

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

AquaArctic Remote Water Chiller



A9100080 -A

**TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:
1.800.591.9360**

Technical Assistance Fax: 1.626.855.4894

NOTES TO INSTALLER:

1. Please leave this documentation with the owner of the fixture when finished.
2. Please read this entire booklet before beginning the installation.
3. Check your installation for compliance with plumbing, electrical and other applicable codes.

LIMITED WARRANTY - UNITED STATES & CANADA

Acorn Aqua warrants that its products are free from defects in material or workmanship under normal use and service for a period of one year from date of original shipment or for 18 months after the date of shipment from the factory, whichever comes first. The compressor, condenser and refrigeration tubing is warranted for five years. Acorn's liability under this warranty shall be discharged solely by replacement or repair of defective material, provided Acorn is notified in writing within one year from date of shipment, F.O.B. Industry, California.

This warranty does not cover installation or labor charges and does not apply to materials, which have been damaged by other causes such as mishandling or improper care or abnormal use. The repair or replacement of the defective materials shall constitute the sole remedy of the Buyer and the sole remedy of Acorn under this warranty. Acorn shall not be liable under any circumstances for incidental, consequential or direct charges caused by defects in the materials, or any delay in the repair or replacement thereof. This warranty is in lieu of all other warranties expressed or implied. Product maintenance instructions are issued with each unit and disregard or non-compliance with these instructions will constitute an abnormal use condition and void the warranty. Stainless steel must be protected on jobsites during construction and must be properly maintained after the water has been introduced into the water cooler or drinking fountain, or Acorn's limited warranty is void.

LIMITED EXPORT WARRANTY – One year on parts only.



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IMPORTANT

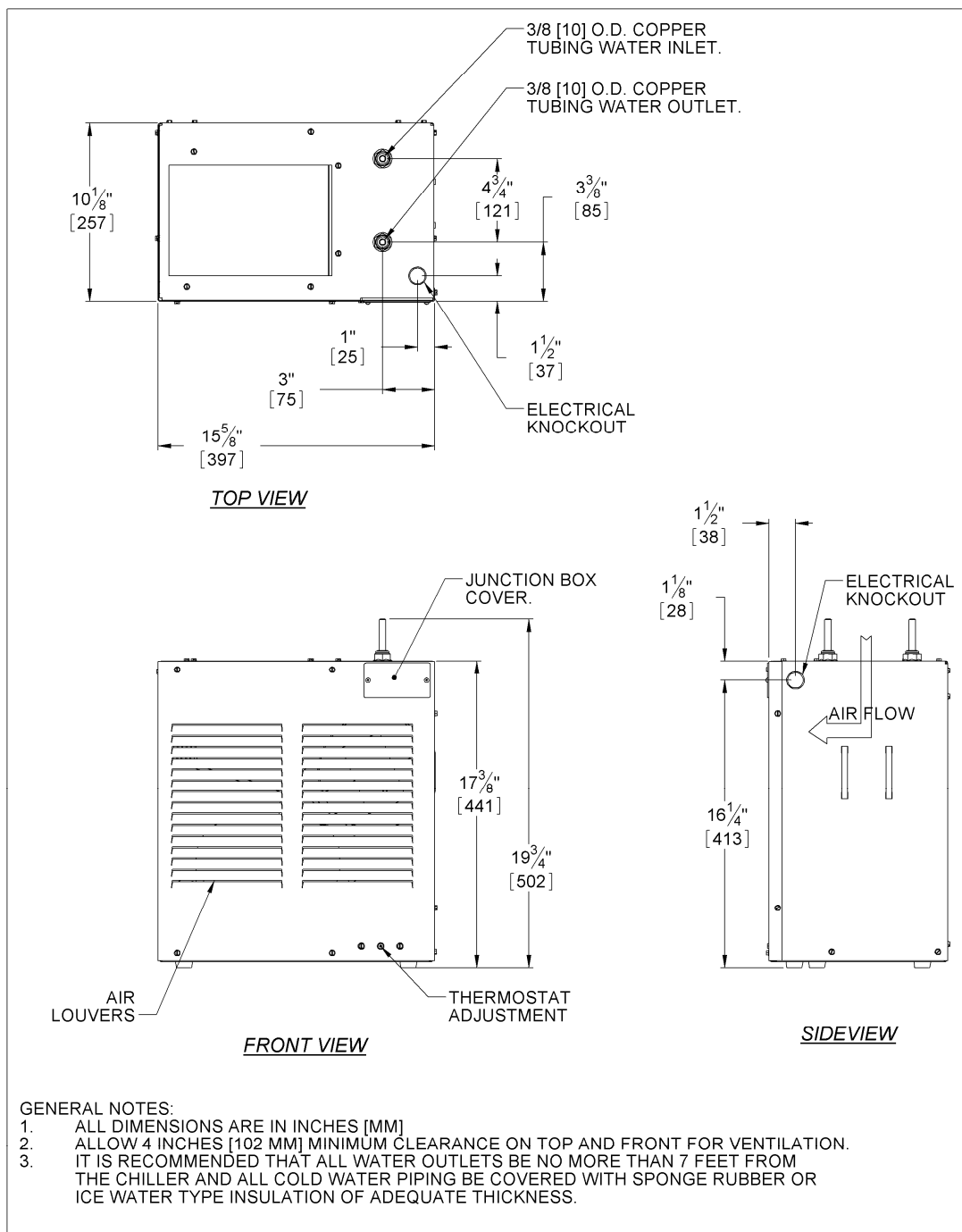
This fixture is intended to dispense water that has been lowered in temperature, but otherwise remains unchanged by the materials in the water chiller. It is common for electrical equipment to be grounded to water lines either within a structure or away from it. Every attempt should be made to prevent this kind of grounding from generating electrical feedback into the water chiller creating electrolysis. Electrolysis will cause a metallic taste or cause water metal content to increase.

