

1. 规格 Specification

1.1 压缩机 Compressor

压缩机型号 Compressor Model	303DH-47P2
压缩机型式 Compressor Type	全封闭型电动压缩机 Hermetic Motor Compressor
压缩机方式 Compression Type	涡旋式 Scroll Type
使用冷媒 Refrigerant	R22
排气容积 Displacement	47cm ³ /rev
润滑油 / 油量 Oil / Oil Charge	SUNISO 4GSD / 1200ml
涂装 Painting	黑色 Black Color Paint
总质量(含油) Net Mass(Including Oil)	37kg
吸气管接口内径 Suction Accept I.D	Φ22.2mm
排气管接口内径 Discharge Accept I.D	Φ12.9mm

1.2 电机 Motor

电动机型式 / 起动方式 Motor Type / Start Mode	单相感应电机 / 电容起动与电容运转式 Single Phase Induction Motor / CSR
极数 Pole	2极 2 Pole
额定电压 / 频率 Rated Voltage / Frequency	1Ph - 208~230V-60Hz
额定转数 Rated Revolution	3,480
绝缘等级 Insulation Class	F级 F Class
绕组阻抗 Winding Resistance (at 20℃)	0.5580 [主 Principal] / 0.9219 [副 Subsidiary]

1.3 性能 Performance

制冷能力 Capacity	10,700W [220V, 60Hz]
输入功率 Motor Input	3,450W [220V, 60Hz]
能效比 EER	3.10W/W [220V, 60Hz]
运行电流 Running Current	16.0A [220V, 60Hz]
堵转电流 Locked Rotor Ampere	115.0A
噪音 Sound Level	60dB (A) Max.
振动 Vibration	15m/s ² Max.

※ 制冷能力测试条件 Test condition of cooling capacity:

冷凝温度 Condensing temp.: 54.4 °C

蒸发温度 Evaporating temp.: 7.2 °C

回气温度 Return gas temp.: 18.3 °C

周围温度 Ambient temp.: 35.0 °C

膨胀阀前液体温度 Liquid temp.: 46.1°C

1.4 一般特性 Characteristics

气密试验压力 Leak Tight Pressure	3.0MPa[高压侧 H.P. Side] /1.5MPa[低压侧 L.P. Side]
耐压试验压力 Hydrostatic Strength Pressure	4.5MPa[高压侧 H.P. Side] /2.3MPa[低压侧 L.P. Side]
绝缘阻抗 Insulation Resistance	10MΩ Min.
绝缘耐压 Withstand Voltage	1,500V-1min.
残余水分量 Residual Moisture	350mg Max.
含尘量 Residual Impurities	100mg Max.

1.5 电气部品规格 Electrical Component

品名 Parts Name		规格 Specification		
启动电容 Start Up Capacitor		75 μ F, 450VAC		
运转电容 Running Capacitor		75 μ F, 450VAC		
过载保护器(内置) Overload Protector (Internal)	型号 Model	15HM1648-204		
	Run	断开温度 Open Temp.	165 \pm 5 $^{\circ}$ C	
		闭合温度 Close Temp.	87 \pm 15 $^{\circ}$ C	
	U/T	动作电流特性 Amps To Trip	主 Principal	120 $^{\circ}$ C 32.3~43.7A
			副 Subsidiary	120 $^{\circ}$ C 12.33~16.68A
		动作时间特性 Time To Trip	主 Principal	112A 2~10s
副 Subsidiary			55A 6~14s	

2. 压缩机配件 Accessories Of Compressor

NO.	名称 Parts Name	数量 Qty	代号 Drawing NO.	备注 Remarks
1	支撑螺柱 Bolt	4	TP1-101	标准部件 Standard Parts
2	防振胶垫 Rubber Grommet B	4	TP1-102	
3	防振胶座 Rubber Grommet A	4	TP1-103	
4	垫圈 Washer	4	TP1-104	
5	M6 螺母 M6 Screw Nut	4	GB41-86-M6	
6	M8 螺母 M8 Screw Nut	4	GB41-86-M8	
7	弹性垫圈 Spring Washer	4	GB93-87-6	
8	温控器挡板 Thermostat Holder	1	TP1-105	选择部件 Option Parts
9	排气温控器 Discharge Thermostat	1	TP1-106	
11	热油器 Crankcase Heater	1	TP1-110	

