

COMPRESSOR SPECIFICATION

MODEL: **QXDR-A088T130**

Contents

1. Application Scope -----	1
2. Specifications & Characteristics -----	1-4
1. Compressor data	
2. Motor data	
3. Electrical component	
4. Performance	
5. Limit of operating condition	
6. Overload protector characteristic	
3. Cautions -----	5
4. Accessories & Drawings -----	6-13
1. Accessories	
2. Drawings	
Attachments	
1. Performance diagram-----	14-15
2. Permitted range of operating pressures-----	16
3. Modification Record for Compressor Specification-----	17

APPLICATION SCOPE

➤ APPLICATION

This specification is applied to QXDR-A088T130 rotary compressor.

Application	Heat pump water heater
Refrigerant	R290
Refrigerant charge limit	320 g Max
Voltage (Rated voltage)/Frequency/Phase	220-240 V~(230V)/50 HZ/1 PHASE

SPECIFICATIONS & CHARACTERISTICS

1. COMPRESSOR DATA

Compressor type	Hermetic motor compressor	
Pump type	Rotary	
The number of cylinders	Single cylinder	
Cylinder nominal volume	8.8	cm ³
Brand of refrigerant oil	CP2922HT	
Refrigerant oil charge	210±10	ml
Weight(Refrigerant oil included)	9.0 (For reference)	kg
Suction pipe ID.	Φ12.2±0.05	mm
Discharge pipe ID.	Ø6.2 ₀ ^{+0.15}	mm

2. MOTOR DATA

Motor type	Induction motor(PSC)	
Starting type	By capacitor	
Number of Pole	2 poles	
Winding resistance	(Main Winding) 6.95 ± 7% Ω	(Aux. Winding) 5.37 ± 7% Ω
Insulation class	B	
Motor winding temp. under locked-rotor condition	Max temp. of motor main/aux. windings shall not exceed 198.9°C at 0.85 times of rated volt. when rotor is locked.	

3. ELECTRICAL COMPONENT

Name	Specification
Running capacitor	20μF/450V
Overload protector	Internal (UP3-040)
Hermetic Terminal	1/4" quick connect type

※The recommended model of Running capacitor is CBB65 made by Zhuhai Gree Xinyuan Electronic Co., Ltd.

4. PERFORMANCE

➤ RATED PERFORMANCE

Item	ASHRAE condition	Unit
(±5%) Capacity	1360	W
(±5%) Input power	425	W
COP	3.2	W/W
(±5%) Working current	1.9	A
(240V/50Hz) LRC (LRA)	12	A
Sound(A weighted sound power)	≤64	dB (A)
Vibration(Tangential acceleration)	≤15	m/s ²

➤ TESTING CONDITION

Testing condition	ASHRAE condition
Testing power supply	230V/50Hz
Evaporating Temp.	7.2°C
Condensing Temp.	54.4°C
Liquid Temp.	46.1°C
Suction Temp.	35.0°C
Ambient Temp.	35.0°C
Testing air flow	1m/s

➤ GENERAL PERFORMANCE

Minimum starting voltage	195.5V	
Range of working voltage	ASHREA condition	195.5V-264V
Compressor cycle	≥ 60000	times
Residual moisture content	≤ 150	mg
Impurity content	≤ 100	mg
Electrical strength	1500V/min or 1800V/s, leak current less than 2mA	
Max. Operating current MOC	2.7A	
Insulation resistance	> 30	MΩ

5. LIMIT OF OPERATING CONDITION

Item	MAX.
Discharge pressure MPa	Refer to pressure guarantee range (Page 15)
Discharging Temp.	115°C
Motor winding Temp.	130°C

6. OVERLOAD PRETECTOR PROPERTY

Action characteristic	Action temperature	125 °C±5 °C
	Reset temperature	80 °C±10 °C
First action characteristic	Current	12A
	Action time	(3~10)S
Overload characteristic	100 °C (4.0-6.0)A	

CAUTIONS

No.	Item	Operational standards and limits
1	ΔT (Comp bottom temp–condensing temp)	Continuous Running : more than 5K Intermittent Running(On/Off) : more than 0K
2	Liquid back operation	No liquid back with current variation and strange noise.
3	Allowable vertical inclination at the time of the installation	5 degree and below
4	Split air conditioner max pipe distance	30 m (Need to the special discussion in case of excess)
5	Split air conditioner max difference	15 m (Need to the special discussion in case of excess)
6	Suction water allowable amount in system	below 100 ppm for refrigerant
7	Suction gas allowable amount in system	The compressor should not be operated to form a vacuum and without load; the evacuation of the system shall ensure that absolute pressure is below 133Pa
8	Refrigerant injection	Only R290 is permitted. Refrigerant should be charged from the end of the condenser of the refrigerating systems. It is allowed to fill vaporised refrigerant at the suction side of the compressor for service purposes. Never charge refrigerant to the compressor directly. When the charge amount exceeds designated value, contact us.
9	Impact at the time of transportation	Do not impact over 60g during transportation
10	Storage	Do not open Compressor plugs more than 10 minutes before use
11	Terminal Cover & Nut Fasten Torque	1.5±0.5 N • m
12	Pressure at starting	Pressure should be balanced between high & low pressure side
13	Compressor is charged with dry nitrogen , remove high pressure side (discharge tube side) rubber plug first before application, otherwise refrigerant oil will gush from the compressor.	
14	The electric pulse should not be applied to the hermetic terminals when the compressor is in vacuum condition.	
15	Temperature within systems during stable compressor operation should not be less than -35°C to prevent the wax in the oil from precipitation.	
16	Make sure that wiring is correct before starting the compressor, the duration between two start-ups shall exceed three minutes, it is forbidden to run compressor in reverse direction and in the air.	
17	To prevent compressor from liquid slugging, the suction temperature of the compressor shall be 5°C above the evaporating temperature.	
18	Compressor can be used when ambient temperature is higher than -10°C. Confirm the start-up of compressor if the temperature of compressor surface is below -10°C. Heat up compressor to reach the temperature higher than -10°C with heater if the ambient temperature is below -10°C.	
19	The Safety Performance in accordance with EN 60335-1 Safety of household and Similar electrical appliances General requirements and EN 60335-2-40 Safety of household and similar electrical appliances Particular requirements for Motor-compressor.	

