

Service Manual for Residential Ice Machine

Models SCCG50 and SCCP50





Encdis

Introduction:

This ice machine is the result of Scotsman's decades of experience as an industry leader in the design and manufacture of both commercial and residential ice machines.

This manual includes the information needed to install, start up and maintain the ice machine. Note any Caution or Warning indicators, as they provide notice of potential hazards. Keep this manual for future reference.

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Specifications

This ice machine is designed to be used indoors, in **Options:** a controlled environment. It can be used in a wide variety of environmental conditions, but there are limits. Use outside of the listed limitations is misuse and will void the warranty.

Air temperature limits:

The ice machine will operate adequately within the limits, but functions best in temperatures between 70 and 80 degrees F.

- Minimum 50 degrees F. (10°C)
- Maximum 100 degrees F. (38°C)

Water temperature limits:

- Minimum 40 degrees F. $(4.5^{\circ}C)$
- Maximum 100 degrees F. (38°C)

Water pressure limits:

- Minimum 20 psi (1.4 bar)
- Maximum 80 psi (5.5 bar)

Because the ice machine is making a food product, the water supply to the ice machine must be potable, or fit for human consumption.

Electrical

- 115 volt, 60 Hz. Plug into dedicated 15 amp circuit.
- Power consumption: 275 400 Watts. Varies during Freeze and Harvest cycles.

Voltage limits:

- Minimum 104 volts
- Maximum 126 volts

Models: There are six models, all air cooled:

- SCCP50M-1WU Pump model, white cabinet
- SCCG50M-1WU Gravity drain model, white cabinet
- SCCP50M-1BU Pump model, black cabinet
- SCCG50M-1BU Gravity drain model, black cabinet
- SCCP50M-1SU Pump model, stainless cabinet
- SCCG50M-1SU Gravity drain model, stainless cabinet

Door Panel kits: Finished door panels are available from Scotsman for attachment to the machine, or a custom panel can be made.

Kit Number	Panel Finish	Handle Finish
KDFW	White	White
KDFWS	White	Stainless Steel
KDFB	Black	Black
KDFBS	Black	Stainless Steel
KDFS	Stainless Steel	Stainless Steel

Kickplate Extension: In some situations the leg levelers will be extended enough to become visible. A kit to extend the kickplate over the legs is **KKPF**.

Cabinet Stability: In some free standing installations it may be prudent to add a bracket that secures the back of the cabinet to a wall. That kit number is **KATB**.

Drain Conversion:

A gravity drain model can be converted to a drain pump model by installing a drain pump kit. The drain pump kit consists of a drain pump, wiring harness and associated tubing. The kit number is A39462-021.

Warranty Information

Warranty information is supplied separately from this manual. Refer to it for coverage. In general, the warranty covers defects in materials or workmanship and does not cover corrections of installation errors or maintenance.

Cabinet Layout



Air flow

The machine takes in room temperature air at the lower right front and forces warm air out the lower left front. Restricting the airflow will adversely affect the ability of the ice machine to make ice.





Scotsman Ice Systems are designed and manufactured with the highest regard for safety and performance. They meet or exceed the standards of agencies like U.L.

Scotsman assumes no liability or responsibility of any kind for products manufactured by Scotsman that have been altered in any way, including the use of any parts and/or other components not specifically approved by Scotsman.

Scotsman reserves the right to make design changes and/or improvements at any time.

Specifications and designs are subject to change without notice.

Water Quality

All water, including potable water supplied by municipalities, contains some impurities or minerals. Water absorbs impurities from the air as rain and/or as it flows through the ground. Some of the impurities are solid particles, these are known as suspended solids, and a fine particle filter will remove them. Other impurities are chemically bonded to the water molecules, and cannot be filtered out, these are called dissolved solids.

Ice made by this machine will have a lower mineral content than the water it was made from. This is due to the method of making ice. Purer water will freeze first in the ice making molds. The reason for this is that anything dissolved in water lowers the water's freezing temperature. This concentrates most of the impurities in the ice machine water reservoir where they may form hard deposits known as scale. The machine dilutes the concentration of minerals by over-filling the reservoir during the harvest cycle (with the excess water flowing down the drain). s. Between 2 and 4 pints of water flow into the unit each cycle. Between 1 and 3.5 pints of that rinses the reservoir and goes down the drain.

Some impurities will inevitably remain, and will stick to the parts in the machine, and will cause malformed ice cubes. Eventually, **built up mineral** scale can shorten machine life.

To keep the machine operating properly, these impurities or minerals will have to be regularly dissolved by an acid cleaning, using Scotsman Ice Machine Scale Remover. Directions for this may be found in the section under cleaning.

Filters and Treatment

In general, it is always a good idea to filter the water. A water filter, if it is of the proper type, can remove taste and odors as well as particles. Some methods of water treatment for dissolved solids include reverse osmosis, and polyphosphate feeders.

RO Water

This machine can be supplied with Reverse Osmosis water, but the water conductivity must be no less than 10 microSiemens/cm. A reverse osmosis system should include post treatment to satisfy the R.O. water's potential aggressiveness. Deionized water is not recommended.

Because water softeners exchange one mineral for another, softened water may not improve water conditions when used with ice machines. Where water is very hard, softened water could result in white, mushy cubes that stick together.

If in doubt about the water, contact a local point of use water specialist for recommendations on water treatment.

Installation Overview

The ice machine must:

- be connected to cold, potable water
- be connected to a drain
- be connected to the proper power supply
- be able circulate air through the vents at the front.

Note: Do not build in so that the door is recessed.

Door Covering

Door Panel

The ice machine is supplied without a conventional door covering so it can be decorated to the user's preference. Scotsman offers several coverings including white, black and stainless steel. In addition, a custom built panel can be placed onto the door.

Door Panel Attachment

To attach a Scotsman supplied panel:

Note: If door swing is to be changed, it must be done before panel is attached.

The panel will be held on by 6 sheet metal screws and 2 machine screws.

- 1. Remove the gasket and retain for later use.
- 2. If the door panel is stainless steel, remove any plastic covering the stainless steel panel.
- 3. Place the panel onto the outside of the door, and secure it to the door using two machine screws, located at the left center and right center.
- 4. Fasten the panel to the door using the 6 sheet metal screws. In the hinge area, use the outermost screw holes.
- 5. Place the covers over the hinge areas, and secure each cover to the door using a sheet metal screw.
- 6. Insert hole plug over screw installed in step 5.
- 7. Return the gasket to its original position.

Custom Panel

A custom panel of wood or other material not exceeding 15 lb can be attached to the door. Attachment is from the ice side of the door. Holes are provided in the door for this purpose.

