ZINGFA

Zhejiang Ankang Refrigeration Equipment Co.,Lid.

Piston Compressor

QL3- 35

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	QL 3-35
Compressor Type	Piston Compressor
Application	Low back pressure
Refrigerant	R404A
Displacement(cc/Rev)	34.45
Oil Type	POE
Viscosity (sCt,40℃)	32
Oil Charge (mL)	500
Rated Speed (r/min)	2900
IP Class	IP21
Compressor Colour	Blaclk
(ID OF SUCTION TUBE)	1’’-14 UNF
(ID OF DISCHARGE TUBE)	Ø10
(ID OF PROCESS TUBE)	Ø 7

1.2 Performance Specifications

Cooling Capacity (W)	1600
Cooling Capacity (BTU)	5450
input Power (W)	1220
COP (W/W)	1.3 1
EER (BTU/WH)	4.45
Rated run Current (A)	2.1
Sound Power (dBA)	≤ 62

Test Condition

	Evaporating Temp. ℃	Condensing Temp. ℃	Suction Temp. ℃	Liquid Subcooling K	Ambient Temp. ℃
LBP	-23.3	+54.5	+32	22.2	+32

1.3 Electrical Characteristics

Motor type	3ph
Motor Poles	2
Power Supply	400V 3 ~ 50Hz/440V 3 ~ 60Hz
Starting capacitor (μF/V)	/
Running capacitor (μF/V)	/
Potential Relay	/
Winding Resistance (Ω 25℃)	11.6
Locked Rotor Current (A)	16
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

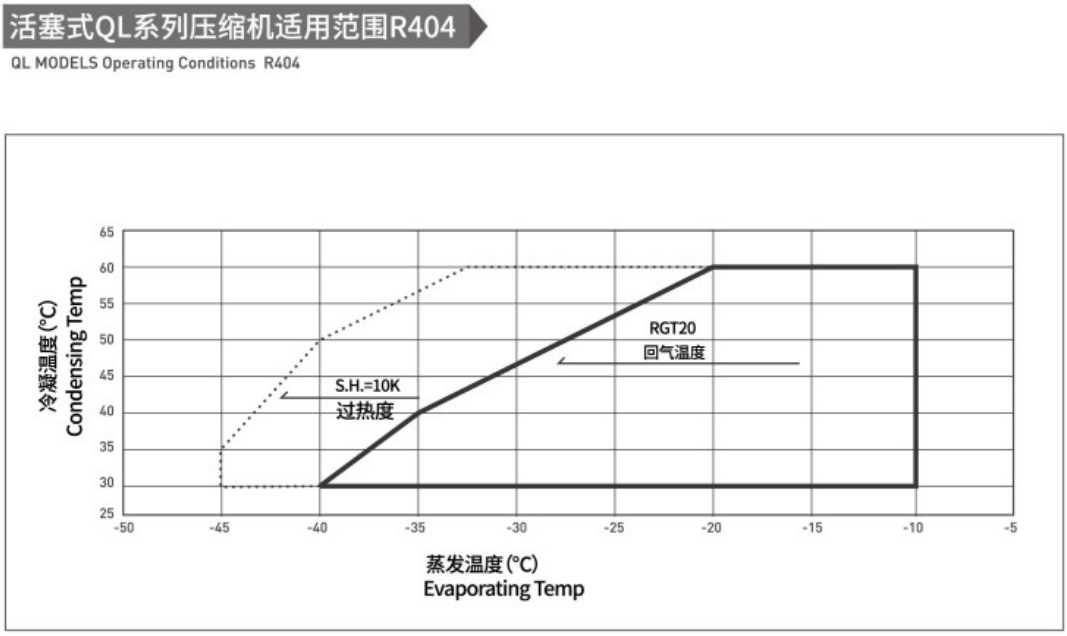
Low side Max Running Pressure (Mpa)	2.0
Discharge Temp.Limit (℃)	≤125

2 Compressor Protection

2.1 motor protector

Internal Protector For Motor Protection

3 Running Envelope



4 Performance date type QL3-35

Performance date at 50Hz

Refrigerating capacity (watts)

evaporating temperature ℃	Condensing temperature ℃						
	30	35	40	45	50	55	60
-40	919						
-35	1304	1240	1112				
-30	1779	1701	1543	1385	1305	1148	
-25	2357	2261	2067	1872	1774	1580	1389
-20	3050	2933	2697	2459	2340	2103	1872
-15	3870	3728	3444	3158	3015	2731	2457

Motor input (watts)

evaporating temperature ℃	Condensing temperature ℃						
	30	35	40	45	50	55	60
-40	723						
-35	852	856	860				

-30	983	994	1010	1020	1023	1023	
-25	1115	1134	1165	1190	1200	1215	1225
-20	1250	1277	1325	1366	1384	1416	1442
-15	1388	1424	1490	1548	1575	1625	1669

Return gas **32 ℃**
Subcooling **0** 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;