ACCESSORIES & DRAWINGS

1. ACCESSORIES

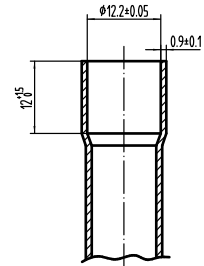
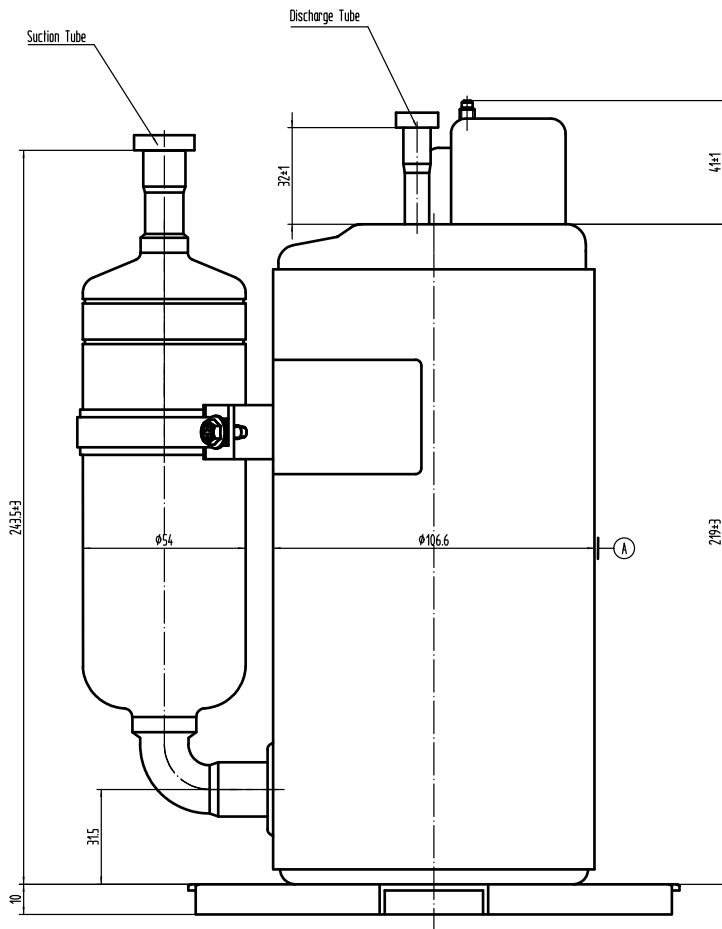
Name	Quantity	Description
Terminal cover	1	Loaded
Nut M5	1	Loaded
Grommet	3	Loaded
Gasket	1	Loaded
Capacitor	1	Not loaded

2. DRAWINGS

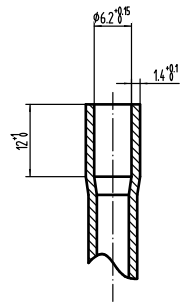
Name	Symbol
Outside dimension	QX-DW-01
Wiring & mounting plate installation diagram	QX-DW-02
Name plate	QX-DW-03
Terminal cover	ZE7.852.059
Gasket	ZE8.683.016
Grommet	ZE8.639.003
Nut M5	GB/T6177.1