See instructions in information packet to create and attach a custom panel:



Custom Panel

A custom panel of wood or other material not exceeding 15 lb can be attached to the door. Attachment is from the ice side of the door. Holes are provided in the door for this purpose.

To create and attach a custom panel:

- Panel width: 14 7/8"
- Panel height: Between 29 3/8" and 30 3/8".
- Panel thickness: 5/8" to 3/4"

1. Measure overall height of cabinet opening where ice machine will be (floor to bottom of countertop edge).

2. Determine desired kickplate space (from bottom of door to floor). This could be equal to the adjacent cabinet's kickplate space or another space the user wants.

3. Subtract kickplate space from cabinet opening.

4. Subtract 1/8 or more for clearance space between top of door and bottom of countertop edge from cabinet opening. This is the maximum door length.

5. Cut panel to width.

6. Cut panel to length (cabinet space - kickplate space - top clearance = length).

7. Determine top of panel.

8. Mark hole locations using drawing 1331/64" on the back of these instructions. Drawing assumes top of panel will be flush with top of door. Measure hole locations from the top of the panel.

9. Drill pilot holes for wood screws. Use drill stop to prevent drilling through the panel. 10. Mount panel to door using wood screws or supplied panel mounting screws.

Note: When installed Ice machine must be adjusted for height to position top of door to desired clearance.



Door swing change

The door can be attached to open with hinges on the left or right using new brackets shipped loose in the ice bin. Retain all screws for re-use.

To change:

 Remove innermost screw holding each hinge to cabinet, loosen the other.



- Slide hinges to the side and remove door from cabinet. Remove screws loosened in step 1 from both hinge brackets.
- Remove two screws securing top panel to back, pull top panel back and remove from cabinet.
- Remove two screws at the top and lift the door hinge bracket out of the cabinet. Replace with the one supplied loose with the machine. Fasten it to the cabinet using the original screws.



- 5. Return the top panel to the cabinet and fasten it with the original screws.
- 6. Remove kickplate and front service panel.
- Remove two front screws and two bottom screws holding the bottom cross brace to the cabinet. Replace the brace with the one supplied loose with the machine. Secure it using the original screws.

- 8. Remove the upper hinge and move it to the door's opposite side, bottom location. Secure using the original screws.
- Remove the original lower hinge and move it to the door's opposite side, upper location. Secure using the original screws.
- 10. Install a screw removed in step 2 in outermost hole of upper and lower cross braces.
- 11. Attach the door to the cabinet using the original screws.
- 12. Return kickplate and front service panel to their original positions and attach to the cabinet using the original screws.

Installation Notes

Built In Situations: If a finished floor is to be installed in the area after the ice machine has been built in, shims the expected thickness of the floor should be installed under the unit to keep the machine level with the planned floor level.

Installations on a slab: Use a pump model and pump the water to the point of drainage. Pump models will pump 1 story (10 feet) high.

Installations over a crawl space or basement: Either gravity drain or pump model units may be used, if there is not enough room behind the machine for a drain/waste receptacle, the drain will have to be below the floor.

Note: When installed in a corner, the door swing may be limited due to handle contact with the wall or cabinet face.



Installation: Water & Drain

The recommended water supply tubing is ¼ inch OD copper. Stainless steel flex or reinforced PVC tube may also be used. Install an easily accessible shut-off valve between the supply and the unit. This shut-off valve should not be installed behind the unit.

Note: Do not use self-piercing type valves.

1. Remove the front service panel.



- 2. Route the tubing through the right hole in the back to the inlet water solenoid valve inlet.
- 3. Install a compression fitting on the tubing and connect to the inlet of the solenoid.

Drains

There are two types of ice machine models, one that drains by gravity and one that has an internal drain pump.

Drain Pump Model drain installation

1. Locate the coil of 3/8" ID plastic drain tubing secured to the back of the unit.

2. Route the plastic drain tube from the back of the unit to the drain connection point.

IMPORTANT NOTE: Often an air gap is required by local codes between the ice maker drain tube and the drain receptacle.



Back View, Drain Pump Model

Gravity Drain

Caution: Restrictions in the drain system to the machine will cause water to back up into the ice storage bin and melt the ice. Gravity drain tubing must be vented, have no kinks and slope to the building drain. Air gaps are typically required by local code.

1. Place the ice machine in front of the installation opening. Adjust leveling legs to the approximate height.

2. Remove the front service access panel and the upper back panel.

Note: If you are connecting a gravity drain model and the drain opening has been located in the floor under the base pan according to the pre install specifications, follow steps 3 through 5 to drain the unit through the base. If not, proceed to step 6b.

3. Remove the clamp and barbed elbow and take off the plastic cover in the base pan below the drain hose.

4. Connect a straight 5/8" barbed connector to the drain hose, securing with the clamp removed in step 4.

5. Cut an 8" piece of 5/8" ID X 7/8" OD tygon (clear plastic) tubing. Slide one end of the tube onto the outlet of the barbed connector and secure with a clamp. Leave the other end of the tube lying on the floor of the base pan until the unit is positioned over the floor drain.

6. Route the drain tube. Either a) Insert the drain tube through the base pan into the floor drain or b) Route the drain tube through the left hole in the lower back panel and connect to barbed elbow and secure with a clamp.

7. Reinstall the upper back panel.

8. Reinstall the service access panel. Level the unit.



Back View, Gravity Drain Model

Electrical

The ice machine is supplied with a power cord. Do not remove the grounding pin from the cord's plug. Do not use extension cords. Follow all codes. Connect the machine to its own 115 volt, 15 amp circuit.

- 1. If the electrical outlet for the ice maker is behind the unit, plug in the unit.
- 2. Position the unit in the installation opening.
- 3. Turn on the water supply. Make sure that the ice maker is plugged in and the power is on.
- 4. Slide unit into installation opening, paying careful attention to water supply and drain connections. Do not kink!
- 5. Pour a couple of quarts of water into the ice storage bin; on drain pump equipped machines the drain pump should start and water should pump out. Check for leaks.
- 6. Replace the service access panel.
- 7. Level the unit as needed.

Installation check list:

- 1. Has the unit been connected to the proper water supply?
- 2. Has the water supply be checked for leaks?
- 3. Has the unit been connected to a drain?
- 4. Has the drain been tested for flow and leaks?
- 5. Has the unit been connected to the proper electrical supply?
- 6. Has the unit been leveled?
- 7. Have all packing materials been removed from the machine?
- 8. Has the door covering been installed?

