

HERMETIC COMPRESSOR SPECIFICATION**Model: HSM165V3UDZA****Accept Marking:**

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Approved	Drafted

1、 Application)

A/C Type	Cooling & Heating A/C System
Refrigerant Type	R22
Maximal Refrigerant Charged	0.9 Kg Max
Power Source	Single Phase 1φ-220-240V-50HZ
Safety Approval	CCC

2、 (Specification)

Compressor Type	Hermetic Motor Compressor
Displacement	16.4 cm ³ /rev.
Oil Charged	4GSD/NM56EP·350 ml
Weight (Oil Included)	10.7 Kg
I. D. of Discharge Pipe	8.1 ±0.1mm
I. D. of Suction Pipe	12.9 $\begin{matrix} +0.2 \\ -0.1 \end{matrix}$ mm

3、 (Motor Specification)

Motor Type	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: 3.97±5%Ω Aux. :5.1±5%Ω
堵转电流 Locked Rotor Amps	(at 1φ-50HZ-240V) 22.5±10% A
运转电容 Running Capacitor	电容容量 Capacity: 30 μF 耐压 Withstanding Voltage: ≥370V

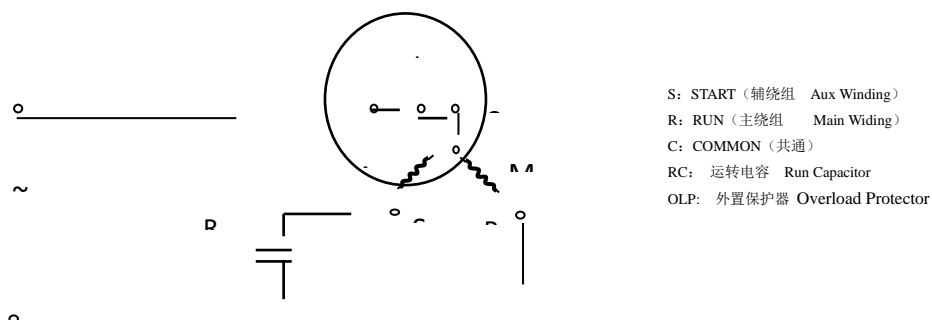
4、额定性能规格 (Rated Performance Parameters)

额定能力 Rated Capacity	2880/2910	±5% W
额定输入功率 Rated Input Power	915/960	±5% W
额定输入电流 Rated Input Current	4.20/4.15	±5% A
能效比(*备注) % COP(*Remarks) %	315/303	±5%
噪音/NOISE (Sound Power Level)	★ 68 以下	MAX
振动 VIBRATION (法线方向振动实效值)	★ 2.8 以下	MAX

测定条件 (Rating Condition)

测试项目	性能	噪音振动
电源 Power Source	1φ-50HZ-220-240V	1φ-50HZ-220V
冷凝温度 Cond. Temp.	46.0°C	★46.0°C
蒸发温度 Evap. Temp.	10.0°C	★10.0°C
吸气温度 Return Gas Temp.	18.0°C	★18.0°C
过冷却温度 Liquid Temp.	41°C	
环境温度 Ambient Temp.	35°C	

5、电气配线接线图 (Wire Connection Figure)



6、一般特性(Charateristic)

绝缘阻抗 Insulation Resistance	$\geq 50 \text{ M}\Omega$	封入氮气时 /Nitrogen Charged
绝缘耐压 Withstanding Voltage	AC1500V-1min	
接地阻抗 EARTHING RESISTANCE	以下 0.1 Ω MAX	
残留水分量 Residual Moisture	冷凝法 $\leq 160\text{mg}$	
含尘量 Residual Impurities	$\leq 45\text{mg}$	

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).	2.06 MPa (55°C)	2.6 MPa (65°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)	0.29~0.59 MPa (-5~10°C)	0.1~0.69 MPa (-25~15°C)	
3	压缩比 Compressing Ratio	8 Max	8 Max	
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:

1. 整个运行过程中不允许有液压缩发生。

Liquid refrigerant compression is not allowed during the whole time.

任何运行条件下(包括过渡期)、压缩机储液器内部液面不能超过内部吸气管管口端面;

Under any operating conditions (including the transition period), the liquid refrigerant level in the compressor accumulator shall not exceed the inner suction pipe nozzle plane; 启动与循环系统切换时, 不应产生异常撞击音、配管异常振动及异常电流。

When starting or circulating system switching, there shall be no abnormal impact sound, no abnormal vibration of piping and no abnormal current.

