

全封闭转子式压缩机规格书

**Hermetic Rotary Refrigeration
Compressor Specification**

压缩机型号: JFSB150Z12 1A

Compressor Model: JFSB150Z12 1A

客户名称 The Customer			
客户签名及时间 Signature & Date			
设计 Design	审核 Examine	批准 Approve	

浙江博阳压缩机有限公司

Zhejiang Boyang Compressor Co.,LTD

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1. 主要规格 Main Specification

应用 Application		空调系统 Air-conditioner System
压缩机的型式 Compressor Type		全封闭转速可控型压缩机 Hermetic Controllable Speed Compressor
制冷剂 Refrigeration		R134a
润滑油牌号·油量 Oil Trademark·Oil Charge		POE·250ml±10ml
总重量 (含润滑油) Net Weight(Oil Included)		7.6 Kg
排气量 Displacement		15.0 cm ³ /rev
气缸数 Number of Cylinders		2
连接管 Bindiny Mechanism	吸气管内径 Suction Tube(I.D)	7/8"-14UNF
	排气管内径 Discharge Tube(I.D)	5/8"-18UNF
电机 Motor	电机类型 Motor Type	耐氟三相稀土同步电机 Fluorine resistant three-phase Rare-earth Synchromotor
	极数 Pole	8 极 8 Pole
	绝缘等级 Insulation Grade	B
	绕组阻值 (20℃) Winding Resistanc (at 20℃)	UV=VW=UW=0.007±5%Ω
	转速范围 Range of rotate speed	900~4000rpm
认证类型 Approval Type		/

2. 特性参数 Characteristic Parameter

2.1. 性能参数 Performance Parameter

项目 Item	单位 Unit	指标 Target Value	备注 Remark
制冷量 Cooling Capacity	W	2100	≥95%
输入功率 Input Power	W	725	≤105%
电流 Current	A	60.4	≤105%
COP	W / W	2.9	平均值 Average Value

噪音 Noise	dB(A)	≤ 60	声压级 SPL
振动 Vibration	m/s ²	≤ 10	切向振动加速度 Tangential oscillation acceleration
测试条件 Test Condition			
电源 Power	DC12V		
冷凝温度 Condensing Temperature	54.4℃		
蒸发温度 Evaporating Temperature	7.2℃		
吸气温度 Suction Gas Temperature	18.3℃		
过冷温度 Subcooling Temperature	46.1℃		
环境温度 Ambient Temperature	35℃		
转速 Revolution	3600 rpm		

2.2. 适用范围 Application Scope

环境温度范围 Range of Ambient Temperature	-5~50℃
蒸发温度范围 Range of Evaporating Temperature	-10~15℃
冷凝温度范围 Range of Condensing Temperature	30~65℃
压缩比 Compression Ratio	≤ 6.5
排气温度 Discharging Temperature	$\leq 115℃$
电机绕组温度 Motor Winding Temperature	$\leq 125℃$
制冷剂最大充注量 The Max. Filling Amount of Refrigerant	$\leq 730g$
启动方式 Starting Type	专用变频器启动 Inverter Starting
退磁电流峰值 (120℃) Demagnetization amps	320 A

2.3. 其他特性 Other Characteristics

项目 Item	单位 Unit	标准 Criterion	备注 Remark
气密试验压力 Leakage Testing Pressure	MPa	2.9	
破坏压力 Destroy Pressure	MPa	10.5	

绝缘特性 Insulating property	MΩ	通 500VDC, 绝缘电阻>50M Ω (20℃时) When powered with 500VDC, insulation resistance>50M Ω (Ambience temperature 20℃)	
耐电压 Withstand voltage		1500V 1 min or 1800V 1 sec	
残余水分含量 Residual Moisture	mg	≤100	
固体杂质含量 Residual Impurity	mg	≤35	
接地电阻 Grounding Resistance	Ω	≤0.1	

