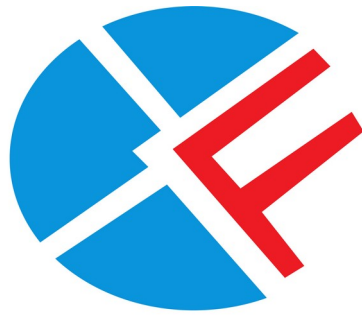




ZINGFA

Zhejiang Ankang Refrigeration Equipment Co.,Lid.

Piston Compressor

QR3-58

Product Specification

Revision Record			
Revision	Reviser	Description	Date
A			25/8/1

Checked By

Date

Approved By

Date

1 Specification

1.1 Basic Specifications

Compressor Model	QR3--58
Compressor Type	Piston Compressor
Application	Medium/high back pressure
Refrigerant	R404A
Displacement(cc/Rev)	58.2
Oil Type	POE
Viscosity (sCt,40°C)	32
Oil Charge (mL)	1500
Rated Speed (r/min)	2900
IP Class	IP21
Compressor Colour	Black
(ID OF SUCTION TUBE)	1 1/4"-12 UNF
(ID OF DISCHARGE TUBE)	1"-14 UNF
(ID OF PROCESS TUBE)	Ø7±0.2

1.2 Performance Specifications

Cooling Capacity (W)	7967
Cooling Capacity (BTU)	27170
input Power (W)	3080
COP (W/W)	2.6
EER (BTU/WH)	8.8
Rated run Current (A)	5.0
Sound Power (dBA)	≤ 65

Test Condition

	Evaporating Temp. °C	Condensing Temp. °C	Suction Temp. °C	Liquid Subcooling K	Ambient Temp. °C
M/HPB-AC	+7.2	+54.5	+35	8.3	+35
LBP	-23.3	+54.5	+32	22.2	+32

1.3 Electrical Characteristics

Motor type	3PH
Motor Poles	2

Power Supply	380--400V 3~ 50Hz 460V 3~ 60Hz
Starting capacitor (μF/V)	/
Running capacitor (μF/V)	/
Potential Relay	/
Winding Resistance (Ω 25℃)	4.0
Locked Rotor Current (A)	39
Insulation Class	F
Dielectric Strength	2000VAC/1S/5mA

1.4 Safety Running Limitation

Tightness Test Pressure (Mpa)	2.2
High Side Max Running pressure (Mpa)	3.2
Low side Max Running Pressure (Mpa)	2.0
Discharge Temp.Limit (℃)	≤125

2 Compressor Protection

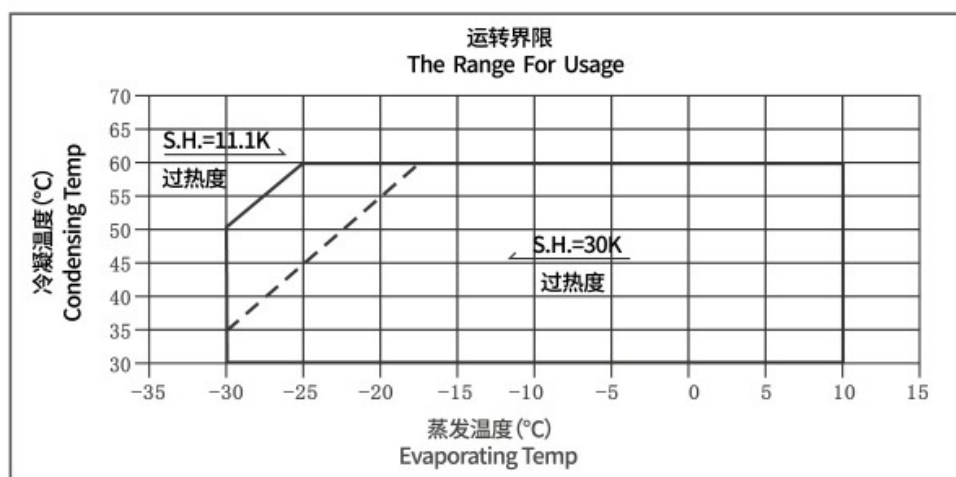
2.1 motor protector

Internal Protector For Motor Protection

2.2 High Pressure Relieve

Internal Pressure Protection

3 Running Envelope



4 Performance date type QR3-58

Performance date at 50Hz

Refrigerating capacity (watts)

evaporating temperature °C	Condensing temperature °C						
	30	35	40	45	50	55	60
-20	3680	3455					
-15	4910	4663	4155	3632			
-10	6339	6056	5475	4876	4572	3956	
-5	8002	7671	6991	6291	5935	5217	4498
0	9935	9544	8741	7916	7497	6652	5809
5	12176	11713	10764	9791	9298	8305	7318
10	14764	14218	13103	11963	11386	10226	9081

