

# **S76CZ1**                      COMPRESSOR

---

## TECHNICAL SPECIFICATION



**DONPER**

HUANGSHI DONGBEI ELECTRICAL APPLIANCE CO., LTD.

2020.06

# INDEX

	<b>page</b>
1、 Compressor Type.....	2
2、 Performance Data.....	2
3、 Running Condition.....	2
4、 Compressor Mechanical Information.....	3
5、 Compressor Shape.....	3
6、 Wiring Diagram.....	4
7、 Fixing of Mounting Accessories.....	4
8、 Starting relay and Overload protector.....	5
9、 Delivery State.....	6
10、 Package、 Storage and Transportation.....	7
11、 Technical Items.....	7

## 1. Compressor Type

Compressor model	S76CZ1
Rated voltage/frequency	220-240V~50Hz
Refrigerant	R134a
Application	Low back pressure (LBP)
Cooling method	Static
Start torque	Low starting torque (LST)
Control device	Capillary tube
Motor type	RSIR
Running capacitor	/

## 2. Performance Data

Displacement	Oil Charge	Net Wt.	Cooling Capacity( $\geq 95\%$ )				COP( $\geq 95\%$ )	
			ASHRAE		CECOMAF		ASHRAE	CECOMAF
			-23.3		-25		-23.3	-25
cm <sup>3</sup>	ml	kg	w	kcal	w	kcal	w/w	w/w
7.6	160 $\pm$ 10	7.3 $\pm$ 0.4	215	185	162	139	1.30	1.01

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

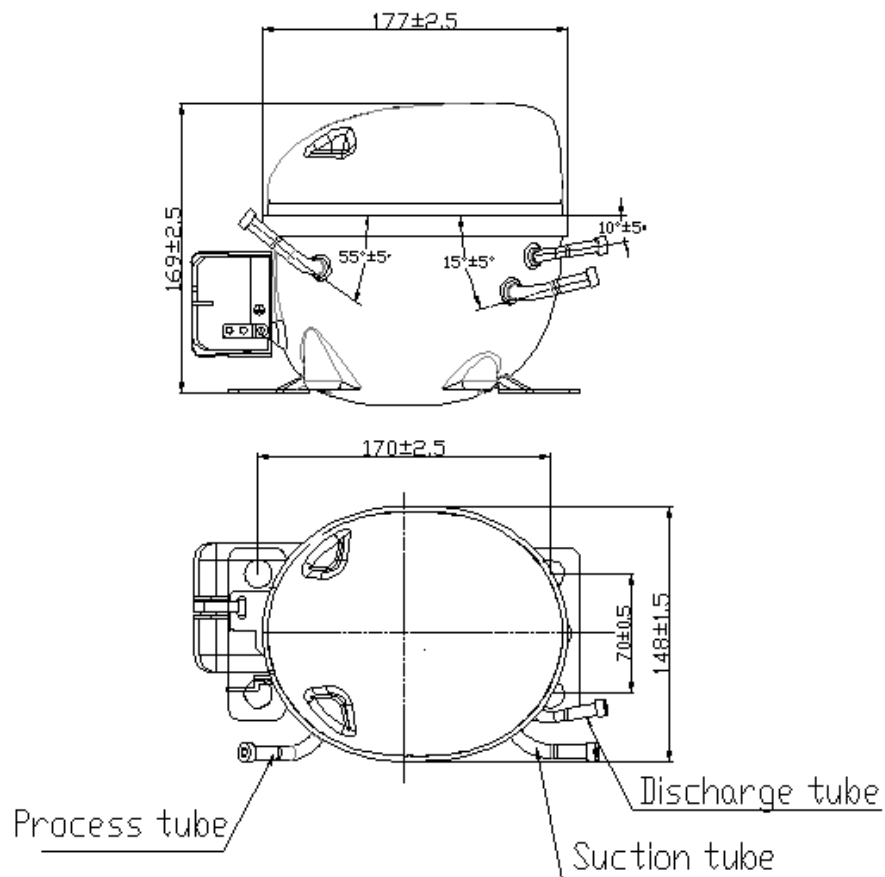
## 3. Running Condition

Ambient temp.	0~43°C
Evaporating temp.	-35~-15°C
Voltage range	187~254V
Max. condensing temp.	65°C
Max. winding temp.	130°C
Max. shell temp.	95°C
Max. discharge temp.	120°C
Start voltage	187V [0.5/0.5 MPa (abs)]
Shell min. resistance to pressure	35bar

