

# **SZ80XY1 COMPRESSOR**

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## **TECHNICAL SPECIFICATION**



HUANGSHI DONPER COMPRESSOR CO., LTD.

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### 1. Compressor Type

Compressor model	SZ80XY1
Rated voltage/frequency	115-127V~60Hz
Refrigerant	R600a
Application	Low back pressure (LBP)
Cooling method	Static
Start torque	Low starting torque (LST)
Control device	Capillary tube
Motor type	RSCR
Running capacitor	12μF
Starting capacitor	/

### 2. Performance Data

Displacement	Net Wt.	Oil Charge	Cooling Capacity(≥95%)		COP(≥95%)	
			ASHRAE	CECOMAF	ASHRAE	CECOMAF
			-23.3	-25	-23.3	-25
cm <sup>3</sup>	kg	ml	w	w	w/w	w/w
8.0	6.9±0.4	160±10	165	124	1.70	1.32

Note: These datas come from the test without a PTC relay

Testing condition:

Test conditions	LBP	
	ASHRAE	CECOMAF
Evaporating Temp.	-23.3°C	-25°C
Ambient Temp.	+32.2°C	+32°C
Condensing Temp.	+54.4°C	+55°C
Suction Temp.	+32.2°C	+32°C
Subcooling Temp.	+32.2°C	+55°C

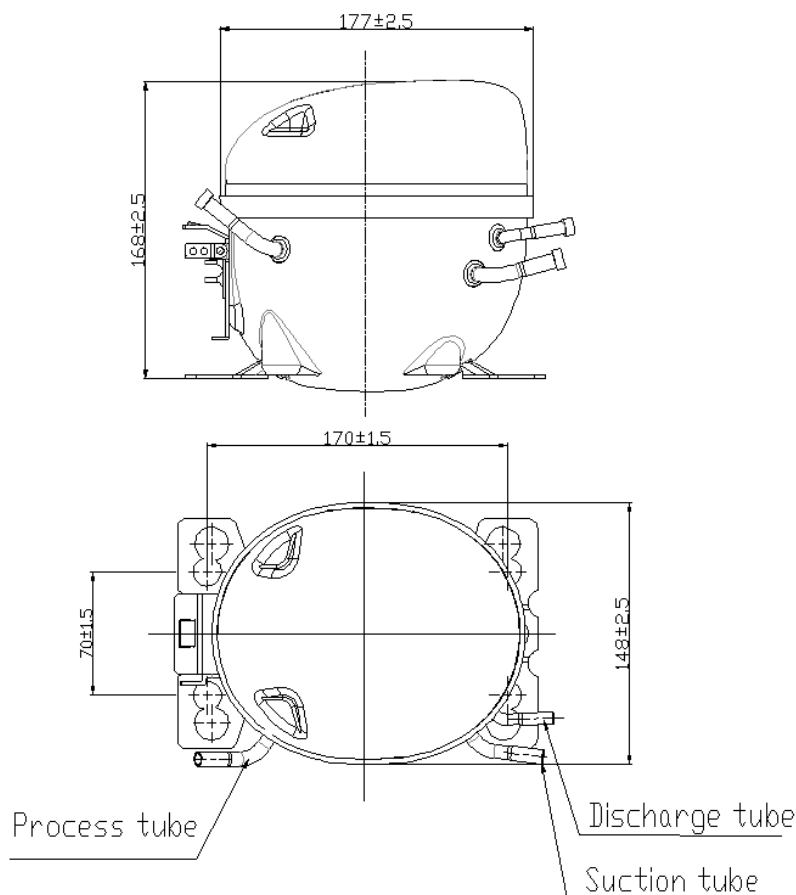
### 3. Running Condition

Ambient temp.	0~43°C
Evaporating temp.	-35~-15°C
Voltage range	98~135V
Max. condensing temp.	65°C
Max. winding temp.	130°C
Max. shell temp.	95°C
Max. discharge temp.	120°C
Start voltage	98V [0.3/0.3MPa(abs)]
Shell min. resistance to pressure	35bar

**4. Compressor Mechanical Information**

Oil type	Synthetic oil
Viscosity	4.2~6.2mm <sup>2</sup> /S (40°C)
Oil charged	160±10ml
Diameter of suction tube (I.D.)	Φ 6.50 ± 0.1mm
Diameter of discharge tube(I.D.)	Φ 4.95 ± 0.1mm
Diameter of process tube (I.D.)	Φ 6.50 ± 0.1mm
Material of suction tube, process tube and discharge tube	Copper tube
Compressor noise	≤42dB(A)
Vibration	≤0.7m/s <sup>2</sup>
Protecting gas	-0.06~-0.02MPa

