



Material no : **1SCBO702053**
 Model : **C-BHR200H0X**
 Customer : **Shoeti**

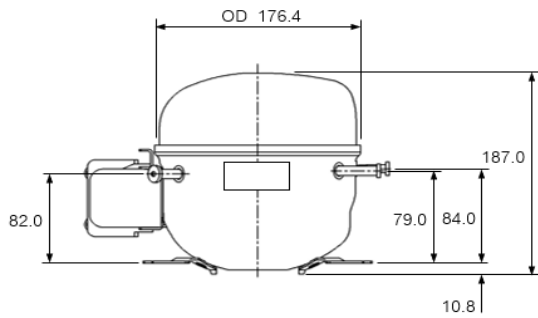
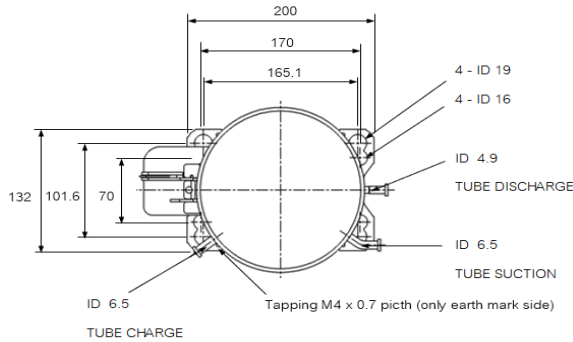
Customer Approved

Hermetic compressor NON-CFC

100 V~ 50 / 60 Hz 1 Phase

(Sign / Sealed)

Dimension (mm)



Performances data

| | | | | |
|---|------|------------|-----------|-----------|
| Cooling capacity | ± 8% | (Btu/h) | 2492.7 | 2949.7 |
| | ± 8% | (Kcal/h) | 628.7 | 743.9 |
| | ± 8% | (W) | 731.0 | 865.0 |
| Input power | ± 8% | (W) | 286.7 | 194.0 |
| Input current | ± 8% | (A) | - | - |
| COP | | (W/W) | 2.55 | 2.59 |
| EER | | (Btu/h.W) | 8.70 | 15.20 |
| | | (Kcal/h.W) | 2.19 | 3.83 |
| Starting V. (at 7 kg/cm ² G) | | (V) | 85 max | |
| Noise (Distance 30 cm) | | dB(A) | 50 max | |
| Rated voltage | | | 100V/50Hz | 100V/60Hz |

Test condition

| | | | |
|-------------------|------|------|----------|
| Evaporating temp. | (°C) | 7.2 | (45 °F) |
| Condensing temp. | (°C) | 54.4 | (130 °F) |
| Suction gas temp. | (°C) | 35.0 | (95 °F) |
| Liquid temp. | (°C) | 46.1 | (115 °F) |
| Ambient temp. | (°C) | 35.0 | (95 °F) |

Application

| | | | |
|-------------------------|------|-------------|--------------|
| Evaporating temp. range | (°C) | -15 ~ 10 | (-5 ~ 50 °F) |
| Refrigerant | | R-290 | |
| Compressor cooling | | Fan Cooling | |
| Voltage range | (V) | 85 ~ 110 | |

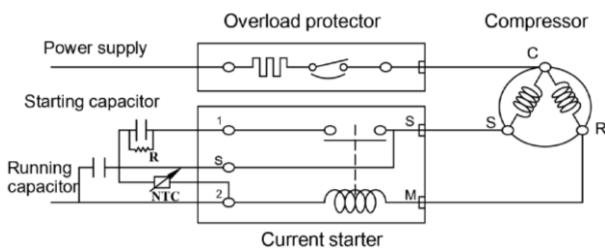
Compressor and motor data

| | | |
|-------------------------------------|------------|--------------------------|
| Design | | Reciprocating 1-Cylinder |
| Bore size ID | (mm) | 21.0 |
| Stroke | (mm) | 15.0 |
| Displacement | (cc/rev) | 5.20 |
| Oil charge (mineral oil) | (cc) | 250 |
| Motor type | | 1 Phase / 2 Pole / CSR |
| Winding resistance at 25 °C (77 °F) | | |
| Main coil ± 5 % | (ohm) | 2.33 |
| Aux. coil ± 5 % | (ohm) | 7.03 |
| Revolution | (rpm / Hz) | 2900 / 50 3500 / 60 |
| Weight (No oil / with oil) | (kg) | - |

Electrical parts

| | | |
|-------------------------|----------|--------------------------------------|
| Overload protector | | External thermal over current type |
| Type | | 4TM / 5TM 771RHBYY-53 (40CM522058) |
| UT current / ST current | (A) | 4.54 / 17.5 |
| Current Starter | | KME682-12NTP (3KME682-12NTPASY) |
| Pick up current max | (A) | 7.30 |
| Drop out current max | (A) | 6.40 |
| Starting capacitor | (μF / V) | 125 / 160 with resistor (40CM524050) |
| Running capacitor | (μF / V) | 30 / 220 Shizuki (40CM524031) |

Circuit diagram CSR



Issued by T. Thipada Apr 09, 24

Quality Assurance Department / Kulthorn Premier Company Limited.