2. 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.

3. 断续运转, 每一周期5分钟以上, 开2分钟以上, 停3分钟以上。

When intermittent running, each cycle should be longer than 5 minutes. (On: over 2 min, Off: over 3 min)

4. 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)

5. 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；

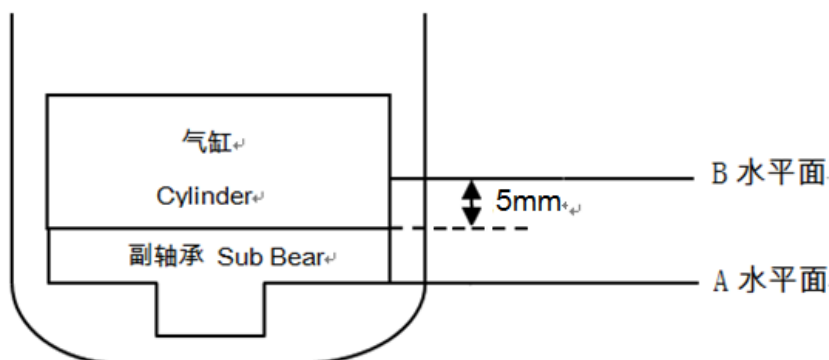
Oil level confirmation test performed with side glass compressor:

- 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、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 30N/mm² 以下，运转时 20N/mm² 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 30N/mm² at the start, stop status and below 20N/mm² 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。胶塞取下之后，压缩机敞口放置时间不能超过 10 分钟。
Please have compressor connected to Air conditioner system within 10 minutes after removing the rubber plug.
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. 制冷剂应从制冷系统冷凝器的出口加注。
Refrigerant shall be charged from the outlet of the condenser of the refrigeration system.
8. 充注冷媒前空调系统的真空度，无论在系统的任何地方都要求在 20Pa 以下。
Before charging refrigerant, the vacuum level is required to be below 20Pa in the whole system.
9. 压缩机不得用作真空泵及类似功能使用；
Do not use compressor as vacuum pump or similar usages.
10. 压缩机用作空调系统冷媒回收时，应严格控制运行时间和频率，运行时间应≤40s，运行频率应≤70Hz；
When using compressor for refrigerant recovery, Compressor running time should be less than 40s, Compressor running frequency should be less than 70rps.
11. 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.)
12. 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，且储存的环境温度条件为-10℃以上、65℃以下。
Do not store Compressor neither outdoors, nor corrosive atmospheres such as chemical storeroom. The ambient temperature for storage should be above -10℃ and below 65℃
13. 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.
14. 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.
15. 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.

16. 禁止使用 R22 之外的冷媒。

Do not fill refrigeration cycles with other refrigerant except R22.

17. 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.

18. 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.

19. 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.

20. 在贵司产品的保修和使用说明中，请体现如下信息：

警告：

- 当重新充注冷媒时，为确保冷媒类型的正确性，必须在制造商或者制造商指定的维修点或者服务机构进行。
- 禁止混合使用冷媒。

Below warning must be written into maintenance and user manual of whole unit:

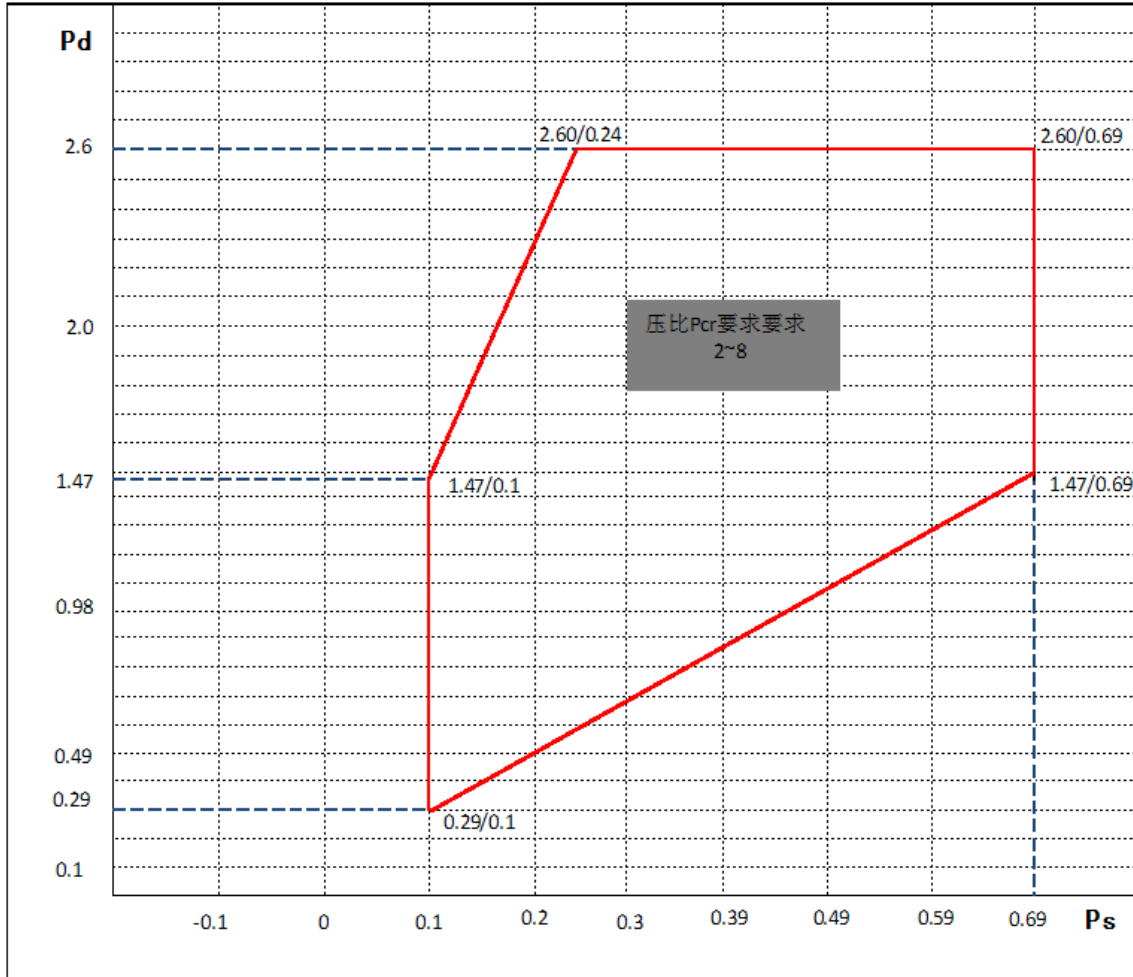
WARNING:

- 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.
- Prohibition of mixing the refrigerants.

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

单位: MPa (表压)

Unit: MPa (G)



备注: 压缩机稳定运行时需满足上图运行范围
Pd: 冷凝压力 condensing pressure

Pcr: 压缩比 compressing ratio
Ps: 蒸发压力 suction pressure

图纸/附件清单 Drawing/Accessories List

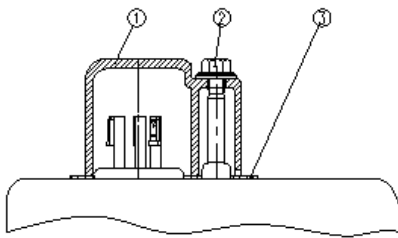
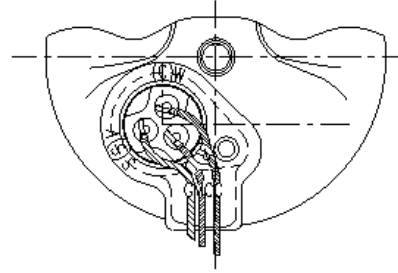
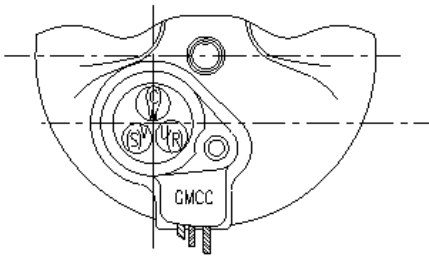
(See the Attached Pages)