3. 压缩机总成附件清单 Compressor Accessory Parts List

品名 Part Name	图号 Drawing Code	数量 Quantity
电动空调压缩机 Compressor	JFSB150Z12 1A	1
接线台 Junction Board	JVSB-150Z-00-32	1
接线台盖 Junction Board Cover	JVSB-150Z-00-03	1
接线台螺钉 Junction Board Screw	JFSB-150Z-00-12a	1
螺钉胶垫 Screw Cushion	QXR-23XL-00-04a	1
螺钉 Screw	JVSB-150Z-00-12	3
上减振垫 Upper absorber support	QHL-23XL-80-01a	4
下减振垫 Lower absorber support	QHL-23XL-80-04a	4
减振弹簧 Absorber spring	QHL-16XL-80-02a	4
垫片 Gasket	/	4
套管 Annular tubes	QHL-23XL-80-06	4
螺栓 Bolt	/	4
防松螺母 Nut	/	4

4. 压缩机使用注意事项 Compressor Cautions

4.1. 橡胶塞 Rubber plug

压缩机内部已封入 0.13~0.15MPa (绝对压力) 的干燥氮气, 使用时应先将压缩机水平放置 1min, 然后拔掉高压侧 (排气管) 的胶塞, 再拔掉低压侧 (吸气管) 的橡胶塞, 以防冷冻油喷出压缩机。

Compressor is charged with 0.13~0.15MPa dry nitrogen. The compressor should be placed horizontally for one minute before application, then remove high pressure side (discharge tube side) rubber plug first, and continue to remove the low pressure side(suction tube side) rubber plug, in case refrigerant oil gush from the compressor.

4.2. 连接 Connect

压缩机吸排气胶塞拔出后, 应在 15 分钟内将压缩机接入系统。连接螺纹接头时, 同时使用两个扳手, 避免对压缩机接头造成损伤。

Compressor suction exhaust after rubber plug pulled out, should be the compressor access system in 15 minutes. When connecting nipple, simultaneously use two wrenches, damage to the compressor joints can be avoided.

4.3. 抽真空 Vacuum requirement

系统严禁采用压缩机自身抽真空, 须采用真空泵抽真空。系统抽真空时应在高压侧和低压侧同时进行, 系统真空度抽至 20Pa 以下。

It is forbidden to vacuum the system by compressor and a vacuum pump should be used for vacuum pumping. The system should be vacuumized at both the high pressure side and the low pressure side. The vacuum degree of the system is below 20Pa.

4.4. 制冷剂充注 Refrigerant charge

制冷剂应从冷凝器的尾端充注, 而不能直接注入压缩机。在任何条件下, 制冷剂充注量 (重量计) 都应控制在冷冻油重量的 3 倍以内。

Refrigerant should be charged from the end of the condenser of the refrigerating system, never charge refrigerant to the compressor directly. In any case, the refrigerant charge (by weight) should be controlled within three times of the weight of the refrigerant oil.

4.5. 启动及运行 Starting and running

请按照正确的接线方式接线。压缩机运行每一个周期不少于 10 分钟, 其中停机时间不少于 3 分钟。严禁压缩机反向运转、在空气中运行或在真空状态下运行。

Please follow the correct wiring method. Each operation cycle of the compressor should not be less than 10 minutes, and the shutdown time should not be less than 3 minutes. It is forbidden to operate the compressor in reverse, in air or in vacuum.

4.6. 系统回油 Oil return from the system

为了确保制冷系统的正常回油，在设计时，请选择合适的蒸发器管径和吸气管管径并确认是否设计回油弯。

To ensure the oil inside the refrigerating system returns to compressor, at the designing, please choose the suitable evaporator and suction tube and confirm whether the oil bend is designed.

4.7. 制冷剂沉底 Refrigerant accumulating

为了防止制冷剂液体沉底或积聚在压缩机的润滑油中，应确保压缩机壳体底部的温度大于冷凝温度 5℃ 以上。

To prevent the liquid refrigerant accumulation in the refrigerant oil of the compressor, ensure that the temperature at bottom of compressor case is more 5℃ than the condensing temperature.

4.8. 退磁电流峰值 Demagnetization amps

压缩机端子间的电流峰值（含瞬时峰值）不应大于压缩机规格书中规定的电流峰值，以防永磁退磁。

The peak current (including instantaneous peak value) between the compressor terminals should not be greater than the peak current specified in the compressor specification to prevent permanent magnet demagnetization.