Initial Start Up

- 1. Turn on the water supply.
- 2. Switch on the electrical power.
- 3. Push and release the On/Off switch to start the machine. The Ice Making light next to the On/Off switch will glow Green.



4. The compressor will start and water will begin to flow into the unit. When the reservoir is full, water will start to drain from the machine. After a few minutes the water pump and fan motor will begin to operate and the first ice making cycle will have begun.

No adjustments are needed.

After about a half hour, ice will fall into the ice storage bin. The machine makes 24 cubes per batch. It is normal for the first batches of ice to melt, that continues until the bin has cooled. It will take 8 to 10 hours of continuous run time to fill the ice bin. When the bin is full of ice, the ice machine will shut off. It will automatically restart when the ice level falls, either from use or normal meltage.

Cube Size Adjustment

The cube size can be adjusted by changing the amount of freeze cycle time. This is done by a button press sequence.

Note: There is only one correct cube size. See the illustrations.

To adjust cube size:

1. Shut the machine off: If it's off on bin full press and release the On/Off button once, switching the Ice Making light off. If the machine is making ice hold the On/Off button in until the Ice Making light is off.

2. Press and hold the Clean button for 5 seconds (light on), then release (light out)

3. View the lights. Compare to the table below.

Cube Size Change Table

	On/Off	Water	Clean
Default	off	off	off
Add 1 minute	on	off	off
Add 2 minutes	off	on	off
Add 3 minutes	off	off	on
Add 4 minutes	on	on	on
- 1 minute	flash	off	off
- 2 minutes	off	flash	off
- 3 minutes	off	off	flash
- 4 minutes	flash	flash	flash

4. Select the amount of change.

5. Push and release the On/Off button until the correct light pattern is displayed.

6. Push and release the Clean button to select that setting.

7. Push and release On/Off to return to ice making.

Side Views of Cubes



Too Small, Adjust Cycle Longer



Just Right



Too Large, Adjust Cycle Shorter

Harvest Time Adjustment

The harvest time can be adjusted so that all the ice harvests during the cycle, plus a few seconds extra. This is done by a button press sequence.

Note: Do not set harvest time shorter than the actual time it takes to release all the cubes.

To adjust Harvest Time:

1. Shut the machine off by holding the On/Off button in until it shuts off (Ice Making light off).

2. Press and hold the On button again for 5 seconds, then release (Ice Making light will switch off).

3. View the lights. Compare to the table below.

Harvest Time Table

	On/Off	Water	Clean
Default	off	off	off
Add 10 seconds	on	off	off
Add 20 seconds	off	on	off
Add 30 seconds	off	off	on
Add 40 seconds	on	on	on
- 10 seconds	flash	off	off
- 20 seconds	off	flash	off
- 30 seconds	off	off	flash
- 40 seconds	flash	flash	flash

4. Select the amount of change.

5. Push and release the Clean button until the correct light pattern is displayed.

6. Push and release the On button to select that setting.

7. Push and release On/Off to return to ice making.

Control Settings

Automatic water purge enable / disable

The control is set at the factory to automatically select the proper amount of water purge. If desired, that can be disabled, and a typical purge amount used.

To disable Automatic purge selection:

1. Press and hold the On/Off button until the unit shuts off. No lights should be on.

2. Press and hold the ON button for 5 seconds, then release.

3. Wait between 5 and 20 seconds, then repeat step 1. All lights will flash once.

To return to Automatic purge selection:

1. Press and hold the ON button for 5 seconds, then release.

2. Wait between 5 and 20 seconds, then repeat step 1. All lights will flash twice.

Manual Harvest - from the OFF or Standby Mode (powered but no lights are on)

1. Press and hold the Clean-Reset button for 5 seconds and release.

2. Wait between 5 and 20 seconds, then repeat step 1. All lights will flash once. The On/Off light will be on until harvest has timed out.

Reset time to clean indicator light

Press and hold the Clean-Reset button for 3 seconds.

Use

No special instructions are needed for use. Just take as much ice as you need, the machine will replace it. A scoop is provided, and it can be stored in the machine using the loop of tubing on the right side as a holder.

The machine can be shut off anytime by just pushing and releasing the On/Off button. The machine will shut off at the end of the next cycle. To shut off immediately, push and hold the On/Off button in until the machine stops.

What shouldn't be done?

Never keep anything in the ice storage bin that is not ice. Objects like wine or beer bottles are not only unsanitary, but the labels can slip off and plug up the drain.

Never allow the machine to operate without regular cleaning. The machine will last longer if it is kept clean. Regular cleaning should happen at least once per year, and preferably twice. Some water conditions will dictate even more frequent cleaning of the ice making section, and some carpets or pets will dictate more frequent cleaning of the condenser.

Note: The Time to Clean light will switch ON after 6 months of use. It will remain ON until the ice making system is cleaned using the process on page 13.

Noise:

The ice machine is designed for quiet operation, but will make some noise during the ice making cycle. During a freezing cycle, it is normal to hear the fan moving air and the water pump circulating water. Ice hitting the bin or ice in the bin can be heard during harvest.

If ice making noise is objectionable, an appliance grade timer can be added to the power supply. Set the timer to turn the machine off at the time(s) of day when the noise is most objectionable.



Normal cubes are tapered cylinders. If the cubes are ragged and mis-shaped, mineral scale must be removed from the ice making system

Maintenance

There are 5 things to keep clean:

- 1. The outside cabinet & door.
- 2. The ice storage bin.
- 3. The condenser.
- 4. The ice making system.
- 5. The ice scoop.

How to clean the cabinet.

Wipe off any spills on the surface of the door and handle as they occur. If anything spilled on the door or gasket dries onto the surface, wash with soap and warm water to remove.

How to clean the ice storage bin.

The ice storage bin should be sanitized occasionally. It is usually convenient to sanitize the bin after the ice making system has been cleaned, and the storage bin is empty.

A sanitizing solution can be made of 1 ounce of household bleach and two gallons of hot (95°F. – 115°F.) water. Use a clean cloth and wipe the interior of the ice storage bin with the sanitizing solution, pour some of the solution down the drain.

Allow to air dry.

How to clean the condenser and winterize.

Condenser cleaning

The condenser is like the radiator on a car, it has fins and tubes that can become clogged with dirt and lint. To clean:

- 1. Remove the kickplate and front service panel.
- 2. Locate the condenser surface.



3. Vacuum the surface, removing all dust and lint.

Caution: Do not dent the fins.

4. Return the kickplate and front service panel to their original positions. Fasten them to the cabinet using the original screws.