OUTSIDE DIMENSION
(MODEL): QXDR-A088T130

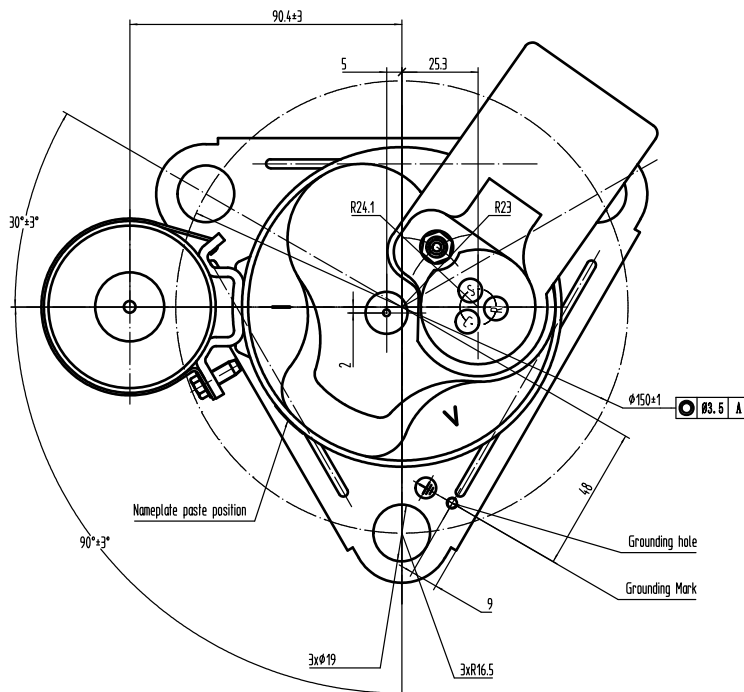
QX-DW-01



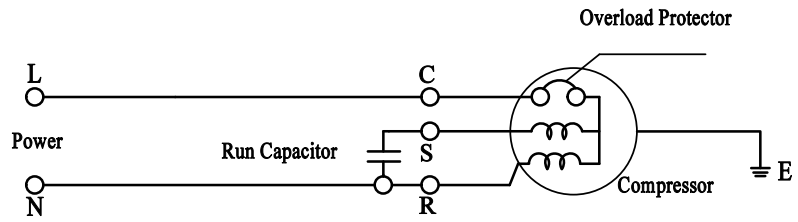
Suction Tube(Scaled)



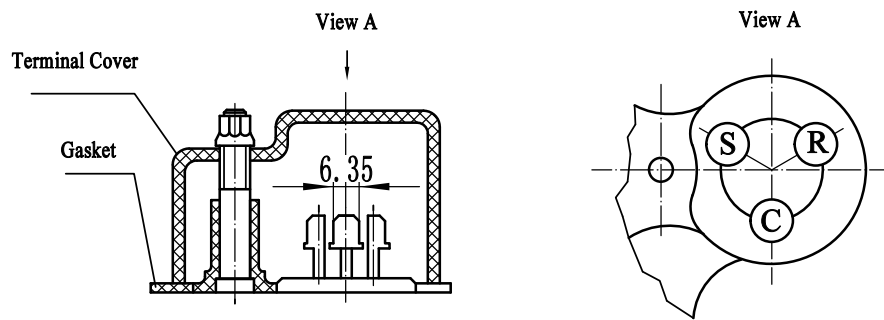
Discharge Tube(Scaled)



