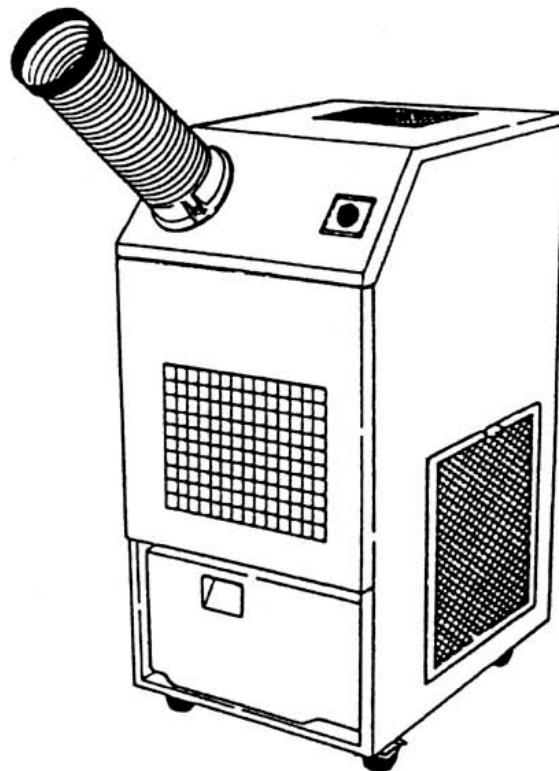


MOVINCOOL®
Spot Cooling Systems

INSTRUCTION MANUAL

**MODEL : 10SFU
10SFU-1**

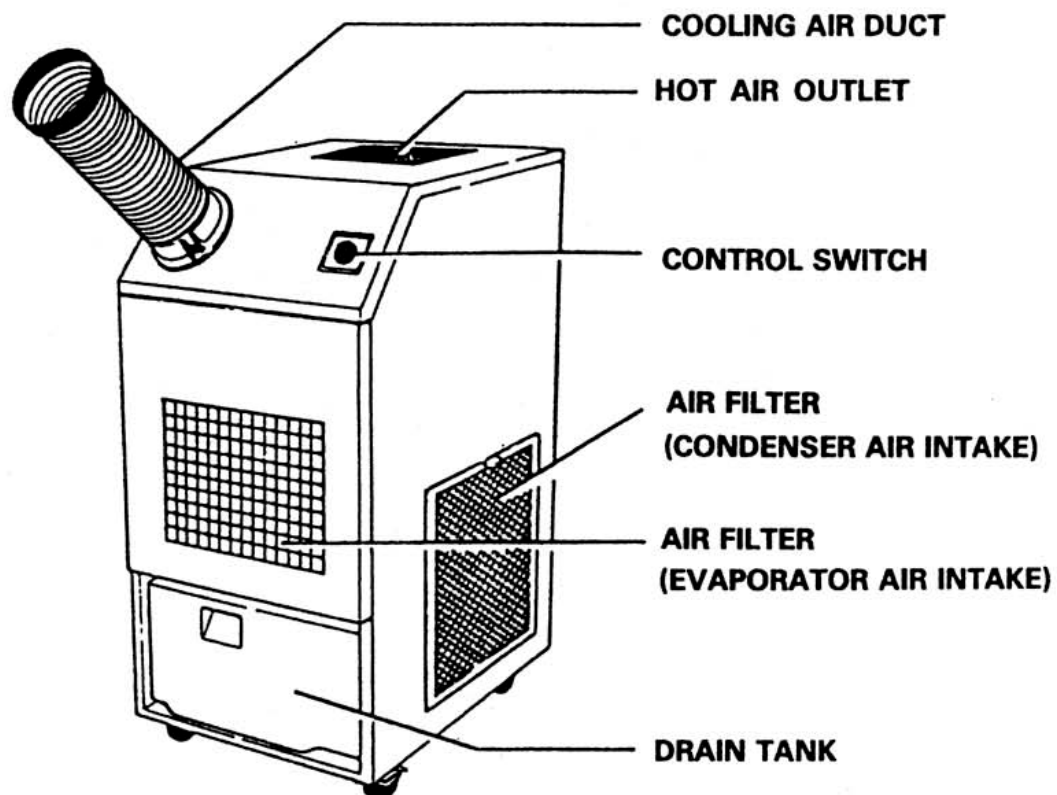


READ THIS MANUAL CAREFULLY FOR INSTRUCTIONS ON
CORRECT INSTALLATION AND USAGE, AND READ ALL
SAFEGUARDS.