Certification Marks

RoHS



TIS.812-2558

Application Standard

[Compressor L.B.P / M.B.P / H.B.P Type]

When use compressor, confirm if the following standards are kept.

| No | Item | Standard & Designation | Conditions - Remark |
|--|--|---|--|
| 1 | Refrigerant | R290 | |
| 2 | Evaporating temp. | L.B.P -35 ~ -5 °C (-31~23 °F) M.B.P, H.B.P -15 ~ 10 °C (5~50 °F) | Except for the short period such as Pull-down etc. |
| 3 | Condensing temp. | 60 °C (140 °F) max. | In stabilized at A/T 43 °C (110 °F) |
| | | 40-45 °C (104~113 °F) | In stabilized at A/T 30 °C (86 °F) |
| | | Recommend temp. | At the peak in pull-down in A/T 43 °C (110 °F) |
| | | 68 °C (154 °F) max. | During the pull-down period at ambient temp. of 43 °C (110 °F) |
| 4 | Compression ratio | L.B.P. : 14.5 max. M.B.P., H.B.P : 12.0 max . | Hi-side / Lo-side pressure (abs) Except very short period as pull-down. |
| 5 | Motor winding temp. | Usual : 115 °C (239 °F) max. Max. : 130 °C (266 °F) max. | In stabilized at A/T 30 °C (86 °F) In stabilized at A/T 43 °C (110 °F) with ± 10% x rated voltage. |
| 6 | Shell bottom temp. (low side) | Max. : 105 °C (221 °F) max. | In stabilized at A/T 43 °C (110 °F) with ± 10% x rated voltage. |
| 7 | Discharge gas temp. | Usual : 105 °C (221 °F) max. Max. : 121 °C (250 °F) max. | In stabilized at A/T 30 °C (86 °F) In stabilized at A/T 43 °C (110 °F) with ± 10% x rated voltage. |
| * Measured on the pipe at 5 cm (2 inches) away from shell. | | | |
| 8 | Suction gas temp. (Super Heat) | 5 °C (41 °F) min. | Follow strictly items 5, 6 and 7, on the pipe At 20~30 cm (8~12 inches) away from shell. |
| 9 | Voltage range | -15% ~ 10% x rating | At the terminals of compressor |
| 10 | Refrigerant Charge | Minimal | Minimize meeting cooling performance, startability, temperature limits, pressure limits and the like. |
| 11 | Oil Charge | Designated quantity ± 10 cc. | Charge in designated oil Acid number 0.02 KOH/g max. Colour 1.0 Max (ASTM Std.) Moisture 10 ppm max. Residual gas. 0.2 Vol% max. |
| 12 | Moisture | 100 ppm max. | Special dryer is needed (For instance XH-7 or XH-9) |
| 13 | Non-condensable gas | Total : 1% (Vol) max. Oxygen : 0.01% (Vol) max. | Recommended Level of evacuation should be less than 1.01 Kpa at 24 hours after evacuation completed. |
| 14 | Dust and Dirt | To be determinaid | Need to survey user capability. |
| 15 | Pressure rise at abnormal situation | 3.43 Mpa max. | Even in case of condenser fan-blocked. |

Application Standard

[Compressor L.B.P / M.B.P / H.B.P Type]

When use compressor, confirm if the following standards are kept.

| No | Item | Standard & Designation | Conditions - Remark |
|----|---------------------|--|--|
| 16 | On-Off period | 6 times / hour (Recommended) | Recommended to start up at balanced Hi-Low pressure in 5 minutes after standstill. |
| 17 | Oil return in comp. | 90% min. the charge | Measure in hot condition after designated appliance test. |
| 18 | Strain in piping | 0.34 Mpa. max. (34.32 N/mm ² max.) 0.12 Mpa. max. (12.26 N/mm ² max.) | At time of start-up and disconnection. in operation |
| 19 | Degree of tilt | On running, compressor shall not be tilted more than 5 degrees in all direction. | |
| 20 | Electical parts | Designated parts | Confirm its suitability with unit test. Keep to designated temperature range. |
| 21 | Mounting parts | Designated parts or equivalents | Confirm its suitability with unit transportation test. |

NOTE

A. Remarks on Compressor

- (1). In principle, the compressor charged with lubricating oil must be used within about 6 month from production date.
- (2). Usual the compressor by removing the plug at the tube end and check to see if gas comes out from the compressor. If no detected. The compressor must not be used.
- (3). Do not leave the compressor with its pinch plug open for more than about 15 minutes.
- (4). Never run the compressor with any air other than the refrigerant.
- (5). Never run the compressor without refrigerant properly filled inside.
- (6). Never run when the compressor has vacuum.
- (7). Never run the compressor without lubricating oil properly field inside.
- (8). Never run the compressor without refrigeration systems properly completed.
- (9). A dropped compressor must not be used.

B. Remarks on Refrigeration Systems.

- (1). To avoid any contamination on the refrigerator assembly line, a dedicated charging station (refrigerant or oil) must be used.
- (2). All materials used in the process must be compatible with (R134a & R1234yf).
- (3). The system components must have a degree of cleanliness better than that of CFC12 system. Especially residue of chlorinated impurity shall not be allowed.
- (4). The maximum moisture content in refrigerant cycle should be 150 mg.
- (5). Special dryer is needed when using (R134a & R1234yf). (for instance XH-7 or XH-9 from Union Carbide) Usually a 20% larger dryer is recommended.
- (6). Special leak-detectors have to be used.

C. Others (The ambient condition to be observed)

- (1). 43 °C (110 °F) or less.
- (2). Keep well ventilated around the compressors.
- (3). Keep well dried around the compressors.
- (4). Avoid operation the compressor when a corrosive gas or an inflammable gas is present.
- (5). Do not operate the compressor in any vibration consonant.
- (6). Certain materials cam degrade the characteristics of Starting relay device.
 - (6.1) Starting relay device should not be exposed to sulphur (S) or chlorine (cl) containing gases, and must be kept away from materials that can generate them. In particular, avoid the use of polyvinyl chloride (PVC) insulation in contact with starting relay terminals.
 - (6.2) Starting relay device should not be exposed to oils of any kind.