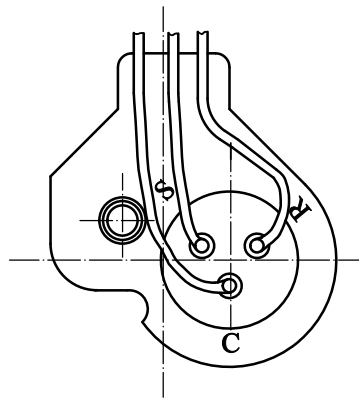
Wiring Diagram



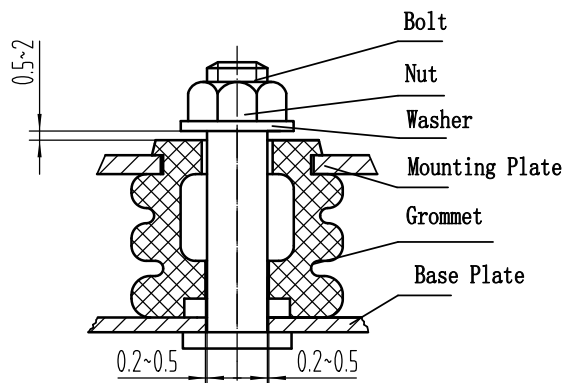
Electric Connecting Drawing



The tightening torque for the metallic flange nut is 1.0~1.5Nm



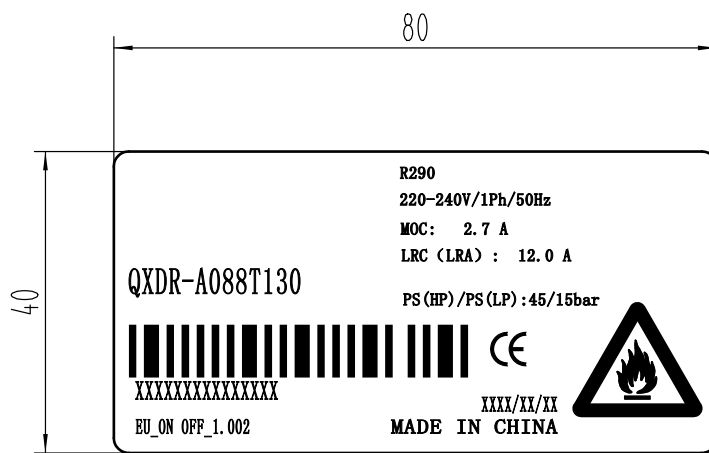
Mounting Plate Installing

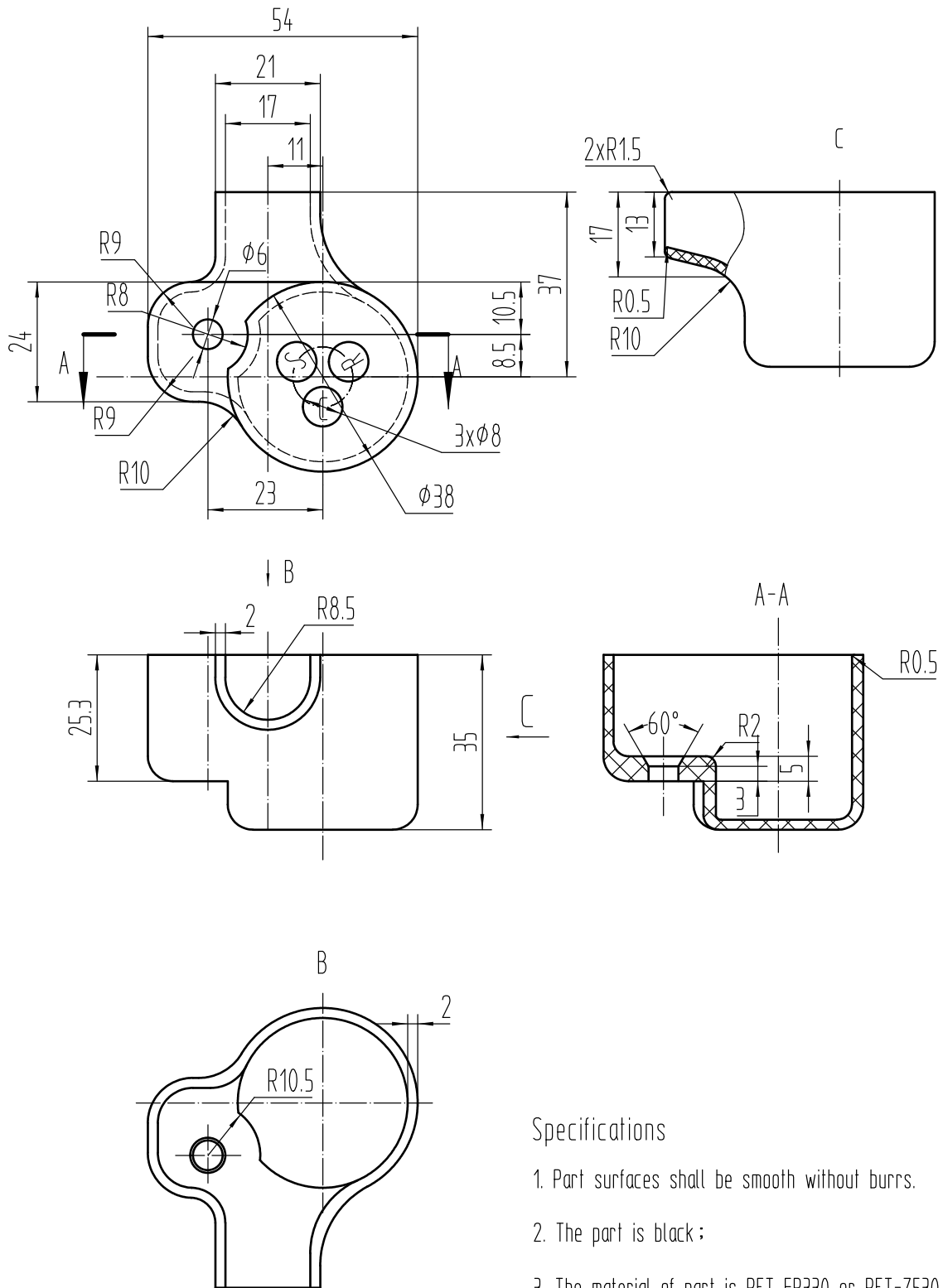


NAME PLATE
MODEL: QXDR-A088T130