3. 使用条件范围 Operating Conditions

蒸发温度 Evaporating Temp.	-15~15 $^{\circ}$ C
排气温度 Discharge Temp.	(冷凝温度+15 $^{\circ}$ C)~120 $^{\circ}$ C以下 (Condensing Temp. +15 $^{\circ}$ C)~120 $^{\circ}$ C Max.
绕组温度 Winding Temp.	120 $^{\circ}$ C以下 Max.
压缩机外壳温度 Shell Temp.	115 $^{\circ}$ C以下 Max.
运转电压 Running Voltage	额定电压 \pm 10% Rated Voltage \pm 10%
起动电压 Start Up Voltage	额定电压的85%以上(压缩机端子间电压) Minimum 85% of the rated voltage measured at compressor terminals.
频率范围 Frequency Range	额定频率 \pm 2% Rated Frequency \pm 2%
吸气压力 Suction Pressure	0.1~0.7MPa (起动、除霜等短时间运转除外; Except the short period such as start, defrost)
排气压力 Discharge Pressure	1.1~2.8MPa
压力比 Pressure Ratio	2~7.5 (起动、除霜等短时间运转除外; Except the short period such as start, defrost)
起动时的压力差 Pressure Difference At Starting	排气压力-吸气压力 \leq 0.05MPa D.P. -S.P. less than 0.05MPa
启停周期 On/Off Period	周期为10分钟以上, 停止时间必须3分钟以上 10 minutes min/cycle, OFF should be over 3 minutes
最低油量 Minimum Oil Charge	400ml Min.
异常升压/降压 Abnormal Press. Rise/Drop	上升:3.0MPa以下 Rise:3.0MPa Max.
	下降:0.2MPa以上 Drop:0.2MPa Min.
配管(铜管)应力 Copper Piping Stress	启动时:50MPa以下 Start:50MPa Max.
	运转时:10MPa以下 Run:10MPa Max.
冷媒水分含量 Refrigerant Moisture Level	60ppm以下 Max.
系统固体杂质含量 Solid Impurities Level	100mg以下 Max.
运转倾斜角度 Tilt In Operation	压缩机倾斜最大5 $^{\circ}$ 以内 5 deg. Max.

※ 其他注意事项 Remarks:

1. 制冷系统 The refrigeration system

- 1) 润滑油与冷媒的重量比（润滑油/冷媒）应在 0.4 以上；

The ratio of oil to the refrigerant (oil/refrigerant) should be higher than 0.4 in weight basis.

- 2) 当系统中压缩机存在液态冷媒回流情况时，应采用储液罐等设计避免液态冷媒回流；

When the compressor in the system has the liquid refrigerant flooding back operation, the accumulator is required.

- 3) 向压缩机充油或冷媒时，必须从排气侧进行；

Charge oil or refrigerant from the discharge pipe.

- 4) 系统应设置高压压力开关，参考设定值为
- 2.8 ± 0.1
- MPa。

Using high pressure switch in the refrigeration system is required we advise setting pressure as follow: 2.8 ± 0.1 MPa.

2. 压缩机在去除吸、排气接头盖后，请勿放置 10 分钟以上；

Installation shall be completed within 10 minutes after removing the caps of suction and discharge tube.

3. 请勿压缩空气；

Do not compress air.

4. 在真空状态下请勿通电；

Do not energize under vacuumed condition.

5. 热泵系统必须在压缩机底部安装油加热器（40~80W, 220V）；

Crankcase heater is required if the refrigeration system is heat pump.

6. 请勿反向旋转；

Do not reverse rotate.

7. 压缩机的接地装置应永久与制冷器具的接地装置连接；

The compressor's ground should be connected with that of refrigeration system permanently and firmly.