Winterizing

1. Clean the ice making system.

2. Open the door and push and release the On/Off switch to turn the machine off.

3. Turn off the water supply.

4. Drain the water reservoir by removing the rubber cap under the reservoir - it's near the back wall of the ice storage bin.



5. Disconnect the incoming water line at the inlet water valve.

6. Open the door, push and release the on/off switch to turn the machine on.

7. Blow air through the inlet water valve; a tire pump could do the job.

8. Drain pump models should have about 1/2 gallon of RV antifreeze (propylene glycol) poured into the ice storage bin drain.

Note: Automotive antifreeze must NOT be used.

9. Switch off and unplug the machine.

How to remove scale from the ice making system.

1. Scoop out all of the ice, either discard it or save it in an ice chest or cooler.

2. Press and HOLD the On/off button in for 3 seconds until the Green light goes out.



3. Press and HOLD the both the Clean-Reset and On/Off buttons for 5 seconds. The Time to Clean light will blink on and off.

4. Pour 8 ounces of Scotsman Ice Machine Scale Remover (available from a local Scotsman Distributor or Dealer) into the ice machine reservoir. 9. Pour a gallon of hot $(95^{\circ}F. - 115^{\circ}F.)$ water into the bin to flush out the drain.

10. Clean the bin liner of mineral scale by mixing some ice machine scale remover and hot water, and using that solution to scrub the scale off of the liner.

11. Rinse the liner with hot water.

12. Sanitize the bin interior.

13. Replace the ice removed in step 1.

14. Push and release the On/Off button to restart ice making.

The ice scoop should be washed regularly, wash it just like any other food container.



5. Operate the machine for about 1/2 hour.

6. Push and release the On/Off switch. The machine will begin to flush out the cleaning solution.

7. Operate the machine for another $\frac{1}{2}$ hour.

8. Push and release the On/Off switch. The machine will stop the cleaning process.

System Information

Overall:

- Refrigerant: 8 oz R-134a
- Compressor: Hermetic, 1300 BTUH, X HP
- Condenser: Forced draft
- Fan blade: 5 blade, 7 inch
- Evaporator: Inverted, 24 cube cells. Tin plated copper, continuous serpentine
- Metering device: Cap tube
- Defrost method: Hot gas bypass with water assist
- Spray method: 6 water jets
- Water charge: 40 ounces
- Water valve: 115 volt solenoid, .19 GPM
- Water fill time: Varies with harvest time & purge setting
- Spray pump: Pedestal type.
- Drain pump: Magnetic drive, controlled by pressure switch
- Purge method: Overflow standpipe
- Control method: Electronic
- Cycle control: Thermistor + timers
- Freeze cycle timer: 10 minutes, + 4
- Harvest cycle timer: 20 seconds, + 40
- Cube size adjustment: Freeze timer change.
- Harvest cycle adjustment: Harvest timer change
- Bin control: Thermostat. Opens on temperature fall, Cut Out: 35 degrees F. Cut In 45 degrees F. Range is adjustable.

Electrical Components:

- Compressor
- Fan motor
- Spray pump motor
- Drain pump motor
- Drain pump switch
- Bin light LED type
- Bin light switch magnetic reed
- · Inlet water solenoid valve
- · Hot gas valve
- Transformer
- Controller
- Water sensor
- Thermistor
- Bin thermostat

Electrical Sequence:

A closed bin thermostat signals to the controller a need for ice. The controller checks for water, if water is needed , the controller opens the inlet water solenoid valve to fill the reservoir. The hot gas valve is open to equalize the system. When the reservoir is full, the compressor, fan motor, water pump are switched on. After 5 seconds the hot gas valve shuts and ice making begins.

Water is sprayed up into the inverted cup mold. As the water is cooled and ice begins to form in the cups, the temperature of the evaporator will fall.

The freeze cycle continues until the temperature of the thermistor attached to the evaporator outlet tube falls to about zero degrees F. At that point the controller starts a freeze cycle timer, whose default time is 10 minutes. At the end of the freeze cycle's timed portion the controller switches to the harvest cycle.

The harvest cycle begins with the controller stopping the water pump and fan motor. At the same time it opens the hot gas valve and the inlet water solenoid valve. The ice is released by the combination of discharge refrigerant gas entering the evaporator serpentine and warming up the copper, plus the inlet water that flows to the evaporator, floods across the plastic platen to warm it up and be pre-chilled for the next cycle. Ice cubes drop individually and harvest continues until the thermistor attached to the suction line warms up to about 50 degrees F. At that point a harvest timer starts, whose default time is 20 seconds. At the end of that time the harvest cycle ends and the freeze cycle restarts.

Bin control.

The machine's on and off modes are regulated by a bin thermostat. The cap tube for the bin thermostat is in the tube that holds the scoop. The machine will only begin ice making when the thermostat's contacts close. If the contacts re-open before the temperature of the evaporator drops below a preset point, the machine will stop. If the temperature is below that point when the contact s open, the machine will continue through a complete cycle and stop at the end of the harvest cycle.

Water System

The controller uses a Water Sensor to check for the presence of water in the reservoir and to measure the conductivity of the water.

The water sensor consists of two stainless steel probes located in a holder next to the water pump.

The probes sense the conductivity of the water. The higher the mineral content of the water, the better it can conduct electricity. The control system is capable of sensing water as clean as 10 microSiemens/cm.

If the controller cannot sense water and the bin thermostat is closed the controller will power the inlet water solenoid valve to fill the reservoir. The water fill is timed. There is a maximum amount of time allowed from the time the controller turned on the inlet water valve until the water sensor signals to the controller. That time is 2 minutes. If water is not sensed within 2 minutes, the controller will not proceed with an ice making cycle. Instead it will blink the Water light and try filling the reservoir in 20 minutes.

Reservoir water dilution

The process of making ice from circulating water causes the pure water to freeze first, because it freezes at the warmest temperature. The remaining water will develop an increasing concentration of minerals. If that mineral concentration were allowed to continue, eventually the ice machine would become coated with mineral scale.

To combat the mineral build up, the reservoir water is diluted with fresh water every cycle. The controller adds enough water to fill the reservoir and extra water to overfill it. The extra water drains out through the standpipe in the reservoir.

The controller keeps the inlet water solenoid valve open until the evaporator temperature set point is reached, plus some extra time. The extra time is either pre-set or automatically determined by the controller.



Freeze Cycle Water Schematic



Components



Scoop and Thermostat Bracket



Control Panel, Bin Light and Curtain





Evaporator Platen





R

Evaporator and Controller



Condenser and Bin Thermostat

Controller



The controller is located at the front of the unit, under the top panel.