PAGE: 9/17

QX-DW-03

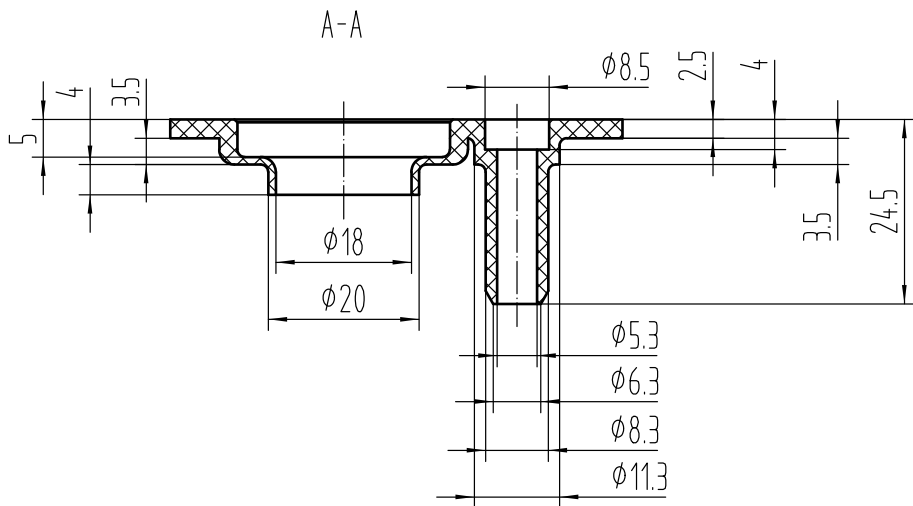
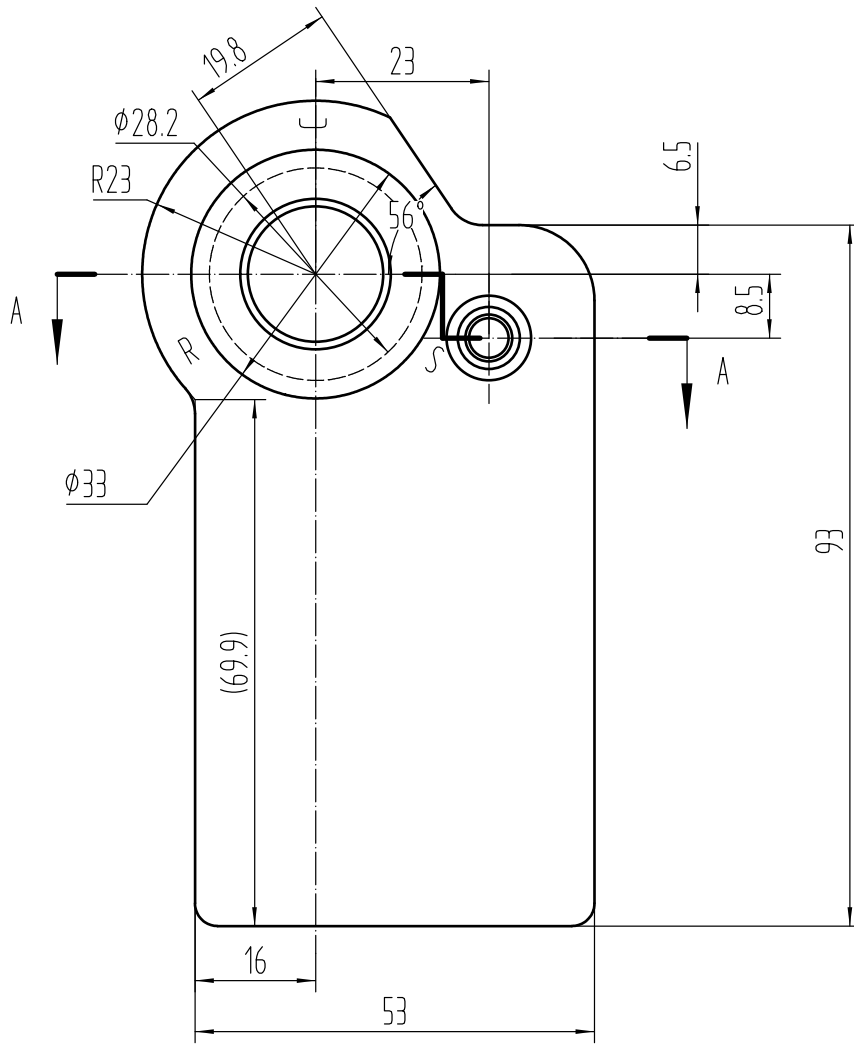




Specifications

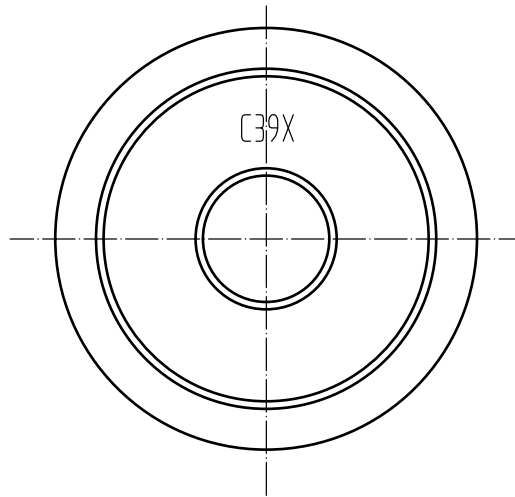
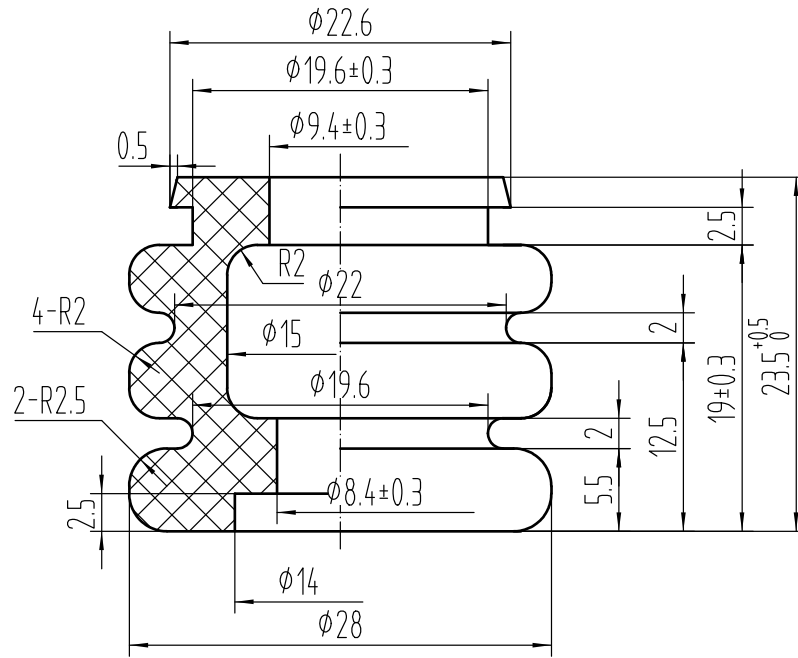
1. Part surfaces shall be smooth without burrs.
2. The part is black ;
3. The material of part is PET FR330 or PET-Z530 or PET SE5030H.

