，则压缩机不能再使用）  
Avoiding compressor running in reverse caused by connecting electrical wire incorrectly.  
(Don't reuse the compressor after running in reverse.)
  9. 压缩机不得露天存放或存放在腐蚀性空气中如化学仓库等。  
The compressor should be kept out of storing in open storage or corrosive atmosphere such as in a chemicals storage and so on.
  10. 压缩机壳体表面不容许配线或类似物接触压缩机表面。  
Do not allow electric cables or the like to touch compressor directly.
  11. 必须有适当的防湿、防尘处理以防止水滴，灰尘进入压缩机  
To avoid water droplets and dust into the compressor, moisture-proof or dust-proof measures must be take.
  12. 分体式空调最长配管不超过 15m，配管的高低落差最大 5m。  
For split type Air Conditioner, the maximum piping length should be 15m, and elevation difference should be within 5m.
  13. 禁止使用 R134a 之外的冷媒。  
Do not fill refrigeration cycles with other refrigerant except R134a.
  14. 请不要裸手触摸运行中或刚停机正处于高温的压缩机，当心烫伤。  
Do not touch the compressor with bare hands during operation or immediately after stoppage.  
The compressor is at a high temperature. There is the danger of burns.
  15. 维修保养设备时必须配戴防护眼镜。由于焊枪温度过高，拆卸配管时，当心会有冷媒、油的溅出而导致烫伤或进入眼中。  
Wear safety goggles when servicing the unit. When removing the tubes by heating it with a burner, there is the danger of burns or eye injury if the refrigerant and/or oil remaining in the tubes is emitted.
  16. 焊接排气管与配管时，请勿取下端子盖，为了保护端子盖不受热量的冲击，需要设置隔热板。  
Do not remove the terminal cover when welding the discharge pipe and a heat shield is required to protect the terminal cover from the impact of welding heat.

## 压缩机运行范围 (Operation Limitation of Compressor)

单位: MPa (表压)

Unit: MPa (G)



## 图纸/附件清单 Drawing/Accessories List

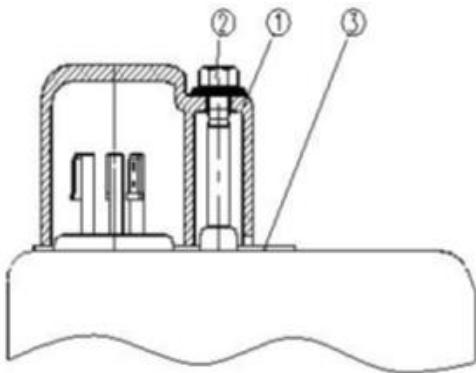
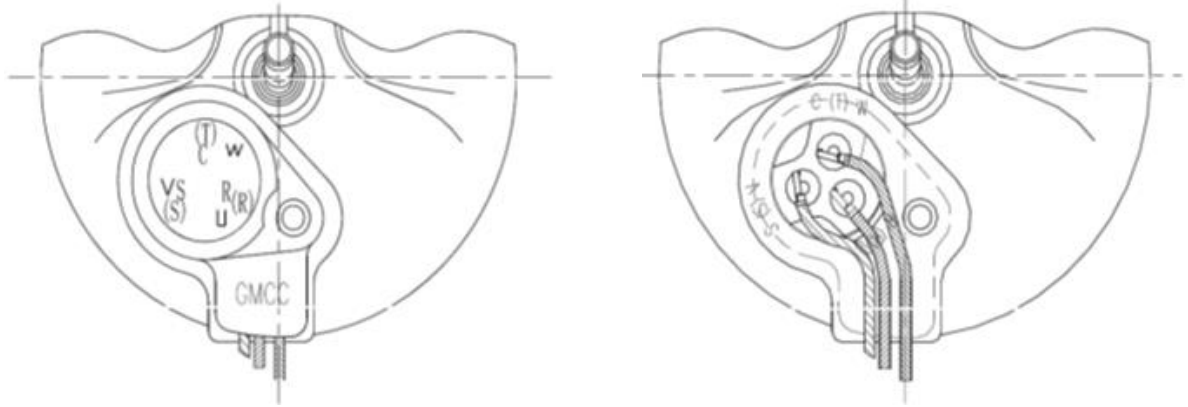
(See the Attached Pages)