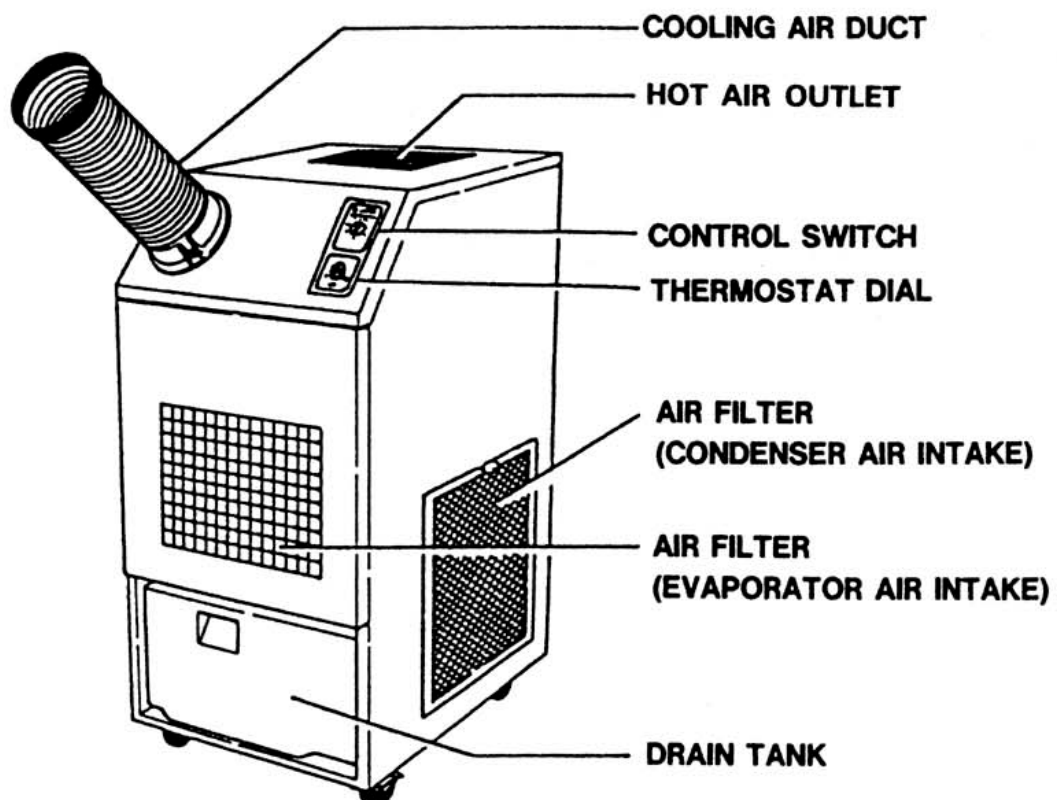
DENSO CORPORATION

1. PART NAMES

[Model 10SFU]



[Model 10SFU-1]



2. ASSEMBLY

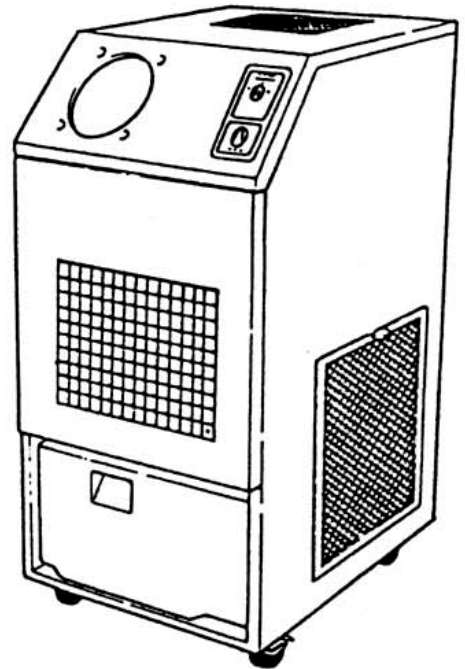
2-1. Air ducts

Using four screws, install cooling air duct to the unit.



2-2. Power cord connection

Do not use any extension cords for connecting the unit.



3. IMPORTANT SAFEGUARDS

Read the following safeguards carefully when installing the unit. This manual should be saved for future reference.

- 1) Do not install and operate the unit in a potentially explosive or combustible atmosphere.

**EXPLOSIVE GAS
COMBUSTIBLE GAS
CORROSIVE GAS**



- 2) Do not operate the unit in an atmosphere of corrosive gases.