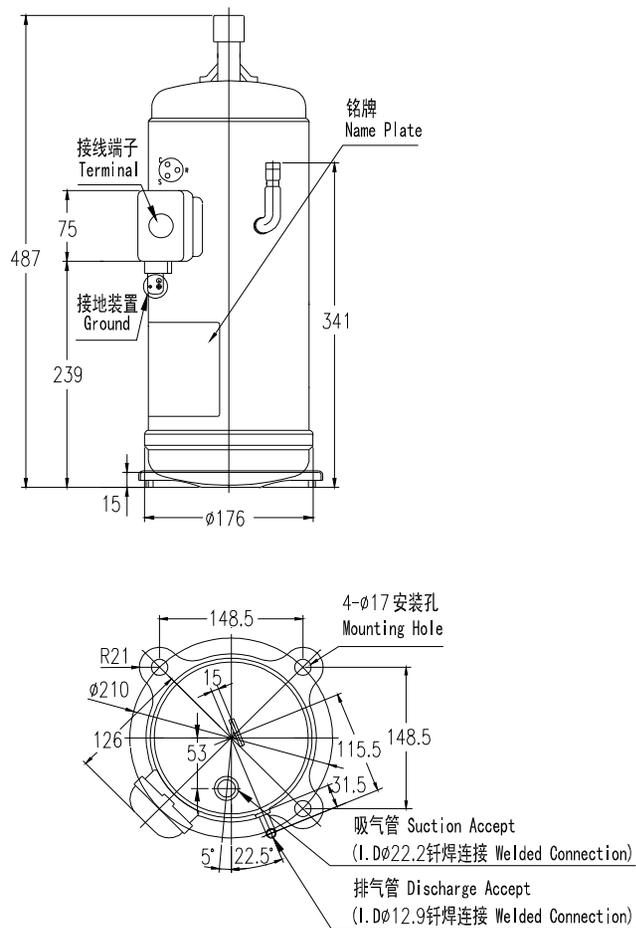
8. 成箱压缩机包装件的叠放堆码极限为 2 箱，装卸过程中严禁翻滚。

Pile limits 2 pallet. Tumbling is forbidden during handling.

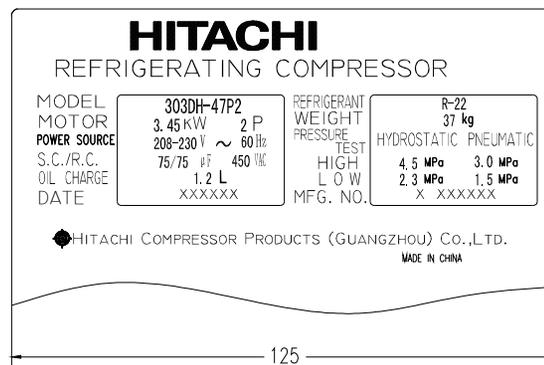
4. 附图 Attachment

- A-1 压缩机外形图 Dimension of Compressor
- A-2 防振胶座装配图 Mounting Assembly
- A-3 压缩机性能曲线 Compressor Performance Curve
- A-4 基本电气原理图（单相压缩机） Basic Circuit Diagram (Single Phase Compressor)
- A-5 排气温控器组装图及零件图 Discharge Gas Thermostat Assembly Diagram
- A-6 过载保护器 U/T 曲线 Overload Protector U/T Curve
- A-7 过载保护器 S/T 曲线 Overload Protector S/T Curve
- A-8 热油器安装图 Crankcase Heater Assembly

A-1 压缩机外形图 Dimension of Compressor (303DH-47P2)

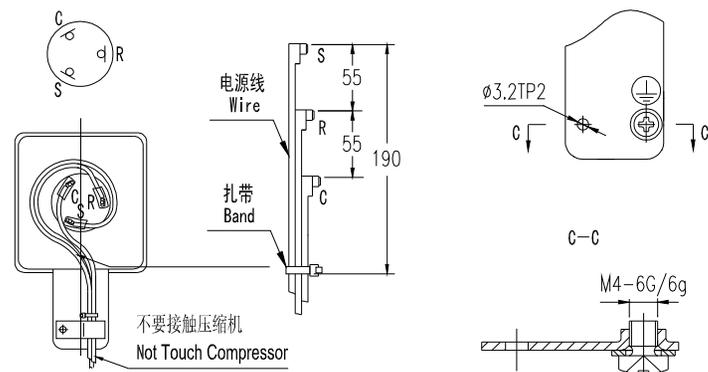


铭牌 Name Plate

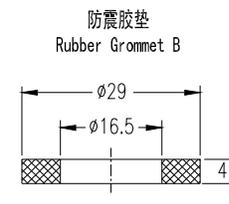
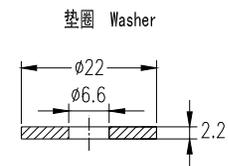
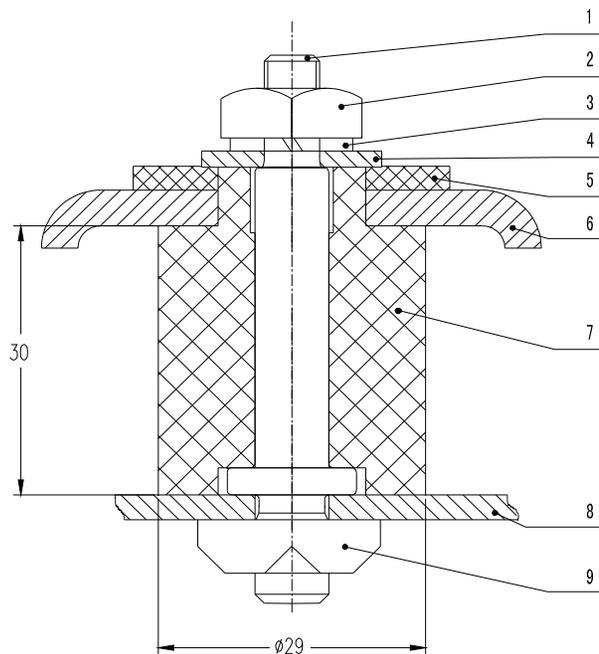
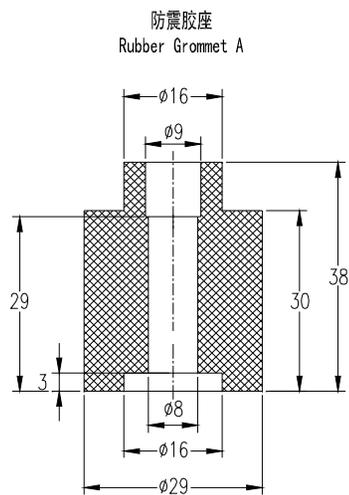


