

**A910.8A**  
**Remote Water Chiller, 8 GPH**



**A9100080-A / A9100080-220V-A**  
**TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:**  
**(800) 743-8259**

Technical Assistance E-Mail: [fieldservice@acorneng.com](mailto:fieldservice@acorneng.com)

**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.
4. **IMPORTANT!** Not intended for use with RO or DI treated water supply.
5. Unit includes Factory installed Leak Detector Shut-Off Valve; refer to details in this manual.

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COMPLIES WITH  
**STANDARDS**



Federal  
Public Law  
111-380  
(No Lead)



(220V Compressor Only)



NSF/ANSI/CAN 61

**murdock**<sup>®</sup>  
SINCE 1853

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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 cooler. 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 cooler creating electrolysis. Electrolysis will cause a metallic taste or cause water metal content to increase.

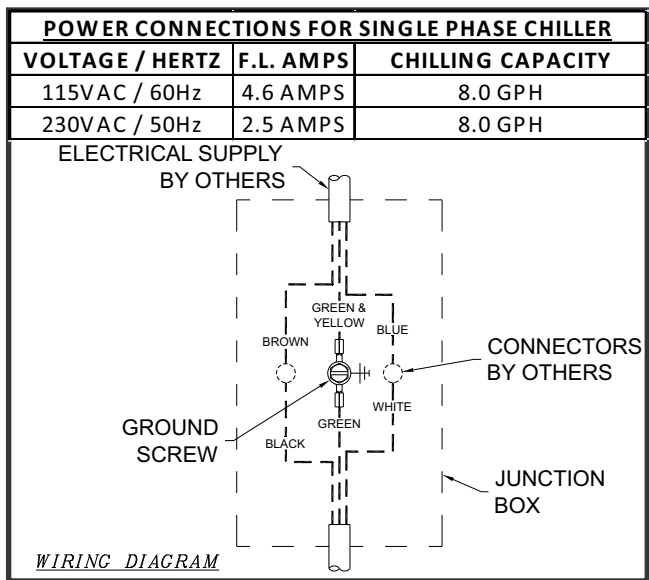
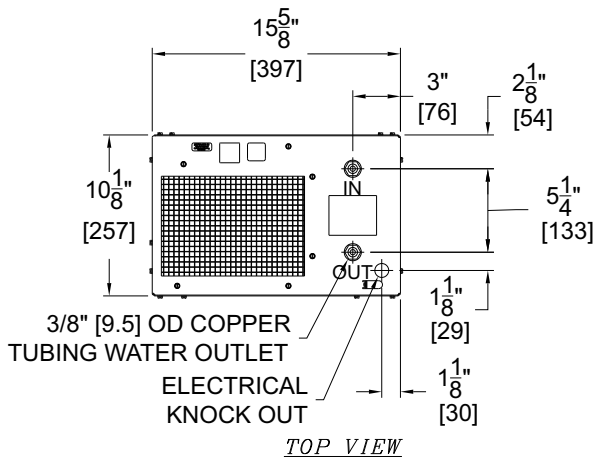
**NOTICE**

**Remote water chiller is intended for indoor installation (fixture has not been rated for outdoor installation).** A dielectric coupling must be used to connect the water chiller to the water supply. A nonmetallic coupler is furnished with this water cooler to meet this requirement.