Gasket



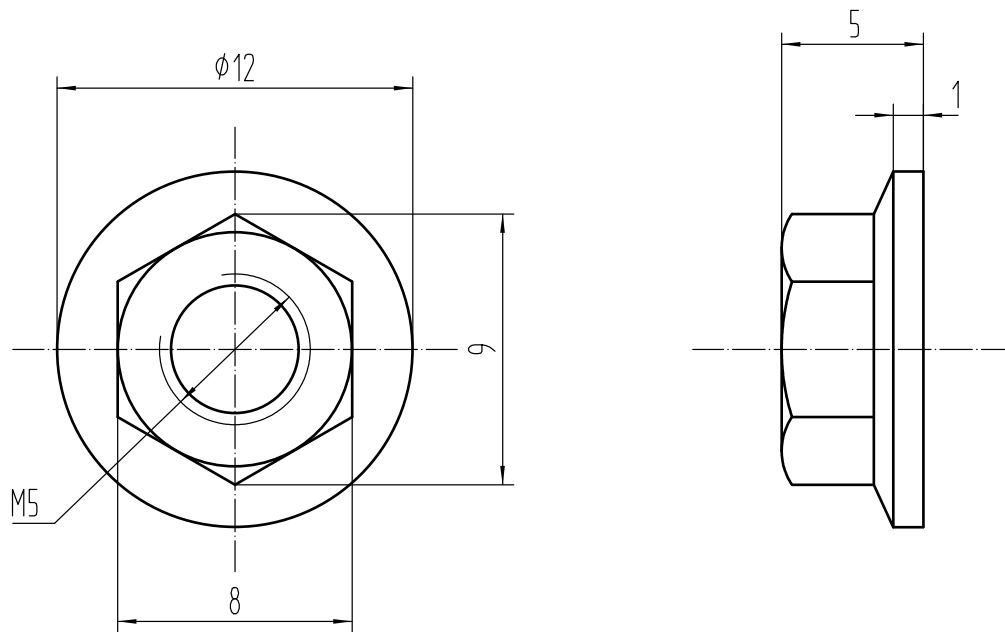
Specifications

1. The part is black ;
2. The material of part is fire-retardant silica gels ;
3. The hardness of part is Hs44 \pm 4°.



Specifications

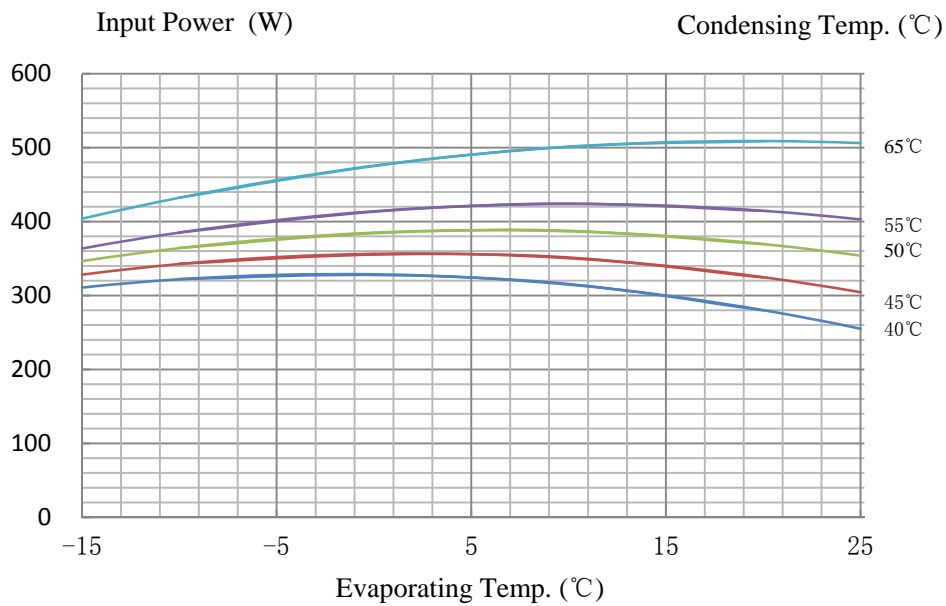
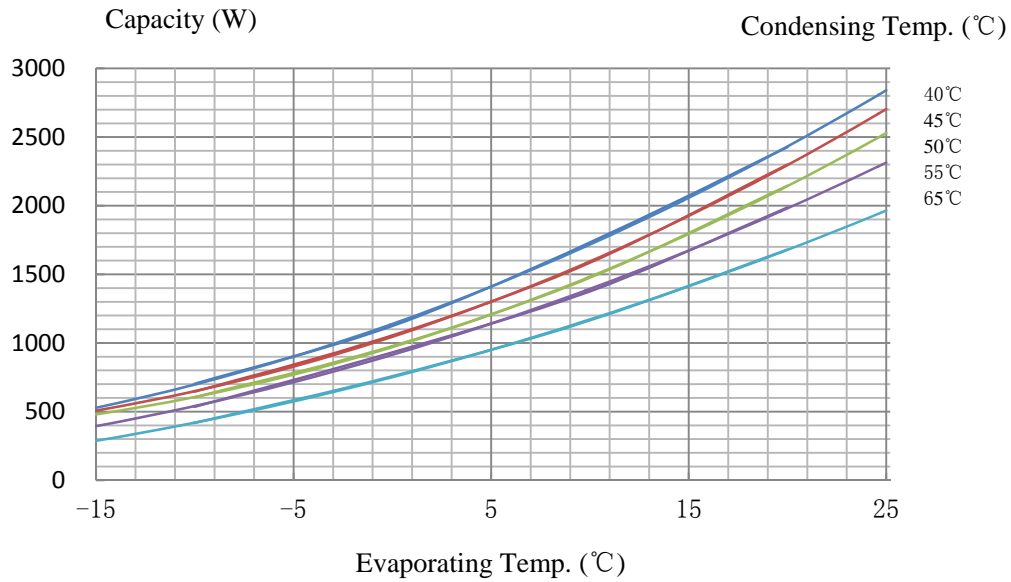
1. The part is black ;
2. The material of part is Ethylene-Propylene-Diene Monomer ;
3. Shore A hardness of part is $40 \pm 3^\circ$.