接线端子 Terminal

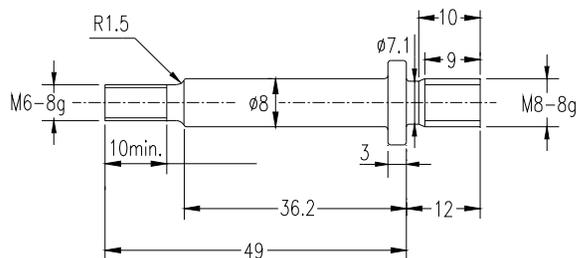
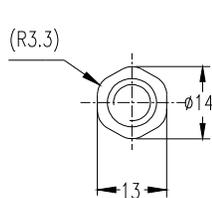
接地装置 Ground



A-2 防震胶座装配图 Mounting Assembly



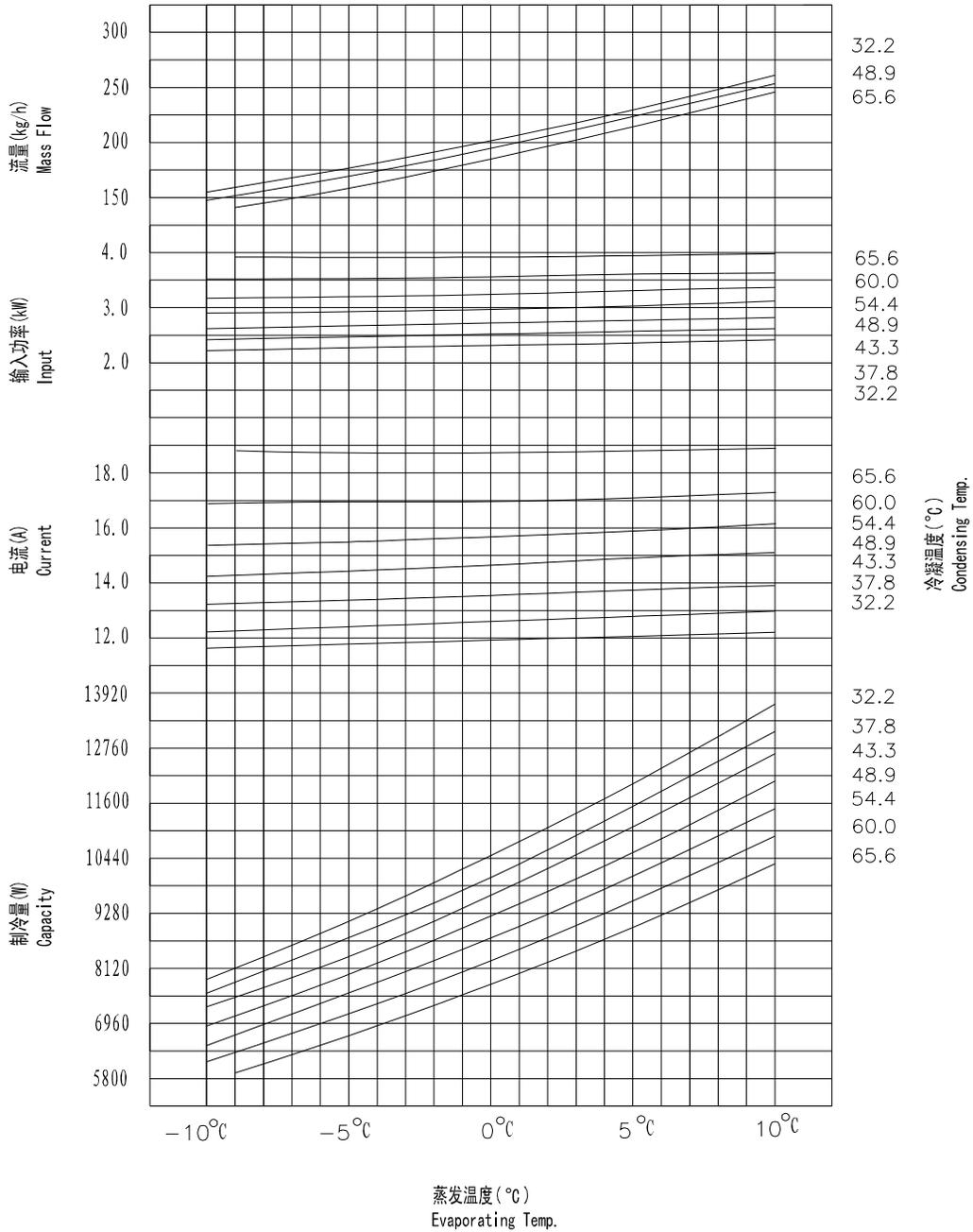
支撑螺栓 Bolt



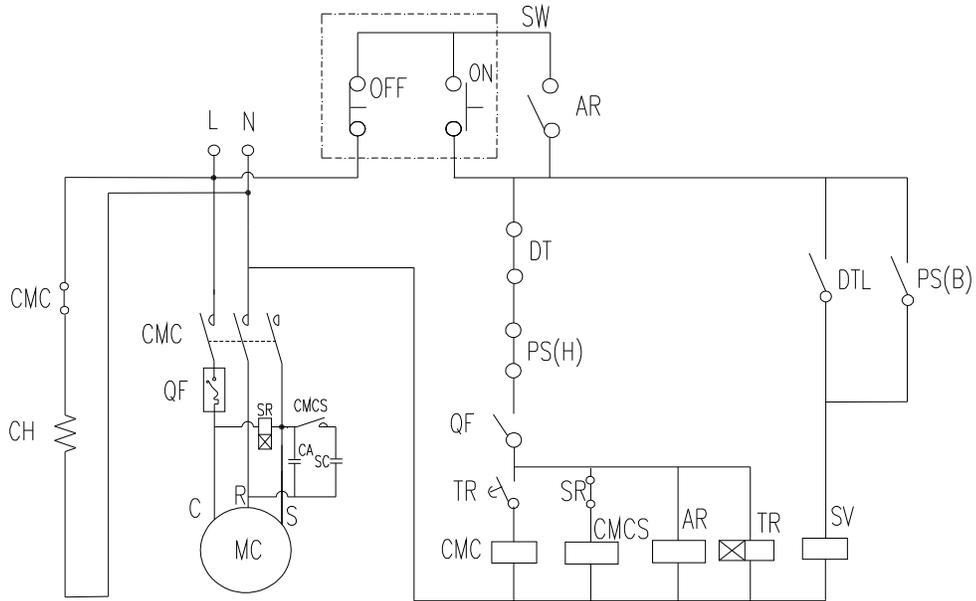
1	支撑螺栓 Bolt
2	M6螺母 M6 Screw Nut
3	弹簧垫圈 Spring Washer
4	垫圈 Washer
5	防震胶垫 Rubber Grommet B
6	压缩机底座 Compressor Foot
7	防震胶座 Rubber Grommet A
8	空调器底座 Unit Base
9	M8螺母 M8 Screw Nut

A-3 压缩机性能曲线 Compressor Performance Curve (303DH-47P2)

电源 Power Source	1Ph-220V-60Hz
制冷剂 Refrigerant	R22
吸气过热度 Suction Superheat	11.1 °C
过冷度 Subcooling	8.3 °C



A-4 基本电气原理图 (单相压缩机) Basic Circuit Diagram (Single Phase Compressor)