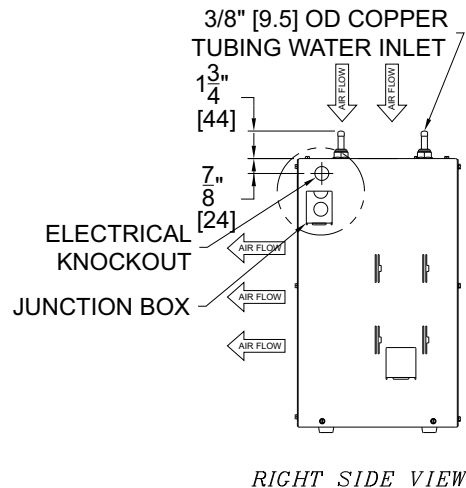
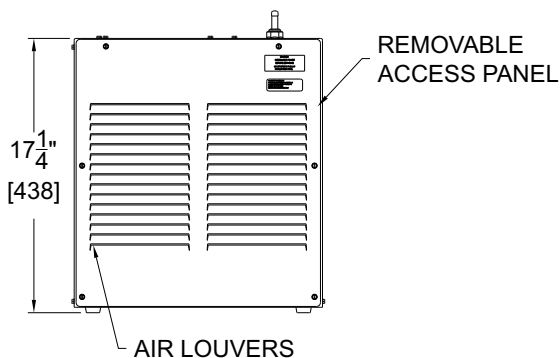
**ROUGHING-IN AND DIMENSIONAL DRAWING**

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

**ROUGH-IN:**



**NOTE: INSTALLER MUST REMOVE THE REMOVABLE ACCESS PANEL TO LOCATE THE JUNCTION BOX TO MAKE UP WIRING CONNECTIONS**



**GENERAL NOTES:**

1. ALL DIMENSIONS ARE IN INCHES [MM].
2. ALLOW 4 INCHES [102MM] MINIMUM CLEARANCE ON TOP AND FRONT FOR VENTILATION.
3. IT IS RECOMMENDED THAT ALL WATER OUTLETS BE CONNECTED DIRECTLY AND NO MORE THAN 7 FEET AWAY FROM THE CHILLER. FOR ANYTHING GREATER THAN 7 FEET, CHILLED WATER MAY NOT BE EXPOSED UNTIL ALL WATER IN RISER HAS BEEN RELEASED. ALL CHILLED WATER PIPING IS INTENDED TO BE COVERED WITH APPROPRIATE INSULATION TO MAINTAIN TEMPERATURE AND AVOID CONDENSATION

**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 and chilled water outlet is 3/8" OD tube (or 1/4" NCT).
4. **Completely flush** supply lines of all foreign debris before connecting to chiller. Water chiller is designed to be free of problems with taste, odor, 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:** Failure to follow current Murdock Manufacturing installation instructions or using chiller in a manner not approved by Murdock Manufacturing will render warranty void.
9. Chiller operates within water pressure range of 20 PSIG (138 kPa) to 105 PSIG (724 kPa). Murdock Manufacturing will not warranty chiller damages when connected to supply lines with flow pressure lower than 20 PSIG (138 kPa) or higher than 105 PSIG (724 kPa). A pressure regulator must be furnished by others on supply line if inlet pressure is greater than 105 PSIG (724 kPa). Consult with UPC and local codes for maximum allowable water pressure.
10. **Remote water chiller is intended for indoor installation (fixture has not been rated for outdoor installation).**

**INSTALLATION:**

1. Locate chiller where there is 4 inches of space in front and above the chiller for proper ventilation.
2. **Make sure the supply power is off.** Remove front panel of chiller and make the necessary electrical connections (per the chiller data label) including the ground connection.
3. With front panel still removed carefully rotate cooling fan manually to insure proper clearance and free fan action.
4. Reinstall front panel with six sheet metal screws.
5. Connect the water supply stop (by others) to the inlet on top of the chiller. Make sure the waste supply lines are thoroughly flushed of any debris before connecting to chiller.
6. Connect the outlet on top of the chiller to the fixture(s) requiring chilled water. All tubing supplying chilled water must be covered with appropriate insulation to maintain temperature and avoid condensation.
7. Tubing connections to fixtures should be direct and no longer than seven feet.