4.9. 频率（转速）变化 Frequency (speed) change

压缩机频率（转速）的上升速率应不大于 2Hz/s（120rpm），频率（转速）的变化幅度应在 2Hz/s（120rpm）以内，为防止瞬间过电流，允许频率的最大下降速率为 5Hz/s（300rpm）。

The rising rate of compressor frequency (speed) should be less than 2Hz/s (120rpm), and the range of frequency (speed) should be within 2Hz/s (120rpm). In order to prevent instantaneous over current, the allowed of maximum frequency decline rate is 5Hz/s (300rpm);

4.10. 存放 Storage

严禁压缩机倒置、跌落，不要把压缩机放置在露天环境中，建议将压缩机存放在室内环境中。

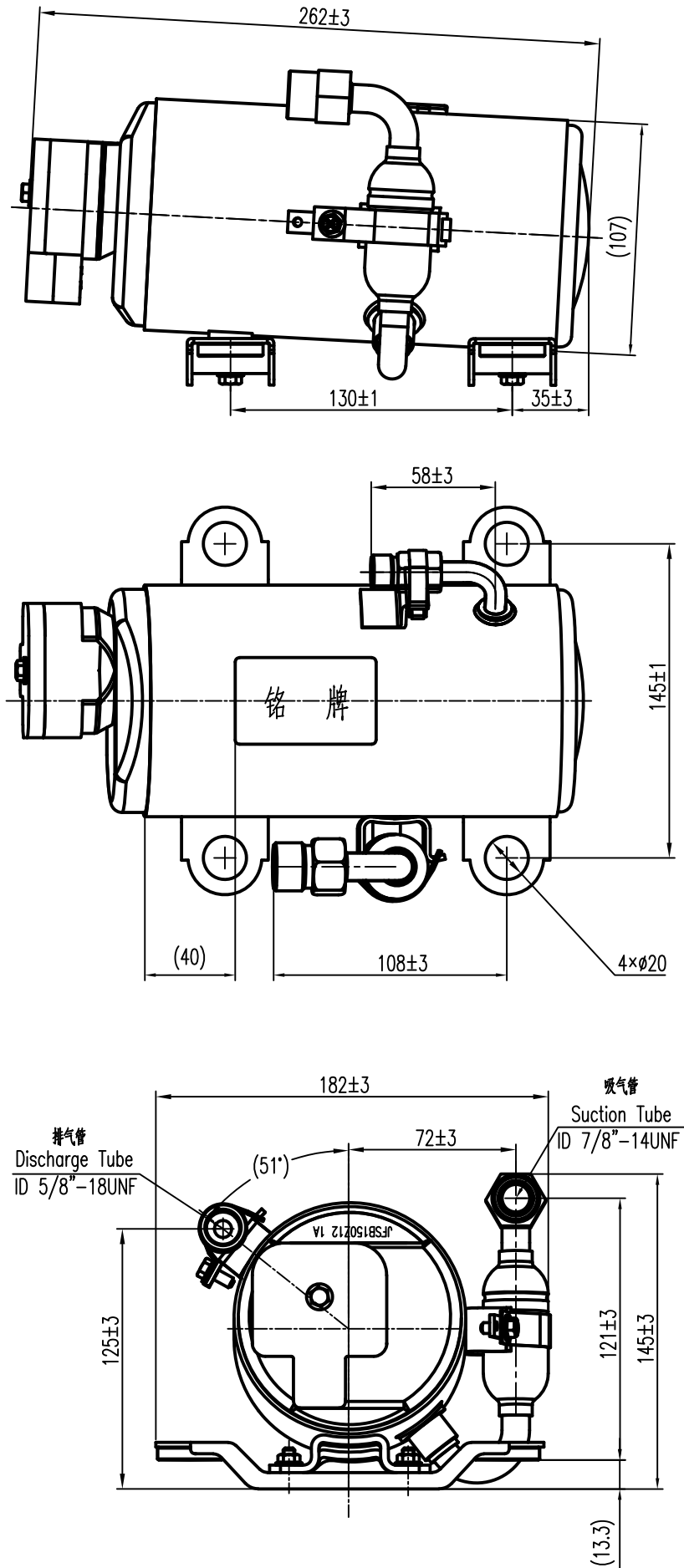
Do not put the compressor upside down. Do not put the compressor in the open air for a long time, it is recommended to place the compressor in the indoor environment.

