



# Refrigeration Compressor

**QD52H**

110V/1Ph/60Hz  
R134A

Compressor Technical Specifications

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### 1. Compressor Type

|                         |                        |
|-------------------------|------------------------|
| Compressor Model        | QD52H                  |
| Rated Voltage/Frequency | 110V/60Hz              |
| Refrigerant             | R134a                  |
| Application             | L/MBP                  |
| Cooling Type            | Static Cooling         |
| Throttle Device         | Capillary              |
| Start Torque            | High Starting Torque   |
| Motor Type              | CSIR                   |
| Running Capacitor       | Yes (280 $\mu$ F/250V) |

### 2. Technology Parameter

| Displacement        | Nominal Power | Technology Parameter |                                  |                              |                          |                       |
|---------------------|---------------|----------------------|----------------------------------|------------------------------|--------------------------|-----------------------|
|                     |               | Frequency (Hz)       | Cooling Capacity $\geq 95\%$ (W) | Input Power $\leq 115\%$ (W) | Current $\leq 110\%$ (A) | COP $\geq 95\%$ (W/W) |
| 5.2 Cm <sup>3</sup> | 1/6 HP        | 60 Hz                | 150                              | 120                          | 2.0                      | 1.25                  |

|                         |                   |
|-------------------------|-------------------|
| Testing Conditions      | LBP               |
|                         | ASHAE             |
| Evaporating Temperature | -23.3°C / -9.94°F |
| Ambient Temperature     | 32.2°C / 89.96°F  |
| Condensing Temperature  | 54.4°C / 129.92°F |
| Suction Temperature     | 32.2°C / 89.96°F  |
| Subcooling Temperature  | 32.2°C / 89.96°F  |

### 3. Running Condition

|                                   |                      |
|-----------------------------------|----------------------|
| Ambient Temperature               | 10~43°C / 50~109.4°F |
| Evaporating Temperature           | -35~0°C / -31~32°F   |
| Voltage Range                     | 98-135V              |
| Max. Discharge Pressure           | 1.86Mpa (abs)        |
| Max. Condensing Temperature       | 65°C / 149°F         |
| Max. Winding Temperature          | 120°C / 248°F        |
| Max. Shell Temperature            | 95°C / 203°F         |
| Max. Discharge Temperature        | 110°C / 230°F        |
| Starting Performance              | 85V [0.5Mpa]         |
| Shell Min. Resistance to Pressure | 25bar                |