名 称 (Parts Name)	数量 (Pieces)	图 号 (Drawing No.)	备注
电装品 ELE. COMPONENTS	1	<b>1K14722112</b>	
端子盖 TERMINAL COVER	1	<b>1K14722211</b>	
端子垫片 TERMINAL PACKING	1	<b>1K14720132</b>	
端子螺母 TERMINAL NUT	1	<b>1K14300711</b>	
橡胶垫 RUBBER CUSHION	3	<b>MC34910210</b>	
接地螺钉 EARTHING HEX BOLT	1	<b>1K14300210</b>	
接地螺钉垫片 WASHER FOR EARTHING BOLT	1	<b>1K14300310</b>	
压缩机外形图 COMPRESSOR DRAWING	1	<b>1K158852GR</b>	



# 电装品 ELE COMPONENTS

Drawing No. 1K14722112



③	端子垫片 TERMINAL PACKING	1K14720132
②	端子螺母 TERMINAL NUT	1K14300711
①	端子盖 TERMINAL COVER	1K14722211
部件 PART NO	部件名称 TITLE	图号 DRAWN NO

注释

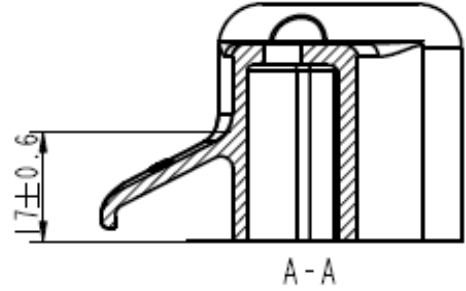
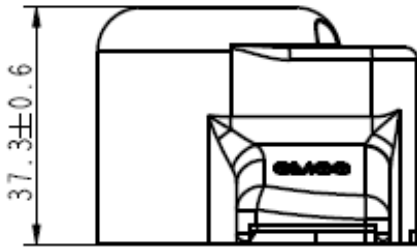
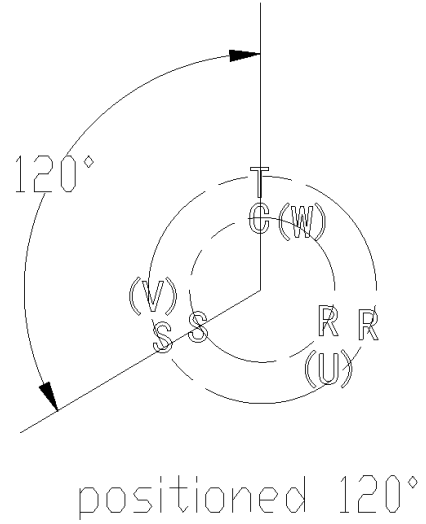
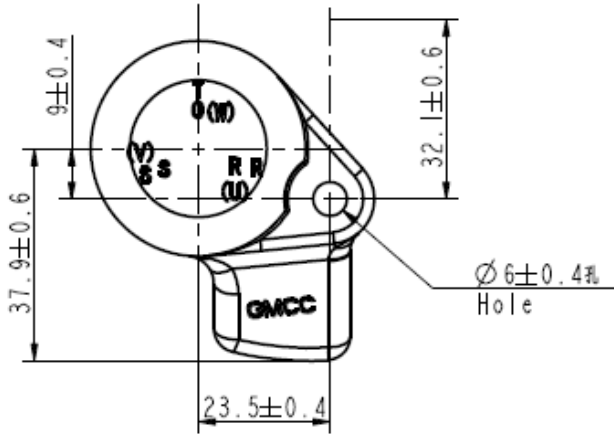
NOTES

