

AC55

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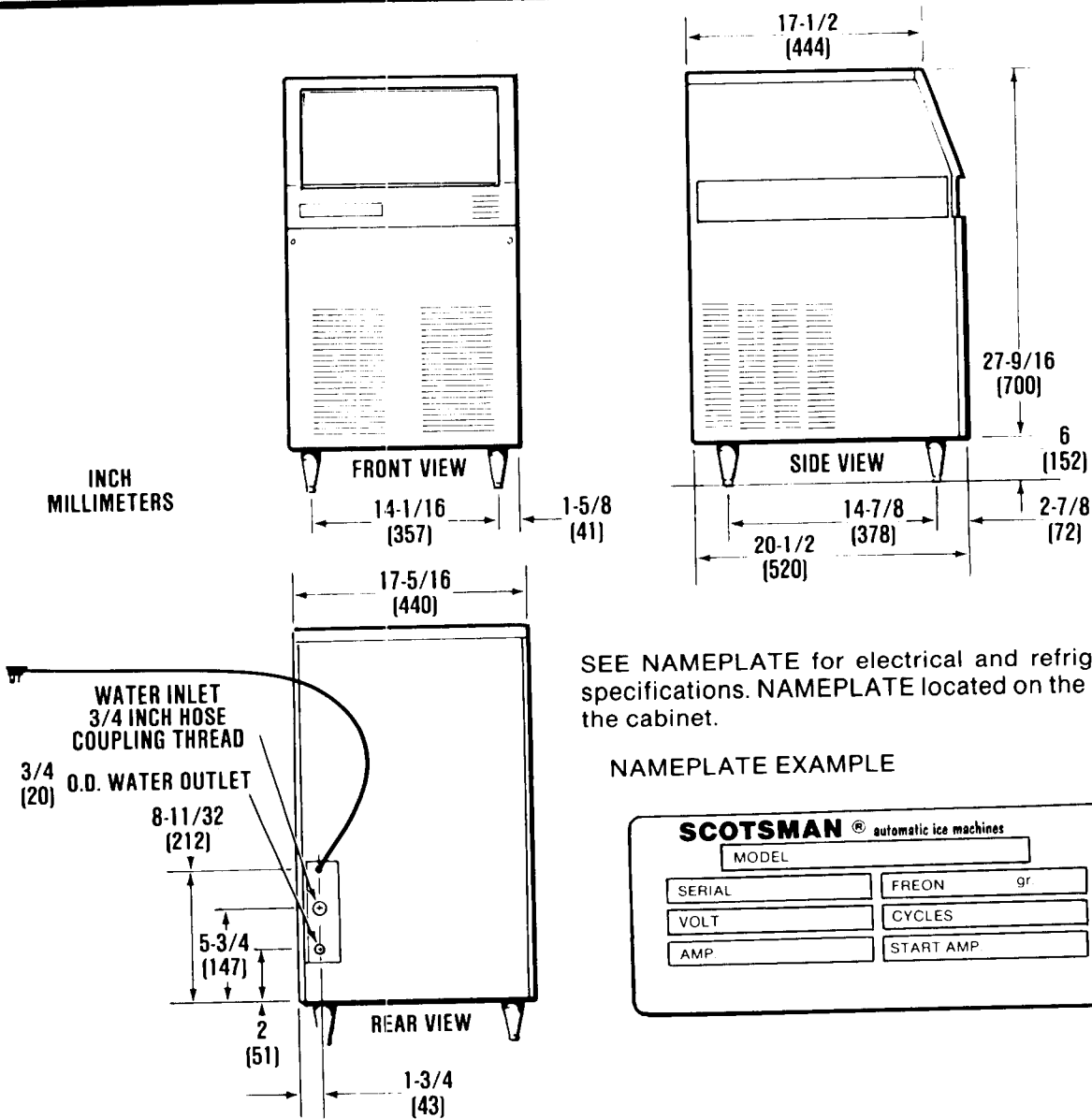
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AC55 SPECIFICATIONS



SEE NAMEPLATE for electrical and refrigeration specifications. NAMEPLATE located on the back of the cabinet.

NAMEPLATE EXAMPLE

SCOTSMAN ® automatic ice machines		
MODEL		
SERIAL	FREON	9F
VOLT	CYCLES	
AMP	START AMP	

MODEL AC55

Bin Storage: 28 lbs.
Electrical: 115/60/1

*Storage based on 90-percent of total volume x 34 lb. average density of ice. A.R.I. Standard.

We reserve the right to make product improvements at any time. Specifications and design are subject to change without notice.



This icemaker has been engineered to our own rigid safety and performance standards. The National Sanitation Foundation (NSF) seal, signifies that it is listed with the NSF and that it complies with the materials and construction standards of the NSF. In addition, the Underwriters Laboratories, Inc., (UL) Listing Mark and the Canadian Standards Association (CSA) Monogram, both signify that its construction and design have been inspected and tested by them. NSF, UL and CSA inspectors also periodically examine production icemakers at the factory, to assure continued compliance.

To retain the safety and performance built into this icemaker, it is important that installation and maintenance be conducted in the manner outlined in this manual.

GENERAL INFORMATION & INSTALLATION

INTRODUCTION

This manual provides specifications and the step-by-step procedures for the installation, start-up, operation, maintenance and cleaning for the SCOTSMAN Model AC55 automatic cubers.

The Model AC55 automatic cubers are quality designed, engineered, constructed, and thoroughly tested icemaking and ice storage systems, providing the utmost in flexibility to fit the needs of a particular user.

One of the outstanding features of this series of cubers is the easy access for service. With the front panel removed, access can be gained to the refrigeration system for on-the-spot repair.

DESCRIPTION

This attractive automatic cuber has a compact cabinet with a high gloss baked enamel finish, up-to-date styling, and easily removable front, back and top panels for easy access to electrical and mechanical components.

SEALED REFRIGERATION SYSTEM

To provide quiet efficient operation of the icemaker, the Compressor motor is internally spring-mounted. The Compressor motor is covered by a five year parts warranty.

SELF-CONTAINED STORAGE BIN

These automatic cubers store their own ice supply in a 28 pound capacity storage bin inside the insulated cabinet.

OVERALL DIMENSIONS

The overall dimensions of the cabinet depth, height, etc., allows the Cuber to be installed in harmony with the existing counter equipment.

UNPACKING AND INSPECTION

1. Call your authorized SCOTSMAN Distributor or Dealer, for proper installation. He's listed under ICE MAKING EQUIPMENT and MACHINERY in the yellow pages of the telephone book.
2. Visually inspect the exterior of the shipping container and skid, any severe damage should be reported to the delivering carrier and a concealed damage claim filed subject to internal inspection with carrier representative present.
3. Remove the shipping container, skid and packing materials.

