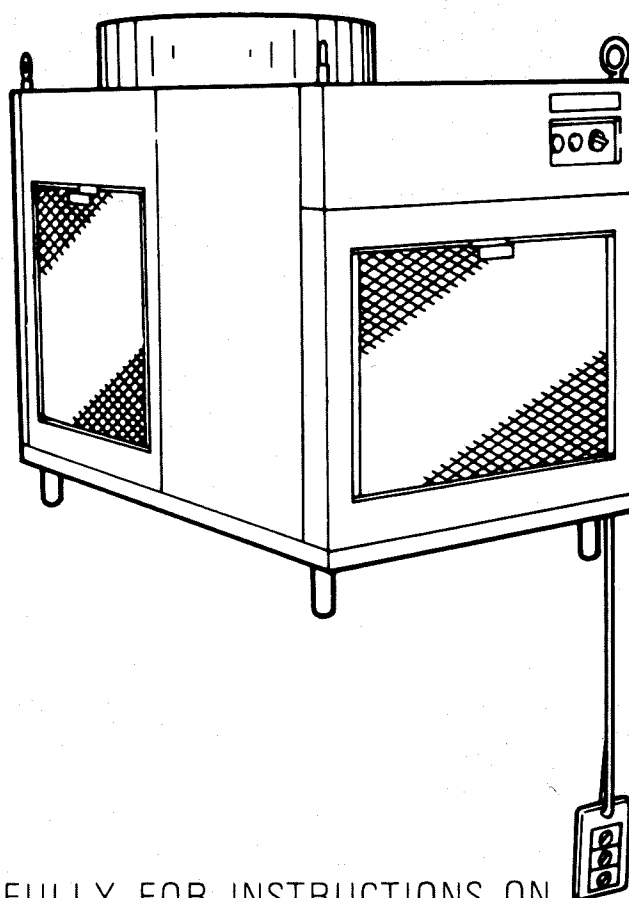


**DENSO**

# SPOT COOL<sup>®</sup> 30HU

## INSTRUCTION MANUAL

**MODEL : 30HU**



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

**DENSO NIPPONDENSO CO., LTD.**

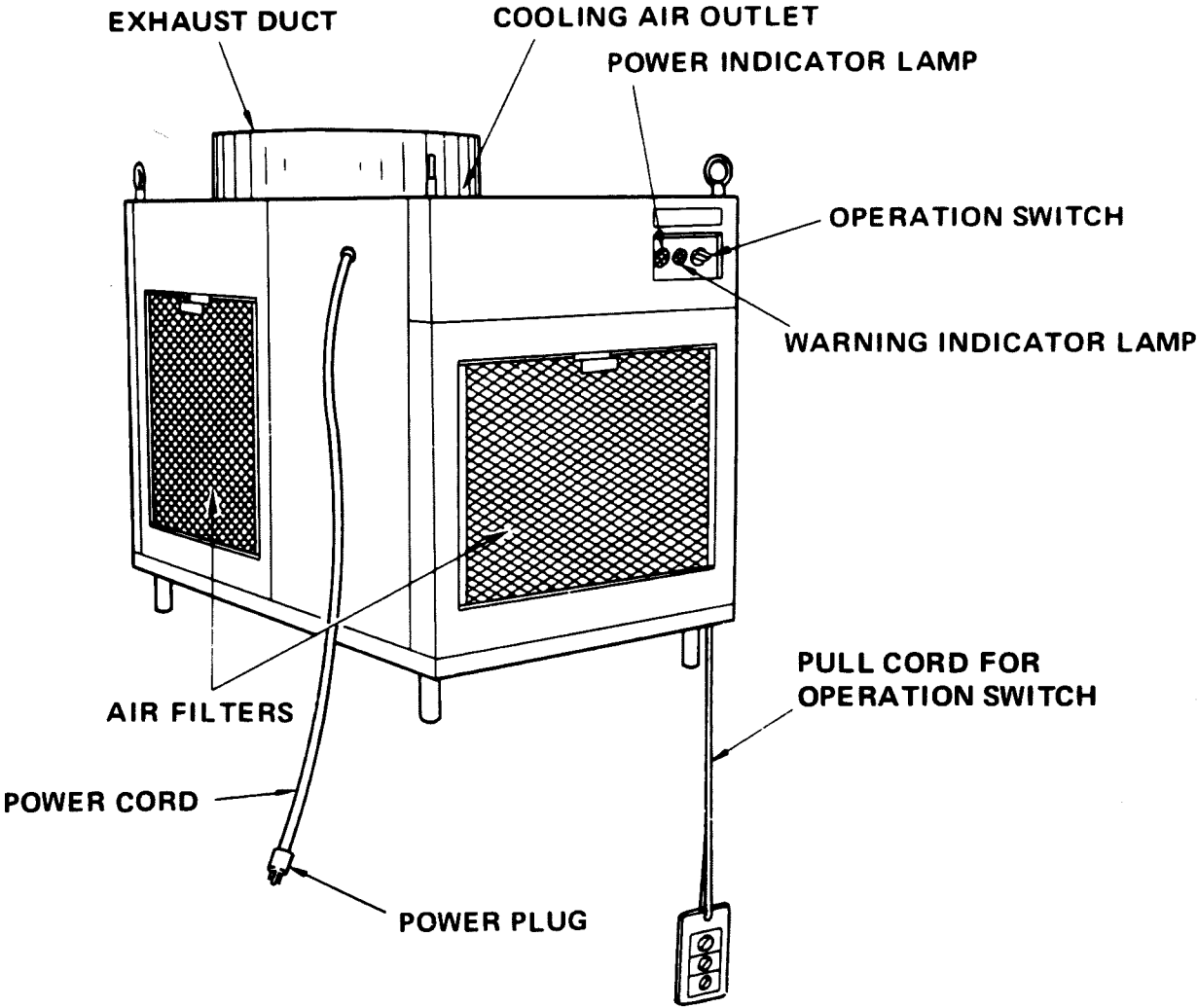
# FOREWORD

Before installing and using **SPOTCOOL 30HU** Spot Cooling Systems, read this manual carefully for instructions on correct usage, and read all safeguards on pages 2 to 3. This manual should be retained for future reference.

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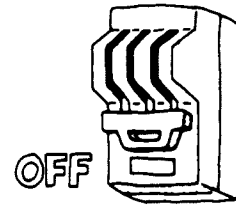
# 1. PART NAMES



## 2. IMPORTANT SAFEGUARDS

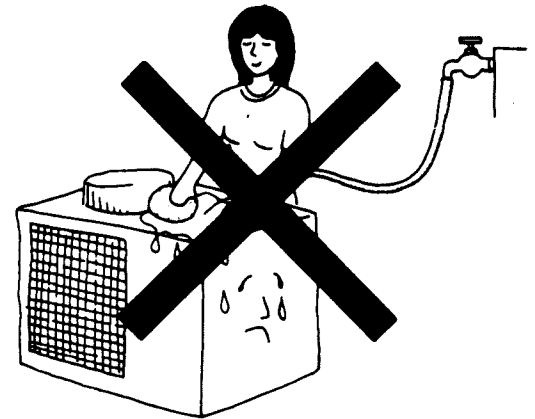
### 2.1 Maintenance and Inspection Safeguards

- (1) For the prevention of accident due to electric shock, be sure to perform inspection and maintenance only after turning off the power switch of the circuit.



- (2) Use a specified fuse (25A). Do not use wiring, copper wire or soldering instead of the fuse.  
The use of non-specified fuse may lead to machine failure or fire.

- (3) Do not clean the unit by directly pouring water on electric parts such as the operation switch and relay box.  
Pouring water on the electric parts will lead to poor insulation, resulting in electric shock or leakage.