**START UP:**

1. **Do not connect electrical power to unit yet.** Before connecting power supply, thoroughly flushing the supply line and connecting it to the chiller, turn on building water supply.  
**Important: check all connections for leaks.**
2. Air within the water chiller system or the structure supply piping will cause an irregular Bubbler outlet stream until purged out by incoming water. Cover 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 for leaks.
4. After turning on power to initiate cooler and cool down, immediately purge water by operating unit continuously for approx 1 minute.

**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.

**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.**

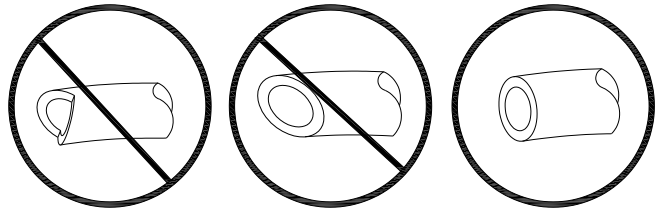
1. Adjustments
  - a. Cold Water Thermostat – **IMPORTANT: Thermostat is Factory pre-set. Thermostat settings should never be field adjusted since damage to fixture may occur, voiding product warranty.**
2. Compressor Does Not Run
  - a. Check the electrical supply for power and correct voltage. The 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 cause a disruption of power to the compressor. Unplug the water chiller and using an ohm meter check for continuity.
  - c. Check for loose wires within the compressor box. The incoming power leads must be connected to the overload 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 refrigerant 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 refrigerant 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 (138 kPa) 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. Disconnect the electrical power to the Water Chiller and have the unit checked by

## **PUSH-IN FITTING INSTALLATION**

NOTE: FITTINGS AND TUBE SHOULD BE KEPT CLEAN, BAGGED AND UNDamaged PRIOR TO INSTALLATION.

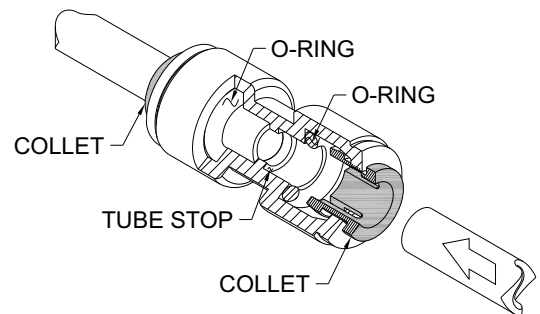
### **TO CUT TUBE:**

Cut to fit length of 1/4" PE tubing and remove any burrs or sharp edges. Ensure that the outside diameter is free from score marks. Tube ends should be square.

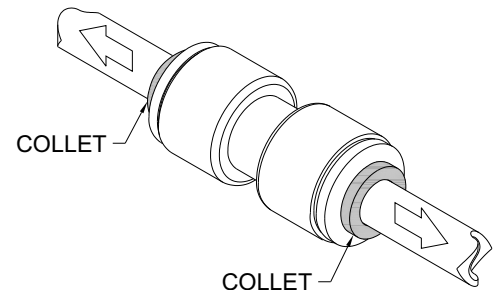


### **INSERTING THE TUBE:**

1. Firmly and fully insert the tubing end into the push-in fitting up to the tube stop located approximately 1/2" deep.

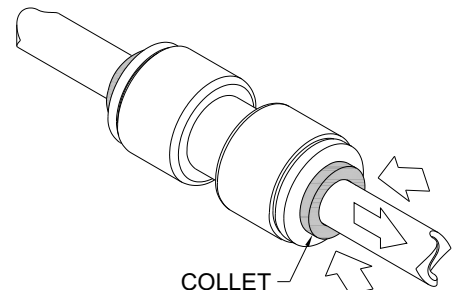


2. Pull on the fitted tubing to ensure it is secure. Tube should not come free from the fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



### **DISCONNECTING THE TUBE:**

To disconnect the tube from the fitting ensure that the water line is depressurized. Push collet square towards the push-in fitting body and hold. While holding the collet in, pull on the PE tubing to remove from the push-in fitting.



