

Kold Draft Troubleshooting

Problem	Possible Cause	Solution
Ice machine is not operating.	On-Off switch in "Off" position	Move switch to "On" position.
	No power at ice machine. Circuit protector open.	Replace fuse or reset breaker. Check circuit for overload condition.
	Ice machine off because bin is full of ice.	Use ice or move ice away from bin level probe.
	Ice machine off because bin level probe is defective.	Replace bin level probe.
	Ice machine off as if bin is full. Ambient temp below 50°F (10°C).	Ambient temperature must be 60°F (15°C) minimum.
Compressor is not operating. Water pump and other components are operating normally. See compressor test procedure for more information.	Ice-Clean switch in "Clean" position.	Move switch to "Ice" position.
	High pressure cut-out open on air cooled models. Condenser dirty.	Clean condenser and reset high pressure cut-out. Confirm proper operating pressures.
	High pressure cut-out open on air cooled models. Air circulation through condenser is insufficient or hot air is recirculating through the condenser.	Provide adequate spacing between the ice machine and walls, ceilings or other equipment. See installation instructions for spacing requirements. Confirm proper pressures.
	High pressure cut-out open on liquid cooled models. Coolant liquid interrupted or insufficient	Restore adequate coolant liquid supply and reset high pressure cut out. Confirm proper operating pressures.
	High pressure cut-out open on liquid cooled models. Interior of condenser has a mineral build-up.	Clean or replace condenser.
	High pressure cut-out open. Refrigeration system is overcharged.	System is overcharged with refrigerant. Remove refrigerant and recharge the system to specifications.
	Compressor thermal protector open because of low voltage condition.	Allow thermal protector to reset. Measure voltage at contactor while compressor is running. Correct power supply problem if voltage is lower than specified on the ice machine electrical plate. See compressor test procedure for more information.
	Compressor thermal protector open because of defective run capacitor.	Replace run capacitor. See compressor test procedure for more information.
	Contactor is defective.	Check for voltage at coil terminals. Replace contactor if it does not close when the coil is energized.
	Compressor start capacitor or relay defective	Test and replace these parts if defective. See compressor test procedure for more information.
	Compressor is defective.	Replace compressor. See compressor test procedure for more information.
Condenser fan motor is not operating on air-cooled models. Compressor is operating	Fan motor protector open.	Replace motor if it does not run when cool or at normal operating conditions.
	Fan motor defective	Replace motor.

Defrost performance slow.	Condenser sub-cooling >11°C at the middle point of the freeze cycle on liquid-cooled models.	System is overcharged with refrigerant. Remove refrigerant and recharge the system to specifications.
	Condenser liquid regulating valve not closing fully during defrost on liquid-cooled models.	Adjust, repair or replace liquid regulating valve.
	Air cooled ice machine installed in a low ambient temperature location.	Ambient temperature must be 60°F (15°C) minimum.
	Ice frozen into the water plate surface. Thick web between ice cubes.	Adjust web thickness to specifications.
	Ice frozen into the water plate surface. Cubes are fully formed without small dimples.	Reduce the water fill level until ice cubes are produced with small dimples.
	Ice cubes have large dimples or are hollow at the end of the freeze cycle. Batch weight is too light.	Increase the water level until ice cubes are produced with small dimples.
	Evaporator grids are distorted.	Carefully straighten grids or replace evaporator if the damage is severe.
Water plate re-opens immediately after closing.	"Water plate up" switch lever is not being pushed up completely.	Adjust "water plate up" switch actuator on water plate until it pushes up the switch lever completely.
	Water plate is prevented from closing by some obstruction such as ice remaining on the water plate surface.	Eliminate obstruction. Adjust the evaporator temperature probe so all ice is out of the evaporator before the water plate begins to close.
Water plate closes but re-opens before water fill is completed.	Water plate springs are stretched or weak and allow the water plate to drop slightly as the water fills the tank. The "water plate up" switch lever is allowed to drop and re-open the water plate.	Replace defective springs.
	A water plate spring is broken or disconnected from the cam arm or the water plate.	Replace broken spring or reattach disconnected spring.
Water plate will not close after defrost.	Evaporator temperature probe is defective and not sensing warm evaporator temperature.	Test probe and replace if defective.
	Actuator motor output shaft is turning but front cam is not turning.	Cam pin is broken or missing.
	Actuator motor will not run. No voltage measured at actuator motor.	Inspect operation of arms up and arms down switches. Adjust or replace if defective.
	Actuator motor will not run. No voltage measured at actuator motor and controller output terminal.	Test controller and replace if defective.
	Actuator motor will not run. Voltage measured at actuator motor. Actuator motor or capacitor defective.	Replace defective actuator motor or capacitor. See actuator motor test procedure for additional information.
	Actuator motor overheated. Open thermal overload.	Let motor cool and determine why motor is running continuously.