端子螺母的拧紧力矩:  $1.2 \pm 0.2 \text{ N} \cdot \text{m}$

Tightening torque of terminal nut:  $1.2 \pm 0.2 \text{ Nm}$

# 端子盖 TERMINAL COVER

Drawing No.1K14722211



注释  
NOTES

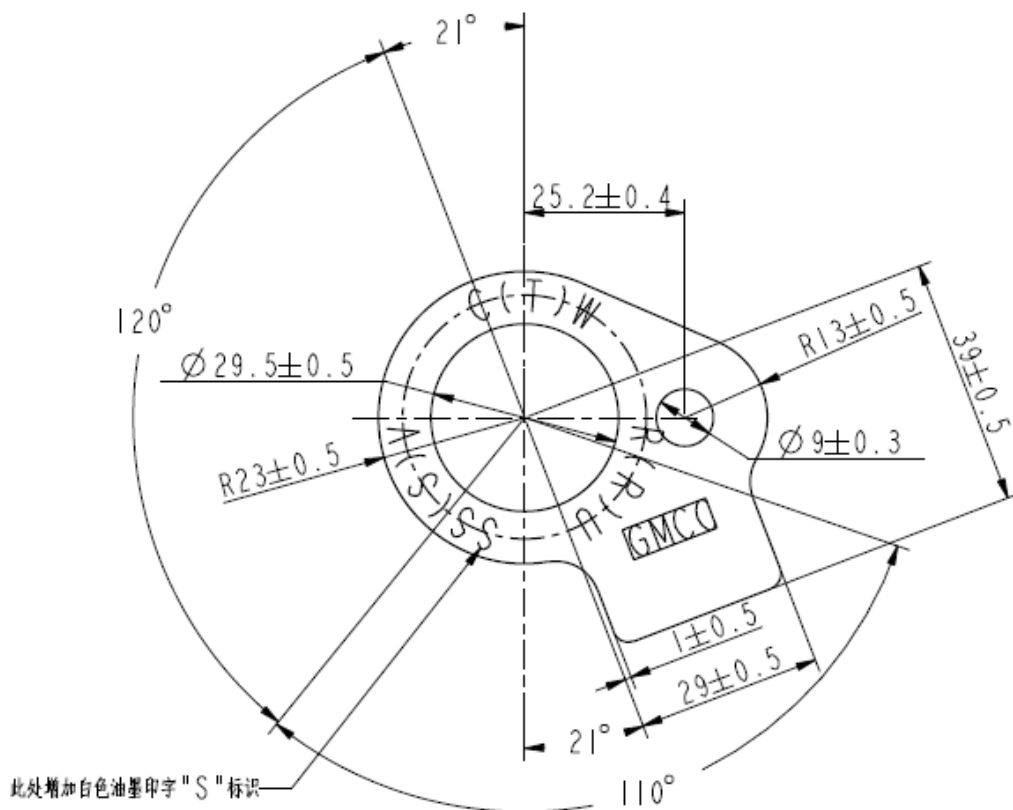
材质：聚对苯二甲酸丁二醇酯 或 团状模塑料 或 聚碳酸酯  
MATERIAL: POLYBUTYLENE TEREPHTHALATE or BULK MOLDING COMPOUND or POLYCARBONATE