NOTICE

A dielectric coupling must be used to connect the water chiller to the water supply.

ROUGHING-IN AND DIMENSIONAL DRAWING

Prior to roughing consult with local, state, and federal codes for proper compliance.





IMPORTANT:

1. Water Supply Service Stop Valve, Water Connections and Electrical Connections to be supplied by others in accordance with local codes.
2. Provide 4" minimum clear space on fixture top and front to allow for proper ventilation.
3. Water inlet is 3/8" Outer Diameter copper tube. Water outlet is 3/8" Outer Diameter copper tube.
4. Completely flush supply lines of all foreign debris before connecting to chiller. Water chiller designed to not cause problems with taste, odor, color, or sediment.
5. All burrs must be removed from outside of cut tubes before inserting into all components.
6. Power supply must be identical in voltage, cycle and phase to that specified on the chiller data plate.
7. This unit must be grounded per the requirements of applicable electrical codes.
8. **WARNING:** Warranty is voided if installation is not made following current Acorn Aqua installation instructions and if components are assembled to chiller that are not approved by Acorn Aqua.
9. Chiller operates within water pressure range of 20 to 105 psig. Acorn Aqua will not warranty chiller damaged when connected to supply lines with flow pressure lower than 20 psig or higher than 105 psig. A pressure regulator must be furnished by others on supply line if inlet pressure is greater than 105 psig.

START UP:

1. Before connecting power supply, but after thoroughly flushing the supply line and connecting it to the chiller, turn on building water supply and check all connections for leaks.
2. Air within the water chiller system or the structure supply piping will cause an irregular outlet stream until purged out by incoming water. Covering the outlet of fixture to which chiller is connected with a clean cup (or similar object) is recommended when first activating water chiller to prevent excessive splashing. Activate fixture valve until steady water stream is achieved.
3. Recheck all water connections with water flowing through system.
4. Provide power to water chiller and make sure unit begins to function.

TROUBLE SHOOTING:

IMPORTANT: BEFORE MAKING ANY OF THE REPAIRS LISTED, MAKE SURE THE WATER CHILLER IS DISCONNECTED FROM THE ELECTRICAL SUPPLY AND THE WATER SUPPLY VALVE IS SHUT OFF.