## LEAK DETECTOR SHUT-OFF VALVE

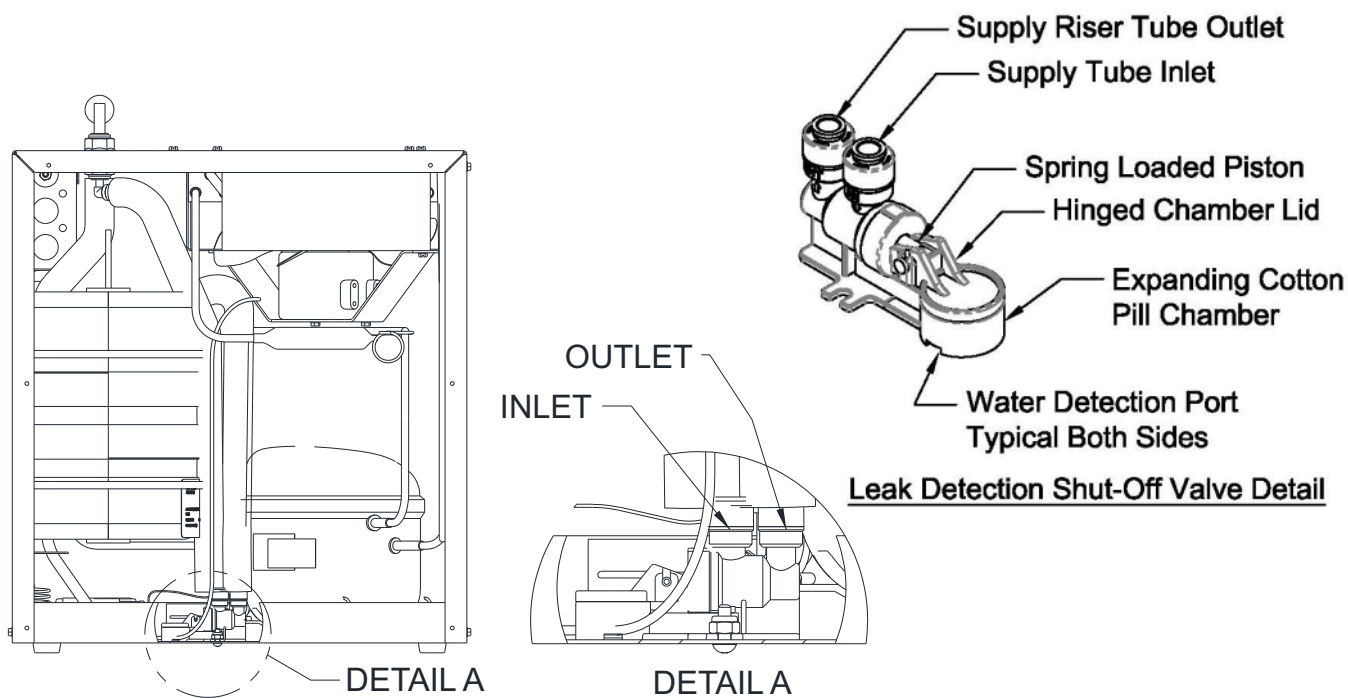
The Murdock Leak Detection Shut-Off Valve feature is intended to limit the possibility of a potentially catastrophic leak, caused as a result of water leakage from a Fitting, Plastic (PE) Tubing, Copper Tubing or other water bearing component within the Fixture. The Shut-Off Valve is provided as standard for all Chiller devices. It is Factory installed to the Bottom Plate (IE lowest point) within the Chiller Housing where it will sense the presence of water leakage and then initiate shut-off of the primary Water Supply Line into Fixture. The Leak Detector Valve is provided with total of (2) Cotton Pills to allow one-time replacement - additional Cotton Pills may be purchased separately.