附：JFSB150Z12 1A 电机参数表

Accessories: JFSB150Z12 1A Motor Parameter Sheet

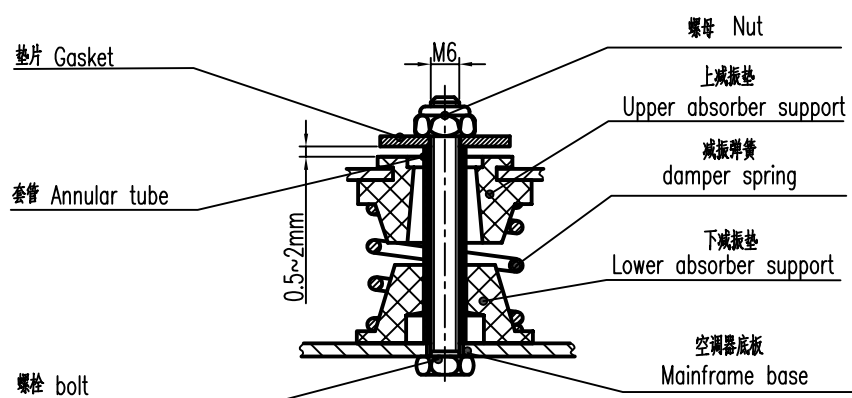
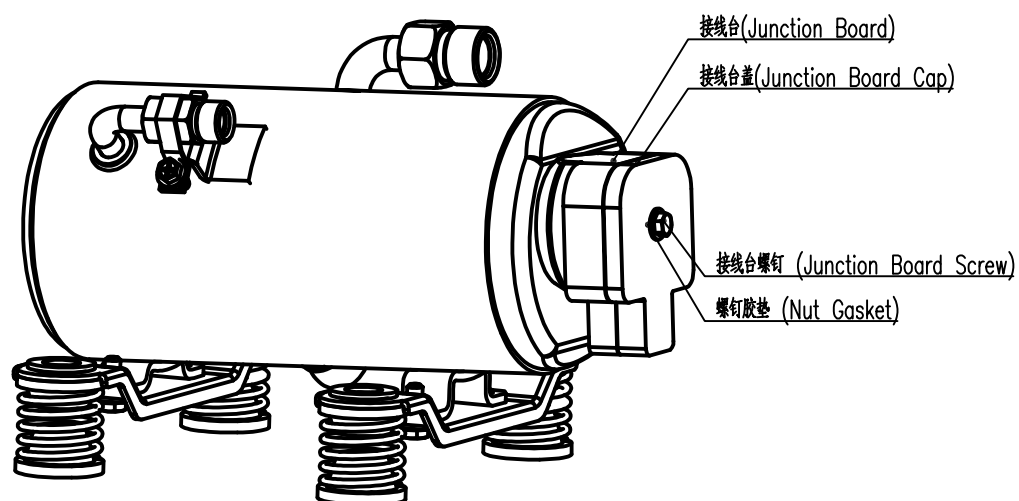
序号	项目	参数	说明
1	转子极数 Rotor Pole	8 极 8 Pole	
2	运行转速范围 Speed Range	900-4000 rpm	
3	磁铁材料 Magnet Material	钕铁硼 NdFeB	
4	永磁体退磁电流峰值 Demagnetizing Current	320A	120℃, -5%退磁率 At 120℃, -5% Demagnetizing rate
5	d 轴电感 Inductance-Ld	0.0226 mH	额定电流下 Under Rated Current
6	q 轴电感 Inductance-Lq	0.0314 mH	额定电流下 Under Rated Current
7	定子电阻 (U-V/U-W/V-W) Winding Resistance	0.007 Ω	线间电阻 (20℃) line-to-line (at 20℃)
8	感应电压常数 Voltage Constant	1.8 Vrms/(kr/min)	线间电压 line-to-line
9	电机转矩常数 Torque Constant	0.023 N.m/Arms	
10	转动惯量 Inertia	0.000217 kg.m ²	
11	每级每项磁链 (Wb) Flux linkage	0.0035 Wb	
12	磁通量 Flux	0.025±3% Wb	