#### 4. Compressor Mechanical and Electrical Information

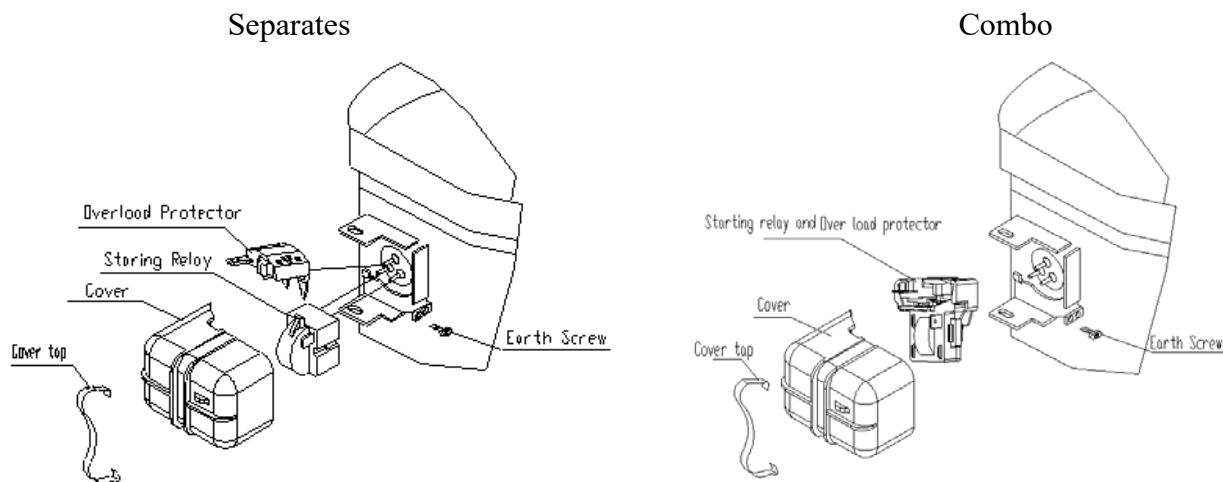
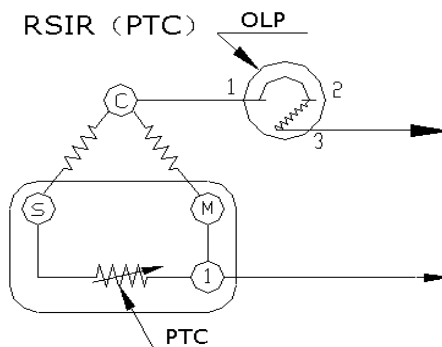
Oil type	Ester oil
Oil charged	160±10ml
Min. oil volume in compressor	100ml
Diameter of suction tube(I.D.)	Φ6.2±0.1mm
Diameter of discharge tube(I.D.)	Φ4.9±0.1mm
Diameter of process tube (I.D.)	Φ6.2±0.1mm
Material of suction tube, process tube and discharge tube	copper tube
Compressor noise	43dB(A)
Vibration	0.8m/s <sup>2</sup>
Protecting gas	Dry com. air (Dew point-60°C)

#### 5. Compressor Shape



Suction tube and process tube can not be exchanged

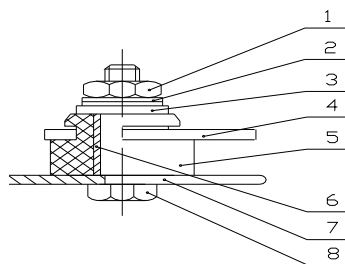
## 6. Wiring Diagram



Note: Each of the starting relay, the overload protector, the cover and the Earth Screw 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

Starter Model: QP2-15 or JPQ II -15

Compressor model		S76CZ1
Starting relay	Resistance of Starting relay $\Omega$	$15 \pm 20\%$
	max working voltage V	350
	max current A	8

Assembly force (first)  $\leq 100\text{N}$  ,Unload force(sixth)  $\geq 25\text{N}$

Starting relay Supplier:

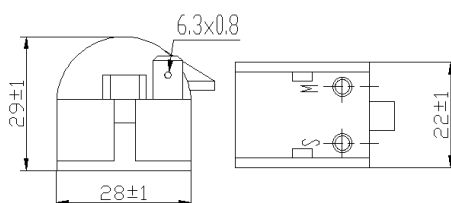
Hangzhou Star shuaier Electric Appliance Co.,Ltd.

Lanxi City Yueqiang Electric Co.,Ltd.

Shunde Ronggui Electronic CircuitMeasuring Equipment Co. Ltd.

Flammability: Anti-flammability

QP2-15/ JPQ II -15



### 8.2 Overload protector

Protector Model: DRB30N61A2 or BT100-120 or TB100-135

Compressor model		S76CZ1		
Protector Model		DRB30N61A2	BT100-120	TB100-135
Max.T.C Amp.(25°C)	A	10.5		
Trip time	S	5~15		
Reset time	S	30~150		
Open temp.	$\pm 5^\circ\text{C}$	125		135
Close temp.	$\pm 9^\circ\text{C}$	61		

Assembly force (first)  $\leq 80\text{N}$  ,Unload force(sixth)  $\geq 12.5\text{N}$

Overload protector Supplier:

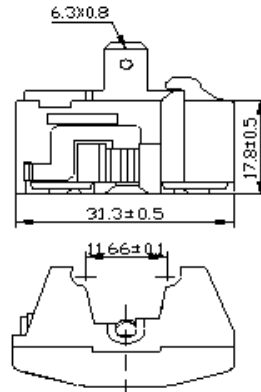
Hangzhou Star shuaier Electric Appliance Co.,Ltd.

Lanxi City Yueqiang Electric Co.,Ltd.