It is powered by a 12 volt transformer. It has 5 indicator lights:

- **Compressor** Light is ON if compressor is powered
- Water Light is ON if inlet water solenoid valve is powered
- Hot Gas Light is ON when Hot Gas Valve is powered
- Fan Light is ON when Fan motor is powered
- **Power** Light is ON when power is connected to controller

Control Safeties:

No Water. If the Water Sensor cannot detect water, and the inlet water solenoid valve has been on for the maximum fill time, the controller will stop all action and wait 20 minutes to re-try water fill. During this time the Check Water light on the control panel will be blinking,

Maximum Freeze Time. If the freeze cycle should extend to 60 minutes, the controller will automatically put the machine into a Harvest cycle.

Maximum Harvest Time. 6 minutes

Time between restarts. After the machine has operated and then turned off, the controller will not restart the machine for four minutes.

Performance Information

	Minutes		Air Temperature					
Freeze Cycle,	Minutes	100	90	80	70	60	50	
	100	37-38	36-37	34-35	32-33	31-32	29-30	
	90	36-37	35-36	33-34	31-32	30-31	28-29	
	80	36-35	32-33	30-31	28-29	27-28	26-27	
Water Temperature	70	32-33	28-29	27-28	25-26	23-24	22-23	
romporataro	60	27-28	25-26	24-25	22-23	20-21	19-20	
	50	20-21	19-20	18-19	17-18	16-17	15-16	
	40	18-19	17-18	16-17	15-16	15-16	15-16	

	0	Air Temperature					
Harvest Cycle	, Seconds	100	90	80	70	60	50
	80 -100	55-60	60-70	70-80	80-90	90-100	110-115
Water	70 - 80	65-75	70-80	75-85	85-95	95-105	115-120
Temperature	50 - 70	70-80	75-85	85-95	125-135	140-150	160-170
	40 - 50	100-120	115-125	130-140	150-170	180-200	210-230

Tatal Ovala	lineetaa	Air Temperature					
Total Cycle, M	linutes	100 90 80			70	60	50
	100	38-39	37-38	36-37	34-35	33-34	31-32
	90	38-39	36-37	35-36	33-34	32-33	30-31
	80	37-38	33-34	31-32	30-31	29-30	27-28
Water Temperature	70	33-34	29-31	28-29	26-27	25-26	24-25
remperature	60	29-30	27-28	25-26	24-25	22-23	21-22
	50	21-22	20-21	19-20	19-20	19	18-19
	40	20-21	19-20	19	18-19	19	19-21

Ice per cycle: 1 lb

Water drained / cycle: Varies by harvest cycle length and purge setting. Typical amounts are @ 70/50 = 52 oz. @ 90/70 = 13 oz