压缩机外形图 Outline of Compressor



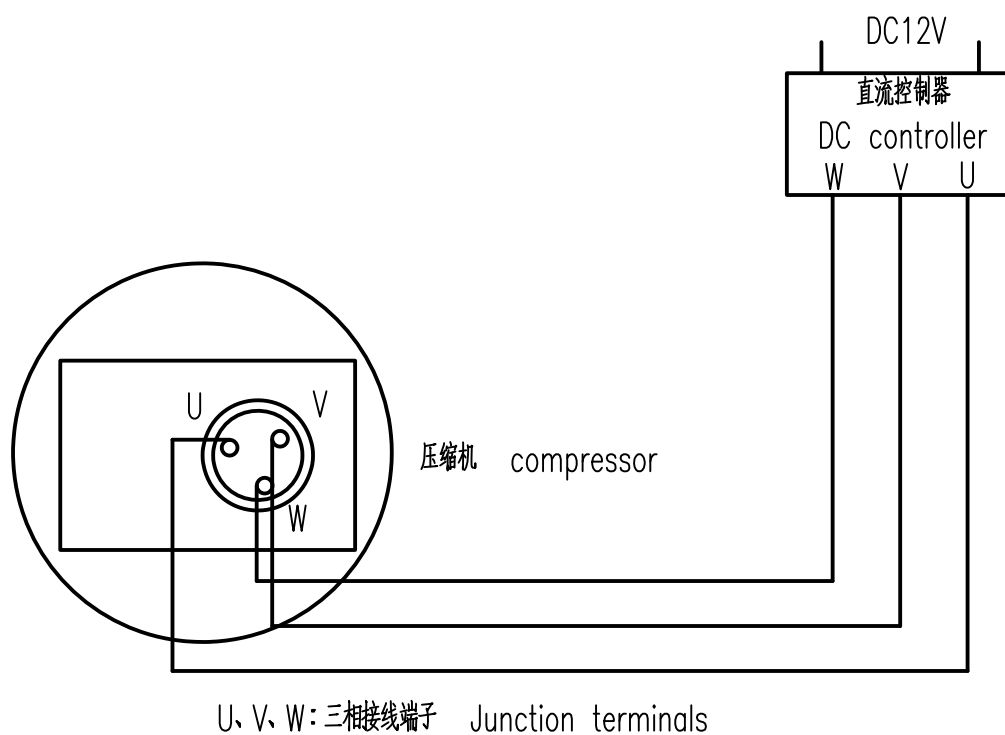
Dimension : mm

附件安装图 Accessories installation diagram

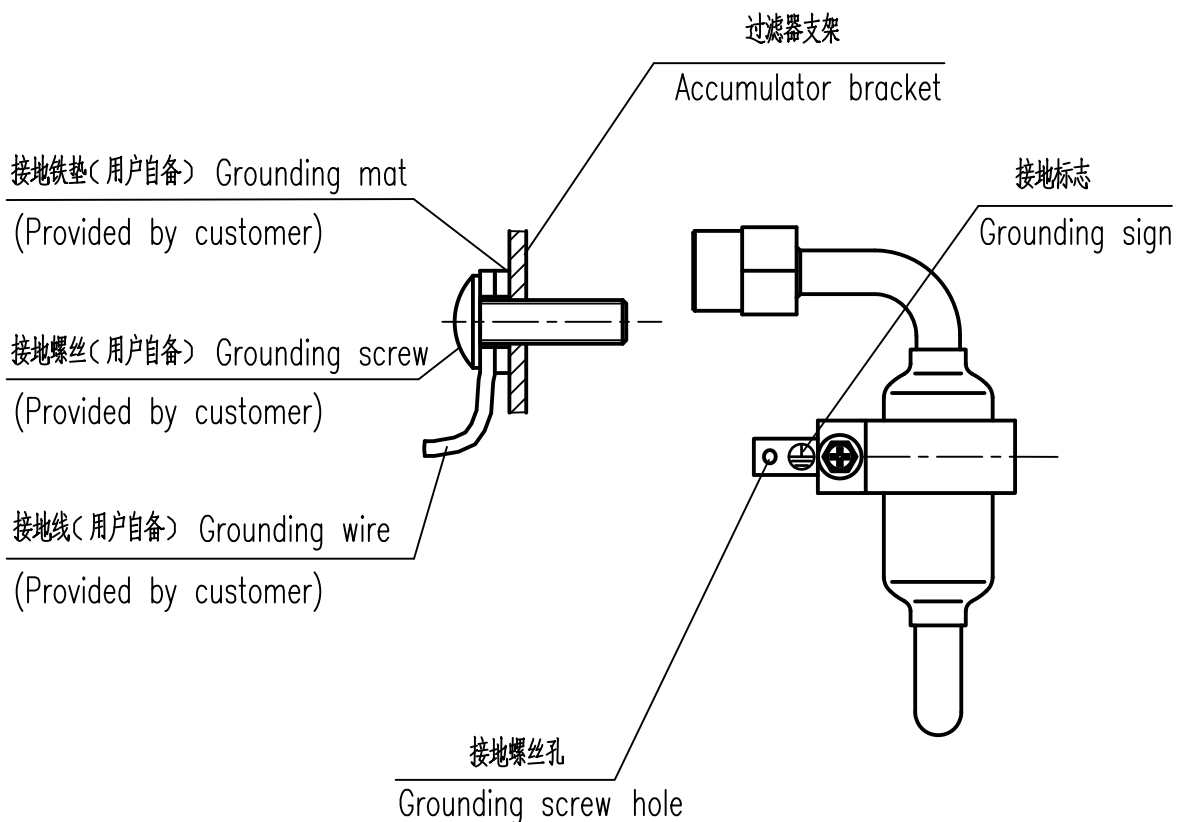


Dimension : mm

压缩机电气接线图 Compressor electric wiring diagram

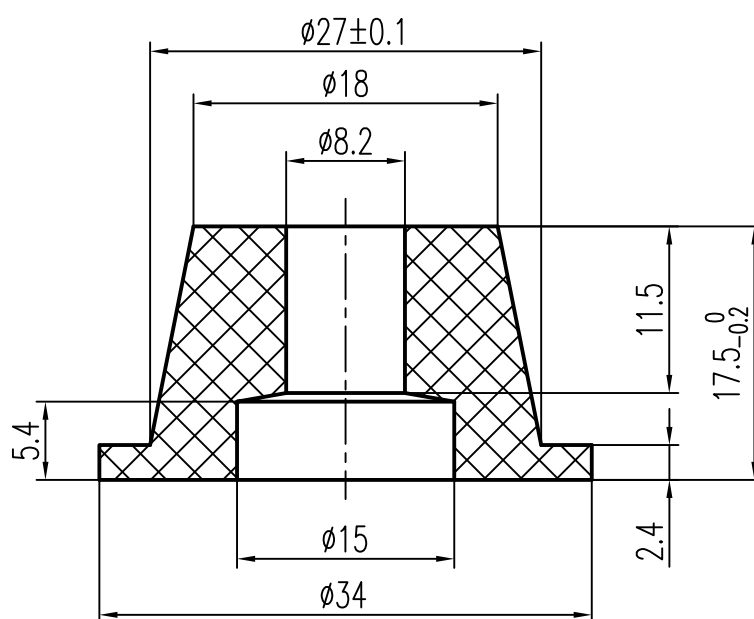


压缩机接地方式 Compressor grounding method



Dimension: mm

名称 Name	上减振垫 Upper absorber support	代号 Code	QHL-23XL-80-01a
技术要求: Technical requirements: 1. 硬度: 邵氏53°±3°; Shore hardness: 53°±3°; 2. 颜色: 黑色; Colour: black; 3. 材料: 三元乙丙橡胶 Material: EPDM			
名称 Name	下减振垫 Lower absorber support	代号 Code	QHL-23XL-80-04a



技术要求:

Technical requirements:

1. 硬度: 邵氏53°±3°;
Shore hardness: 53°±3°;

