ANKANG

Zhejiang Ankang Refrigeration Equipment Co., Ltd.

XINGFA

PISTON COMPRESSOR

QL3-52A

PRODUCT SPECIFICATION

Revision Record

Revision	Reviser	Description	Date
A		Released	25/8/1

Checked By		**Date**	
Approved By		**Date**	

1 Specification

1.1 Basic Parameters

Compressor Model	QL3-52A
Compressor Type	Piston Compressor
Application	Medium/high back pressure
Refrigerant	R404A
Displacement (cc/Rev)	52
Oil Type	POE
Viscosity (sCt, 40°C)	32
Oil Charge (mL)	1500
Rated Speed (r/min)	2900
IP Class	IP21
Compressor Colour	Blaclk
ID OF SUCTION TUBE	Ø 19.1 ±0.2
ID OF DISCHARGE TUBE	Ø 12.7±0.2
ID OF PROCESS TUBE	Ø 7 ±0.2

1.2 Performance Specifications

Cooling Capacity (W)	2189
Cooling Capacity (BTU)	7460
input Power (W)	1380
COP (W/W)	1.6
EER (BTU/WH)	5.3
Rated run Current (A)	2.5
Sound Power (dBA)	≤ 65

Test Condition

Operating 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	1PH
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°C)	6.8
Locked Rotor Current (A)	28
Insulation Class	F
Dielectric Strength	2000VAC/1S/5mA

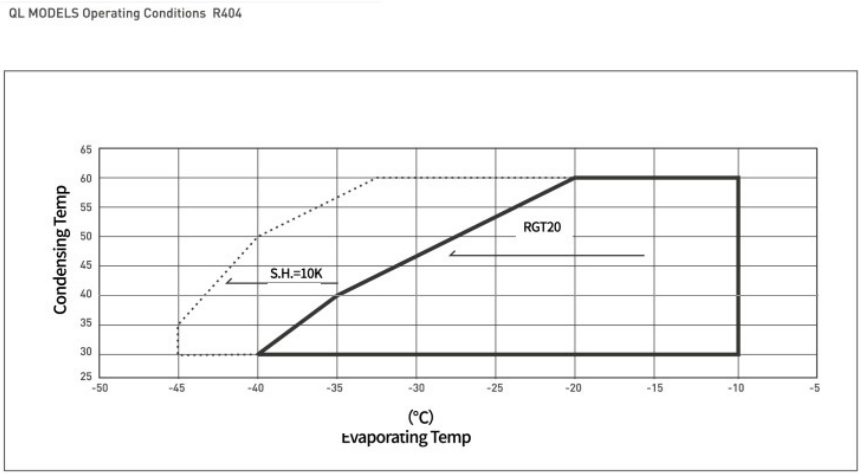
1.4 Safety Running Limitation

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 (°C)	≤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 Data

Type: QL3-52A | Performance data at 50Hz

Refrigerating capacity (watts)

Evaporating temperature (°C)	Condensing temperature (°C)						
	30	35	40	45	50	55	60
-40	1218						
-35	1830	1714	1481				
-30	2546	2415	2153	1890	1758	1496	
-25	3374	3225	2926	2627	2479	2185	1898
-20	4326	4155	3811	3470	3300	2967	2648
-15	5413	5215	4820	4428	4235	3857	3499

Motor input (watts)

Evaporating temperature (°C)	Condensing temperature (°C)						
	30	35	40	45	50	55	60
-40	929						
-35	1175	1160	1125				
-30	1415	1409	1397	1380	1368	1329	
-25	1650	1652	1661	1672	1675	1674	1656
-20	1883	1891	1919	1955	1973	2007	2031
-15	2116	2130	2174	2232	2265	2331	2394

Return gas: 32 °C | 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;

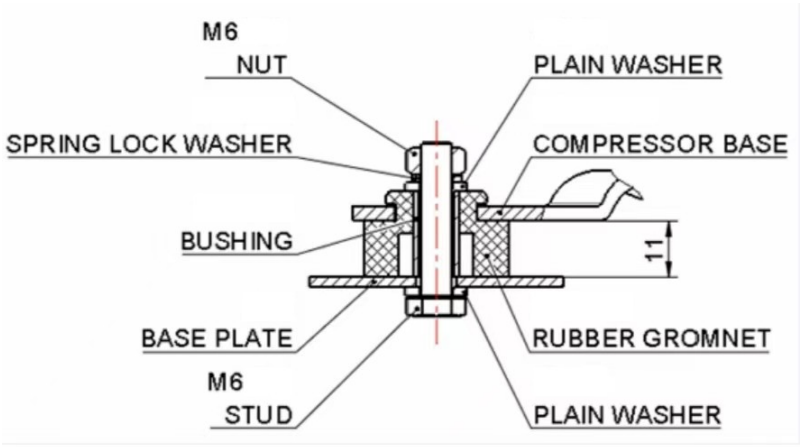
7.8 The frequently start/stop compressor should be avoided. The suggested minimum continuous running time is 10 minutes to guarantee the safe oil level (>=50% initial charge volume), the suggested minimum interval between start and stop is 3 minutes.

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.

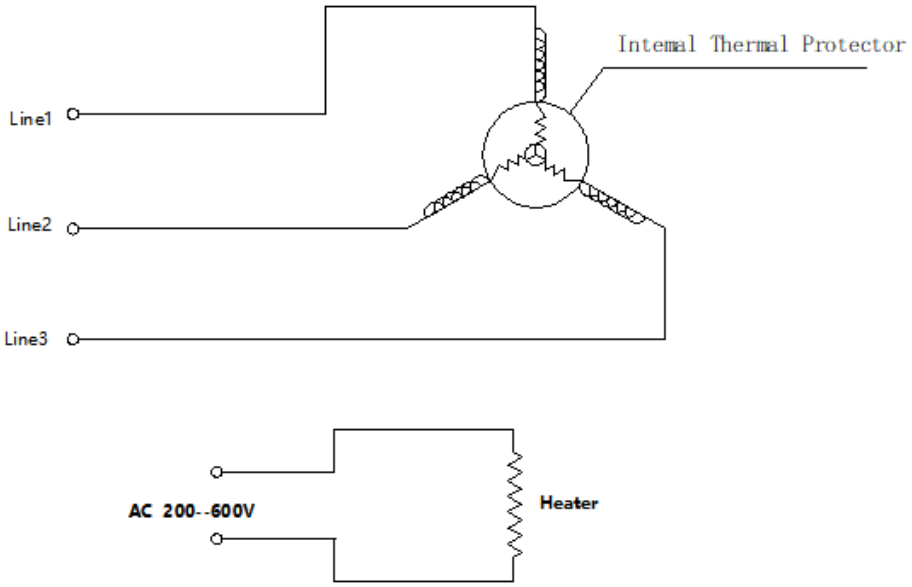
7.11 The compressor is not allowed to lay down or place upside down during transportation, stock and installation. The maximum inclination is 15° when the compressor is running.

8 Mount Diagram



（MOUNTING TYPE）:(1)

9 Wiring Diagram



10 Dimensional Drawing