颜色：黑色  
COLOR: BLACK

# 端子垫片 TERMI PACKING

Drawing No.1K14720132

厚度  $1 \pm 0.2\text{mm}$   
THICKNESS  $1 \pm 0.2\text{mm}$



注释

NOTES

材质: 硅橡胶

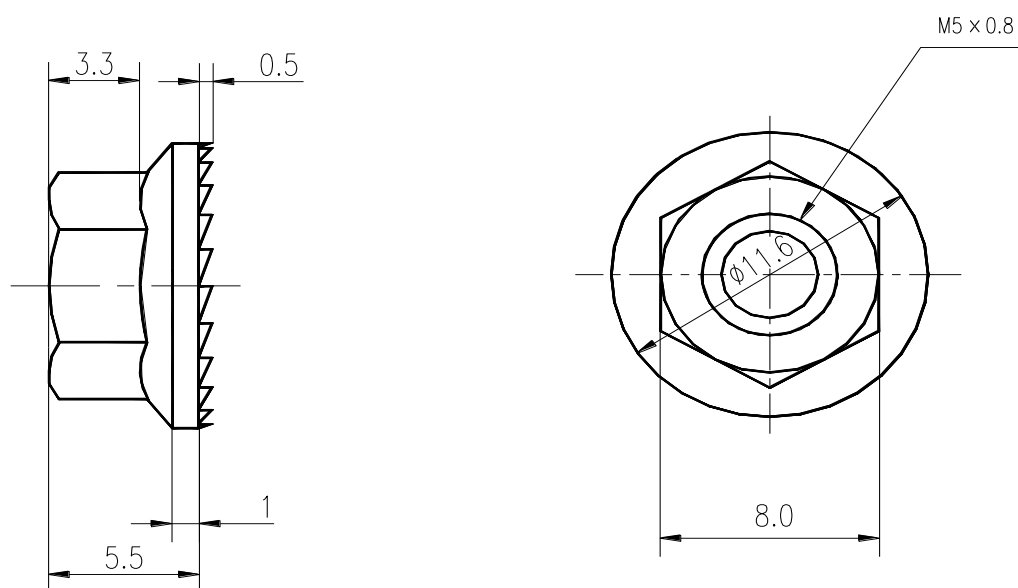
MATERIAL: SI

颜色: 黑色

COLOR: BLACK

# 端子螺母 TERMINAL NUT

Drawing No. 1K14300711



注释

NOTES

材质: SWCH12A

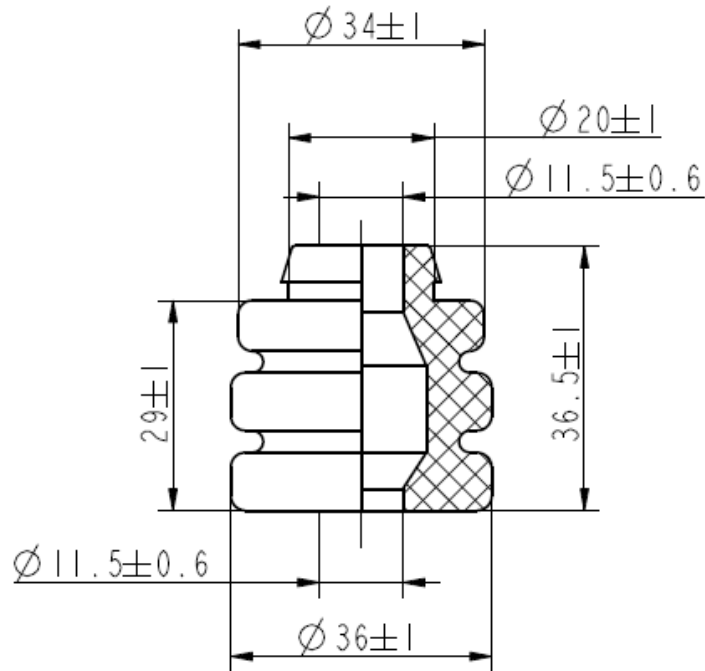
MATERIAL: SWCH12A

处理: 表面处理按Ep-Fe/Zn 2-CM 2镀锌处理

TREATMENT: WITHOUT HEXAVALENT CHROMIUM COMPOUNDS (Ep-Fe/Zn 2-CM 2镀锌处理)