Compressor amps: 2.6 - 3.2

Refrigeration System





Thermistor Values

Deg. F · Ohms	Deg. F · Ohms	Deg. F. · Ohms	Deg. F. Ohms	Deg. F. · Ohms
$0 \cdot \cdot \cdot \cdot 85325$	52 · · · 18873	104 · · 5325	156 • • 1819	208 · · 724
$1 \cdot \cdot \cdot \cdot 82661$	$S_2 \cdot \cdot \cdot 18381$	$105 \cdot 5208$	$150 \cdot 101^{\circ}$ $157 \cdot 1785$	$209 \cdot 713$
$\frac{1}{2}$ · · · · 80090	$54 \cdot \cdot \cdot 17903$	106 · · 5093	158 · · 1752	$210 \cdot \cdot 701$
$3 \cdot \cdot \cdot 77607$	$55 \cdot \cdot \cdot 17439$	107 · · 4981	159 • • 1719	211 · · 690
$4 \cdot \cdot \cdot \cdot 75210$	56 · · · 16988	108 · · 4872	160 · · 1687	212 · · 679
5 72896	57 · · · 16551	109 · · 4766	161 · · 1655	213 · · 668
6· · · · 70660	58 · · · 16126	110 • • 4663	162 · · 1624	214 · · 657
$7 \cdot \cdot \cdot \cdot 68501$	59 · · · 15714	111 · · 4562	163 · · 1594	215 • • 646
8 66415	60 · · · 15313	112 • • 4463	164 · · 1565	216 • • 636
$9 \cdot \cdot \cdot \cdot 64400$	61 · · · 14924	113 · · 4367	165 · · 1536	217 • • 626
$10 \cdot \cdot \cdot 62453$	62 · · · 14546	114 · · 4273	166 · · 1508	218 · · 616
$11 \cdot \cdot \cdot 60571$	63 · · · 14179	115 · · 4182	$167 \cdot \cdot 1480$	219 · · 606
$12 \cdot \cdot \cdot 58752$	$64 \cdot \cdot \cdot 13823$	116 · · 4093	168 · · 1453.	220 · · 597
$13 \cdot \cdot \cdot 56995$	65 · · · 13476	$117 \cdot \cdot 4006$	169 · · 1427	221 · · 587
$14 \cdot \cdot \cdot 55296$	66 · · · 13139	118 · · 3921	$170 \cdot \cdot 1401$	222 · · 578
$15 \cdot \cdot \cdot 53653$	$67 \cdot \cdot \cdot 12812$	$119 \cdot \cdot 3838$	171 • • 1375	$223 \cdot \cdot 569$
$16 \cdot \cdot \cdot 52065$	68 · · · 12494	120 · · 3757	$172 \cdot \cdot 1350$	$224 \cdot \cdot 560$
$17 \cdot \cdot \cdot 50529$	69 · · · 12185	$121 \cdot \cdot 3678$	173 · · 1326	225 · · 551
$18 \cdot \cdot \cdot 49043$	$70 \cdot \cdot \cdot 11884$	$122 \cdot \cdot 3601$	$174 \cdot \cdot 1302$	$226 \cdot \cdot 543$
$19 \cdot \cdot \cdot 47607$	$71 \cdot \cdot \cdot 11592$	$123 \cdot \cdot 3526$	$175 \cdot \cdot 1279$	$227 \cdot \cdot 534$
$20 \cdot \cdot \cdot 46217$	$72 \cdot \cdot \cdot 11308$	$124 \cdot \cdot 3452$	$176 \cdot \cdot 1256$	$228 \cdot \cdot 526$
$21 \cdot \cdot \cdot 44872$	$73 \cdot \cdot \cdot 11031$	$125 \cdot \cdot 3381$	$177 \cdot \cdot 1234$	229 · · 518
$22 \cdot \cdot \cdot 43571$	$74 \cdot \cdot \cdot 10763$	126 · · 3311	$178 \cdot \cdot 1212$	$230 \cdot \cdot 510$
$23 \cdot \cdot \cdot 42313$	$75 \cdot \cdot \cdot 10502$	$127 \cdot \cdot 3243$	179 · · 1190	$231 \cdot \cdot 502$
$24 \cdot \cdot \cdot 41094$	$76 \cdot \cdot \cdot 10247$	128 · · 3176	180 · · 1169	232 · · 495
25 · · · 39915	$77 \cdot \cdot \cdot 10000$	129 · · 3111	181 · · 1149	233 · · 487
$26 \cdot \cdot \cdot 38774$	$78 \cdot \cdot \cdot 9760$	130 · · 3047	182 · · 1129	$234 \cdot \cdot 480$
$27 \cdot \cdot \cdot 37669$	$79 \cdot \cdot \cdot 9526$	131 · · 2985	183 · · 1109	$235 \cdot \cdot 472$
$28 \cdot \cdot \cdot 36600$	$80 \cdot \cdot \cdot 9299$	$132 \cdot \cdot 2924$	184 · · 1090	$236 \cdot \cdot 465$
$29 \cdot \cdot \cdot 35564$	$81 \cdot \cdot \cdot 9077$	$133 \cdot 2865$	$185 \cdot \cdot 1071$	$237 \cdot \cdot 458$
$30 \cdot \cdot \cdot 34561$	$82 \cdot \cdot \cdot 8862$ $83 \cdot \cdot \cdot 8652$	$134 \cdot 2807$	$186 \cdot \cdot 1052$	$238 \cdot \cdot 451$
$31 \cdot \cdot \cdot 33590$ $32 \cdot \cdot \cdot 32649$		$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
$32 \cdot \cdot \cdot 32649$ $33 \cdot \cdot \cdot 31738$	$84 \cdot \cdot \cdot 8448$ $85 \cdot \cdot \cdot 8250$	$130 \cdot 2090$ $137 \cdot 2642$	$188 \cdot 1010$ $189 \cdot 998$	$240 \cdot \cdot 438$ $241 \cdot \cdot 431$
$34 \cdot \cdot \cdot 30855$		$137 \cdot 2042$ $138 \cdot 2589$	190 · · 981	$241 \cdot \cdot 431$ $242 \cdot \cdot 425$
$34 \cdot \cdot \cdot 30833$ $35 \cdot \cdot \cdot 30000$	$86 \cdot \cdot \cdot 8056$ $87 \cdot \cdot \cdot 7868$	$138 \cdot 2389$ $139 \cdot 2537$	190 • • 981	$242 \cdot \cdot 423$ $243 \cdot \cdot 419$
$36 \cdot \cdot \cdot 29171$	88 · · · 7685	$139 2337$ $140 \cdot 2487$	191 903 $192 948$	243 + 19 $244 \cdot 412$
$37 \cdot \cdot 28368$	$89 \cdot \cdot \cdot 7507$	140 - 2437 $141 \cdot 2438$	192 948 $193 932$	$244 412$ $245 \cdot 406$
$38 \cdot \cdot \cdot 27589$	$90 \cdot \cdot \cdot 7333$	$142 \cdot 2390$	$193 \cdot 932$ 194 · 916	$246 \cdot \cdot 400$
$39 \cdot \cdot \cdot 26835$	$91 \cdot \cdot \cdot 7164$	$142 \cdot 2343$	$194 \cdot 910$ $195 \cdot 901$	$240 400$ $247 \cdot 394$
$40 \cdot \cdot \cdot 26104$	$92 \cdot \cdot \cdot 6999$	$144 \cdot 2297$	$196 \cdot \cdot 885$	$246 \cdot \cdot 389$
$41 \cdot \cdot \cdot 25395$	$93 \cdot \cdot \cdot 6839$	$145 \cdot 2252$	$190 \cdot \cdot 871$	$249 \cdot \cdot 383$
$42 \cdot \cdot \cdot 24707$	94 · · · 6683	$146 \cdot 2208$	198 · · 856	$250 \cdot \cdot 377$
$43 \cdot \cdot \cdot 24041$	95 · · · 6530	$147 \cdot 2165$	199 · · 842	
$44 \cdot \cdot \cdot 23394$	96 · · · 6382	148 · · 2123	200 · · 828	
45 · · · 22767	$97 \cdot \cdot \cdot 6238$	$149 \cdot 2082$	201 · · 814	
46 · · · 22159	98 · · · 6097	150 · · 2042	202 · · 800	
47 · · · 21569	99 · · · 5960	151 · · 2003	203 · · 787	
$48 \cdot \cdot \cdot 20997$	100 · · 5826	152 • • 1965	204 · · 774	
$49 \cdot \cdot \cdot 20442$	101 · · 5696	153 • • 1927	205 · · 761	
50 · · · 19903	102 · · 5569	154 · · 1890	206 · · 749	
51 · · · 19381	103 · · 5446	155 · · 1855	207 · · 737	

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Service Diagnosis

No Ice

Problem	Likely Cause	Probable Solution	
No power to unit	Power disconnected	Check breaker or fuse. Reset or replace, restart and check	
No power to controller	Transformer open	Replace transformer	
Shut down on maximum water fill time - water light flashing	Water shut off	Restore water supply	
	Water leak	Check curtain, sump	
	Dirty condenser	Clean condenser	
	Restricted location, intake air too hot or blocked	Eliminate restriction, have machine moved	
	Evaporator thermistor not sensing properly	Check thermistor	
Very long freeze cycle	Spray jets dirty	Remove spray platform and clean spray jets	
	Inlet water valve leaks through during freeze	Check inlet water valve	
	Low on refrigerant	Check cube formation,	
	Connected to hot water	Check for bleed thru from / missing check valve in building water supply	
	Spray pump not pumping	Check pump motor	
	Fan motor not turning	Check fan motor, check fan blade, check controller for voltage output	
	Pump hose disconnected	Check hose	
	Very low on refrigerant	Add access valve, add refrigerant as a test. If unit makes ice, find and correct leak.	
Cannot make ice	Compressor not operating	Check compressor start components, check PTCR resistance and temperature	
		Check compressor voltage	
		Check compressor windings	
	Hot gas valve leaks through during freeze	Check hot gas valve for hot outlet during freeze	
	Compressor inefficient	Check compressor amp draw, if low and all else is correct, change compressor	

Service Diagnosis

Makes excessive noise

Problem	Likely Cause	Probable Solution
	Blade is bent	Replace fan blade
Fan blade vibrates	Fan motor mount is broken	Replace motor mount
Compressor vibrates	Mounting loose	Check mounting
Water pump vibrates	Pump bearings worn	Replace pump
Panels vibrate	Mounting screws loose	Tighten screws