4. Remove (3) screws and shipping tape, and the Lower Front Panel from the cabinet. Inspect for any concealed damage. Notify carrier of any concealed damage claims, as stated in Step 2.
5. Remove all internal support packing, tape and wires in machinery compartment.
6. Carefully lay the unit on its back, and attach the legs to the base by screwing them on. Return unit to upright position.
7. Check that refrigerant lines do not rub or touch lines or other surfaces, and that fan blades, if any, move freely.
8. Check that the Compressor is snug on all mounting pads.
9. Use clean damp cloth or disposable paper wiper to wipe clean the interior surfaces of the ice storage bin and the external surfaces of the cabinet.
10. See NAMEPLATE on the lower rear panel and check that the location source voltage corresponds with the voltage specified on the nameplate.

CAUTION

Improper voltage supplied to the Icemaker will void your parts replacement program.

11. Complete the Manufacturer's Registration Card by filling in all spaces including: Model Number and Serial Number taken from the serial plate located on the rear panel. Forward the completed, self addressed, registration card to the SCOTSMAN factory.

LOCATION AND LEVELING

WARNING

This Cuber is NOT designed for outdoor installation where air temperatures are below 50-degrees F., or above 100-degrees F., and the water temperature is below 40-degrees F. or above 100-degrees F. Extended periods of operation at temperatures exceeding these limitations will constitute misuse, under the terms of the SCOTSMAN Manufacturer's limited warranty resulting in LOSS of warranty coverage.

AC55 GENERAL INFORMATION & INSTALLATION

NOTE

Prior consideration for location site shall include:

Minimum room temperature 50-degrees F. and maximum room temperature 100-degrees F.

Water inlet temperatures: Minimum 40-degrees F. and Maximum 100-degrees F.

Well ventilated location, advising user to frequently clean the Air-Cooled Condenser.

SERVICE ACCESS: Adequate space for all utility connections, at the back of the Cabinet.

The front panel must remain unobstructed for air circulation and service access.

ELECTRICAL CONNECTIONS

Access to a standard 115 Volt, 15 Amp receptacle with ground.

Be certain the icemaker is connected to its own electrical circuit and individually fused. The maximum allowable voltage variation should not exceed ten percent of the nameplate rating even under starting conditions. Low voltages can cause erratic operation and may be responsible for serious damage to the overload switch and motor windings.

All external wiring should conform to the National, State and local electrical code requirements. Usually an electrical permit and services of a licensed electrician will be required to install the receptacle.

WATER SUPPLY AND DRAIN CONNECTIONS

AIR COOLED MODELS: The recommended water supply line is a 1/4 inch O.D. copper tubing, and must have a minimum incoming water pressure of 20 PSIG or above. Connect to cold water supply line with standard plumbing fittings, with a shutoff valve installed in an accessible place between the water supply and the cuber solenoid water inlet valve.

The Icemaker will not operate when water supply temperatures are below 40-degrees F. or above 100-degrees F.

NOTE

Water supply must be installed to conform with local plumbing codes. In some cases, a plumbing permit and services of a licensed plumber will be required.

DRAIN CONNECTIONS

All drains are gravity type and must be 1/4-inch per foot on horizontal runs. The drains are to be installed to conform with local code. The drain receptacle should be an open, trapped or vented construction.

FINAL CHECK LIST

1. Is the cabinet level? (IMPORTANT)
2. Have all electrical and piping connections been made?
3. Has the voltage been tested and checked against the nameplate rating?
4. Access to a standard 115 Volt, 115 Amp. receptacle with ground.
5. Is the water supply line shutoff valve installed and electrical wiring properly connected?
6. Have the Bin and Cabinet been wiped clean?
7. Have the Compressor hold-down nuts been checked, to be sure the Compressor is snug on the mounting pads?
8. Has the owner/user been given the User Manual and instructed on how to operate the Icemaker?
9. Has the Manufacturer's Registration Card been properly filled out? Check for correct Model and Serial numbers for Serial nameplate and then mail the completed card to the SCOTSMAN factory.
10. Check all refrigerant and conduit lines, to guard against vibration or rubbing and possible failure.
11. Has the spray platform been snapped into place?
12. Has the shipping tape been removed from the curtain assembly?
13. Is the cuber in a room where ambient temperatures are a minimum of 50-degrees F. all year around?
14. Has water supply pressure been checked to insure a minimum of 20 PSI?
15. Has the owner been given name and telephone number of the authorized SCOTSMAN Service Agency serving him?

See page 8 for start up and cube size adjustment.