Specifications

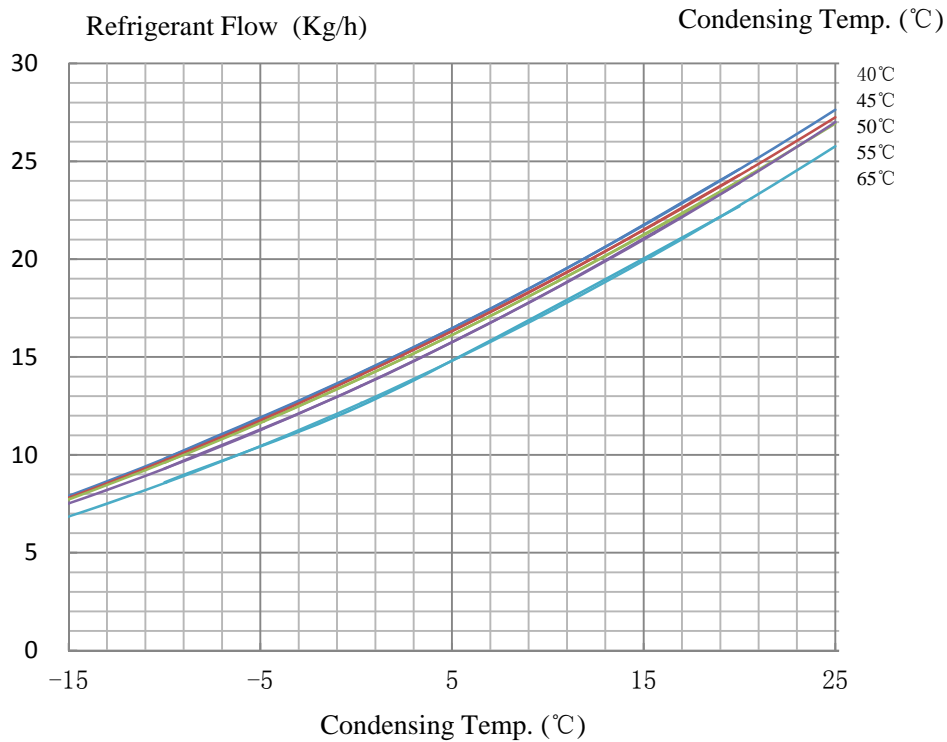
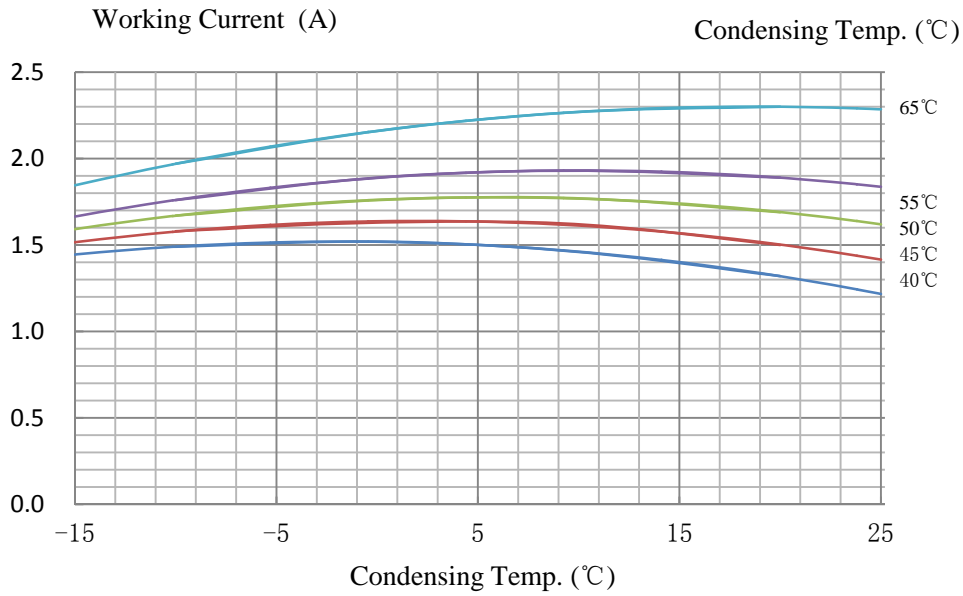
1. The part must adapt to the GB/T6177.1;
2. The material of part is STEEL.