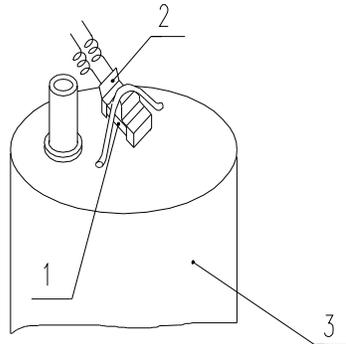


代号 Code	名称 Parts Name	备注 Remarks	代号 Code	名称 Parts Name	备注 Remarks
MC	压缩机 Compressor		*DT	排气温控器 Discharge Gas Thermostat	开 Open: 130°C ± 6°C 闭 Close: 100°C ± 15°C
*CMC	交流接触器 Magnetic Contactor		*PS(H)	高压断路装置 High Pressure Switch	设定压力: 2.8MPa Set Pressure: 2.8MPa
*CMCS	交流接触器 Magnetic Contactor		*PS(B)	液旁通用压力断开装置 Pressure Switch For Liquid Bypass	闭 Close: 2.5MPa ± 0.1MPa 开 Open: 2.1MPa ± 0.15MPa
*SV	电磁阀 Solenoid Valve	液旁通冷却用 For Cooling Of Liquid Bypass	*SR	启动继电器 Startup Relay	
*CA	运转电容器 Running Capacitor	75 μ F 450VAC	*AR	中间继电器 Auxiliary Relay	
*SC	启动电容 Startup Capacitor	75 μ F 450VAC	*TR	时间继电器 Timer	设定时间: 3分钟 Set Time: 3 minutes
*QF	单级自动开关 Overload Relay		*DTL	液旁通用温控器 Thermostat For Liquid Bypass	闭 Close: 110°C ± 6°C 开 Open: 70°C ± 7.5°C
*CH	热油器 Oil Heater	220V 40W			

注: 带“*”的零部件由用户自备;

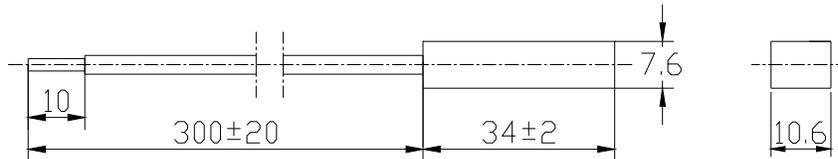
Note: All the parts marks “*” should prepared by customer .

A-5 排气温控器组装图及零件图 Discharge Gas Thermostat Assembly Diagram

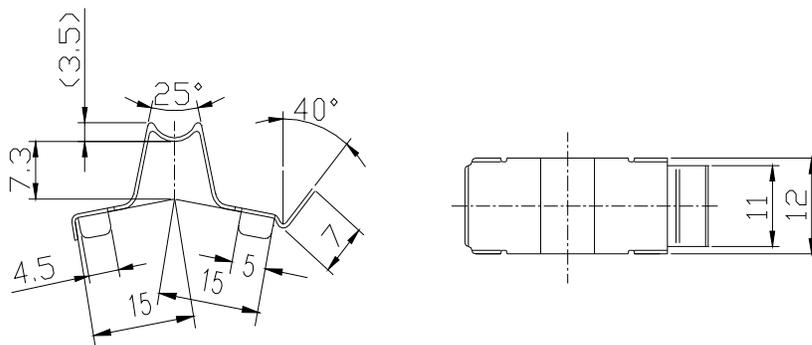


序号 No.	名称 Parts Name	备注 Remarks
1	排气温控器 D.T.	Open: $130 \pm 6^{\circ}\text{C}$; Close: $100 \pm 15^{\circ}\text{C}$
2	温控器挡板 D.T. Hold	
3	压缩机 Compressor	

排气温控器 D.T.