AC55 GENERAL INFORMATION & INSTALLATION

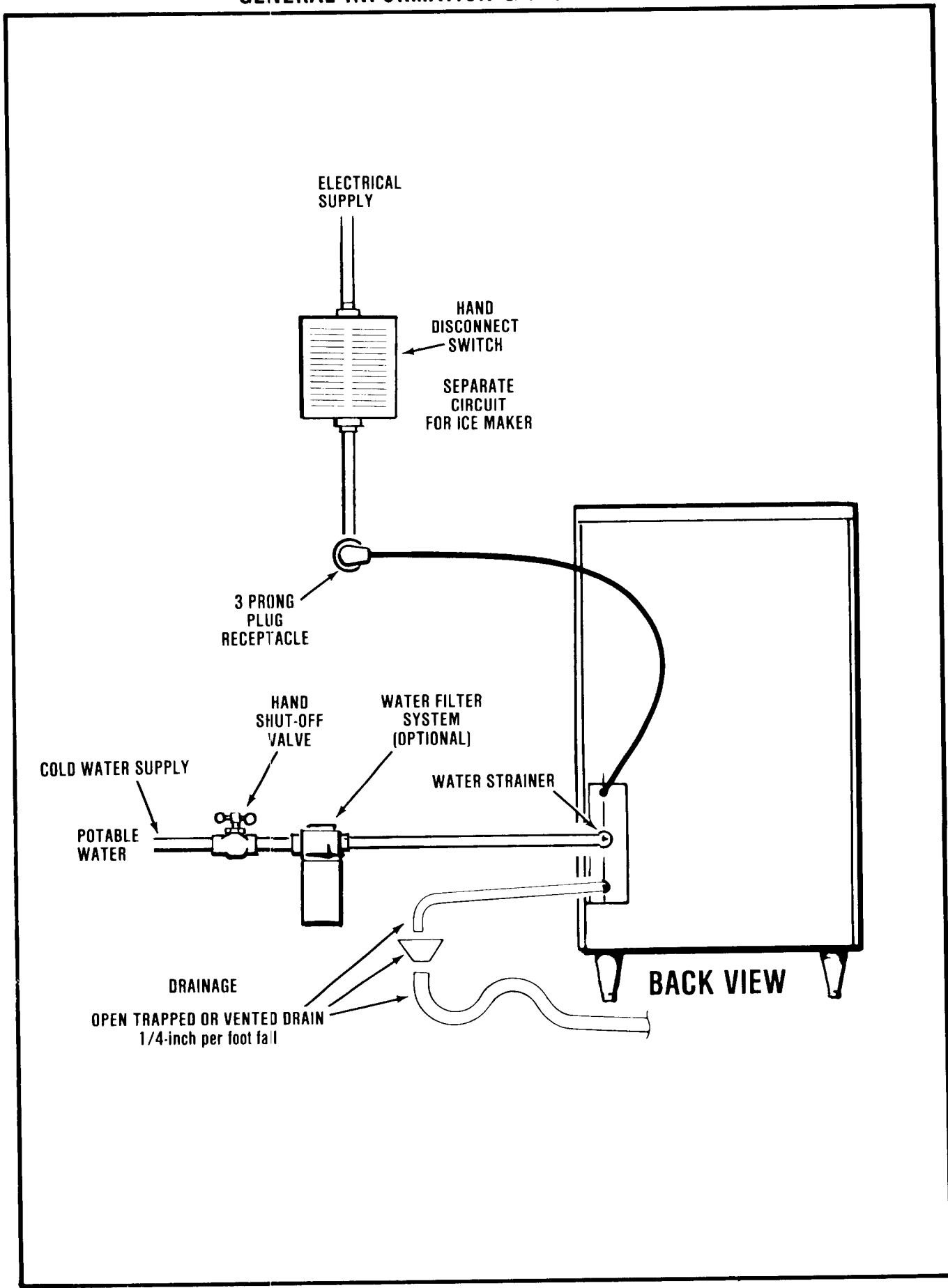


Figure 1-1. Installation Practice

AC55 GENERAL INFORMATION & INSTALLATION

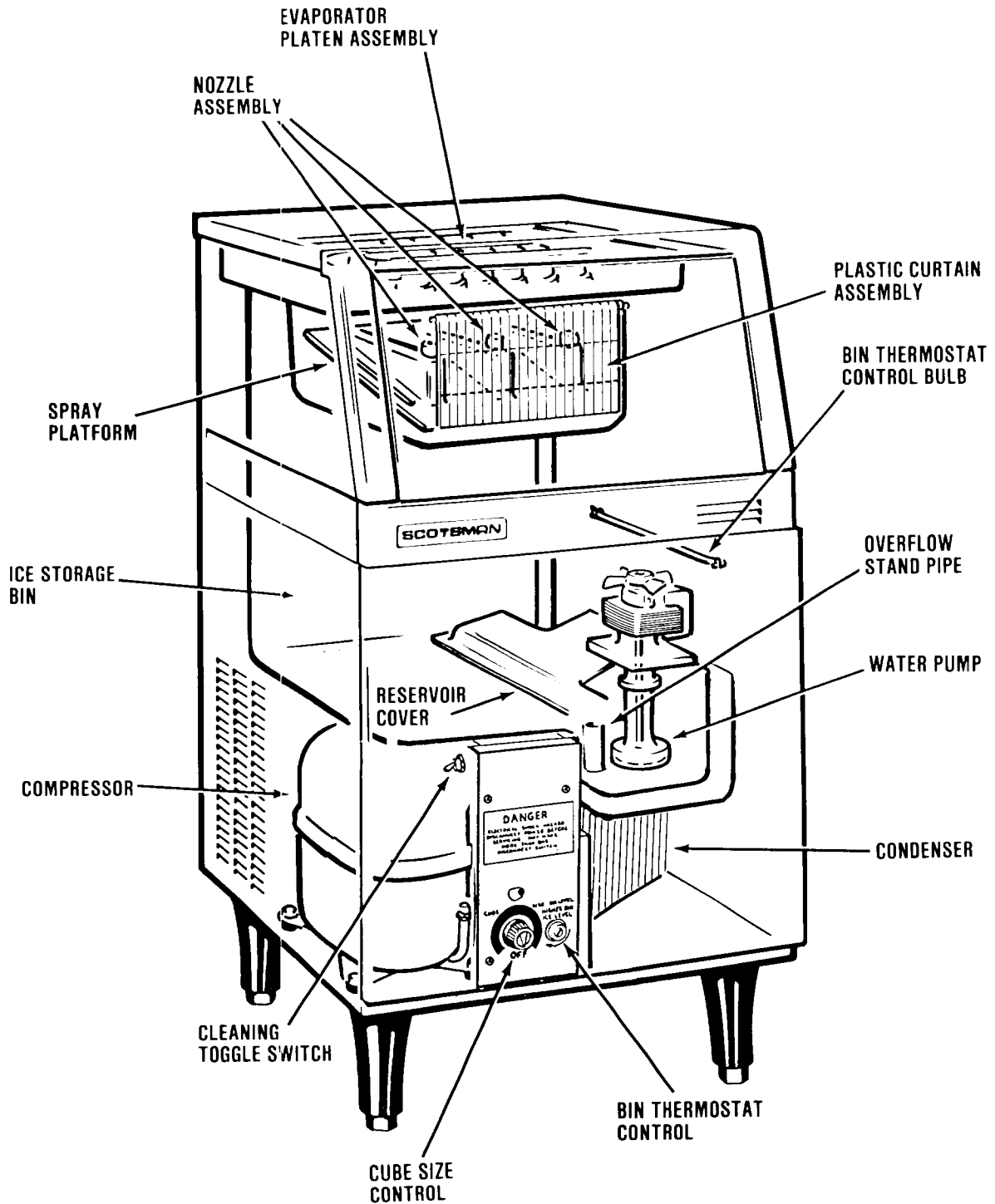


Figure 1-2. Component Location

AC55 OPERATING INSTRUCTIONS

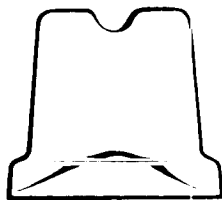
START-UP

1. Open water supply valve.
2. Move Main Electrical power switch to the cuber to the ON position at the circuit breaker or fuse box.
3. Check the cube size control knob, it should be in a preset cube size position. If not, turn it clockwise till the unit comes on, cube size adjustments may be required - see below.
4. Move the cleaning toggle switch to the CLEANING position.
5. Observe water fill cycle: Water inlet solenoid valve OPENS, incoming water flows from valve through tubing to top of freezing chamber. Water flows around inverted ice cube cups and drains through holes into reservoir, reservoir fills. Excess water is overflowed through stand pipe. This cycle will take about three minutes.
6. Move cleaning toggle switch to the OPERATION position. This will START the automatic icemaking process.

RUN

1. Check operation of the freezing cycle:
 - a. Compressor is operating.
 - b. Water pump is operating and water is being sprayed through all nozzles into all inverted ice cube cups.
 - c. Icemaking process begins: feeling inside ice cube cups reveals cold temperatures and very shortly ice begins to form.
2. Check that plastic curtain assembly hangs down evenly in the opening and no excessive water is passing through.
3. Observe first ice cube harvests:
 - a. Check size of ice cubes:

Proper size and shape of a Scotsman Round Cube:

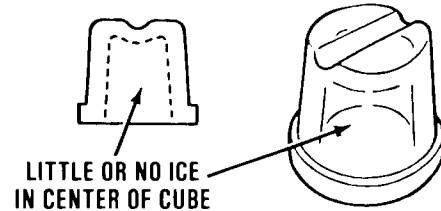


Normal cube size is with a one-quarter inch depression in the crown.