### **OPERATION:**

1. Fixture water supply comes from the Wall and goes directly into the Leak Detection Shut-Off Valve, where it passes through and feeds (optional) Water Filter and then enters the Chiller.
2. The Leak Protection Valve Consists of; Water Supply Inlet and Outlet, Expanding Cotton Pill, Pill Chamber with Hinged Lid, and a Spring Loaded Piston.
3. Primary Water Supply to fixture passes into and out of Leak Protection Valve prior to feeding fixture components via the Water Supply Inlet and Outlet.
4. The Leak Protection Valve, positioned at the bottom of the Fixture cabinet, contains a Cotton "Pill" in a Chamber. The Pill Chamber has Water Detection Ports to detect when an excess of Water is within Cabinet.
5. When leaking water enters the Pill Chamber Detection Port, the Cotton Pill absorbs it and expands. When the Cotton Pill expands, it triggers the Pill Chamber Hinged Cap (Lever) to open, which in-turn moves the Spring Loaded Piston to close the valve, shutting off Water Supply Outlet thereby preventing leaking water to flow beyond the Leak Detection Shut-Off Valve.

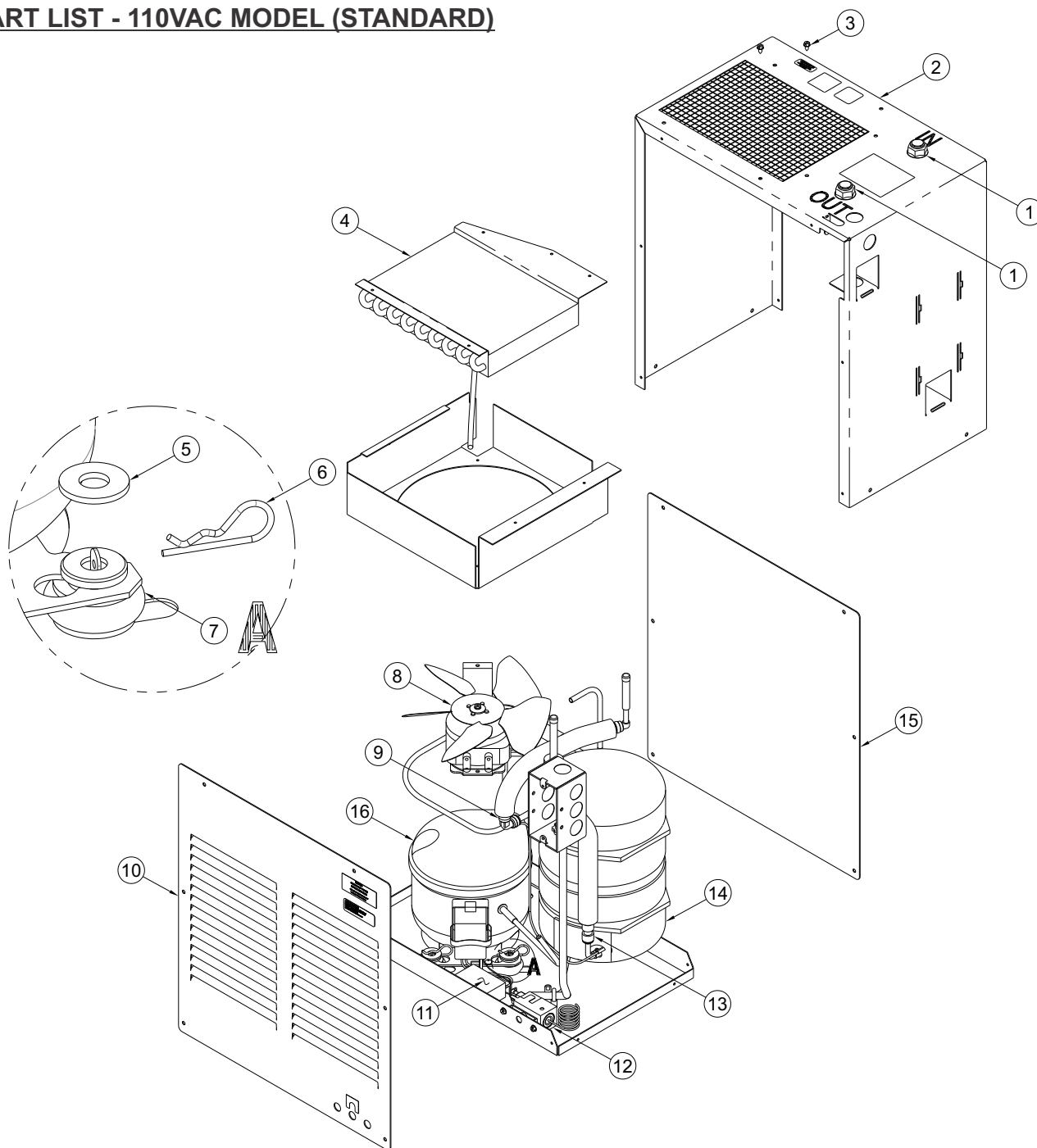
**REPLACEMENT:** Once leak is detected, Shut off water supply to fixture, complete repair by a qualified professional. Operation may be restored by replacing the Cotton Pill, and closing the Hinged Pill Chamber Lid which will reset the Shut-Off Valve in the open position. Turn water to fixture back on and confirm leak repair was successful.