Motor input (watts)

evaporating temperature °C	Condensing temperature °C						
	30	35	40	45	50	55	60
-20	1670	1676					
-15	1893	1916	1945	1952			
-10	2100	2138	2200	2243	2257	2271	
-5	2295	2349	2441	2516	2548	2599	2634
0	2486	2552	2672	2778	2826	2911	2981
5	2678	2755	2901	3035	3097	3213	3316
10	2877	2965	3133	3292	3368	3512	3645

Return gas 35 °C
Subcooling 8.3 K

5 Accessories

Serial number	Name	Quantity	Notes
1	Compressor	1	
2	Grommet	4	
3	Sleeve	4	
4	VALVE	2	Needed

6. PACKING,TRANSPORTATION AND STORAGE

6.1 The packing should be moisture-resistant, and prevent the compressor in it being damaged. The letters and marks on the package should be clearly painted.

6.2 Don't incline the compressor more than 45°.

6.3 The compressor should be kept in the place with normal room temperature, and should be kept out of corrosive atmosphere.

7 Attention

7.1 It is not allowed to perform vacuum in the system by using the refrigeration compressor. The compressor can start only after the refrigerant is charged;

7.2 It is not allowed to charge the refrigerant from the suction or discharge line closes to the compressor. The charge port should be arranged on the connection pipe of suction line accumulator or receiver, which is far away from the compressor, to avoid the liquid refrigerant flooding back;

7.3 The refrigerant charge amount complies with local regulations;

7.4 It is not allowed to run compressor in vacuum, not allowed to run compressor without refrigerant, and not allowed to run compressor in the reversed direction for long duration;

7.5 The compressor can only work with approved refrigerants;

7.6 The compressor is not allowed to work outside its envelope. System design should guarantee the suction line superheat and avoid the liquid refrigerant flooding back;

7.7 When the suction and discharge plugs are removed, the assembly and brazing should be done in 15 minutes;

7.8 The frequently start/stop compressor should be avoided. The suggested minimum continuous running time is 10 minutes to guarantee the safe oil level ($\geq 50\%$ initial charge volume), the suggested minimum interval between start and stop is 3 minutes.

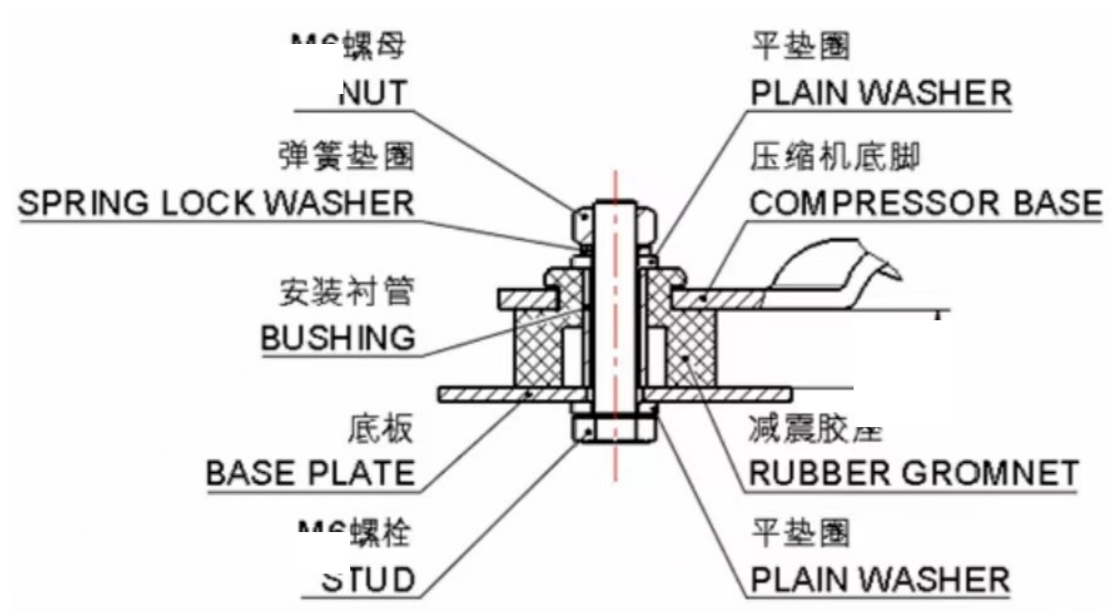
7.9 A 45W crankcase heater is recommended to avoid the refrigerant migration during the off circle and flooded start. The crankcase heater should be powered on 12 hours earlier before the first start

or restart after long duration off;