NOTE

Normal cube size is with a one-quarter inch depression in the crown.

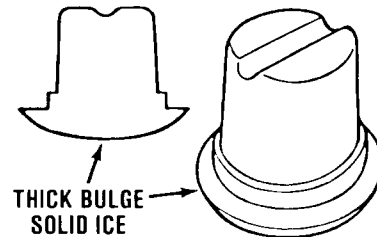
IMPROPERLY FORMED CUBES



UNDERSIZED, TOO SHALLOW

- b. To produce LARGER sized ice cubes:

- (1) Locate Cube Size Control on the front of the control box and rotate CLOCKWISE to larger.
- (2) Observe size of ice cubes in next two ice cube harvests and repeat step (1) above, in one-eighth turn increments, until desired ice cube size is achieved.



OVERSIZED

- c. To produce SMALLER sized ice cubes:

- (1) Locate Cube Size Control on the front of the control box and rotate COUNTER-CLOCKWISE to a smaller cube setting.
- (2) Observe size of ice cubes in next two ice cube harvests and repeat step (2) above, in one eighth turn increments, until desired ice cube size is achieved.

AC55 OPERATING INSTRUCTIONS

- d. Check texture of ice cubes: When partially cloudy through out, suggests unit operating short of water near end of freezing cycle, or possibly an extreme water condition exists and filtering or purifying equipment is recommended. Contact SCOTSMAN - Queen Products Division, Service Department, Albert Lea, Minnesota, for further details.
- 5. TEST BIN FULL ICEMAKER SHUT DOWN. To test bin full icemaker shut down, hold ice on the bin thermostat bracket. Icemaker will stop until ice is removed from the bin thermostat bracket.
- 6. Thoroughly explain to the owner/user the significant specifications of the Icemaker, the start up and operation, maintenance and cleaning procedures. Answer all questions about the icemaker, and inform the owner of the name and telephone number of the authorized SCOTSMAN Service Agency serving him.

OPERATING CHARACTERISTICS

The information shown below covers a wide range of air and water temperatures. It is intended as a guideline only, and is based on data compiled on NEW CLEAN units. Allow a variation from each end of the range given.

A. Refrigeration System Pressures:

High side (discharge)

End of freeze cycle 100 - 130 PSIG
Harvest cycle (max) 150 - 190 PSIG

Low side (suction)

End of freeze cycle 3 - 5 PSIG
Harvest cycle (max) 60 - 75 PSIG

B. Freeze cycle time 15 - 30 minutes

C. Defrost cycle time 2 - 3 minutes

D. Compressor amps

Freeze cycle 3.3 - 3.5
Harvest cycle 6.3 - 6.7

PRINCIPLES OF OPERATION

OPERATION (How It Works)

FREEZING CYCLE

The refrigeration process creates cold temperatures within the evaporator coils and removes heat from the water sprayed up into the inverted cube cups and the water turns into ice.

Sediment and other impurities will not freeze and are drained away. Only pure water will be frozen into crystal clear SCOTSMAN ice cubes.

During the freezing cycle, the Compressor and the fan motor operates, the water pump operates and water is continuously freezing or being sprayed and re-circulated. When evaporator temperature is lowered to the cold temperature setting of the cube size control, it opens the circuit to the fan motor and the water pump motor, ending the freezing cycle and starting the harvest cycle.

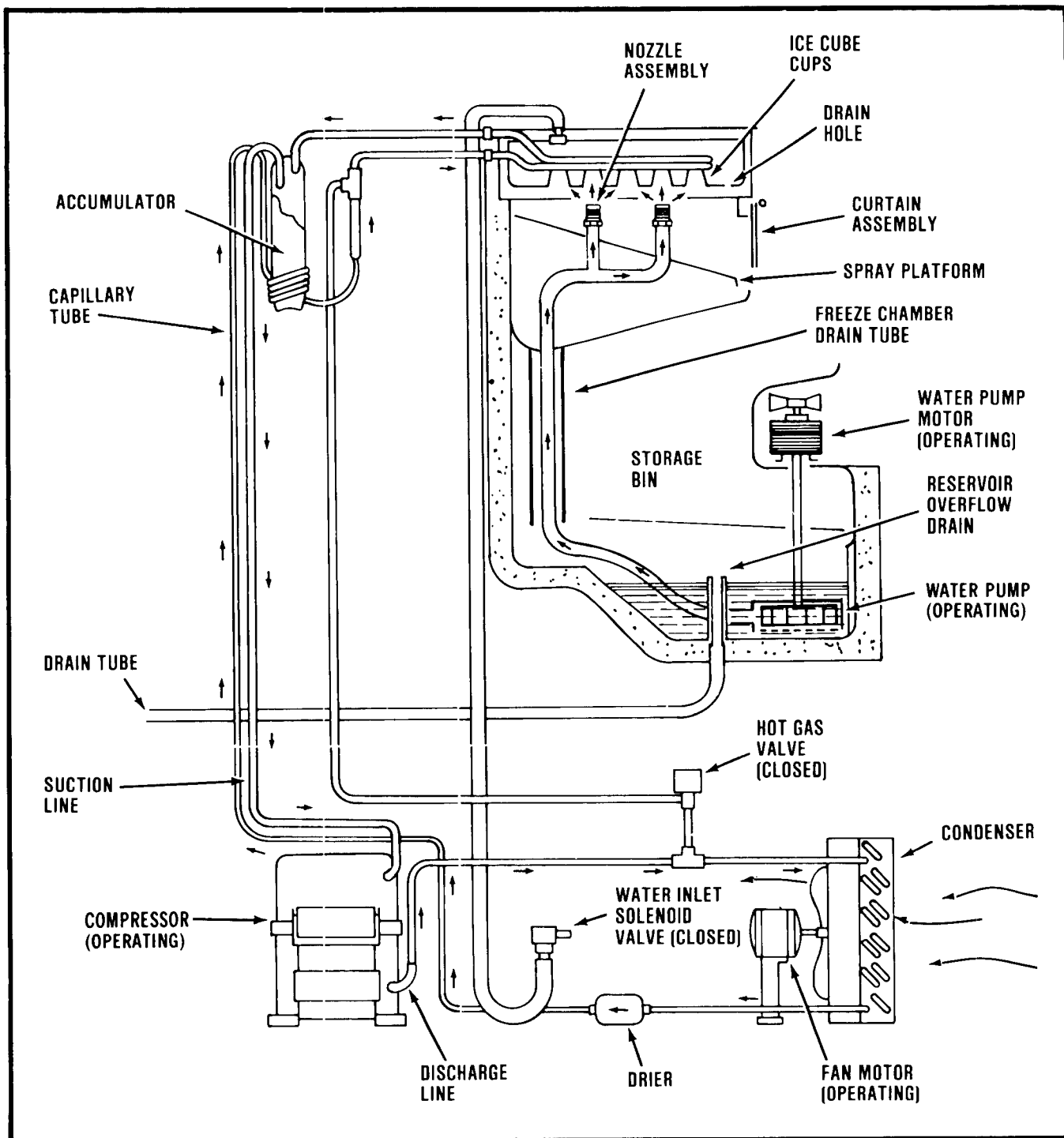


Figure 2-2. Freezing Cycle

AC55 PRINCIPLES OF OPERATION

HARVEST CYCLE

The cube size control thermostat also closes the circuit to the solenoid of the hot gas valve and the solenoid of the inlet water valve.