- 3) The environmental requirements of this unit at the installation site are 25°C (77°F) to 40°C (104°F) with a 50% relative humidity when the unit is in operation. If the unit is operated in an environment outside this range, its protective device is activated, stopping the unit.

**No
Good!**

**TEMPERATURE
OVER 40°C (104°F)**

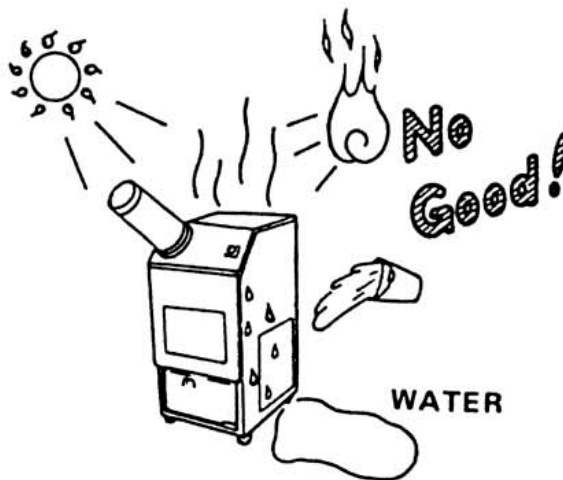


**HUMIDITY
OVER 50%**

- 4) Do not place the unit in direct sunlight.
- 5) Keep the unit away from flammable materials.
- 6) Keep the unit away from direct contact with water.

**DIRECT
SUNLIGHT**

**FLAMMABLE
MATERIALS**

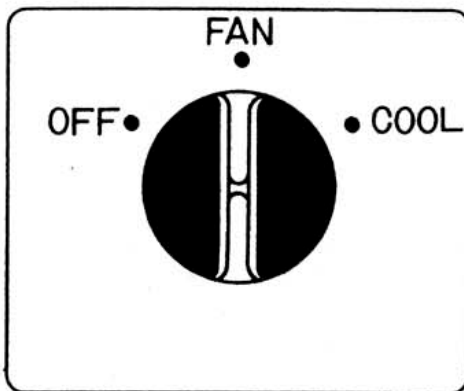


WATER

4. INSTRUCTIONS FOR USE

4-1. Control switch panel

The operation of the unit is controlled by the switch above the panel. Check the power supply before turning the unit on.



[FAN]

The fan will start when the switch is set to FAN.

[COOL]

To start cooling, set the switch to COOL.

[OFF]

Set the switch to off, and the fan and cooler will stop.

Fig. 4-1. Control switch panel

NOTE:

- 1) When the overflow lamp lights, the drain tank is full of water and the unit stops running automatically.

If this happens, be sure to set the switch to OFF, and drain the water from the tank.

- 2) COMPRESSOR PROTECTION (10SFU-1 only)

There is a time delay circuit included in the electrical system to prevent short-cycling the compressor. This delay is in effect any time when the compressor is turned on, by the control switch, thermostatic control, or resumption after black-out.

Delay time 75 ± 15 seconds

- 3) AUTOMATIC RESTART AFTER POWER INTERRUPTION (10SFU only)

The system will resume operation automatically after a power interruption, eliminating the need for manual reset of the control switch.

The compressor is also protected by a delay circuit (see paragraph 2 above) to prevent short-cycling.

4) TEMPERATURE CONTROL (10SFU-1 only)

The compressor is controlled by a thermostat which senses the return air temperature. This thermostat can be set to approximate temperatures by means of the thermostat dial, located below the control switch.

| Dial Setting | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------------------------------------|----|----|----|----|----|----|----|----|
| Return Air Temperature (Approx.) | °C | 32 | 29 | 27 | 24 | 21 | 18 | 16 |
| | °F | 90 | 85 | 80 | 75 | 70 | 65 | 60 |

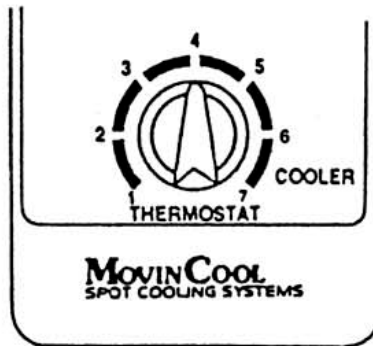


Fig. 4-2. Thermostat dial

When the unit is continuously operated with the dial set to 5 or more, the compressor will occasionally stop to avoid freezing.