Makes ice, does not harvest

Problem	Likely Cause	Probable Solution
Ice wrong size	Environment changed	Adjust cube size
Little heat to evaporator	Hot gas valve does not open	Check voltage to coil when unit is in harvest, check controller indicator light.
	Water temperature very low	Adjust harvest time
	Fan motor does not stop	Check voltage, replace controller

Makes poor quality ice

Problem	Likely Cause	Probable Solution
Spray pattern poor	Spray jets dirty	Clean jets
Runs out of water	Water leaking from reservoir	Correct leak
High TDS water supply	Groundwater supply	Treat water

Makes ice, but melts rapidly

Problem	Likely Cause	Probable Solution
Restricted drain	Gravity drain hose has air block	Check for kinks or traps
Pooled water in bin	Pump model switch not starting pump	Check / replace switch

Removal and Repair

Bin Thermostat

1. Disconnect electrical power.



AWARNING

Electrical Shock Hazard. Disconnect electrical power before beginning removal

- 2. Remove service panel.
- 3. Remove back panel.

Note: If unit is built in it must be pulled out to change the bin thermostat.

4. Pull cap tube out from the back of the ice storage bin and cap tube holder.

5. Remove two screws and the bin thermostat contact section from its mounting bracket.

6. Disconnect two wires from the bin thermostat contact section and remove the thermostat from the ice machine.

7. Reverse to reinstall.

Inlet Water Solenoid Valve

1. Disconnect electrical power.

2. Remove service panel.

3. Shut water supply OFF.

4. Disconnect inlet water supply tube from inlet water solenoid valve.

5. Unplug wire harness from valve coil.

6. Remove two screws holding valve to chassis.

7. Squeeze hose clamp larger and push away from solenoid valve outlet.

8. Pull hose from outlet of valve.

9. Reverse to reassemble.

Curtain

1. Shut unit off.

2. Loosen both thumbscrews holding curtain bracket to freezing chamber.

3. Pull out and remove curtain with bracket from ice machine.

4. Reverse to reassemble.

Spray Platform

1. Remove curtain.

2. Lift spray platform up until it disconnects from its fitting.

- 3. Pull forward and remove from the ice machine.
- 4. Reverse to reassemble.

Water Pump

- 1. Remove spray platform
- 2. Remove back panel.

Note: If unit is built in it must be pulled out to change the water pump.

3. Disconnect power and ground wires from pump motor.

- 4. Rotate pump body CW and lift up to remove it.
- 5. Reverse to reassemble.

Removal and Repair

Evaporator Thermistor

Note: If unit is built in it must be pulled out to change the evaporator thermistor.



AWARNING

Electrical Shock Hazard. Disconnect electrical power before beginning removal

1. Shut machine off. If unit was making ice, manually harvest the ice.

- 2. Disconnect electrical power.
- 3. Remove top panel.
- 4. Remove cover from controller box.
- 5. Disconnect thermistor wire from controller.

6. Locate thermistor sensor, it is attached to the suction line, just above the accumulator and is covered with insulation tape. Remove the insulation.

7. Disconnect sensor bulb from suction line (it's held on with a metal clip).

8. Remove thermistor from ice machine.

9. Reverse to reassemble. It is very important that the bulb be re-insulated.

Transformer

Note: If unit is built in it must be pulled out to change the transformer.

- 1. Disconnect electrical power.
- 2. Remove top panel.
- 3. Remove controller cover.
- 4. Unplug leads from transformer.

5. Remove screws holding transformer to controller box and pull transformer up and out of the ice machine.

6. Reverse to reassemble.

Controller

Note: If unit is built in it must be pulled out to change the controller.

- 1. Disconnect electrical power.
- 2. Remove top panel
- 3. Remove controller box cover.
- 4. Unplug all connections.

5. Remove screws holding controller to housing, and lift controller from unit.

Note: To avoid damaging the controller, touch the metal chassis of the unit prior to touching the replacement controller.

6. Reverse to reassemble.

Control Panel

- 1. Disconnect electrical power.
- 2. Remove top panel
- 3. Remove controller box cover.
- 4. Unplug ribbon cable connection.

5. Push control panel away from the front of the machine. Begin at the ribbon cable attachment point.

Note: Control panel is held on by adhesive and the adhesive is thinnest at the cable point.

6. Separate control panel from controller box and remove from the ice machine.

7. Reverse to reassemble.

Removal and Repair - Cabinet Removal

Certain components require the removal of the cabinet for repair access.

- 1. If the machine is in a freeze mode, perform a manual harvest.
- 2. Remove all ice.
- 3. Drain reservoir.
- 4. Remove service panel and kick plate.
- 5. Remove back panel.
- 6. Disconnect electrical power.



Electrical Shock Hazard. Disconnect electrical power before beginning removal

- 7. Disconnect water and drain tubing.
- 8. Remove door.
- 9. Remove top panel.
- 10. Remove controller box cover.

11. Disconnect thermistor from controller, pull wire back to suction line.



12. Remove curtain & hanger.



13. Locate elbows where water flows onto the evaporator platen.



14. Pull clip up. Push inner elbow back and rotate it until it points straight up, then push it back through the hole in the back of the freezing compartment.



15. Pull water inlet elbow out of inner elbow.

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18. Remove two screws holding freezing compartment brace to cabinet, lift brace up.



19. Lift evaporator platen up and tilt back enough for bin assembly to clear the base.



23. Lift bin assembly off the base.

Note: Prop evaporator assembly up. A 3' length of 3/4" PVC tubing with one end inserted into the cup mold and the other against the base will hold it up.

The hot gas valve, fan motor, condenser and compressor are now exposed for service.



20. Remove air baffle.

21. Unplug 7 wire harness connector (at back of bin).

22. Remove 1 screw at each corner of the base.

Chassis Shown in Front of Bin Assembly

Refrigeration Service

This ice machine use R-134a type refrigerant. There are specific rules for handling that refrigerant.

To check for system pressures, add a field supplied clamp-on type service valve as a temporary means of system access. After diagnosis and before final repair, replace the clamp-on type valve with valves that are brazed onto the process tubes of the system.

Use a low flow of dry nitrogen when brazing on the system.

Install a new filter drier when replacing a refrigeration component or after a refrigerant leak repair.

Evacuate the system to at least 300 microns and use a micron gauge to measure the evacuation level.

Weigh in the nameplate charge. The machine is critically charged and a partial ounce mis-charge will affect performance.