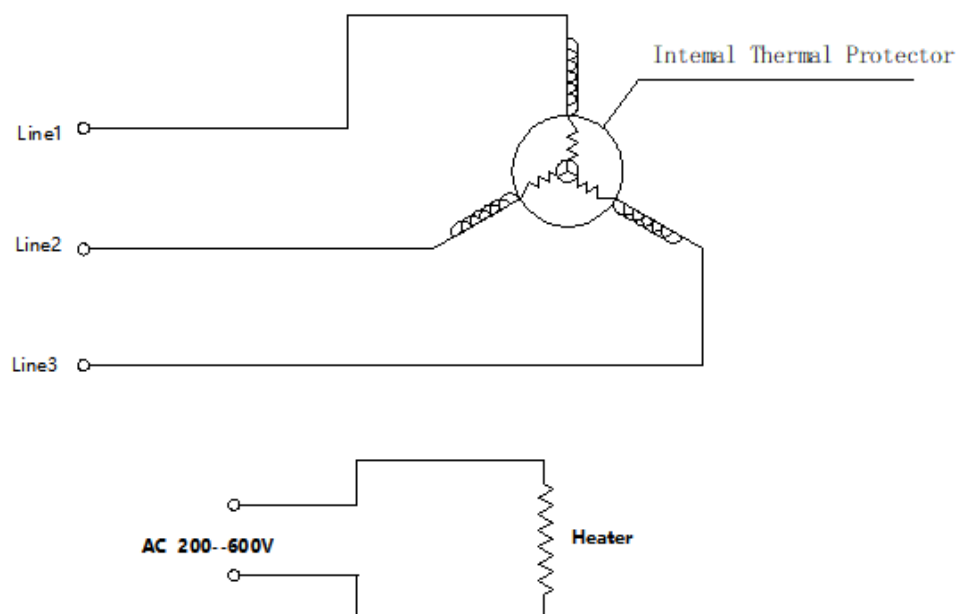
7.10 The system should be equipped with necessary protection devices for pressure, temperature, oil return, overcurrent and phase fault, etc.

7.11 The compressor is not allowed to lay down or place upside down during transportation, stock and installation. The maximum inclination is 15° when the compressor is running.

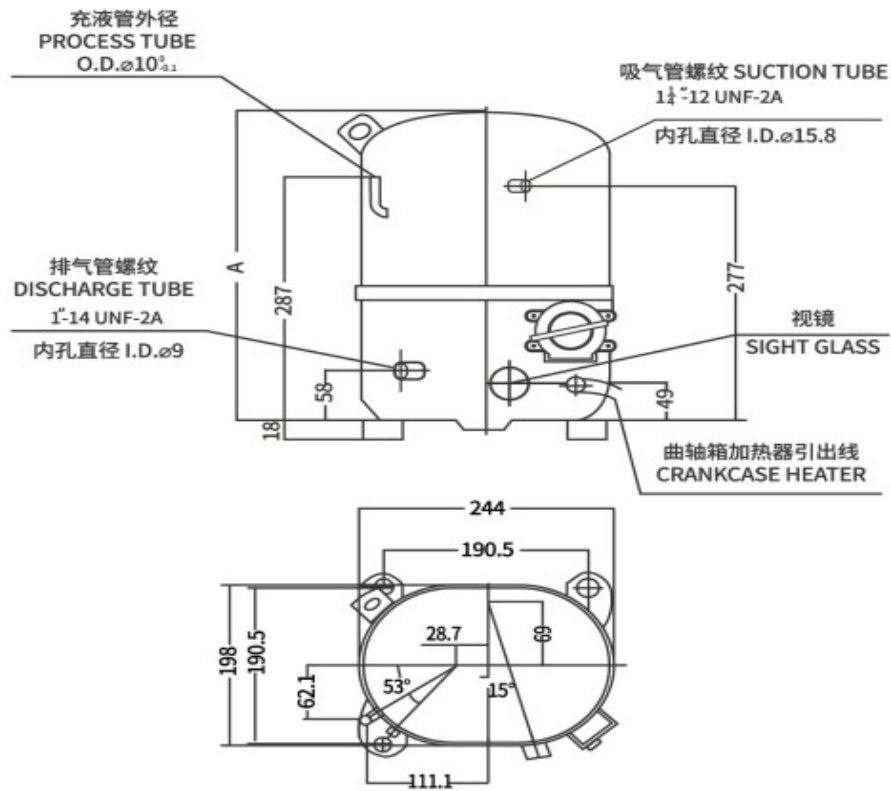
8 Mount Diagram



9 Wiring Diagram



10 PISTON COMPRESSOR Dimensional Drawing



MODEL	A (IN/mm)
QR41(QR3-41)	14.4/365
QR44(QR3-44)	
QR52(QR3-52)	14.4/365
QR58(QR3-58)	
QR62(QR3-62)	14.4/365
QR3-74	