

# **S76CU1** COMPRESSOR

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## TECHNICAL SPECIFICATION



HUANGSHI DONPER COMPRESSOR CO., LTD.

2024.1

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## 1. Compressor Type

Compressor model	S76CU1
Rated voltage/frequency	220-240V~ 50Hz
Refrigerant	R290
Application	LBP
Cooling method	Fan Cooling
Start torque	Low starting torque (LST)
Control device	Capillary tube
Motor type	RSIR
Running capacitor	\

## 2. Performance Data

Displacement	Net Wt.	Oil Charge	Cooling Capacity( $\geq 95\%$ )							COP( $\geq 95\%$ )	
			ASHRAE						CECOM AF	ASHRAE	CECOM
			-35	-30	-25	-23.3	-20	-15	-25	-23.3	-25
cm <sup>3</sup>	kg	ml	w	w	w	w	w	w	w	w/w	w/w
6.8	7.0±0.4	160±10	200	253	327	365	413	511	275	1.30	1.10

Note: These data 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

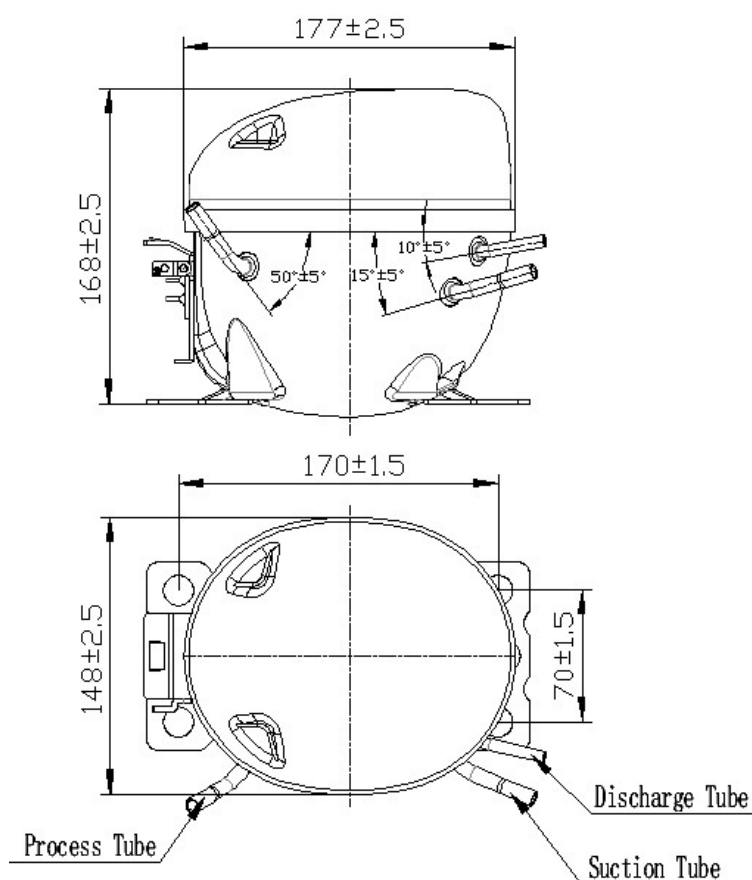
## 3. Running Condition

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.	130°C
Start voltage	187V [0.9/0.9MPa(abs)]
Shell min. resistance to pressure	35bar

#### 4. Compressor Mechanical Information

Oil type	Ester oil
Viscosity	18.2~21.2mm <sup>2</sup> /s(40°C)
Oil charged	160±10ml
Diameter of suction tube (I.D.)	Φ 6.5±0.1mm
Diameter of discharge tube(I.D.)	Φ 4.95±0.1mm
Diameter of process tube (I.D.)	Φ 6.5±0.1mm
Material of suction tube, process tube and discharge tube	Copper tube
Compressor noise	≤48.0dB(A)
Vibration	≤1.2m/s <sup>2</sup>
Protecting gas	-0.06~-0.02MPa