### 2.2 Operation Safeguards

- (1) Be sure to install the air filters before operation.  
If operation is performed without the filters, the inside of unit will be contaminated, resulting in reduced cooling capability and machine failure.
- (2) Once the unit has been switched off, wait at least three minutes before restarting the unit.

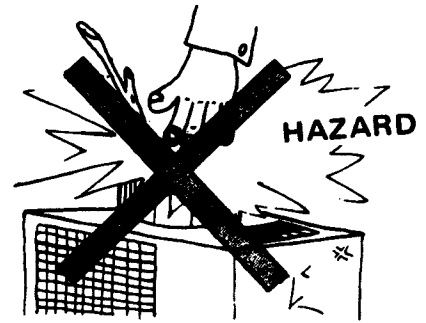


- (3) When power failure has occurred during operation, move the operation switch to "OFF" position.  
After the power is restored, restart the unit.

## 2.3 Cautions

- (1) Do not place hands or any other objects in the cooling air outlet or exhaust duct.

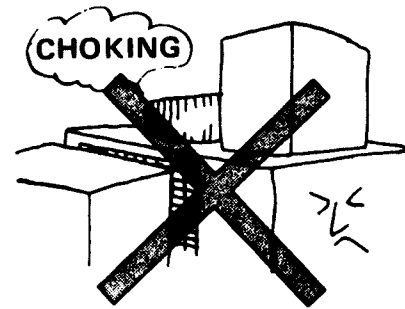
Touching the fan, which is rotating at high speed, is very hazardous.



- (2) Do not use volatile gases or flammable spray in the vicinity of the spot cooling unit.

- (3) Do not place obstacles near the air inlet and outlet.

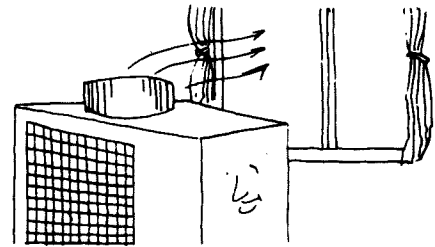
Insufficient air flow will actuate the protection device or lead to reduced cooling efficiency.



- (4) The spot cooling unit is a system for cooling a limited area.

If the unit is installed in an enclosed area, a net heat gain will occur.

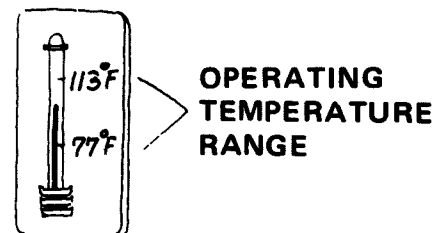
In such areas, be sure to provide proper ventilation.



- (5) Do not use the unit for other than cooling or air circulation.

- (6) The environmental requirements of this unit at the installation site are 77°F (25°C) to 113°F (45°C) 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 or freezing the evaporator.



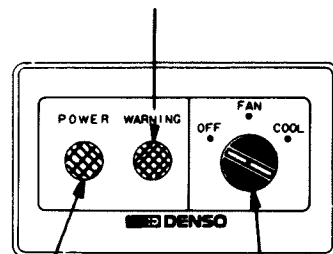
### 3. INSTRUCTIONS FOR USE

Operate the unit by means of the operation switch (when the unit is installed on the floor), which is located above the control panel built in the **SPOTCOOL 30HU** unit, or the pull-cord panel (when the unit is suspended from the ceiling).

The functional parts are run or stopped as indicated below depending on the position of operation switch.