Defrost does not initiate when water level drops below low water level probe.	Water level probe does not sense that the water level is low.	Be sure there is no continuity path between the probes through water or mineral deposits on the probe cap. Make sure the cap is clean and dry especially after cleaning the ice machine.
	Water level probes are OK but no voltage measured at the controller output terminals to the actuator motor, water valve or defrost valve.	Test controller and replace if defective.
Defrost cycle ends and water plate closes before all ice is out of the evaporator.	Evaporator temperature probe adjustment is set too cold and terminates defrost too early.	Adjust evaporator temperature probe counter-clockwise (warmer) to extend defrost time.
	The evaporator temperature probe has poor contact with the evaporator and terminates defrost too early.	Be sure the evaporator temperature probe is fully inserted into the evaporator probe holder.
	Evaporator grids are distorted, slowing the fall of the ice from the evaporator.	Carefully straighten grids or replace evaporator if the damage is severe.
Defrost valve opens during water fill.	Slow water fill.	The water supply pressure must be a minimum of 20 PSI (138 kPa) dynamic at the water valve. Be sure that the supply line is of adequate size. This is especially important for liquid cooled models where the potable water and condenser coolant water are supplied by the same water line. Check for restrictions in the water supply line including clogged filters. Check the water line strainer and clean it if needed.
	Cold potable water supply.	This is normal operation of the unit, if the water supply is too cold. Very cold water will not rinse the ice residue from the water plate, causing it to build up and affect normal operation.
Ice remains attached to the water plate surface at the end of defrost.	Ice frozen into the water plate surface. Thick web between ice cubes.	Adjust web thickness to specifications.
	Ice frozen into the water plate surface. Cubes are fully formed without small dimples.	Reduce the water level until ice cubes are produced with small dimples.
	Cold potable water supply.	Very cold water will not rinse the ice residue from the water plate thoroughly.

<p>Water valve will not close. Potable water level continues to rise after contacting the tip of the high water level probe, during the fill cycle.</p>	<p>No voltage measured at water valve coil. Water valve remains open because of water supply problem.</p>	<p>The water supply pressure must be a minimum of 20 PSI (138 kPa) dynamic at the water valve. Be sure that the supply line is of adequate size. This is especially important for liquid cooled models where the potable water and condenser coolant water are supplied by the same water line. Check for restrictions in the water supply line including clogged filters. Check the water line strainer and clean it if needed.</p>
	<p>No voltage measured at water valve coil. Water valve remains open because of dirty or defective water valve.</p>	<p>Disassemble and clean water valve if needed. Make sure the bleed holes in the valve diaphragm are open. Replace or rebuild water valve if defective.</p>
	<p>Line voltage measured at water valve coil.</p>	<p>Test for continuity through the high level probe and the reference probe. Replace the probe if the continuity is broken.</p>
	<p>Water level probes test OK, but line voltage measured at water valve coil.</p>	<p>Test controller and replace if defective.</p>
<p>Water valve will not open. Potable water level never reaches the high water level reaches the high water level probe, during the fill cycle.</p>	<p>No voltage measured at water valve coil because of an abnormal probe continuity path.</p>	<p>Be sure there is no continuity path between the probes through water or mineral deposits on probes through water or mineral deposits on the probe cap. Make sure the cap is clean and dry especially after cleaning the ice machine.</p>
	<p>Test controller and replace if defective. No voltage measured at water valve coil and controller output terminal because of defective controller.</p>	<p>Test controller and replace if defective.</p>
	<p>Water valve closes when water contacts the tip of the low water level probe, because the low and high water level probes are reversed in the water level probe terminal plug.</p>	<p>Relocate and reinstall the probe wires, in the probe terminal plug or replace the water level probe set.</p>

Poorly formed or cloudy ice cubes.	Water plate pressure is low. Pump operating improperly because of low supply voltage.	Measure the supply voltage with the ice machine running. Be sure voltage is within the specified tolerances.
	Water plate pressure is low. Improper pump installed in ice machine.	Be sure the pump being used is proper for the ice machine model.
	Water plate pressure is low. Water plate is cracked or leaking	Repair or replace water plate.
	Ice cubes have large dimples or are hollow at the end of the freeze cycle.	Increase the water level until ice cubes are produced with small dimples.
	Water plate is out of alignment with evaporator.	Re-align water plate. See the water plate alignment illustration for more information
	Ice cubes do not break apart after defrost because of thick web between cubes.	Adjust spacing between evaporator and water plate. See the web thickness adjustment illustration for more information.
	Ice cubes have uneven dimples. Dimples are larger on right side of evaporator because of low refrigerant charge.	Remove refrigerant and recharge the system to specifications.
	Ice cubes have uneven dimples. Dimples are larger on right side of evaporator because of high evaporator superheat.	Adjust the expansion valve to decrease the evaporator superheat.
	Ice cubes have uneven dimples. Dimples are larger on left side of evaporator and ice may freeze into the right side surface of the water plate because of low evaporator superheat.	Adjust the expansion valve to increase the evaporator superheat.
Actuator motor turns clockwise at start of defrost.	Arms up and arms down switches are defective, or the relationship between the switches and switch operators is improper.	Confirm proper operation of the arms up and arms down switches and replace if needed. Confirm proper settings of the switch operators and adjust as required.
	Arms up and arms down switch wiring is incorrect.	Correct switch wiring.
Cam arms are improperly positioned when the water plate is fully opened and/or closed.	The relationship between the switches and switch operators is improper.	Adjust switch operators so the cam arms are at the 12 o'clock position when the water plate is fully closed and at the 7 o'clock position when the water plate is fully open. See the cam arm, switch and switch operator relationship illustration for more information.