This is the illustrated parts list for the SCCG50 and the SCCP50 Residential Ice Machines

When ordering a service part, always refer to the complete model number of the equipment being repaired to be sure of obtaining the correct part. Many times there are slight differences between models, and having the complete model number will aide in selecting the correct part.

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Items 17 and 18 included with item 19, package shipped loose in bin.

ltem	Part		7
Number	Number	Description	8
1		Door panel kits. Kits include	9
		items 1 thru 8.	1
	KDFW	White panel, white handle	1
	KDFWS	White panel, SS handle	1
	KDFB	Black panel, black handle	1
	kDFBS	Black panel, SS handle	1
	KDFS	SS panel, SS handle	1
2	02-4433-01	Corner block, RH	1
3	02-4430-42	Handle, white	
	02-4430-52	Handle, black	1
	02-4430-01	Handle, SS	1
4	02-4433-02	Corner block, LH	1
5	03-1531-01	Screw	
6	03-3811-01	Screw	

7	03-1410-07	Lockwasher
8	A39390-001	Support bracket
9	13-0949-01	Door gasket
10	03-1404-40	Screw
11	03-3818-01	Screw - hinge to cabinet
12	02-3866-04	Hinge - top right/bottom left
13	03-1404-24	Screw - hinge to door
14	02-3866-03	Hinge
15	03-1403-67	Screw
16	A39513-001	Door assembly, does not
	include door	panel or hinges
17	02-4429-01	Hinge opening cover
18	02-1875-07	Hole plug for item 17
19	02-4474-01	Hinge package

Cabinet 16 15 14 13 12 11 2 20, 21-10 1 19 1 3 9 10 02-4392-01 Bin edging 11 A39364-001 Top hinge brkt, RH white A39364-002 Top hinge brkt, RH black A39364-003 Top hinge brkt, RH SS 17 A39364-004 Top hinge brkt, LH white . 18 A39364-005 Top hinge brkt, LH white 6 A39364-006 Top hinge brkt, LH SS 12 03-3836-03 Screw 13 02-4438-01 Gasket 14 02-4438-02 Gasket strip 15 02-4426-01 Insulation pad Item Part 16 A39362-001 Top panel, white Number Number Description A39362-002 Top panel, black 03-1531-01 Screw 1 A39362-003 Top panel, SS 2 A39363-001 Back panel 17 03-1403-86 Screw 3 A39389-001 Utility routing bracket 18 no number Cabinet & bin assembly 4 12-1213-11 Snap bushing A39385-001 Btm hinge brkt, right white 19 5 A39392-001 Srv panel mntg bracket A39385-002 Btm hinge brkt, right black 6 02-4390-01 Kickplate A39385-003 Btm hinge brkt, right SS 7 03-1403-86 Screw A39385-004 Btm hinge brkt, left white 8 02-4441-01 Panel handle A39385-005 Btm hinge brkt, left black 9 A39381-001 Service panel, white A39385-006 Btm hinge brkt, left SS A39381-002 Service panel, black 20 A39379-001 Bin stat bracket/scoop hldr A39381-003 Service panel, SS 21 02-4391-03 Scoop

Reservoir and Spray Pump



ltem	Part	
Number	Number	Description
1	12-2986-21	Water pump
2	02-4379-01	Pump discharge hose
3	A39030-023	Water probe
4	02-4371-02	Spray platform
5	02-4368-01	Water Tee
6	13-0617-11	O-ring
7	02-4365-01	Front bracket
8	03-3892-01	Thumb screw
9	A39357-001	Curtain
10	02-4383-01	Clamp
11	02-4369-01	Drain cap
12	02-4428-01	Drain tube
13	02-4375-01	Evap bracket, left

- 14 02-4375-02 Evap bracket, right
- 15 02-4475-01 Grommet
- 16 02-4381-03 Clip
- 17 13-0617-04 O-ring
- 18 02-4381-01 Barbed fitting
- 19 02-4381-02 Spout
- 20 02-4373-01 O-ring
- 21 02-4370-21 Spray nozzle, kit. Set of 3

nozzles, o-rings, screws and nuts.



- 4b 18-8939-52 Relay
- 5 03-3821-01 Clip
- 6 03-1407-08 Washer
- 7 18-4700-28 Grommet
- 8 18-8940-01 Condenser
- 9 02-4416-01 Drier
- 10 11-0562-21 Hot gas valve
- 10a 11-0562-22 HGV coil

Under Bin Parts



ltem	Part		14	02
Number	Number	Description	15	02
1	12-2990-01	Inlet water sol valve	16	02
2	03-1531-01	Screw	17	16
3	12-2396-02	Fan motor	18	A
4	18-8941-01	Fan blade	19	A
5	A39424-001	Fan motor bracket	20	02
6	A39359-001	Fan shroud	21	02
7	13-0909-01	Gasket, order 1 & cut to fit	22	02
8	02-4450-01	Air baffle	23	02
9	11-0578-01	Thermostat	24	02
10	A39379-001	Thermostat bracket	25	02
11	03-1403-16	Screw	26	05
12	03-1608-01	Leg leveler	27	A
12a	02-4415-01	Leg cap	28	11
13	02-1875-18	Hole plug	29	03
			30	12

14	02-2814-13	Hose clamp
15	02-4412-01	Drain hose
16	02-2814-08	Hose clamp
17	16-0671-01	Elbow
18	A39462-021	Pump kit
19	A37334-001	Discharge hose
20	02-0534-02	Hose clamp
21	02-3522-01	Elbow
22	02-3374-01	Check valve
23	02-2814-13	Hose clamp
24	02-4413-01	Drain tube
25	02-3406-01	Barbed connector
26	05-0591-01	Switch hose
27	A39370-001	Switch bracket
28	11-0504-01	Pressure switch
29	03-3904-01	Spring
30	12-2503-21	Pump & motor only

Control System



ltem	Part	
Number	Number	Description
1	03-3836-03	Screw
2	12-2924-01	Transformer
3	12-2980-01	Bulb
4	02-4380-01	Light cover
5	11-0574-01	Switch panel
6	12-2980-03	Bin light sensor
7	11-0573-21	Controller
8	03-1531-01	Screw

9 02-4386-01 Cover

5.

Not Shown:

NS1

NS2

NS3

- 12-2980-02 Bin light harness & socket
 - 12-3003-01 Bin stat harness
 - 12-3000-02 Hi voltage harness, lower
- NS4
 - 12-3000-01 Hi voltage harness, upper
- NS5 12-2992-01 Water sensor harness

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Schematic Diagram



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Wiring Diagram





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