Switch Position	Operation		
	Compressor	Evaporator Fan	Condenser Fan
OFF	Stop		
FAN	Stop	Run	Stop
COOL	Run	Run	Run

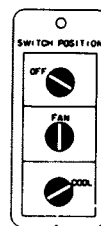
#### WARNING INDICATOR LAMP



#### POWER INDICATOR LAMP

#### OPERATION SWITCH

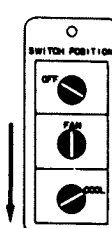
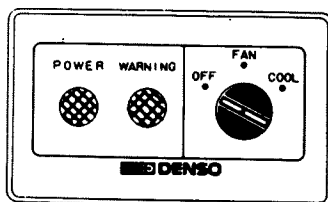
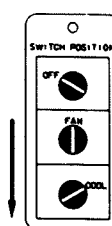
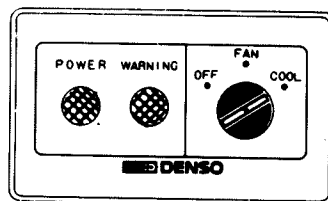
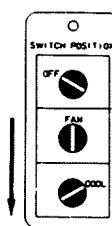
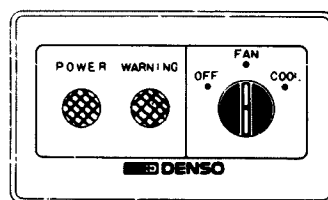
#### PULL-CORD PANEL



#### Cooling Operation

Before starting operation, make sure that the **POWER** indicator lamp on the control panel is lit, i.e. the power is on.

- (1) When the operation switch is moved to the "FAN" position, only the blower motor operates.
- (2) When the operation switch is moved to the "COOL" position, the compressor is actuated to start cooling operation.
- (3) When it is desired to stop both cooling and air circulation, turn the switch to the "OFF" position.

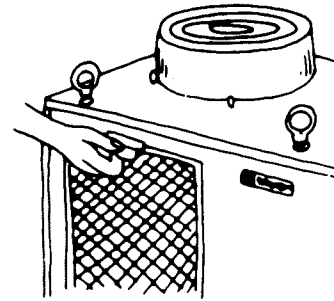


## 4. DAILY INSPECTION AND MAINTENANCE

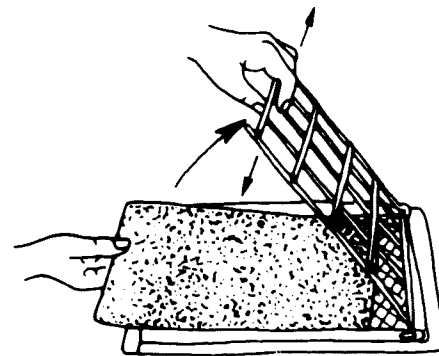
### 4.1 Cleaning of Air Filters

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

- 1) Remove the filters.



- 2) Remove the filter element.



- 3) 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.

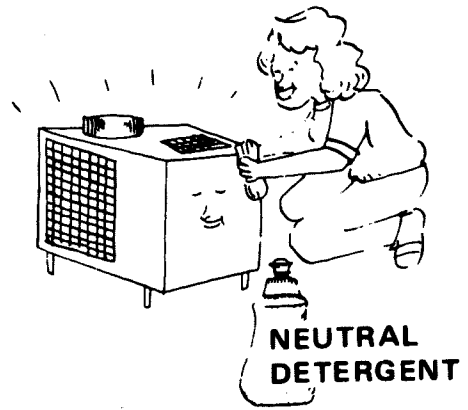


Avoid the use of solvents such as gasoline or thinner to clean the filter element.

## 4.2 Cleaning the Exterior Panels

Wipe away dirt with a soft cloth. When the panel is especially dirty, wipe the panel with a cloth which is soaked with neutral detergent, and then wipe away dirt with a dry cloth.

Do not use solvent, such as gasoliner or thinner, for cleaning the panel.





## **5. IN-SEASON INSPECTION AND MAINTENANCE**

The cooling capability of the spot cooling unit during the season greatly depends on the conditions of in-season inspection and maintenance. Therefore, perform the in-season inspection and consequent maintenance positively and carefully.