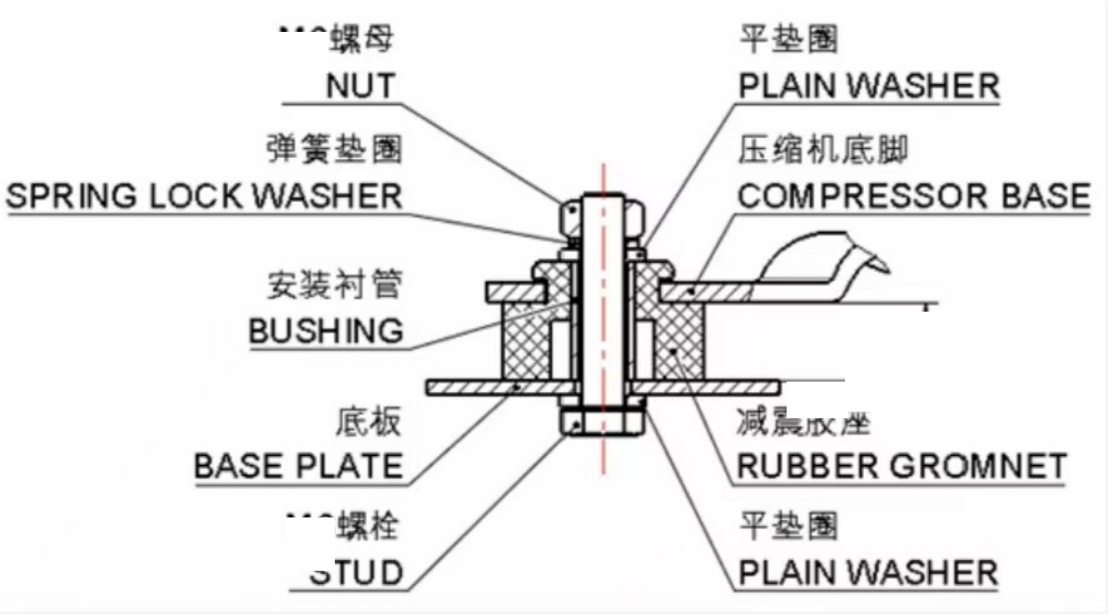
7.8 The frequently start/stop compressor should be avoided. The suggested minimum continuous running time is 10 minutes to guarantee the safe oil level (>=50% initial charge volume), the suggested minimum interval between start and stop is 3 minutes.

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;

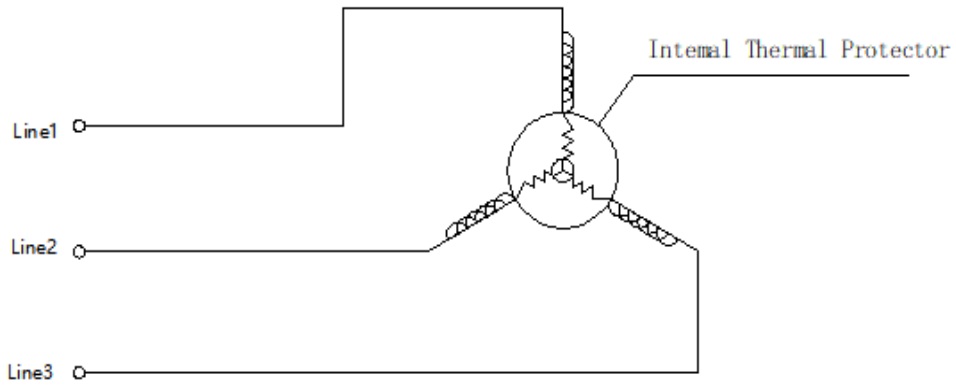
7.10 The system should be equipped with necessary protection devices for pressure, temperature, oil return, overcurrent and phase fault, etc.

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.

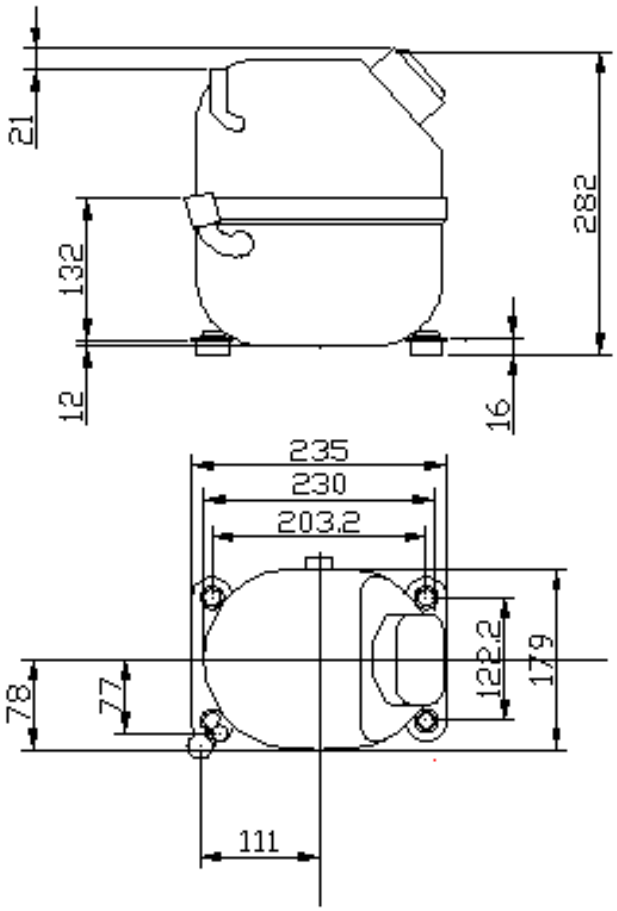
8 Mount Diagram



9 Wiring Diagram



10 Dimensional Drawing


21
282
132
12
16
235
230
203,2
122,2
179
78
77
111