4-2. Moving the unit

When moving the unit, set the switch to the OFF position, and unplug the power source. After finishing the move be sure to lock the casters.

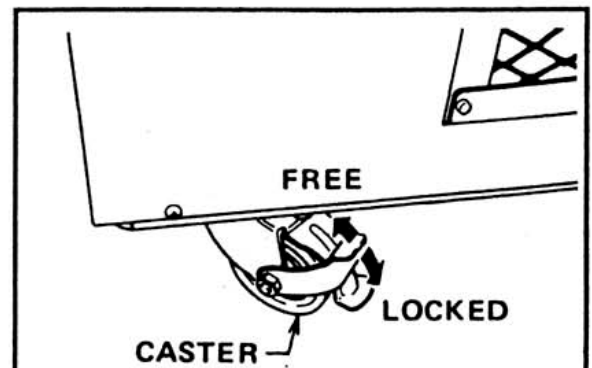


Fig. 4-3. Moving unit

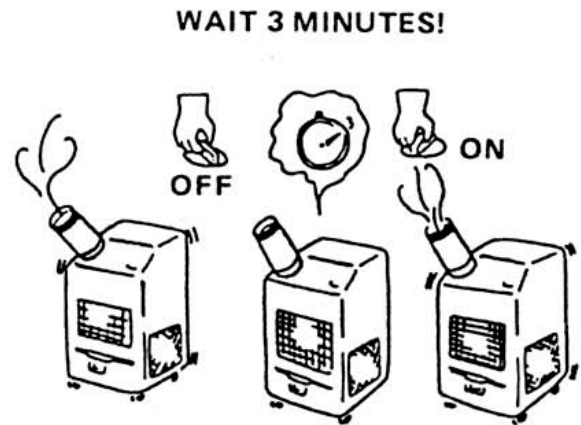
4-3. Condensate pump kit <option>

These models come standard with a condensate tank, which collects the water that forms on the evaporator during normal cooling operation. If the unit is required to operate continuously without periodic emptying of this tank, a condensate pump may be needed.

Condensate Pump Model CU-41

5. OPERATION SAFEGUARDS

- 1) Once the unit has been switched off, wait three minutes before restarting the unit to protect the compressor. (10SFU only)



- 2) Do not turn the switch roughly or unnecessarily.

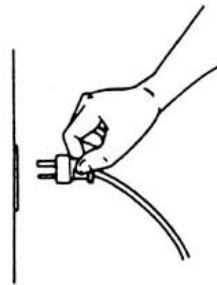


- 3) Do not move the unit while the fan or cooler is running.

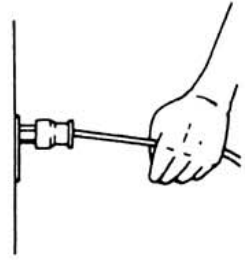


- 4) Connect the power cable firmly into the socket. Disconnect the power cable by pulling the plug, not on wire.

Connect plug to the proper power source: 115 volts.



PULL PLUG



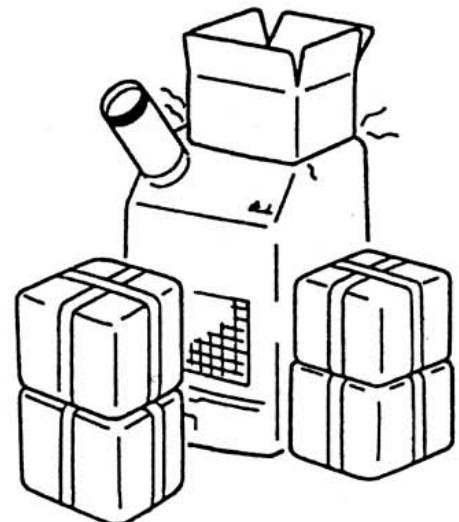
**DO NOT PULL
POWER WIRE**

- 5) Do not insert your hand or any other object into the ducts. Close supervision is necessary when the unit is used near children and pets.



**DO NOT INSERT
ANY OBJECT.**

- 6) Do not block the air filters.



**DO NOT BLOCK
AIR FILTERS.**

- 7) Do not touch the unit with wet or dirty hands.

**DO NOT TOUCH
BY WET OR
DIRTY HANDS.**



- 8) Do not tilt or overturn the cooler.

Never put anything on top of the unit.

**DO NOT TILT
OR OVERTURN.**



- 9) If water should leak from the unit, turn the switch to the OFF position, and drain the water from the tank.