The hot gas valve opens and hot gas discharged from the compressor is diverted directly to the evaporator. The inlet water valve opens and a fresh supply of water is discharged into the top of the evaporator and the water drains into the sump of the evaporator assembly.

The ice cubes are released from the inverted cube cups in the evaporator by the warming effect of the hot gas flowing through the evaporator tubes and the incoming fresh water flowing around the

inverted cups. Released ice cubes drop onto the spray platform and through the curtain assembly into the ice storage bin.

The cube size control thermostat senses the warmer temperature of the harvest cycle and opens the circuit to the solenoid of the hot gas valve and solenoid of the inlet water valve. Both valves close, incoming water stops and hot gas is diverted back to the condenser. The harvest cycle is complete.

The automatic icemaking process continues until the bin is full of cubes and the bin thermostat senses cold temperature, and opens the circuit to all components and the automatic icemaking process stops.

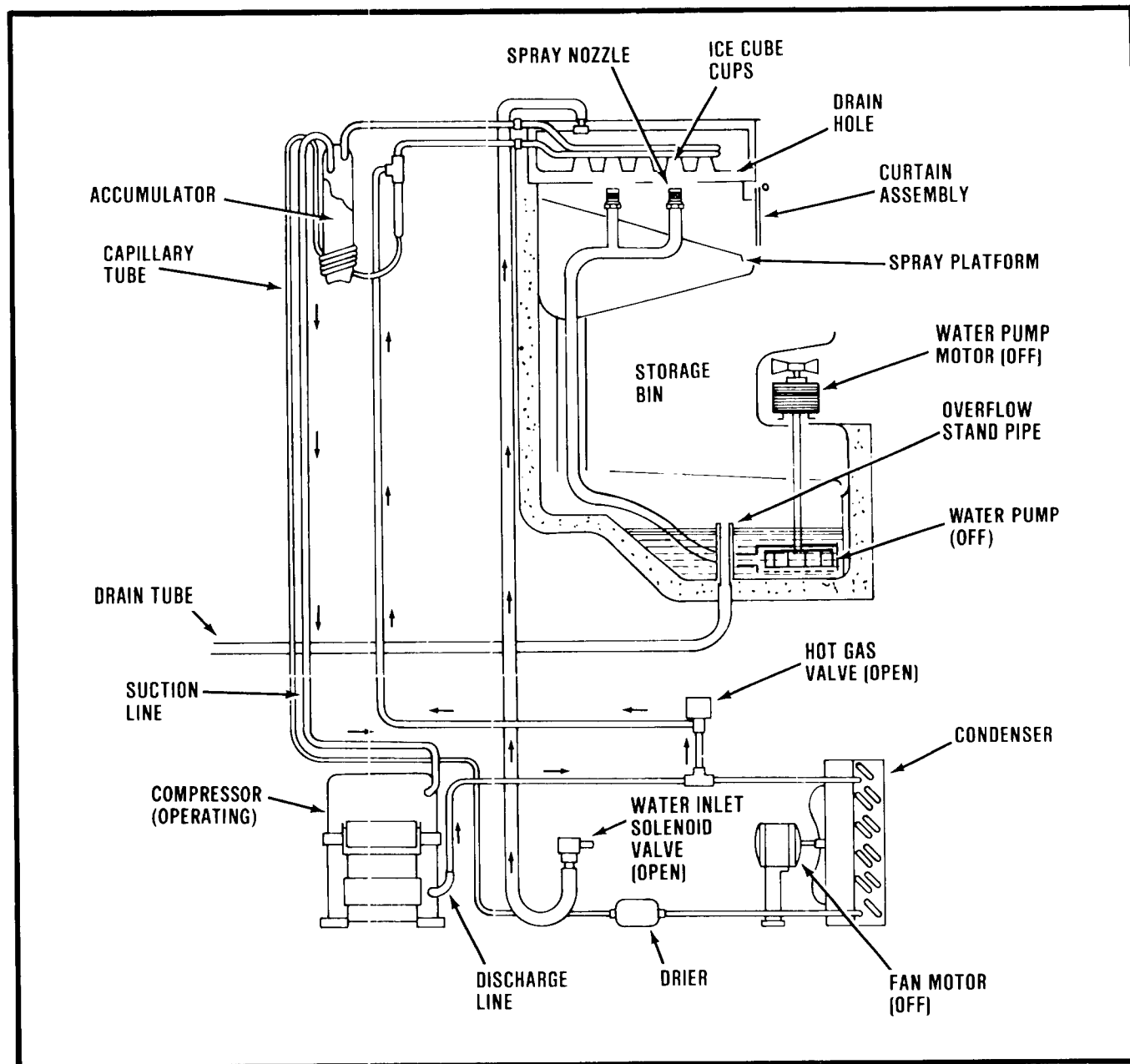


Figure 2-3. Harvest Cycle

AC55

PRINCIPLES OF OPERATION

COMPONENT DESCRIPTION

CUBE SIZE CONTROL

Cube size control is located in front of the control box, behind the front panel. The sensing capillary tube of the cube size control is routed out of the control box into its bulb holder on the evaporator coil. It is a reverse acting temperature control with double throw contact points; turning its knob all the way counterclockwise shuts off the icemaker. This control determines the length of freezing cycle and correspondingly the size of the cube. A lower setting will produce a larger cube while a higher setting produces a smaller cube. The cube size control changes its contacts when the evaporator reaches the low preset temperature value, starting the harvest cycle. After a few minutes, when the sensing tube of the cube size control reaches the high preset temperature valve, its contacts change, starting a new freezing cycle.

CLEANING TOGGLE SWITCH

The cleaning toggle switch is located on the side of the control box. When moved to the CLEANING position, it completes a circuit to the compressor, hot gas valve, water solenoid valve, water pump motor and the fan motor and the icemaker operates to rinse the water system. Refer to Cleaning Icemaker. When the cleaning toggle switch is moved to the OPERATION position, the icemaker operates in the normal automatic icemaking process.

WATER PUMP

The water pump operates during the freezing cycle and the cleaning cycle to pump and circulate water from the sump through the six spray nozzles and into the inverted cube cups.

INLET WATER SOLENOID VALVE -3/4" MALE FITTING

The water solenoid valve, located in the rear side of the unit, is energized only during the harvest cycle. When energized it allows a metered rate of water to flow into the top of the evaporator, assisting in the hot gas cube-release operation. This water flows by gravity through the drain holes in the platen assembly to the reservoir located under the water pump where it is picked up by the pump and directed to the spray system.