**5. Compressor Shape**

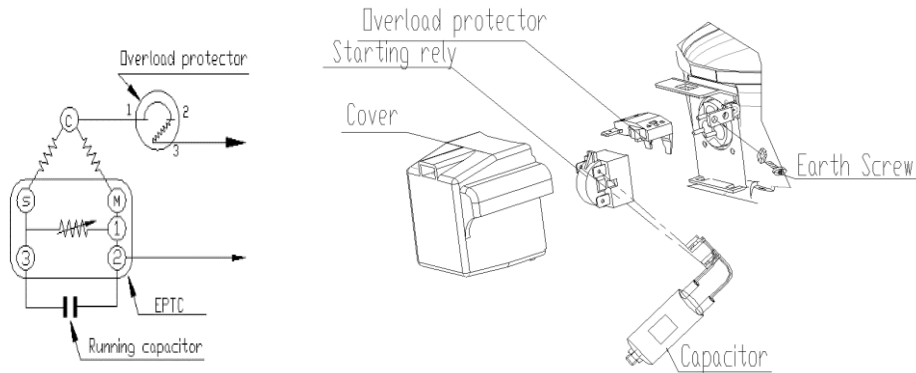


Caution: Suction tube and process tube can not be exchanged

Unmarked tolerance: ± 5mm

Unmarked Angle: ± 10°

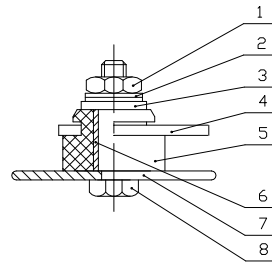
**6. Wiring Diagram**



Note: Each of the starting relay, the overload protector, the cover, running capacitor and the earth bolt is separately provided by our company.

**7. Fixing of mounting bracket and cabinet base**

- 1、 Hexagon nut
- 2、 Spring washer
- 3、 Flat washer
- 4、 Compressor mounting bracket
- 5、 Rubber grommet
- 6、 Sleeve
- 7、 Cabinet base
- 8、 Screw



Note: Equipment assembly is all provided by our company. Above is just for reference, details can refer to delivery state.

**8. Starting relay and overload protector**

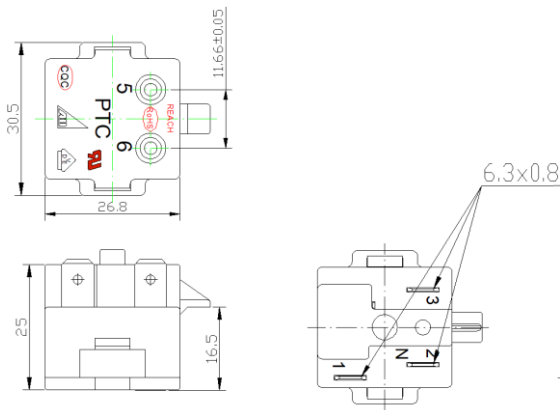
**8.1 Starting relay**

Model	QPE2-A4R7MD3	TY-QE-A4.7
Supplier	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Changshu Tianyin Electromechanical Co. Ltd.
Resistance	$\Omega$	/
Run time	S	0.7~2.2
Reset time	S	$\leq 100$
Max working voltage	V	180
Max current	A	12

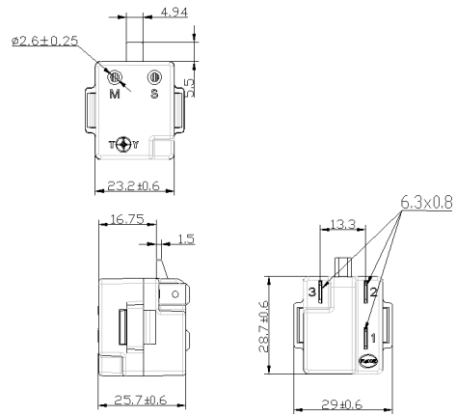
Assembly force  $\leq 100N$       Disassembly force  $\geq 25N$

Flammability: Anti-flammability

**QPE2-A4R7MD3**



**TY-QE-A4.7**



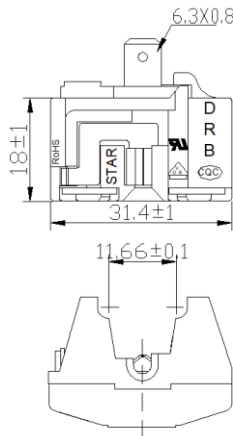
**8.2 Overload protector**

Model	DRB268S61A2	BT83-135
Supplier	Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Lanxi City Yueqiang Electric Co.,Ltd.
Max.T.C Amp.(25°C)	A	8.3
Trip time	S	5~15
Reset time	S	20~150
Open temp.	±5°C	135
Close temp.	±9°C	61