名 称 (Parts Name)	数量 (Pieces)	图 号 (Drawing No.)	备注
电装品 ELE. COMPONENTS	1	MC35720410	
端子罩 TERMINAL COVER	1	MC33721410	
端子衬垫 TERMINAL PACKING	1	MC33721710	
端子螺母 TERMINAL NUT	1	MC33300810	
橡胶垫 RUBBER CUSHION	3	MC33910310	
压缩机外形图 COMPRESSOR DRAWING	1	MC228879Gr	

附件制作备注：定速机型附件有带内保和外保，根据实际机型提供

电装品 ELE COMPONENTS

Drawing No. MC35720410



③	端子衬垫 TERMINAL PACKING	MC33721710
②	端子螺母 TERMINAL NUT	MC33300810
①	端子罩 TERMINAL COVER	MC33721410
部件 Parts	部件名称 T I T L E	图号 Drawing No.

注释

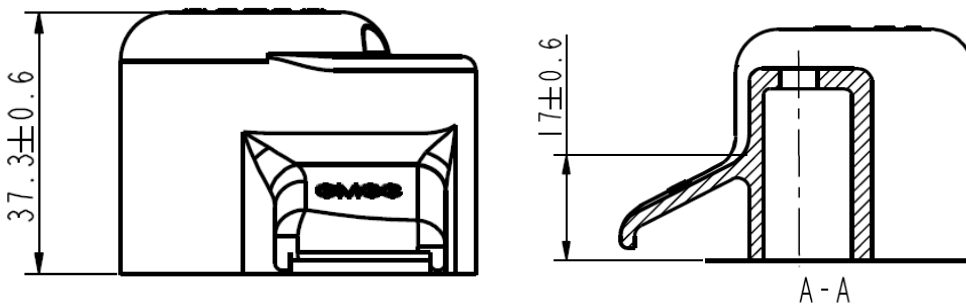
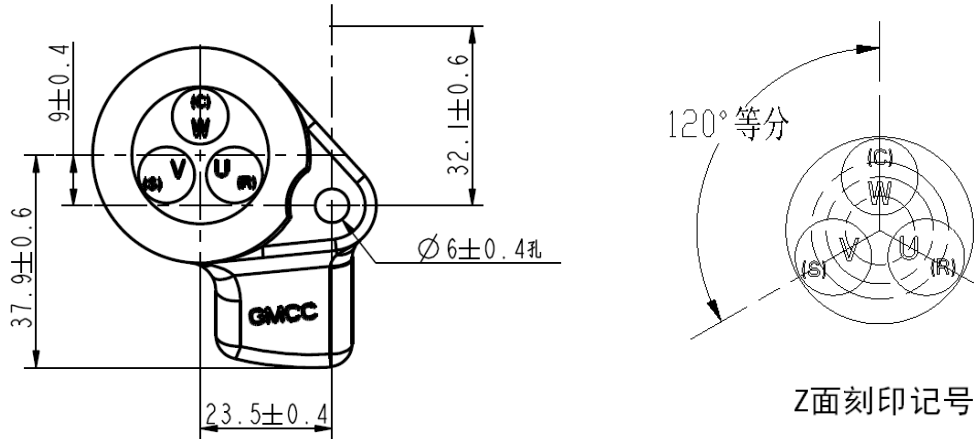
NOTES