# 橡胶垫 RUBBER CUSHION

Drawing: MC34910210



注释

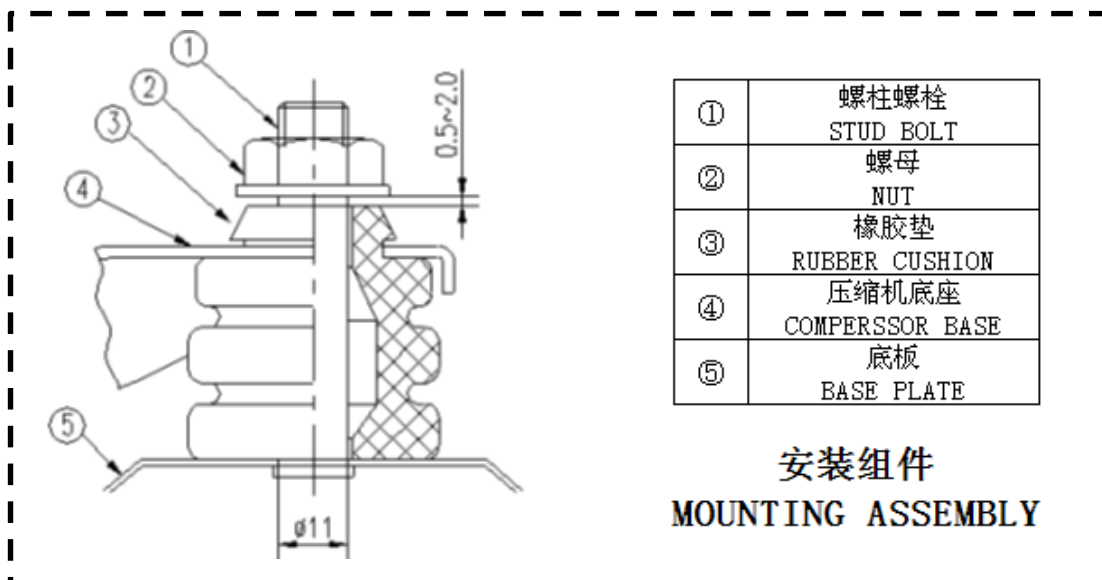
NOTES

材质：三元乙丙胶

MATERIAL: EPDM

硬度：HS=40±4

HARDNESS: HS=40±4

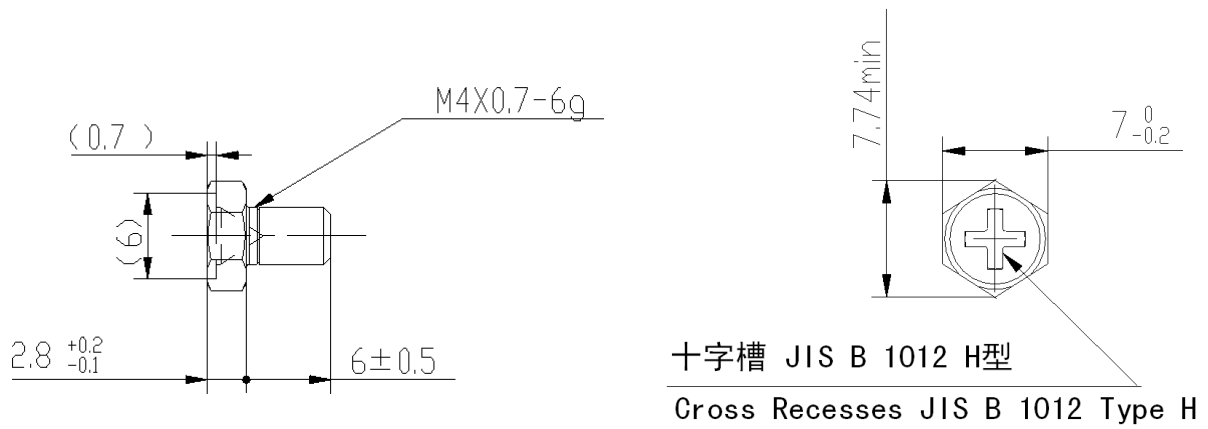


①	螺柱螺栓 STUD BOLT
②	螺母 NUT
③	橡胶垫 RUBBER CUSHION
④	压缩机底座 COMPRESSOR BASE
⑤	底板 BASE PLATE