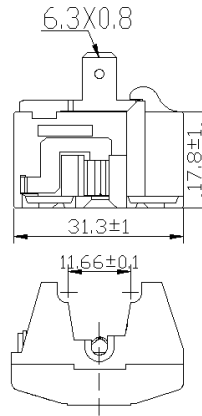
Assembly force ≤ 80N    Disassembly force ≥ 12.5N

Flammability: Anti-flammability

**DRB268S61A2**



**BT83-135**



**9. Capacitor**

Model	μF	12
Rated voltage	V.AC	250
Supplier and model	Anhui Tongfeng Electronics CO.,LTD CBB65	
	Shanghai haoyue Electronics CO.,LTD CBB65D (MKP-1)	
	Anhui Feida Electrical Technology Co., Ltd. CBB65A-2	
	Ningguo Yuhua Electrical Product CO.,LTD CBB65	

**10. Delivery State**

No.	Name	Model	Quantity	CODE
1	Compressor	SZ80XY1	1pcs	
2	Rubber plug	Φ6.4	1pcs	
3		Φ8.2	2pcs	
4	Rubber grommet	U model(QET-03U)	4pcs	Installed
5	Starting relay	QPE2-A4R7MD3	1pcs	Installed
		TY-QE-A4.7		
6	Overload protector	DRB268S61A2	1pcs	Installed
		BT83-135		
7	Running capacitor	12μF	1pcs	
8	Cover	A1E	1pcs	

Notes:1. rubber grommet, starting relay and overload protector are installed on the compressor, other electrical parts and equipment assembly are supplied separately, not installed on the compressor.

2.All electrical parts and equipment assembly according to “Delivery state”are all provided by our company.

**11. Package、Storage and Transportation**

Package type	unrecyclable
Quantity	100pcs/box
Transportation	By sea
Storage	Max. 2 layers
Cross Weight      Kg	725±40
Net Weight        Kg	690±40
Volume             m <sup>3</sup>	1.16
Dimension: length×width×height    cm	114×89×114
Main components	Wooden supporter、upper wooden cover、foam divider、plastic sheet、cardboard cover、rain-proof cover、wrapping
Movement	Keep the compressor in normal or vertical position
Trans. test requirement	No allowable compressor’s damage and performance loss.

**12. Technical Items**

- (1)、Don’t take off the rubber plugs before using and installing compressor to prevent dust and moisture.
- (2)、Don’t turn down or incline the compressor during storage, transportation or installation and avoid vibration and shock.
- (3)、The compressor must be kept horizontally during running, the inclination angle must be less than 5°.

- (4)、 A special polyester oil is charged in the R600a compressor and the charging volume has been optimized by DONPER. Don't pour out or add any refrigerant oil.
- (5)、 The interval of compressor operation must be more than 4 minutes in order to obtain a pressure balance in the systems.
- (6)、 Don't start or run in the case of vacuum or charge high voltage in the compressor. The compressor cannot be used to vacuumize the refrigeration system.
- (7)、 The design of refrigeration system must be suitable to insure the oil could flow back to compressor.
- (8)、 The maximum ambient temperature of the compressor operation is 43°C. When continuously operating under the maximum ambient temperature 43°C, the condensing pressure and the peak pressure should not exceed as showing in the following table.

Refrigerant	R600a
Max. condensing pressure	0.87MPa
Peak	0.98MPa

- (9)、 Widen the evaporating Temp. range of the compressor should be approved by DONPER.
- (10)、 Compressor should be stored in a dry place.
- (11)、 Compressor accessories (eg: starting relay, overload protector etc.) are put in the accessories box instead of fixing on the compressor.
- (12)、 The inventory period of the compressor after leaving the factory should not exceed 6 months. If it exceeds 6 months, please check if the protective gas inside the compressor is under negative pressure.
- (13)、 It's necessary to keep the compressor without rubber plug as short time as possible (max time 10 min).
- (14)、 R600a systems require a filter with drying agent which suitable for R600a refrigerant
- (15)、 The vacuum pump and the charging system must only be dedicated to R600a.
- (16)、 The refrigeration system should minimize the content of chlorine and moisture, and must be free of paraffin and silicon oil.
- (17)、 The organic substance non-compatible with R600a cannot be used in the refrigeration system.