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

Tightening torque of TERMINAL NUT : $1.2 \pm 0.2 \text{ N} \cdot \text{m}$

端子罩 TERMINAL COVER

Drawing No. MC33721410



注释
NOTES

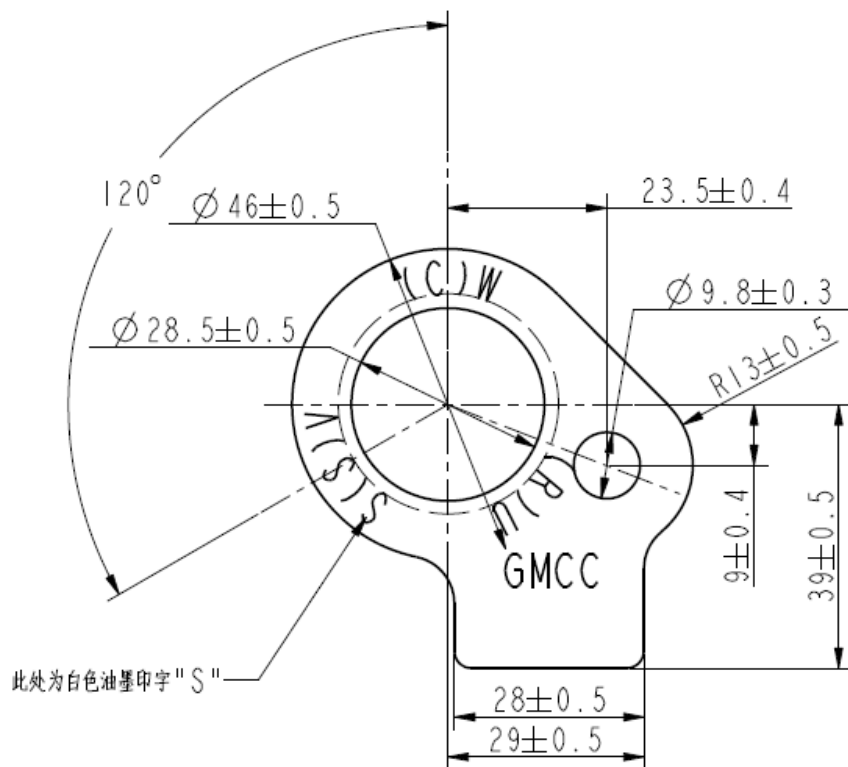
材质: 聚对苯二甲酸二醇酯 或 团状模塑料 或 聚碳酸酯
MATERIAL (材质): POLYBUTYLENE TEREPHTHALATE or BULK MOLDING COMPOUND or POLYCARBONATE

颜色: 黑色
COLOR: BLACK

端子衬垫 TERMINAL PACKING

Drawing No.MC33721710

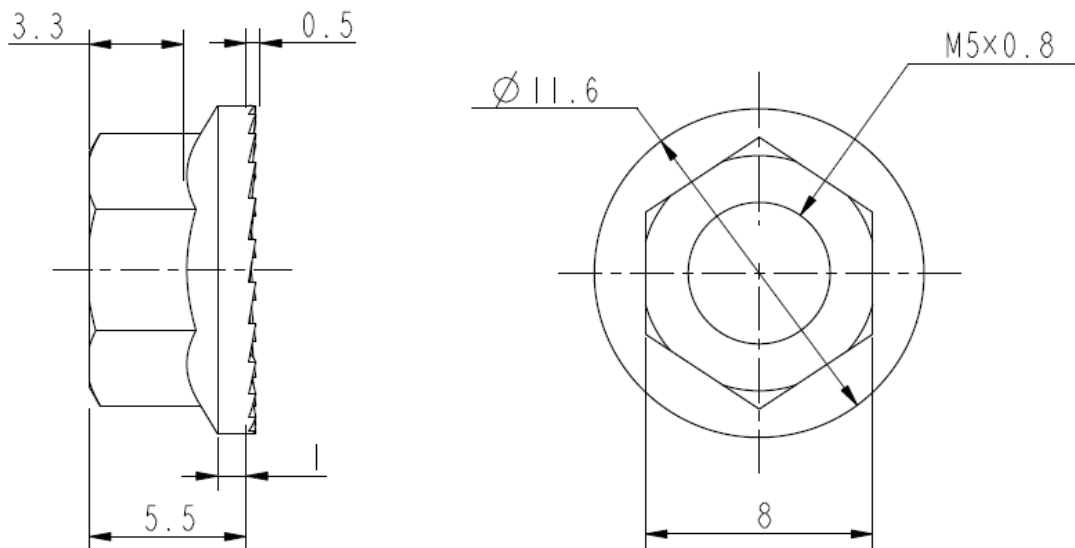
厚度 1.2 (+0.3, -0.1) mm
THICKNESS 1.2 (+0.3, -0.1) mm