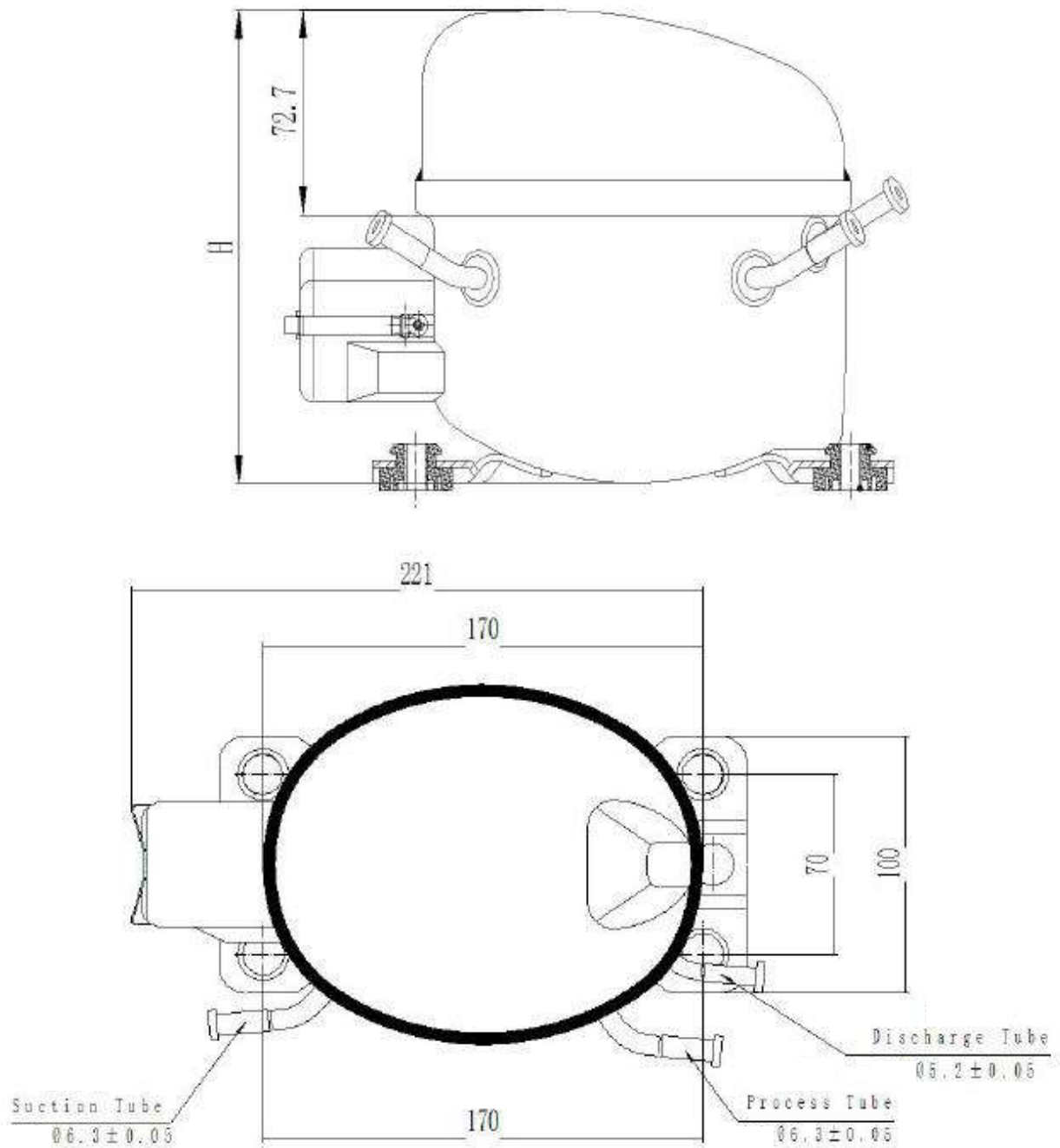
#### 4. Compressor Mechanical Information

|   |   |
|---|---|
| Oil Type  | Ester Oil   |
| Viscosity of Refrigerant Oil                              | 30-34mm <sup>2</sup> /S (40°C/104°F)                |
| Density of Refrigerant Oil                                | 0.975-0.981g/ml (20°C/68°F)                         |
| Brand   | RL32H   |
| Oil Changing Volume                                       | 180±5ml   |
| Weight (Including Oil)                                    | 6.5kg   |
| Diameter of Suction Tube (I.D)                            | Φ6.3±0.05mm   |
| Diameter of Discharge Tube (I.D)                          | Φ5.2±0.05mm   |
| Diameter of Process Tube (I.D) (P)                        | Φ6.3±0.05mm   |
| Material of Suction Tube, Process Tube and Discharge Tube | TP2   |
| Compressor Noise  | ≤40dB(A) (GB/T9098-2008)                            |
| Vibration   | 0.3m/s <sup>2</sup>                                 |
| Protecting Gas  | Dry Nitrogen 0.03 ~0.05 Mpa (dewpoint: -60°C/-76°F) |
| Height  | 173mm   |
| Water Collector Hook                                      | No  |
| Sealing   | Rubber Plug   |