WATER LEAK

6. INSPECTION AND CARE OF THE UNIT

Read the following instructions on the care and inspection of the unit carefully to help insure the utmost in cooling comfort.

Care of unit includes the following:

Daily inspection

In-season inspection — Should be carried out before putting the unit into season.

Off-season inspection — Unit should be completely checked out before storing away for the season.

6-1. Daily and in-season inspection

A. Check air filters

At least once a week or every two or three days remove the air filters and check them. If they are dirty, wash them as described below.

as described below.

i) Remove the filters.

ii) Remove the filter element.

iii) Submerge the filter element in cool or lukewarm water. Swirl the filter around to clean it. If the element is exceptionally dirty, 10 to 15 minutes in soapy water. Clean the element as described above, and rinse well in clear water. Let the element dry before using it.

Avoid the use of solvents such as gasoline or thinner to clean the filter element.

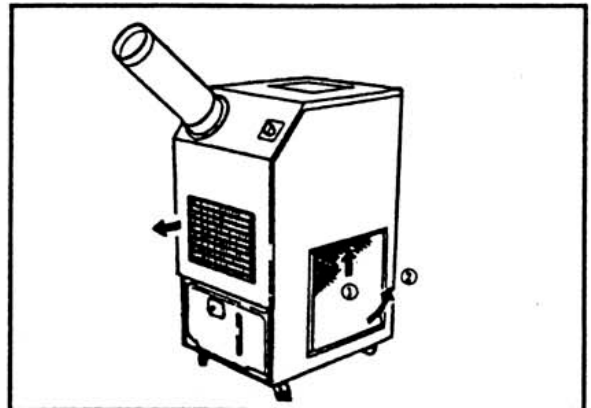


Fig. 6-1. Removal of air filters

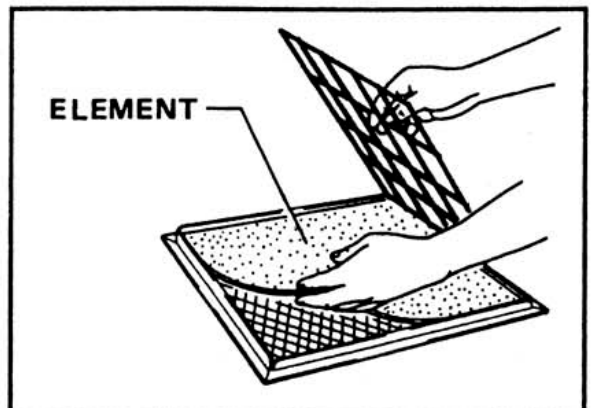


Fig. 6-2. Removal of filter element

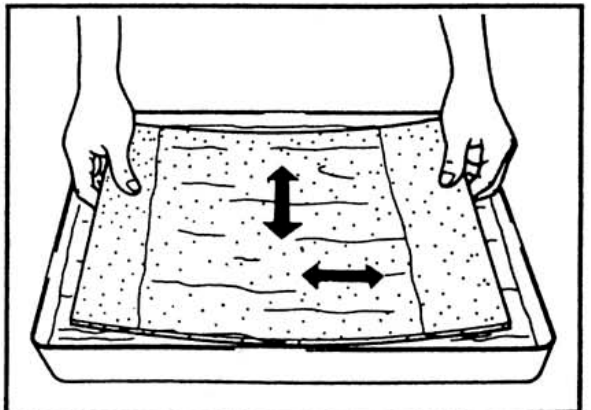


Fig. 6-3. Cleaning of filter element

B. Drain tank check

Every six hours, drain the water that has collected in the unit's drain tank. The unit stops running automatically, when the drain tank is full of water.