注释
NOTES
材质: 硅橡胶
MATERIAL: SI
颜色: 黑色
COLOR: BLACK

端子螺母 TERMINAL NUT

Drawing No.MC33300810



注释 NOTES

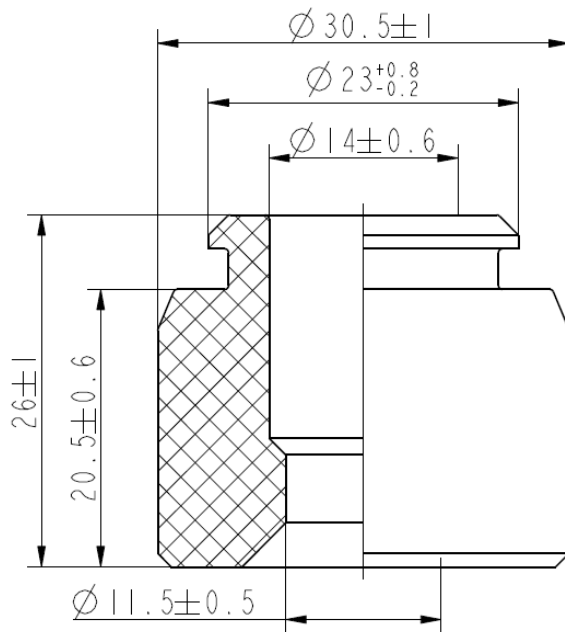
材质: SWCH12A
MATERIAL: SWCH12A

未注公差: ± 0.3
UNMARKED TOLERANCE: ± 0.3

处理: 表面按照Ep-Fe/Zn 2-CM 2镀白锌处理, 48h中性盐雾实验后无红锈。
TREATMENT: THE SURFACE ACCORDING TO Ep-Fe/Zn 2-CM 2 PLANTING WITH WHITE Zn. NO RED RUST AFTER 48h NEUTRAL SALT SPRAY TEST.

橡胶垫 RUBBER CUSHION

Drawing: MC33910310



注释

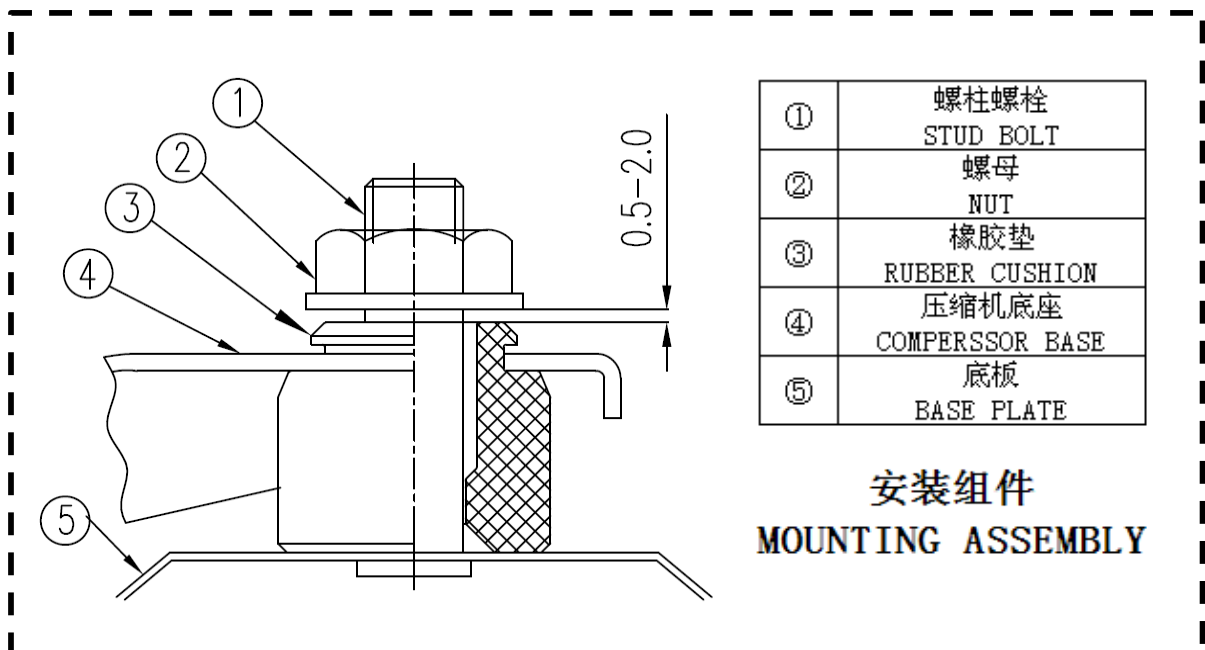
NOTES

材质：三元乙丙胶

MATERIAL: EPDM

硬度：HS=32±4

HARDNESS: HS=32±4



外形图 (COMPRESSOR DRAWING)