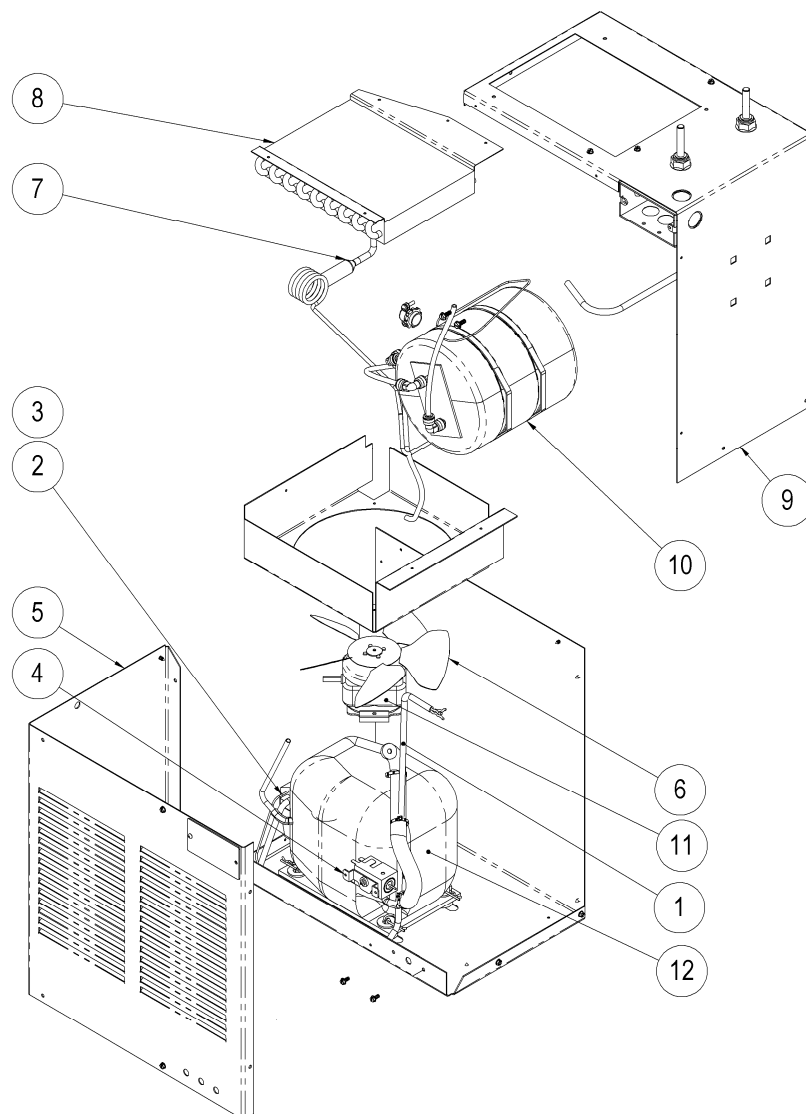
1. Adjustments
 - a. Cold Water Thermostat – The water temperature can be adjusted using a slotted screwdriver and turning clockwise to make colder and counterclockwise to make warmer.
2. Compressor Does Not Run
 - a. Check the electrical supply for power and correct voltage. The incoming voltage must be within 10% of the rated voltage on the serial nameplate.
 - b. If the cold thermostat capillary bulb loses its charge or becomes kinked it will fail in the open position causing a disruption of power to the compressor. Unplug the water chiller and using an ohm meter check for continuity across the two electrical terminals on the thermostat. Install a new thermostat if there is no continuity.
 - c. Check for loose wires within the compressor box. The incoming power leads must be connected to the overload and relay.
 - d. If all components check positive for continuity then test the wiring harness plug for continuity to see if there is a broken wire within the wiring harness insulation.
3. Compressor Runs – Water Is Warm
 - a. The most common cause for a water chiller to run without producing cold water is a loss of refrigerant. The water chiller must be taken to a certified refrigerant technician for repairs.
 - b. Make sure the condenser fan motor is operative. The fan blade must turn freely to help remove the heat of compression.

- c. An incorrect refrigerant charge, restriction or defective compressor (not pumping) will also cause the compressor to run without producing cold water. All these signs indicate a problem within the refrigeration system and the water chiller must be checked by an authorized service company.
4. Compressor Cycling On Overload Protector
 - a. A dirty condenser or a blocked fan will cause a high head pressure and frequent cycling of the overload protector.
 - b. Check the incoming voltage to make sure it is within 10% of the serial nameplate rating.
 - c. A restriction or moisture in the system will also cause intermittent cycling. A certified refrigeration mechanic should be contacted in this situation.
 - d. Change the overload or relay if defective.
5. Noisy Operation
 - a. Check to make sure the fan blade is rotating freely.
 - b. Check the compressor mounting to make sure the pins and clips are not rattling. If the compressor appears to be noisy internally, it must be replaced.
6. Restricted Or No Water Flow
 - a. Ensure water supply service stop valve is fully open.
 - b. Verify minimum 20 psig supply line flow pressure.
 - c. Check for twists or kinks in outlet tubing.
 - d. Fixture to which chiller is attached might be clogged with foreign material.
 - e. The water chiller may also develop a freezing condition in which the water will become frozen inside the evaporator coil. This indicates a refrigeration problem or thermostat failure in which case the water chiller needs to be checked by a qualified technician.

CLEANING & MAINTENANCE GUIDE:

1. Motors have lifetime lubrication and do not require scheduled maintenance.
2. Excess dirt or poor ventilation will cause the compressor overload protector to turn the compressor off and it will cycle on and off with no cold water coming out of bubbler. Periodically clean with vacuum cleaner, air hose or brush the condenser fins and cabinet ventilation louvers. In environments where dirt and dust is more prevalent, clean more frequently.

CHILLER PARTS BREAKDOWN



ITEM #	PART NUMBER	DESCRIPTION
	A9100080-A	
1	7008-300-001	Wiring Harness
2	7012-002-000	Start Relay
	7012-031-000	Start Relay – 220V
3	7012-003-000	Start Capacitor
	7012-032-000	Start Capacitor – 220V
4	7003-250-000	Cold Control
5	7008-002-199	Front / Side Panel
6	7003-350-000	Fan Blade
7	7012-050-000	Filter / Dryer
8	7003-201-000	Condenser
9	7008-003-199	Top / Side Panel
10	7008-100-001	Evaporator
11	7003-302-000	Fan Motor
	7012-062-001	Fan Motor – 220V
12	7012-001-001	Compressor
	7012-030-001	Compressor – 220V

Repairs must be made with Acorn Aqua parts only. Please order through your local representative or distributor. The phone number to locate your local representative is 1.800.591.9360.