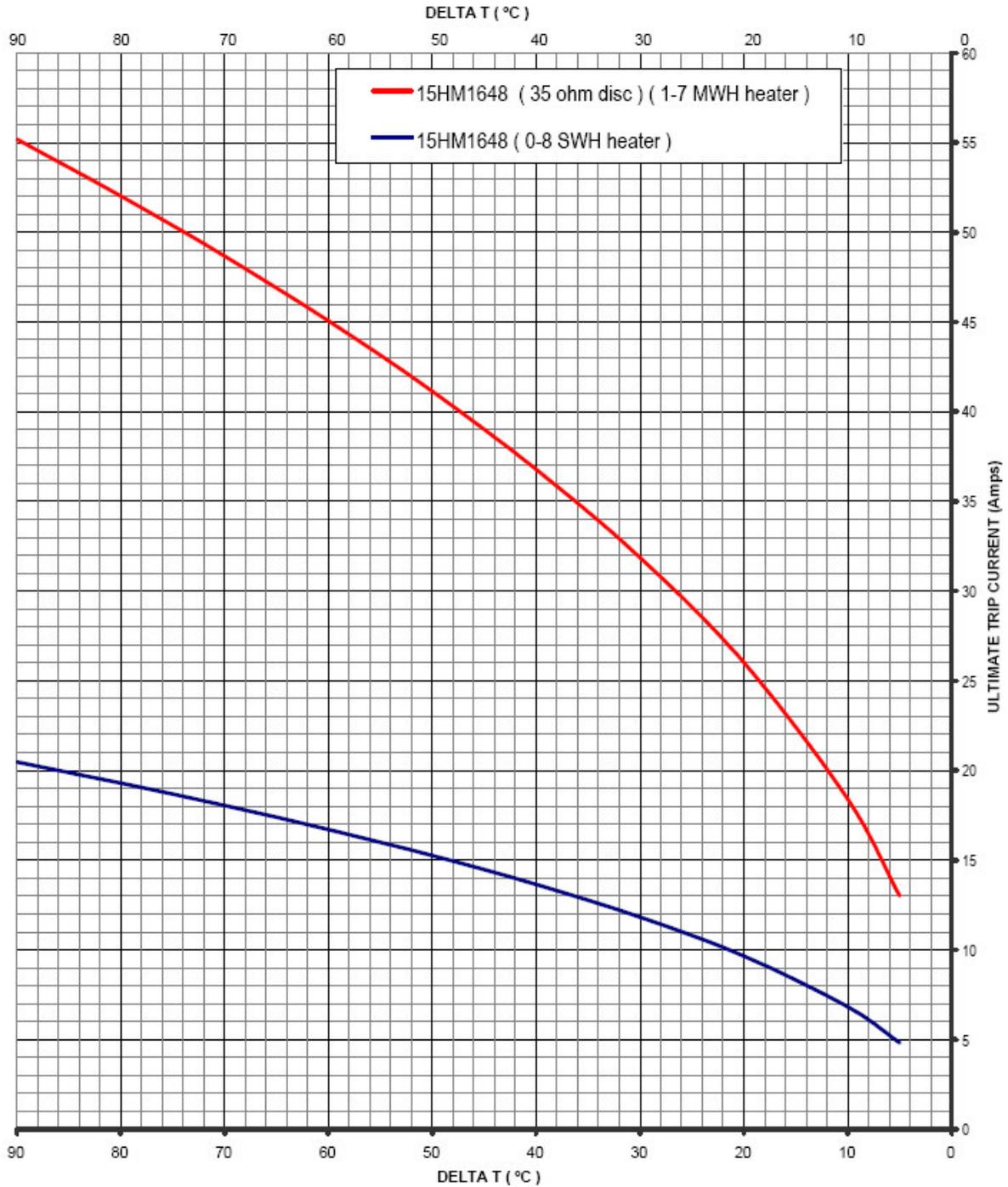
温控器挡板 D.T. Hold



A-6 过载保护器 U/T 曲线 Overload Protector U/T Curve

15HM MOTOR PROTECTOR
ULTIMATE TRIP CURVES

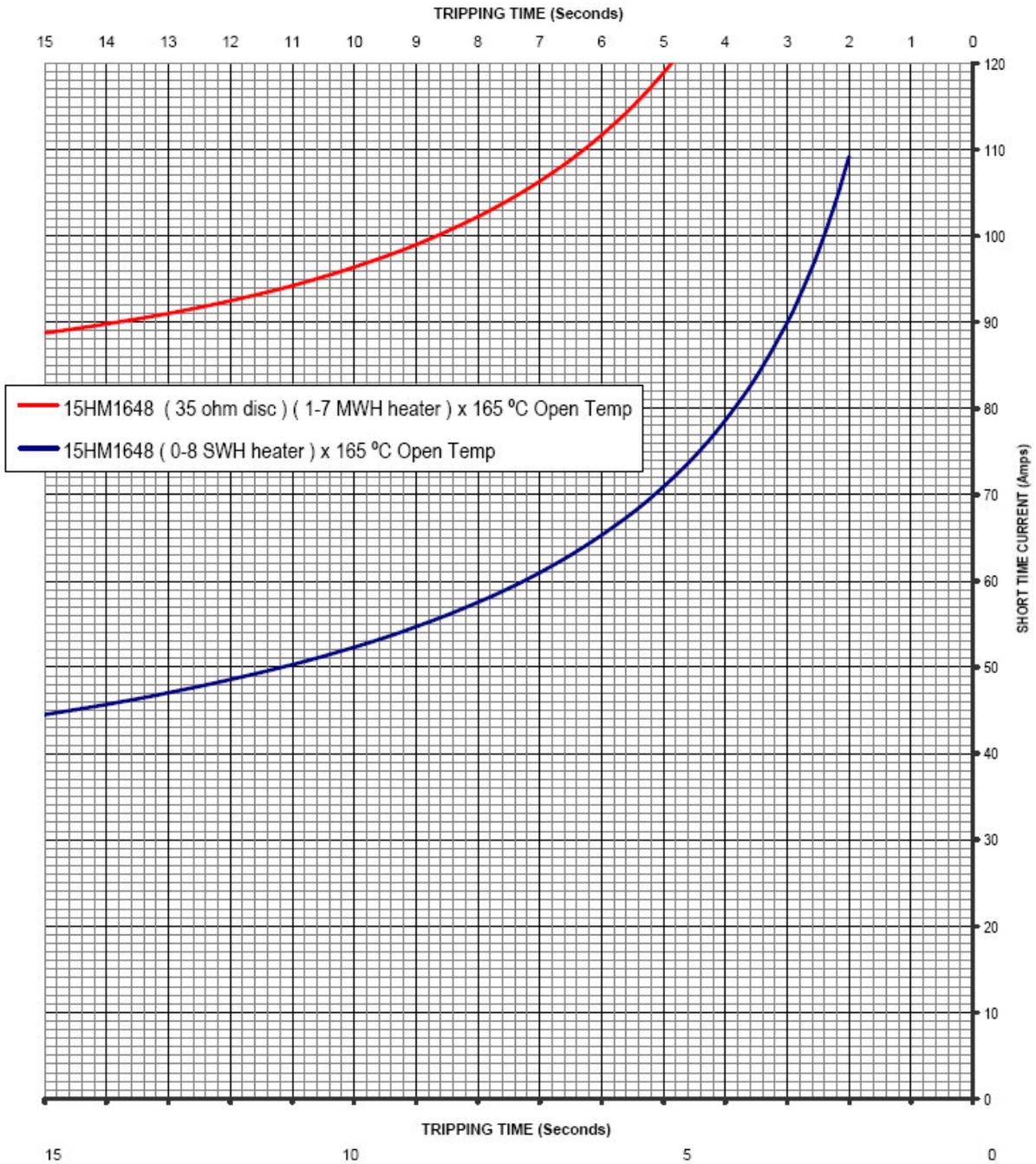
Ultimate Trip Current VS. Protector Ambient Temperature (Approximate).
To Be Used Only For Selecting Samples For Motor Verification Test.



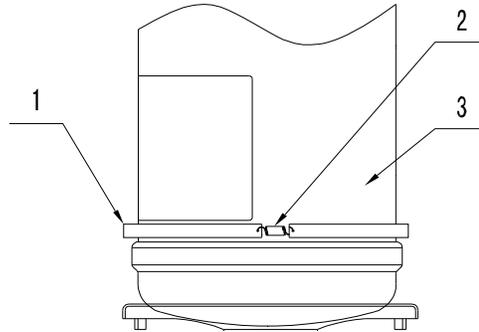
A-7 过载保护器 S/T 曲线 Overload Protector S/T Curve