### **5.1 Checking Drain Pipe**

Check for looseness and clogging of drain pipe. If the drain pipe is loose or clogged, take corrective action so that drain water flows smoothly.

### **5.2 Checking Electrical Wiring**

Check for looseness of each connection terminal inside the control box. Especially, fully check the following terminals:

- Main Terminal
- Grounding terminal

Carefully check the grounding terminal because it may have been disconnected during off-season inspection.

Be sure to turn off the power supply before checking the electrical system.

### **5.3 Checking Abnormal Noise and Vibration**

Check if abnormal noise or vibration is generated from the unit and also check for missing or loose nuts.

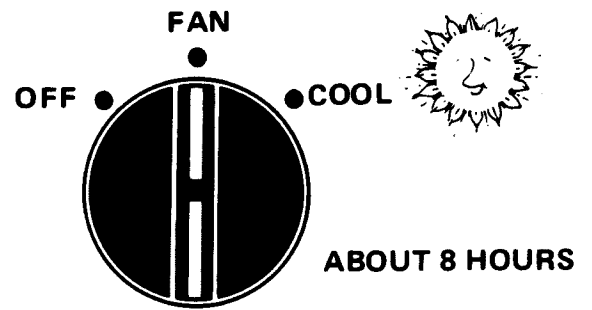
For some time after the start or stop of operation, the unit may make a gurgling sound. This sound is generated by refrigerant inside the unit and does not indicate machine trouble.

### **5.4 Checking Air Filters**

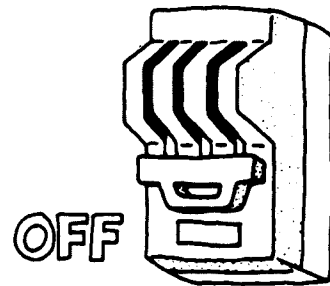
Check the air filters for clogging. If they are clogged, rinse them with water. For the removal and cleaning of air filters, refer to Section 4 "DAILY INSPECTION AND MAINTENANCE".

## 6. OFF-SEASON INSPECTION AND MAINTENANCE

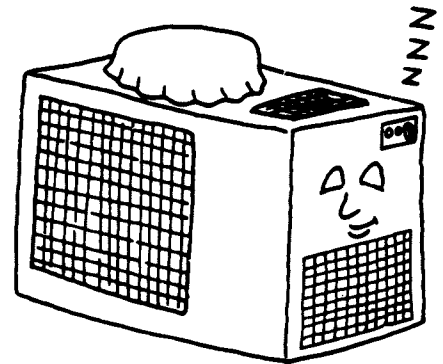
- (1) On a dry day, move the operation switch to FAN position and operate the unit for about eight hours to fully dry the inside of unit.



- (2) Reassemble the air filter after cleaning.
- (3) Switch off the power of circuit.



- (4) Put the exhaust duct cover, which is packaged with the unit, to prevent dust from entering the unit.



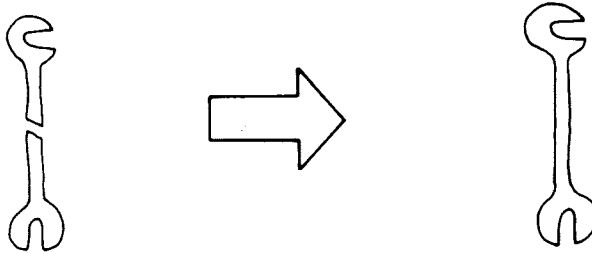
The unit can be kept in proper working order with regular inspection and maintenance as outlined above.

## 7. CHECK POINTS BEFORE CONTACTING YOUR DEALER

The spot cooling unit is manufactured under complete quality control. However, if trouble occurs during use of the unit, check the following points.