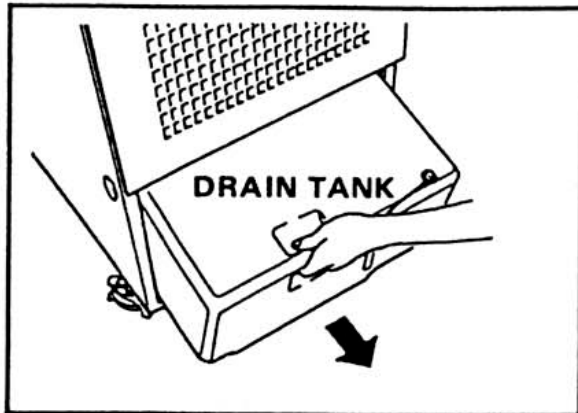


Fig. 6-4. Removing drain tank

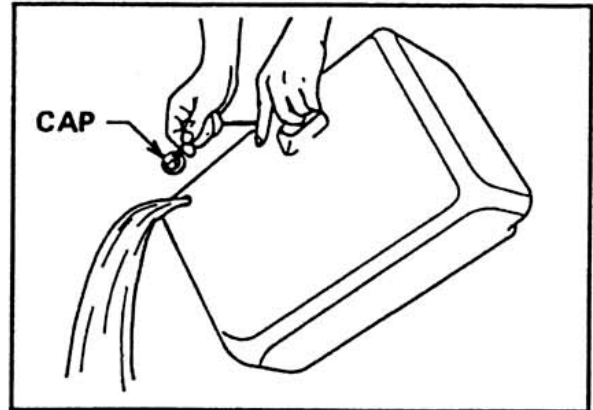


Fig. 6-5. Draining water

C. Abnormal noises, shaking

Please contact with repair shop if the unit is shaking or making abnormal noises in operation.

6-2. Off-season inspection

A. Check air filters

Check the air filters as described above.

B. Drying the unit

On a dry day turn the switch to FAN, and run the fan for about eight hours to completely evaporate any water within the unit. When the unit is dry, cut the switch, remove the power cord, and store away for the next season.

7. HINTS FOR ENJOYING THE SPOT COOLING SYSTEM

In contrast to most conventional coolers, which circulate cool air to the entire environment, this unit is designed for cooling particular areas or objects.

To cool the areas desired simply turn the cooling air ducts in that direction.

The unit is particularly effective for providing spot cooling for workers with large open spaces.

8. IN CASE OF TROUBLE

In the case of "no air movement" or "insufficient cooling", follow the inspection points listed below. If nothing out of the ordinary can be found, consult your dealer. Also, consult your dealer if any other problems occur with your unit such as abnormal noise or shaking.

1) Is there some hidden heat source in the room?

If so, remove or block it.

2) Are direct rays of sunlight entering the room?

If so, obstruct the rays by pulling the blinds or curtains.

3) Are the air filters blocked?

If so, clean them out.

9. SPECIFICATIONS

| Item | Model | 10SFU | 10SFU-1 |
|--|---|---|---|
| [Rating Condition] (Inlet air) | | DB 35°C (95°F), 60%RH (WB 28.2°C (83°F)) | DB 35°C (95°F), 60%RH (WB 28.2°C (83°F)) |
| [Features] | | | |
| Power frequency | (Hz) | 60 | 60 |
| Line Voltage | (Volt) | Single phase 115 | Single phase 115 |
| Power consumption | (kw) | 1.1 | 1.1 |
| Current consumption | (Amp) | 10 | 10 |
| Power factor | (%) | 96 | 96 |
| Starting current | (Amp) | 34 | 34 |
| Power wiring | (AWG) | 14 (3-core) | 14 (3-core) |
| [Cooling Unit] | | | |
| Cooling capability | (kcal/h) (Btu/h) | 2500 10000 | 2500 10000 |
| Cooling system | | Direct expansion | Direct expansion |
| [Blower] | | | |
| Type of fan | | Centrifugal fan | Centrifugal fan |
| Air volume | (m ³ /h) (ft ³ /min) | 450 265 | 450 265 |
| Motor output | (kw) | 0.14 | 0.14 |
| [Compressor] | | | |
| Type | | Hermetically sealed rotary type | Hermetically sealed rotary type |
| Output | (kw) | 0.6 | 0.6 |
| Refrigerant | | R-22 | R-22 |
| Packed amount of | (kg) | 0.48 | 0.48 |
| refrigerant | (lbs) | 1.05 | 1.05 |
| [Saftey Device] | | | |
| Compressor overload relay | | With | With |
| Fan motor protector | | With | With |
| Drain switch | | With | With |
| Anti-freezing thermostat | | With | With |
| Restart relay for power interruption | | Without | With |
| Time delay relay | | Without | With |
| [Control Device] | | | |
| Temperature control | | Without | With |
| [Dimensions and Weight] | | | |
| W × D × H | (mm) (inch) | 490 × 670 × 1045 19.3 × 26.4 × 41.1 | 490 × 670 × 1045 19.3 × 26.4 × 41.1 |
| Weight | (kg) (lbs) | 66 145 | 66 145 |
| [Operating Conditions] (Inlet air) | | | |
| | MAX | 40°C (104°F), 50%RH | 40°C (104°F), 50%RH |
| | MIN | 25°C (77°F), 50%RH | 25°C (77°F), 50%RH |