BIN THERMOSTAT CONTROL

The thermostat control body is located in front of the control box just beside the cube size control. The thermostat sensing tube (capillary tube) is located in the ice storage bin on the right side wall, where it automatically shuts the icemaker off when the ice bin is full and re-starts the icemaker when ice is removed. Factory settings are 1° C (36° F) cut-out and 4° C (39° F) cut-in. When replacing control, check operation by placing ice on capillary tube before installation. An audible 'click' will be heard on cut-out.

HOT GAS SOLENOID VALVE ASSEMBLY

The hot gas solenoid valve assembly is comprised of two parts, the valve body and the solenoid coil. These components are located on the discharge line of the compressor and activated by the cube size control contacts during the harvest cycle. During the harvest cycle, the solenoid coil, located on top of the valve body, is energized, lifting the valve stem within the valve body. This allows the hot discharge gas from the compressor to by-pass the capillary tube and flow directly into the evaporator, releasing the cubes from the cube mold.

SPRAY PLATFORM AND CHUTE

The spray system used on this unit is of the stationary type. The water is forced by the water pump into the platform chamber and sprayed into the inverted cup molds through a set of six spray nozzles.

FAN MOTOR

The fan motor is electrically connected through the cube size control and runs only during the freezing cycle, maintaining proper head pressure by circulating air through the air-cooled condenser.

HERMETIC MOTOR COMPRESSOR U.H. AE59ZF9

The hermetic motor compressor circulates and retrieves refrigerant throughout the refrigeration system. It compresses the low pressure refrigerant vapor, causing its temperature to rise, and become high pressure high temperature vapor, which is then released through the discharge valve to the condenser.

ADJUSTMENT AND REMOVAL AND REPLACEMENT PROCEDURES

ADJUSTMENT OF THE CUBE SIZE CONTROL

The cube size control regulates the size and shape of the cubes. Normal size and shape can be seen in illustration 4-1 Cube Size, the NORMAL Size and Shape.

CAUTION

Before performing actual adjustment of the cube size control, check other possible causes for cube size problems, refer to section VI, Service Diagnosis for problem review and analysis.

ADJUSTMENT OF THE CUBE SIZE CONTROL IS PERFORMED:

If ice cubes are shallow in size (indentation is too deep): See Figure 4-1 Shallow Size.

1. Locate the cube size control knob on the front of the control box.
2. Rotate the adjusting knob one-eighth of a turn clock-wise toward colder.
3. Observe size of ice cubes in next two ice cube harvests and repeat step 2 above, in one-eighth turn increments, until proper ice cube size is achieved. See Figure 4-1, Normal Size-Shape.

If ice cubes are oversize (indentation is too full):

1. Locate the cube size control knob on front of the control box behind the lower front panel.
2. Rotate the adjusting knob one-eighth of a turn counterclockwise toward warmer.
3. Observe size of ice cubes in next two ice cube harvests and repeat step 2 above, in one-eighth turn increments, until proper ice cube size is achieved. See Figure 4-1 Normal Size-Shape.

Once the control knob is set to obtain ice cubes in the proper shape, the ice maker does not require any further immediate attention.

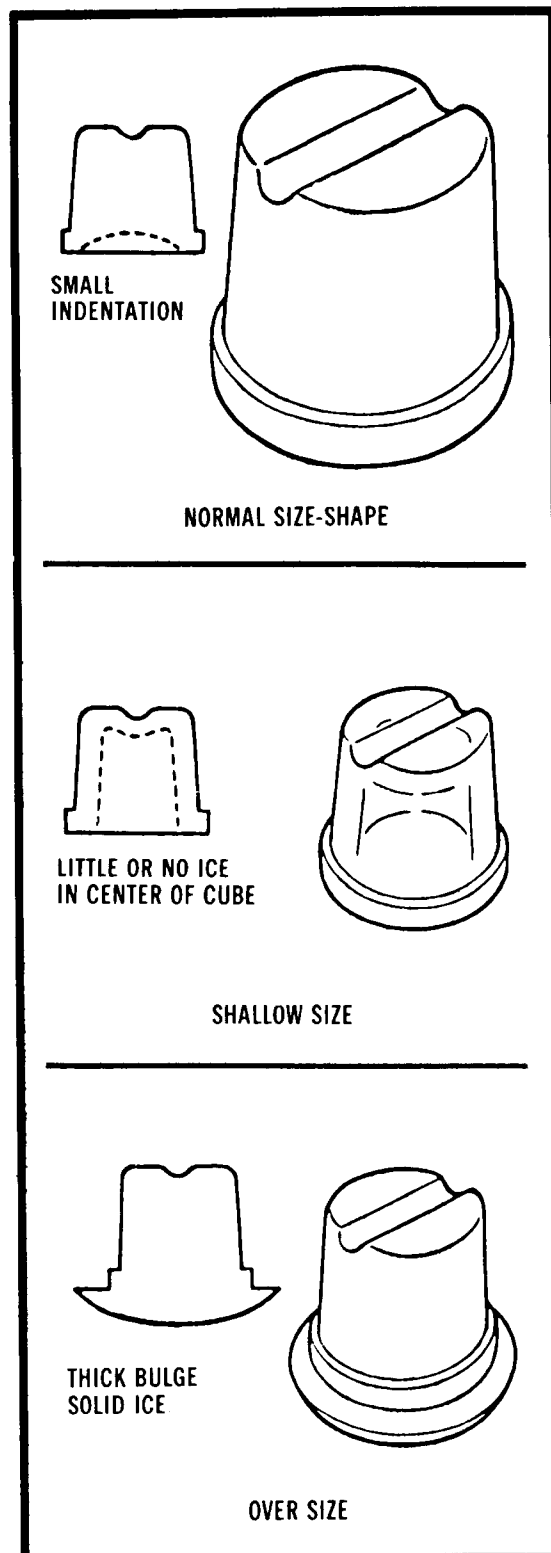


Figure 4-1. Cube Size

AC55 ADJUSTMENT AND REMOVAL AND REPLACEMENT PROCEDURES

ADJUSTMENT OF THE BIN THERMOSTAT CONTROL

Adjustment of the bin thermostat control should be performed if the ice level in the bin is too high or too low.

To INCREASE the ice level in the storage bin; Rotate the bin thermostat adjustment screw counter-clockwise in one-eighth turn increments until the desired ice level is obtained.

WARNING

Be sure the electrical power supply and the inlet water supply are off, before starting any of the following removal and replacement procedures as a precaution to prevent possible personal injury or damage to equipment.

AIR-COOLED CONDENSER REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and front and back cabinet panels.
3. Follow the steps in fan motor replacement to remove the fan motor.
4. Remove screws and remove the condenser shroud.
5. Bleed off or blow the refrigerant from the system through the Schrader valve.
6. Unsolder the refrigerant lines from the condenser and remove the bolts which attach the condenser to the base. Remove the condenser from the chassis.
7. To replace the air-cooled condenser, reverse the removal procedure.