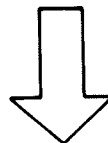
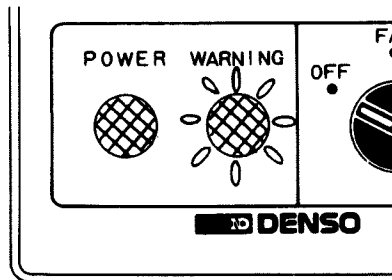
### 7.1 The Unit Does Not Run

- (1) Check if the power is on.
- (2) Check if the fuse has blown.



If the fuse blows again after replacement, repairs may be necessary. In this case, contact your dealer.

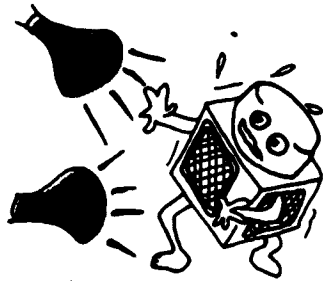
- (3) Check if the WARNING indicator lamp (red) is lit.



After checking for dirt of filters and cleaning the filters, restart the unit. If the WARNING indicator lamp is lit often, contact your dealer.

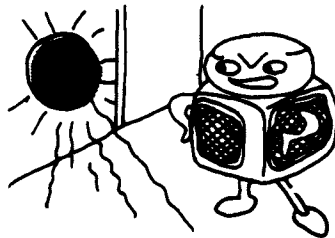
## 7.2 Cooling Efficiency Is Low

- (1) Check if there is unnoticed heat source in the room.



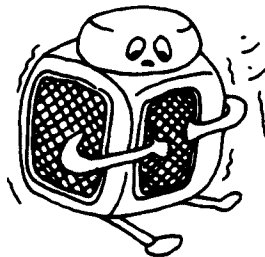
Remove the heat source.

- (2) Check if sunlight comes directly into the room.



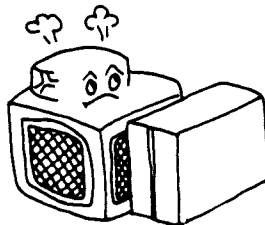
Intercept the direct sunlight with a window shade or similar object.

- (3) Check if the air filters are clogged.



Clean the air filters.

- (4) Check if the air inlet and outlet are covered with obstacles.



Remove obstacles.

If the problem persists after the above checks, move the operation switch to "OFF" position and turn off the power switch of circuit. Then, contact your dealer.

## 8. SPECIFICATIONS

Item	Model	30HU
<b>[Rating condition]</b>		
		DB 35°C 95°F
		WB 28.2°C 83°F (60%)
<b>(humidity)</b>		
<b>[Features]</b>		
Power frequency	(Hz)	60
Line Voltage	(Volt)	Three phase 220
Power consumption	(Kw)	4.7
Current consumption	(Amp)	14.0
Power factor	(%)	88
Starting current	(Amp)	70
<b>[Cooling Unit]</b>		
Cooling capability	(Kcal/h)	9830
	(Btu/h)	39000
Cooling system		Direct expansion
<b>[Blower]</b>		
Type of fan		Sirroco fan
Air volume	(m <sup>3</sup> /h)	1800
	(ft <sup>3</sup> /min)	1060
Motor output	(W)	750
<b>[Compressor]</b>		
Type		Hermetic reciprocating type
Output	(W)	2200
Refrigerant		R-22
Packed amount of	(kg)	2.0
refrigerant	(lbs)	4.1
<b>[Safety Devices]</b>		
Compressor overload realy		With
Fan motor protector		With
(for evaporator and condenser)		
High pressure switch		With
Anti-freezing thermostat		With
<b>[Dimensions and Weight]</b>		
W x D x H	(mm)	1100 x 650 x 985
	(inch)	43.3 x 25.6 x 38.8
Weight	(kg)	160
	(lbs)	353
<b>[Operating condition]</b>		
Inlet air		113°F (45°C), 50% or lower 77°F (25°C), 50% or higher

MEMO

 **NIPPONDENSO CO.,LTD.**

**SERVICE DEPARTMENT**

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