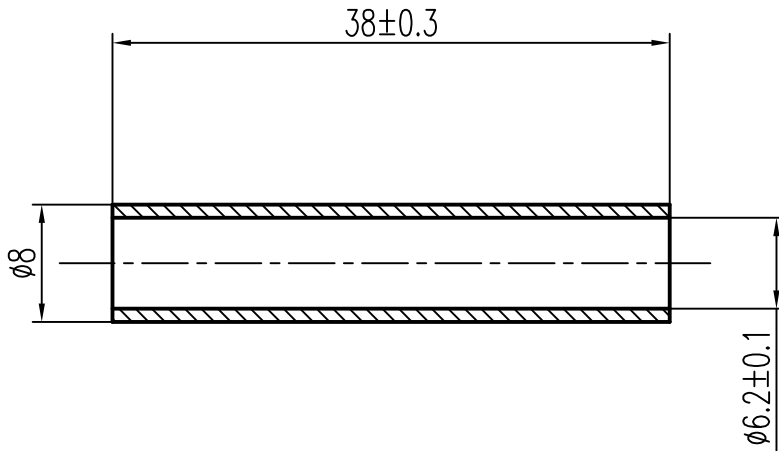
2. 颜色: 黑色;
Colour: black;

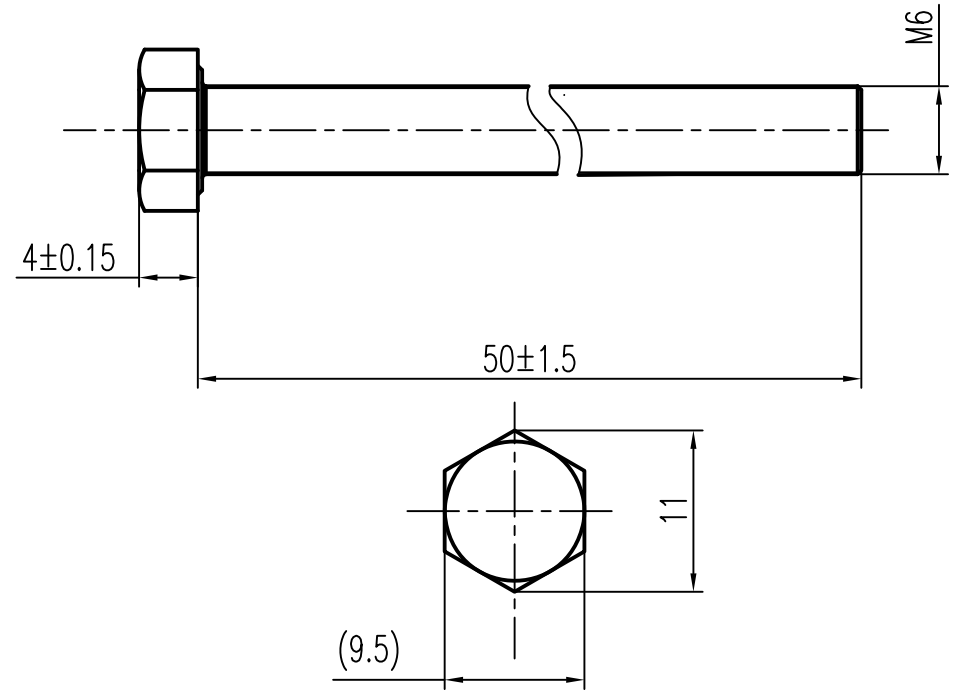
3. 材料: 三元乙丙橡胶
Material: EPDM

Dimension: mm

名称 Name	减振弹簧 Absorber spring	代号 Code	QHL-16XL-80-02a
技术要求: Technical requirement: 1. 弹簧绕卷方向为右旋; The spring rolls in the right direction; 2. 成品需经镀锌防锈处理; The finished surface requires rust prevention; 3. 负载2.8-3.0Kg时弹簧压缩长度6.0mm; The spring compression length is 6.0mm when load is 2.8-3.0kg; 4. 材料截面直径为$\phi 2.8_{-0.1}^0$; The diameter of the material section is $\phi 2.8_{-0.1}^0$; 5. 材料: 钢. Material: steel.			
名称 Name	垫片 Gasket	代号 Code	/
技术要求: Technical requirement: 1. 性能等级: GB/T96-1985 C级. Performance rate: GB/T96-1985 C level. 2. 材料: 钢. Material: steel.			

Dimension: mm

名称 Name	套管 Annular tubes	代号 Code	QHL-23XL-80-06
 材料：钢 Material：steel			

名称 Name	螺栓 bolt	代号 Code	/
 Dimension：mm			