NOTE

Always install a replacement dryer anytime the sealed refrigeration system is opened. Do not replace the dryer until all other repairs or replacements have been completed.

NOTE

Thoroughly evacuate the system to remove moisture and non-condensables after condenser replacement.

8. Recharge the refrigeration system per NAMEPLATE Specifications and check for leaks.

BIN THERMOSTAT CONTROL REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and cabinet front panel.

3. Remove screws and control box cover to gain access and disconnect electrical leads from the bin thermostat control.
4. Remove nut and separate bin thermostat control from the control box.
5. Remove capillary tube from bin thermostat bracket and remove bin thermostat control and capillary tube from the chassis.
6. To replace the bin thermostat control, reverse the removal procedure.

COMPRESSOR REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and rear and front cabinet panels.
3. Remove the cover and disconnect the electrical leads from the compressor junction box.
4. Bleed off or blow the refrigerant charge through the Schrader valves.
5. Unsolder and disconnect both the suction line and the discharge line from the compressor.
6. Remove the compressor mounting bolts and the compressor from the unit base.
7. To replace the compressor, reverse the removal procedures.

NOTE

Always install a replacement dryer any time the sealed refrigeration system is opened. Do not replace the dryer until all other repairs or replacements have been completed.

8. Thoroughly evacuate the system to remove moisture and non-condensables after compressor and dryer replacement.
9. Recharge the refrigeration system per NAMEPLATE Specifications and check for leaks.

CUBE SIZE CONTROL REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and cabinet front and top panels.
3. Remove screws and control box cover to gain access and disconnect electrical leads from the cube size control.
4. Remove nut and separate cube size control from the control box.
5. Remove capillary tube from the bulb holder located in the evaporator assembly and remove the cube size control and capillary tube from the chassis.
6. To replace the cube size control, reverse the removal procedure.

AC55 ADJUSTMENT AND REMOVAL AND REPLACEMENT PROCEDURES

DRYER REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
 2. Remove screws and front and back panels.
 3. Bleed off or blow the refrigeration charge through the Schrader valve.
 4. Unsolder the capillary tube from one end of the dryer and the refrigerant line from the other end. Leave the service line on the dryer and remove the dryer from the unit.
 5. Unsolder and remove the service line from the dryer and retain for use in the replacement dryer.
 6. Remove factory seals and install and solder the service line into the same location as the previous dryer.
 7. Re-position the dryer in the unit and install and solder the refrigerant line and the capillary tube into the replacement dryer.
 8. Thoroughly evacuate the refrigeration system to remove moisture and non-condensables.
 9. Recharge the refrigeration system per NAMEPLATE Specifications and check for leaks.
10. Replace front and back panels and screws.

FAN MOTOR REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and the cabinet back panel.
3. Locate and disconnect the yellow-green ground wire and the electrical wire leads connected to the fan motor.
4. Remove the bolts securing the fan motor assembly to the cabinet base and remove the fan motor assembly.
5. To replace the fan motor, reverse the removal procedure.

NOTE

Check that fan blades move freely and do not touch any surfaces.

HOT GAS VALVE BODY REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove the hot gas valve coil. Follow the steps in Hot Gas Valve Coil replacement.
3. Bleed off or blow the refrigerant from the system.
4. Unsolder the refrigerant lines from the hot gas valve body and remove the hot gas valve from the unit.

5. To replace the hot gas valve body, reverse the removal procedure.
6. Always install a replacement dryer anytime the sealed refrigeration system is opened. Do not replace the dryer until all other repairs or replacements have been completed.
7. Thoroughly evacuate the system to remove moisture and non-condensables after hot gas valve body replacement.
8. Recharge the refrigeration system per NAMEPLATE Specifications and check for leaks.

HOT GAS VALVE COIL REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and front and back panels.
3. Remove the spring clip securing the hot gas valve coil to the hot gas valve body.
4. Locate the hot gas valve electrical terminals inside the control box and disconnect and remove.
5. To replace the hot gas valve coil, reverse the removal procedure.

SPRAY PLATFORM, SPRAY JETS AND CHUTE REPLACEMENT

1. Open ice access door to gain access and uncouple and remove the curtain assembly.
2. Lift the spray platform from the evaporator housing and remove the corbin clamp and the rubber hose from the bottom of the platform.
3. Unscrew the spray caps and remove the spinner jets. Inspect condition for cleaning or replacement.
4. To replace the spray platform, spray jets and chute, reverse the removal procedure.

WATER INLET VALVE REPLACEMENT

1. Unplug the icemaker to disconnect electrical power.
2. Close valve to shut off water supply to icemaker.
3. Remove screws and remove the cabinet back panel to gain access.
4. Disconnect electrical leads from water inlet valve.
5. Remove the two screws securing the water inlet valve to the chassis.
6. Remove Corbin Clamp and rubber hose from the inlet water valve.
7. Remove the water inlet valve from the cabinet.
8. To replace the water inlet valve, reverse the removal procedure.

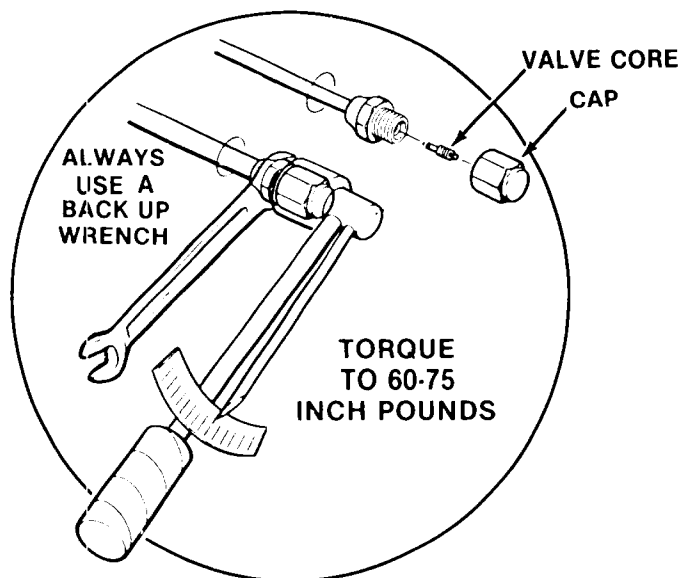
AC55 ADJUSTMENT AND REMOVAL AND REPLACEMENT PROCEDURES

WATER PUMP REPLACEMENT

To replace the water pump assembly:

1. Unplug the icemaker to disconnect electrical power.
2. Remove screws and cabinet front panel to gain access to the water pump assembly.
3. Remove reservoir cover to gain access and disconnect rubber hose from discharge port of the water pump assembly.
4. Remove top panel and door frame.
5. Disconnect yellow-green ground wire and pump electrical wire leads.
6. Remove screws and lift water pump from sump.
7. Remove screw and separate water pump assembly from mounting bracket.
8. To install replacement pump, reverse the removal procedure.