安装组件  
MOUNTING ASSEMBLY

# 接地螺钉 EARTHING HEX BOLT

Drawing No. 1K14300210



注释

NOTES

材质: C2700W-1/4H

MATERIAL: C2700W-1/4H

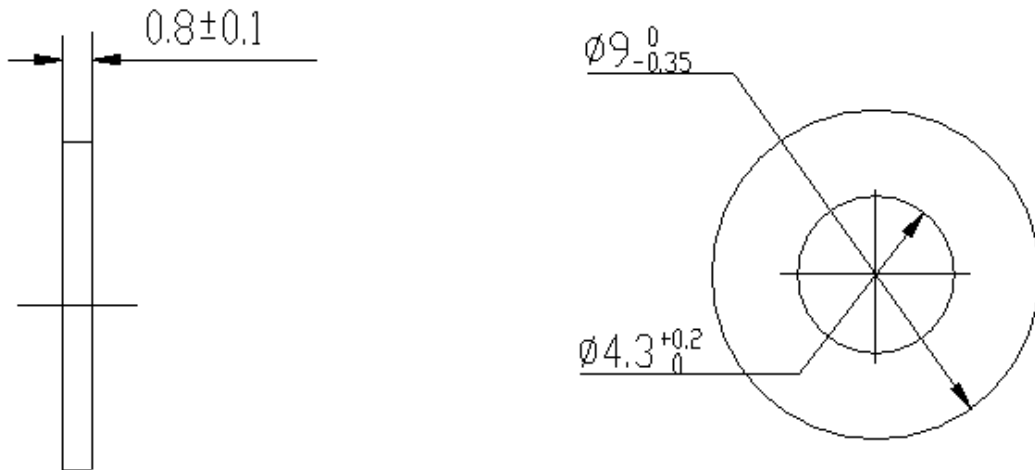
处理: 按 (Ep-Cu/Ni 3 b) 进行表面处理

TREATMENT: ELECTROPLATED COATINGS OF NICKEL (Ep-Cu/Ni 3 b)

# 接地螺钉垫片

## WASHER FOR EARTHING BOLT

Drawing No. 1K14300310



注释

NOTES

材质: C2801P

MATERIAL: C2801P

处理: 按照(Ep-Cu/Ni 3 b)进行表面处理

TREATMENT: ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)

外形图 (COMPRESSOR DRAWING)

TOSHIBA

1K158852Gr  
 DRAWING NO. 1K158852Gr  
 115±3  
 STUD BOLT  
 PROTECT CAP  
 41  
 292±3  
 261  
 NAME PLATE  
 DISCHARGE TUBE  
 SUCTION TUBE  
 244±3  
 28  
 115±3  
 115±3  
 ACCUM 铜其它外形详细  
 ID  $\varnothing 8.2 \pm 0.1$   
 ID  $\varnothing 12.9 \pm 0.1$   
 7  
 15  
 吐出管详细 DISCHARGE TUBE  
 吸入管详细 SUCTION TUBE  
 244±3  
 28  
 22  
 261  
 130  
 80  
 28  
 S  
 C  
 120°  
 120°  
 120°  
 120°  
 176±0.6  
 27  
 3- $\varnothing 20$   
 地球螺钉 EARTH TERMINAL  
 名牌 NAME PLATE  
 R  
 RoHS

PJ250M2C-4FT			
图 号	年 月 日		

DESIGNED BY	工 艺 技 术	简 称	ABBV.	Gr	10
DRAWN BY	标 准 化	图 号	DRAW EXTER	图 号	DRAWING NO.
CHECKED BY	审 定	材 料	MATERIAL	图 名	TITLE
APPROVED BY	APPROVED BY	图 样 标 记	STAGE OF DRAWING	材 料 比 例	SCALE
DATE	DATE	1	9	1	9
		共 页	TOTAL PAGE	第 页	RAGE NO.

标 记	外 观	更 改 文 件 号	签 字	日 期
MARK	NUM.	REV. NO.	MODIFIED BY	DATE