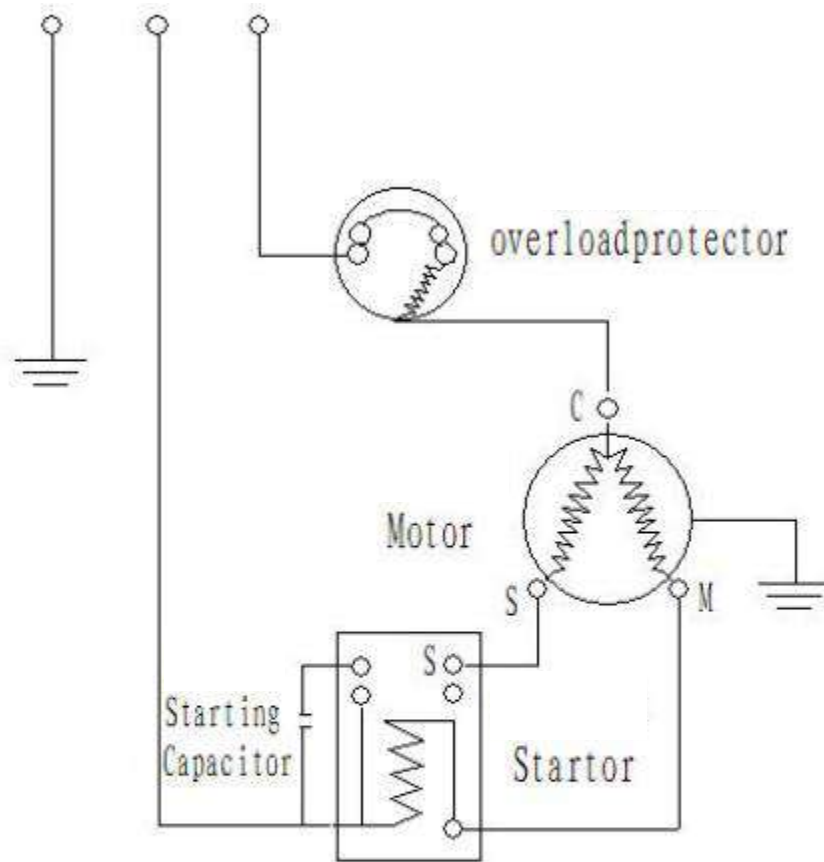
#### 5. Residue

|                                |       |
|--------------------------------|-------|
| Moisture Content               | ≤80mg |
| Content of Residual Impurities | ≤50mg |

6. Compressor Shape



7. Wiring Diagram



CSIR ( CURRENT )

## 8. Starter and Protector

### 8.1 Starter

Model: QL2-4.90

Starter Type: CURRENT

Manufacturers: Hangzhou Huo Furman Electrical Appliance Co. Ltd.

### 8.2 Protector

Model: XB130-120

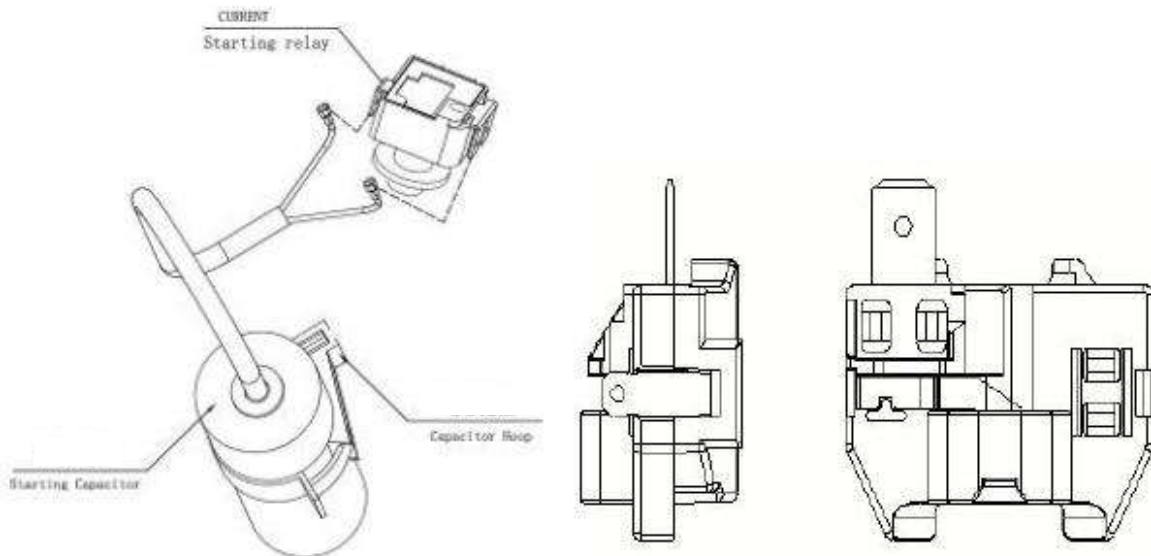
Manufacturers Hangzhou Huo Furman Electrical Appliance Co. Ltd.

|                                       |              |
|---------------------------------------|--------------|
| <b>Compressor Model</b>               | <b>QD52H</b> |
| Trip Current (25°C/77°F)              | 13.0A        |
| Trip Time                             | 7-14S        |
| Reset Time                            | 45-120S      |
| Trip Temperature                      | 120±5°C      |
| Reset Temperature                     | 61±9°C       |
| The Minimum Trip Current (75°C/167°F) | 3.8A ± 10%   |
| Assembly Force                        | ≤75N         |
| Disassembly Force                     | ≥9N          |
| UL Flammability Classification        | UL94V-0      |

## 9. Starter and Protector Appearance

Note:

- 1) All electrical parts and installation accessories are packed separately, not installed on the compressor.
- 2) All electrical parts and installation accessories listed on the delivery list are all provided by our company.