**Replacement Cotton Pills may be purchased in pack of (5) using P.N. 1895-158-001**  
**Shut-Off Valve complete P.N. 1895-157-000 (includes (2) Cotton Pills)**



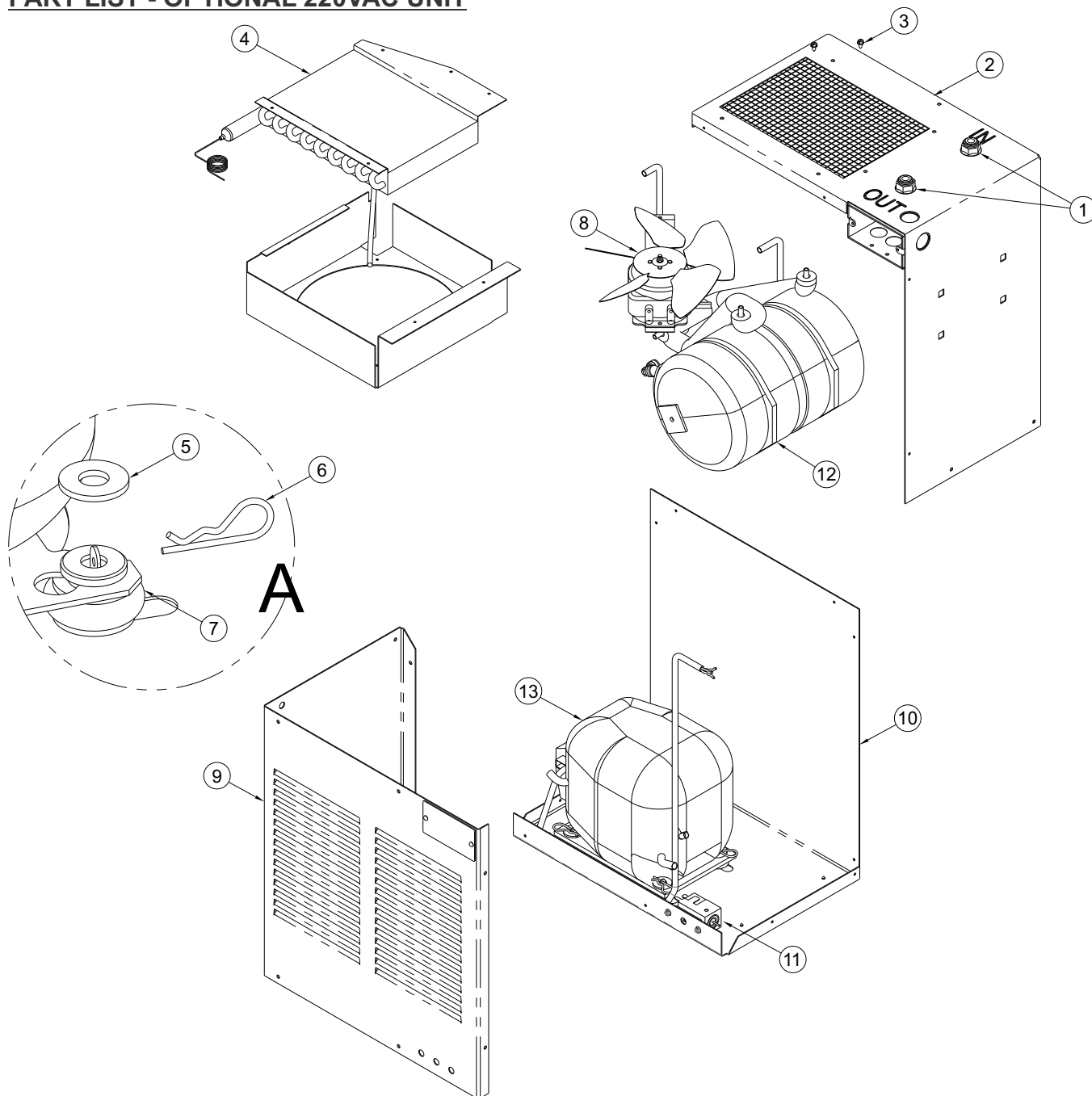


**PART LIST - 110VAC MODEL (STANDARD)**



ITEM#	PART NUMBER	DESCRIPTION	ITEM#	PART NUMBER	DESCRIPTION
1	1895-712-000	3/8"OD - 1/4" OD BULKHEAD CONNECTION	9	1895-708-000	1/4" OD PUSH-IN ELBOW CONNECTION
2	7008-010-199	HOUSING	10	7008-012-199	FRONT PANEL
3	0124-031-000	#8-3/8" HEX WASHER HD SLOTTED SCREW	11	7012-803-000	CAPACITOR
4	7008-015-001	CONDENSOR ASSEMBLY	12	7003-250-000	TEMPERATURE CONTROL
5	0332-013-000	1" OD x 7/16" ID FLAT WASHER	13	1895-121-000	1/4" OD PUSH-IN CONNECTION
6	7012-150-000	3/32" x 1-5/8" HITCH PIN	14	7003-115-001	EVAPORATOR ASSEMBLY
7	7012-805-000	RUBBER FOOT FOR TATUNG	15	7008-013-199	BACK PANEL
8	7003-002-004	115V FAN MOTOR	16	7012-801-001	115V COMPRESSOR ASSY

**PART LIST - OPTIONAL 220VAC UNIT**



ITEM#	PART NUMBER	DESCRIPTION	ITEM#	PART NUMBER	DESCRIPTION
1	1895-712-000	3/8"OD - 1/4" OD BULKHEAD CONNECTION	8	7003-700-005	220V FAN MOTOR
2	7008-050-004	HOUSING ASSEMBLY	9	7008-052-199	FRONT PANEL
3	0124-031-000	#8-3/8" HEX WASHER HD SLOTTED SCREW	10	7008-051-199	BASE PANEL
4	7008-200-001	CONDENSOR ASSEMBLY	11	7003-250-000	TEMPERATURE CONTROL
5	0332-013-000	1" OD x 7/16" ID FLAT WASHER	12	7003-115-001	EVAPORATOR ASSEMBLY
6	7012-150-000	3/32" x 1-5/8" HITCH PIN	13	7012-030-001	220V COMPRESSOR ASSY
7	7012-051-000	RUBBER FOOT			