#### 5. Compressor Shape

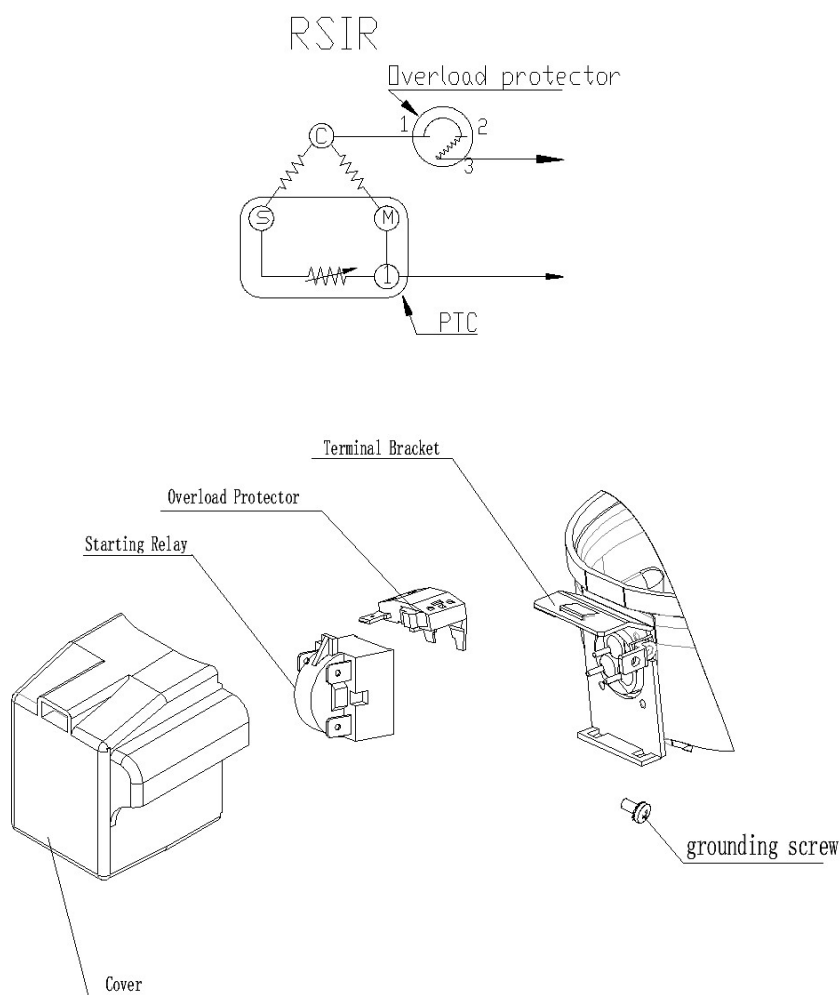


Caution: Suction tube and process tube can not be exchanged

Unmarked tolerance: ±5mm

Unmarked Angle: ±10°

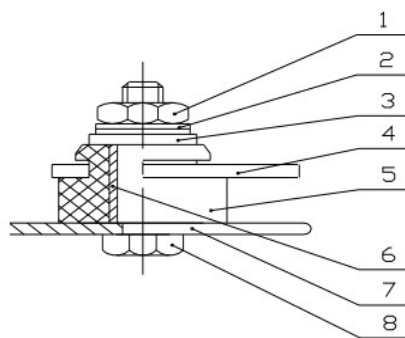
## 6. Wiring Diagram



Note: Each of the starting relay、the overload protector、the cover and the grounding 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

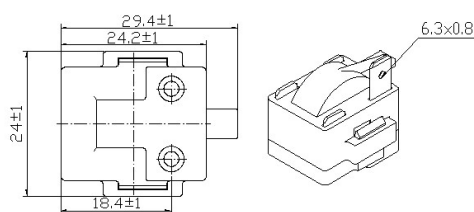
### 8.1 Starting relay

Model		QPS2-A15MG1	QP2-15
Supplier		Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Starting relay	Resistance $\Omega$	$15 \pm 20\%$	
	Run time S	0.2~1.5	
	Rese time S	$\leq 100$	
	Max working voltage V	350	
	Max current A	8	

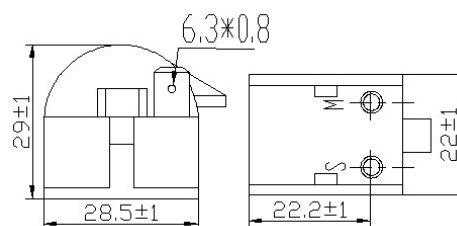
Assembly force  $\leq 100\text{N}$  Disassembly force  $\geq 25\text{N}$

Flammability: Anti-flammability

QPS2-A15MG1



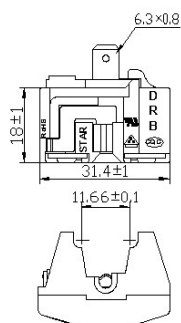
QP2-15



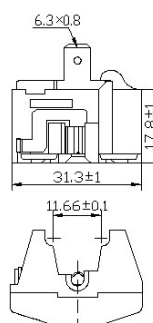
### 8.2 Overload protector

Model		DRB29M61A2	TB94-105
Supplier		Hangzhou Star shuaier Electric Appliance Co.,Ltd.	Shunde Ronggui Electronic Circuit Measuring Equipment Co. Ltd.
Protector	Max.T.C Amp.(25°C) A	9.4	
	Trip time S	5~15	
	Resent time S	30~150	
	Open temp $\pm 5^\circ\text{C}$	125	
	Close temp $\pm 9^\circ\text{C}$	61	

DRB29M61A2



TB94-105



## 9. Delivery State

No.	Name	Model	Quantity	CODE
1	Compressor	S76CU1	1pcs	Installed
2	Rubber plug	Φ6.4	1pcs	
		Φ8.2	2pcs	
3	Rubber grommet	H model	4pcs	
4	Starting relay	QPS2-A15MG1	1pcs	
		QP2-15		
	Overload protector	DRB29M61A2	1pcs	
		TB94-105		
5	cover	A1N	1pcs	
6	Earth screw	QET.1-24C	1pcs	
7	Anchor shaft pin assembly	M6*30	4pcs	
8	Nut	M6	4pcs	

Notes:1. All electrical parts and equipment assembly are supplied separately, not installed on the compressor, except the one noted “Installed”.

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

## 10. Package、Storage and Transportation

Package type	unrecyclable
Quantity	100pcs/box
Transportation	By sea
Storage	Max. 2 layers
Cross Weight      Kg	750±40
Net Weight      Kg	700±40
Volume      m <sup>3</sup>	1.12
Dimension: length×width×height    cm	112×89×112
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	R290
Max. condensing pressure	2.01MPa
Peak	2.44MPa

- 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 it is negative pressure inside the compressor.
- 12)、It's necessary to keep the compressor without rubber plug as short time as possible (max time 10 min).
- 13)、R290 systems require a filter with drying agent which suitable for R290 refrigerant
- 14)、The vacuum pump and the charging system must only be dedicated to R290.
- 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 R290 cannot be used in the refrigeration system.