Degree of superheat: 12K ,Degree of sub cooling: 8.3K ,Ambient Temp: 35°C
230V/50HZ/1 PHASE R290



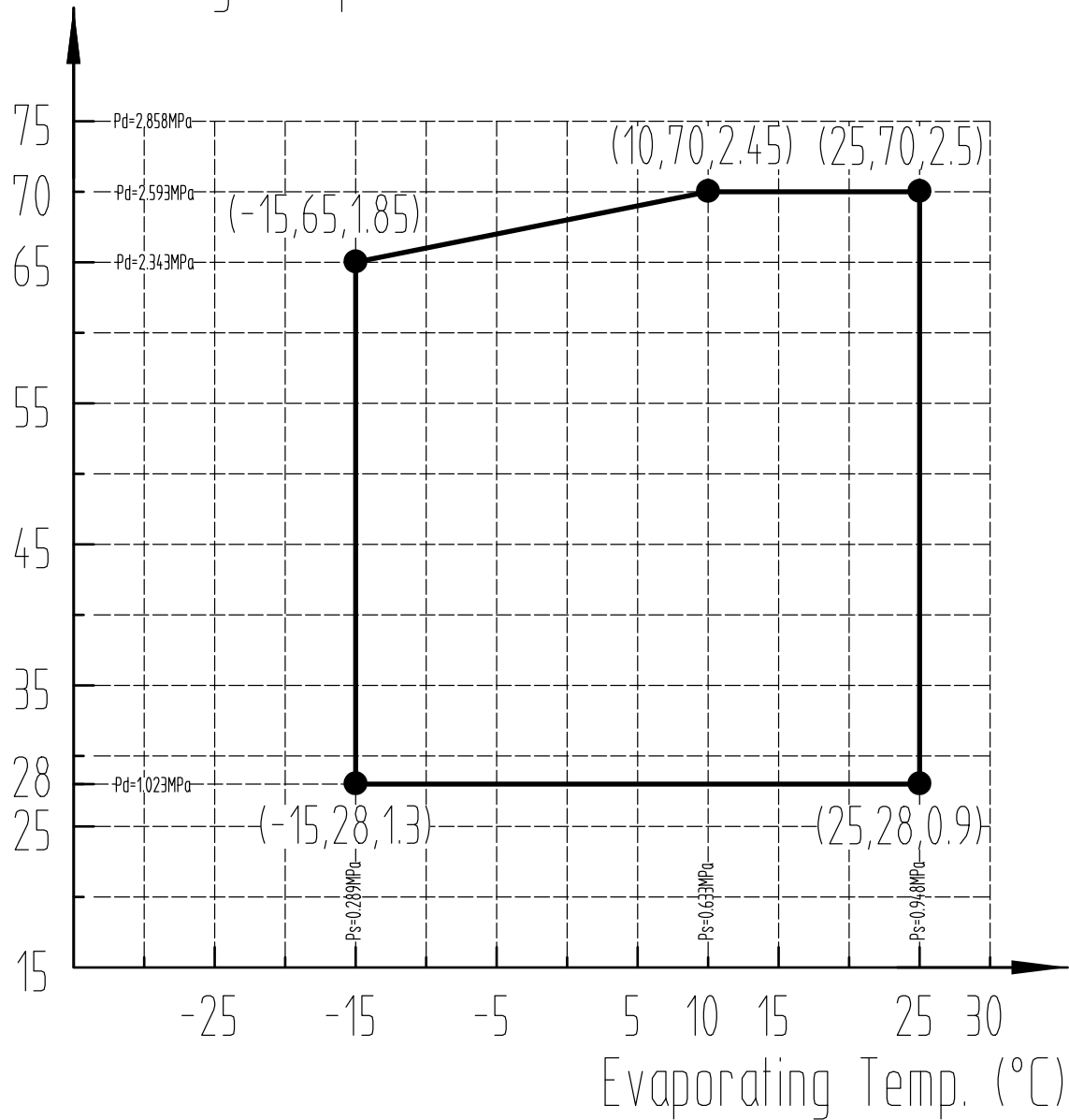
PERFORMANCE DIAGRAM
MODEL: QXDR-A088T130

Degree of superheat: 12K ,Degree of sub cooling: 8.3K ,Ambient Temp: 35°C
230V/50HZ/1 PHASE R290



230V/50HZ/1 PHASE R290

Condensing Temp. (°C)



1. For example : (25,70,2.5) means when the evaporating temperature is 25°C and the condensing temperature is 70°C, the current value is 2.5A .

2. Superheat of suction vapour: 12 (K).

3. Above are absolute pressures.