Shunde Ronggui Electronic CircuitMeasuring Equipment Co. Ltd.

Flammability: Anti-flammability

## DRB30N61A2 / BT100-120 /TB100-135



## 8.3. Starting relay and Overload protector

Compressor model		S76CZ1		
Type		JPQ II -15 BK+ BT100-120	QPS2-B15MG1+ DRB30N61A2	QP2-15 ZH +TB100-135
Starting relay	Resistance of Starting rely $\Omega$	15 $\pm$ 20%		
	max working voltage V	350		
	max current A	8		
	Trip time S	0.2~1.5		
	Reset time S	$\leq$ 100		
Overload protector	Max.T.C Amp.(25 $^{\circ}$ C) A	10.5		
	Trip time S	5~15		
	Reset time S	30~150		
	Open temp. $\pm 5^{\circ}$ C	125	135	
	Close temp. $\pm 9^{\circ}$ C	61		

 Assembly force (first)  $\leq$ 150N ,Unload force(sixth)  $\geq$ 37.5N

Supplier:

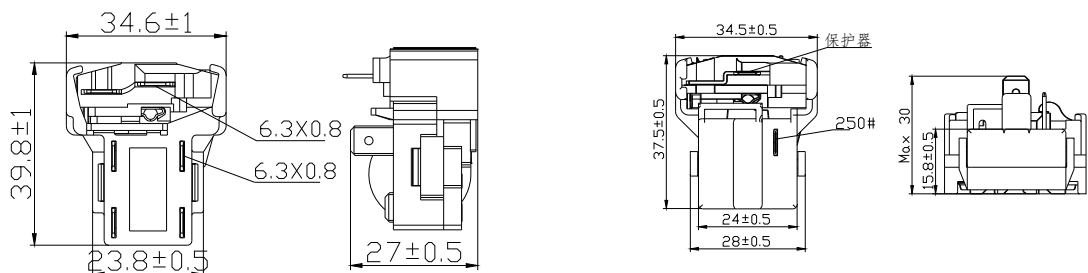
Hangzhou Star shuaier Electric Appliance Co.,Ltd.

Lanxi City Yueqiang Electric Co.,Ltd.

Shunde Ronggui Electronic CircuitMeasuring Equipment Co. Ltd.

Flammability: Anti-flammability

QPS2-B15MG1+DRB30N61A2/QP2-15 ZH+TB100-135      JPQ II -15 BK + BT100-120



## 9. Delivery State

No.	Name	Model	Quantity	CODE
1	Compressor	S76CZ1	1pcs	
2	Rubber plug	Φ6.4	1pcs	
3		Φ8.2	2pcs	
4	Rubber grommet	H model	4pcs	
5	Starting relay	QP2-15	1pcs	.
		JPQ II -15		
	Overload protector	DRB30N61A2	1pcs	
		BT100-120		
		TB100-135		
(5)	Starting relay and Overload protector	QPS2-B15MG1+DRB30N61A2	1pcs	
		QP2-15 ZH+TB100-135		
		JPQ II -15 BK + BT100-120		
6	Cover	QS08-04	1pcs	S1
7	Earth Screw	QET.1-24C	1pcs	
8	Hexagon bolt(screw)	QD05ZB-03	4pcs	M6×28
9	Sleeve	QET-04	4 pcs	Φ 10×17
10	Nut	QET-27	4 pcs	M6
11	Cover tap	QS08-05 D	1pcs	

Notes:1.All electrical parts and equipment assembly are supplied separately, not installed on the compressor.

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



## 10. Package、Storage and Transportation

Package type	Unrecyclable
Quantity	120pcs/box
Transportation	By Sea
Storage	Max. 2 layers
Gross Weight            Kg	911 ± 48
Net Weight                Kg	876 ± 48
Volume                    m <sup>3</sup>	1.12
Dimension: length×width×height (cm)	109×89×115
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.

## 11. 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). The interval of compressor operation must be more than 4 minutes in order to obtain a pressure balance in the systems.
- (5). 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.
- (6). The design of refrigeration system must be suitable to insure the oil could flow back to compressor.
- (7). 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	R134a
Max. condensing pressure	1.59MPa/abs(60°C)
Peak	2.0MPa/ abs(70°C)

- (8). Widen the evaporating Temp. range of the compressor should be approved by DONPER.
- (9). Compressor should be stored in a dry place.

- (10). Compressor accessories (eg:starting relay, overload protector etc.) are put in the accessories box instead of fixing on the compressor.
- (11). The stocking period must be less than 6 months after the date of production. If longer, you have to check whether the filled gas is sufficient. Replenishment must be done if necessary.
- (12). It's necessary to keep the compressor without rubber plug as short time as possible (max time 10 min).
- (13). R134a systems require a filter with drying agent which suitable for R134a refrigerant
- (14). The vacuum pump and the charging system must only be dedicated to R134a.
- (15). The refrigeration system should minimize the content of chlorine and moisture, and must be free of paraffin and silicon oil.
- (16). The organic substance non-compatible with R134a cannot be used in the refrigeration system.