**15HM MOTOR PROTECTOR
SHORT TIME CURVES**

Average First Cycle Tripping Time VS. Current In 25 °C Ambient (Approximate).
To Be Used Only For Selecting Samples For Motor Verification Test.

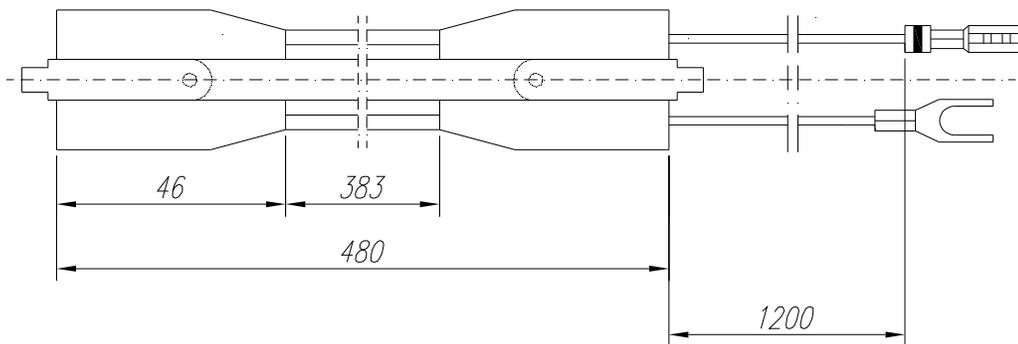


A-8 热油器安装图 Crankcase Heater Assembly



序号 No.	名称 Parts Name	备注 Remarks
1	热油器 Crankcase Heater	220V, 40W
2	弹簧 Spring	
3	压缩机 Compressor	

热油器 Crankcase Heater



弹簧 Spring