10. Delivery List

| Serial Number | Name                                | Specifications | Quantity (pc) |
|---------------|-------------------------------------|----------------|---------------|
| 1             | Compressor                          | QD52H          | 1             |
| 2             | Installation Accessories            |                |               |
| 2.1           | Rubber Grommet                      |                | 4             |
| 2.2           | Sleeve                              |                | 4             |
| 3             | Electrical Accessories              |                |               |
| 3.1           | Thermal Overload Protector          |                | 1             |
| 3.2           | Current Starter                     |                | 1             |
| 3.3           | Relay Cover                         |                | 1             |
| 3.4           | Cover Buckle                        |                | 1             |
| 3.5           | Grounding Screw (Including Washers) | M4×6           | 1             |
| 3.6           | Start Capacitor                     | 280μF/250V     | 1             |

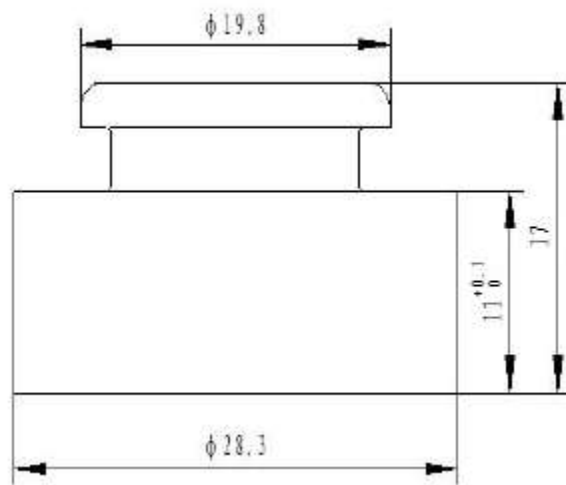
11. Package, Storage and Transportation

|                         |   |
|-------------------------|---|
| Quantity                | 100/120 pcs/pallet                                  |
| Stacking Layer          | At most two layers                                  |
| Main Packing Components | Wooden supporter, upper wooden cover, carton        |
| Transfer                | Keep the compressor in normal and vertical position |

12. Accessory Diagram as Bellow

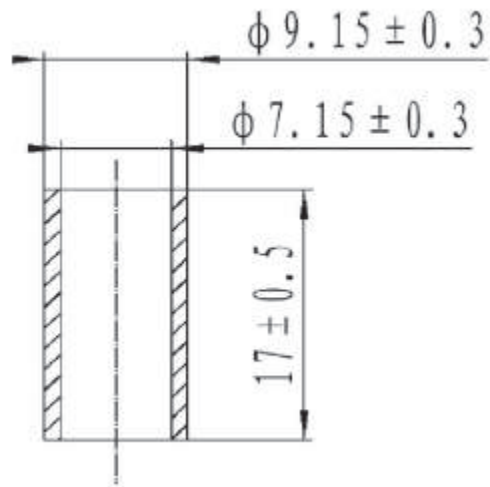
1) Rubber grommet:

|          |                |
|----------|----------------|
| Material | Natural rubber |
| Hardness | Shore A55±5°   |
| Color    | Black          |



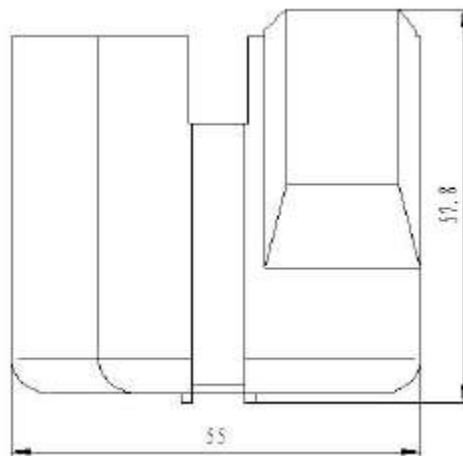


2) Sleeve:

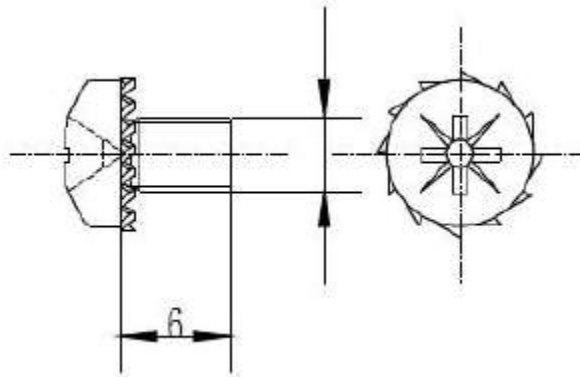


3) Relay cover:

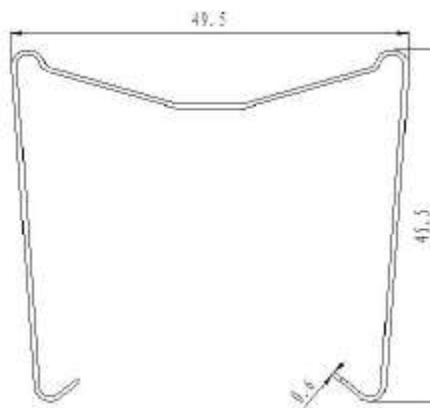
|                                |         |
|--------------------------------|---------|
| Material                       | PPO     |
| UL Flammability Classification | UL94V-0 |



4) Grounding Screw:



5) Cover Card:



### 13. General Requirement

- 1) Compressor should be stored in a dry and drafty place.
- 2) Compressor should not be tilted or inverted in storage and transportation; collision should be avoided. The installation level and working condition should not be tilted at more than 5°.
- 3) Rubber plugs should not be pulled out from discharge tube before installation so as to avoid impurity and humidity. The installation should be completed within 10 minutes after that. (It is recommended to pull out the rubber plugs of discharge tube first.)
- 4) The compressor's ground connection should be reliably connected with that of the refrigeration appliance all the time.
- 5) In order to keep a pressure balance in system, the interval of operation should not be less than 5 minutes.
- 6) The charging volume of refrigerant oil has been optimized by our company. Do not pour any oil out or into the compressor randomly.
- 7) The accessories (ex. Starter, thermal protector etc.) are not installed during delivery, but can be found in the accessory case. Be sure to select the corresponding starter and the thermal protector models correspondingly.
- 8) Match the proper evaporating temperatures according to the low, middle, and high back pressure requirements. Pay attention to the admitted ranges of voltage and frequency for the different models.
- 9) Compressor cannot start or run in high-voltage or vacuum condition. Checking insulation and compressive resistance in vacuum is not allowed.
- 10) The process or suction tube of direct and semi-direct gas compressor cannot be inter changed, or it would be difficult to guarantee the performance of compressor.
- 11) Do not use the compressor as vacuum-pumping. The oxygen injection should not be used for leak detection of refrigeration system, or it would possibly cause accidents.
- 12) The oil return in system has been fully taken into consideration in design.
- 13) The ambient temperature in which compressor working should not be higher than 43 °C/113°F. The current and input power unit's continuous operation should not be exceeding the limitation of the compressor at the highest room temperature (43°C/113°F).
- 14) The stocking period must be less than 6 months after the date of production. If longer, you have to check whether the filled dry nitrogen is sufficient. Replenishment must be done if necessary.
- 15) Do not keep the R134a compressor connect pipe open too, ideally no longer than 10 minutes.
- 16) The vacuum pump and the charging system must only be dedicated to R134a.
- 17) The organic substance non-compatible with R134a cannot be used in the refrigeration system.
- 18) R134a refrigerating system should use the dry filter corresponding to R134a.
- 19) R134a refrigerant system should strictly control the content of moisture, impurities, paraffin, silicone oil and chloride ion.
- 20) R134a compressor is injected with Ester Oil approved by Hangzhou XinNihong Refrigeration Equipment Co. Ltd., it is not allowed to randomly pour out or add.

### 14. Environmental Protection Requirement to Compressor and Accessories

- 1) Requirement of PAHs: PAHs (II class): BaP content < 1 ppm, total content of 16 PAH (EPA) < 10 ppm
- 2) Regulatory requirement of REACH: SVHC < 1000 ppm
- 3) Requirement of Phthalate: total content of 18 hazardous material < 1000 ppm