**TO SERVICE REFRIGERATION SYSTEM:
TORQUE REFRIGERATION ACCESS VALVE
CAPS TO 60-75 INCH POUNDS.**



**ALWAYS USE A BACK-UP
WRENCH TO AVOID DAMAGE
TO THE REFRIGERANT TUBING.**

MAINTENANCE & CLEANING INSTRUCTIONS

GENERAL

The periods and procedures for maintenance and cleaning are given as a guide. Cleaning will vary depending upon local water conditions and the ice volume produced. Each icemaker must be maintained individually, in accordance with its own particular location requirements.

ICEMAKER

THE FOLLOWING MAINTENANCE SHOULD BE SCHEDULED AT LEAST TWO TIMES PER YEAR ON THIS ICEMAKER. CALL YOUR AUTHORIZED SCOTSMAN SERVICE AGENCY.

1. SHUT OFF water supply valve to the icemaker.
2. Disconnect the water inlet line and remove the strainer from its seat in the water inlet fitting. Remove the strainer, using a pliers and rinse the strainer clean under a stream of tap water. Replace the strainer into its original position. Replace filters or maintain other optional water purification equipment.
3. Open water supply valve.
4. Unplug the electrical power cord to disconnect power supply to the icemaker.
5. Remove screws and cabinet front panel.
6. Clean the air-cool condenser fins using a vacuum, whisk broom or brush. The icemaking performance and capacity is affected by the clean condition of the air-cooled condenser. Instruct the user to clean the air-cooled condenser as frequently as required to maintain proper air circulation.
7. Remove cubes from the bin and remove the water reservoir cover located in the bottom right side of the bin.
8. Locate the overflow stand pipe in the water reservoir and pull up to remove. Removal of the overflow stand pipe drains the water and mineral accumulation from the water reservoir. Replace the overflow stand pipe.
9. Prepare cleaning solution: Mix three ounces of SCOTSMAN Ice Machine Cleaner with three pints of fresh potable water.
10. Carefully pour the cleaning solution into the water reservoir and replace the water reservoir cover.
11. Plug the icemaker electrical power cord into the receptacle and allow the icemaker to operate for about 20 minutes; then turn the cleaning toggle switch to the CLEAN position for about three minutes to release all ice.

NOTE

With the cleaning toggle switch in the Clean position, the unit runs in the harvest cycle. During the harvest cycle, fresh water is introduced into the reservoir to rinse away most mineral concentration out through the reservoir overflow drain.

12. Rotate the cube size control knob counter clockwise to the OFF position to SHUT OFF the icemaker.
13. Remove the overflow stand pipe from the reservoir to drain all cleaning solution and mineral concentration through the drain tube. Replace the stand pipe and replace the water reservoir cover.
14. Unsnap the curtain assembly. The spray platform can be lifted out for easier removal. Reach inside the freezer assembly and unscrew and remove the spray caps. Clean the spray caps and the spinner jets under a stream of tap water. Replace the spinner jets and spray caps.
15. Rotate the cube size control knob to the normal operating position.
16. Move the cleaning toggle switch to the CLEAN position and operate the unit approximately 4 minutes, then alternate to the OPERATING position for 1-2 minutes and back to the CLEAN position for 1-2 minutes. Alternate the cleaning toggle switch between CLEAN and OPERATE position several times. This action will properly rinse the water system.
17. Move cleaning toggle switch to the OPERATION position to restart the automatic icemaking process.
18. Check each ice cube harvest until the ice cubes are clear and acid taste has been eliminated. Remove and discard all ice cubes from the bin.

WARNING

SCOTSMAN Ice Machine Cleaner contains Phosphoric and Hydroxyacetic acids. These compounds are corrosive and may cause burns if swallowed. DO NOT induce vomiting. Give large amounts of water or milk. Call physician immediately. In case of external contact, flush with water. KEEP OUT OF THE REACH OF CHILDREN.

CAUTION

Do not use acid tasting ice cubes produced during the cleaning procedures of the water system. Be sure no cubes made with the ice machine cleaner remain in the bin.

19. Clean the interior surfaces of the ice storage bin clean cloth.
20. Replace cabinet panels.

AC55
SERVICE DIAGNOSIS

SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTION
Unit will not run	Blown fuse or breaker. Bin thermostat set improperly Cube Size Control Switch in Off position	Replace fuse & check for cause of blown fuse. Reset breaker. Adjust or replace if required. Turn switch to On Position.
Compressor cycles intermittently	Low voltage Dirty condenser Air circulation blocked. Non-condensable gas in system	Check circuit for overloading. Check voltage at the supply to the building. If low, contact the power company. Clean with vacuum cleaner, air or stiff brush. (DO NOT use wire brush). Allow sufficient air space all around unit. Evacuate and recharge system per nameplate specifications.
Cubes too small	Cube size control set improperly Partially restricted capillary tube Moisture in system Shortage of water Shortage of refrigerant Inoperative cube size control	Check and adjust for proper operation. Blow charge, add new gas & drier, after evacuating system with vacuum pump. Save as above. See remedies for shortage of water. Check for leaks and recharge. Replace cube size control.
Cloudy cubes Accumulated impurities	Spray nozzles plugged Shortage of water Dirty water supply Use SCOTSMAN Ice Machine Cleaner.	Clean. See remedies for shortage of water. Use water softener or water filter. Clean unit per instructions in Section V.
Shortage of water	Water solenoid not opening Water leaks in sump area Water flow control plugged	Repair or replace. Locate and repair. Remove and clean.
Irregular size cubes and some cloudy	Some jets plugged Shortage of water Unit not level	Clean jets. See Shortage of Water. Water overflowing air vent holes on low side burning cubes. Level as required.

AC55 SERVICE DIAGNOSIS

SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTION
Cubes too large	Cube size control set improperly	Check and adjust for proper operation.
Decreased ice capacity	Inefficient compressor Leaky water inlet valve High head pressure Non-condensable gas in the system. Poor air circulation or excessively hot location Overcharge of refrigerant Partially restricted cap tube	Replace. Replace. Dirty condenser. Clean. Bad fan motor. Replace. Purge the system. Relocate the unit, or provide for ventilation by cutting openings. Correct the charge. Purge off slowly. Purge & replace charge and drier.
Poor harvests	Too short defrost time Restriction in incoming water line Solenoid valve not opening the water valve Air vent holes in upper cube cups plugged Ambient and water temp. too low Solenoid not opening the hot gas valve	Check cube size control. Replace if necessary. Check water feed line strainer and flow reducing valve. Do not remove flow control washers. Solenoid binding or burned out. Replace. Clean out holes. Change unit location. Solenoid binding or burned out. Replace.
Unit won't Harvest	Inoperative cube size control Hot gas solenoid not opening. Water inlet valve not opening	Replace cube size control. Solenoid binding or burned out. Replace. Replace.
Excessive Water in Unit base	Water tubing leaking (Check during freeze & harvest cycle)	Check. Tighten or replace.