

**A311.8 Series**  
**Compact and Deluxe Wall Mounted Water Coolers**



A311108F-G / A311108S-G / A311108Q-G  
A1311408F / A3111408S / A3111408Q

**TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:**  
**1.800.743.8259**

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.

For current Warranty click hyperlink [Product Warranty](#) or visit: [www.murdockmfg.com/terms-and-warranty](http://www.murdockmfg.com/terms-and-warranty)

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COMPLIES WITH  
**STANDARDS**



NSF/ANSI 61



Federal  
Public Law  
111-380  
(No Lead)



Test rating conditions are  
compliant with ARI 1010.

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SINCE 1853

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**IMPORTANT**

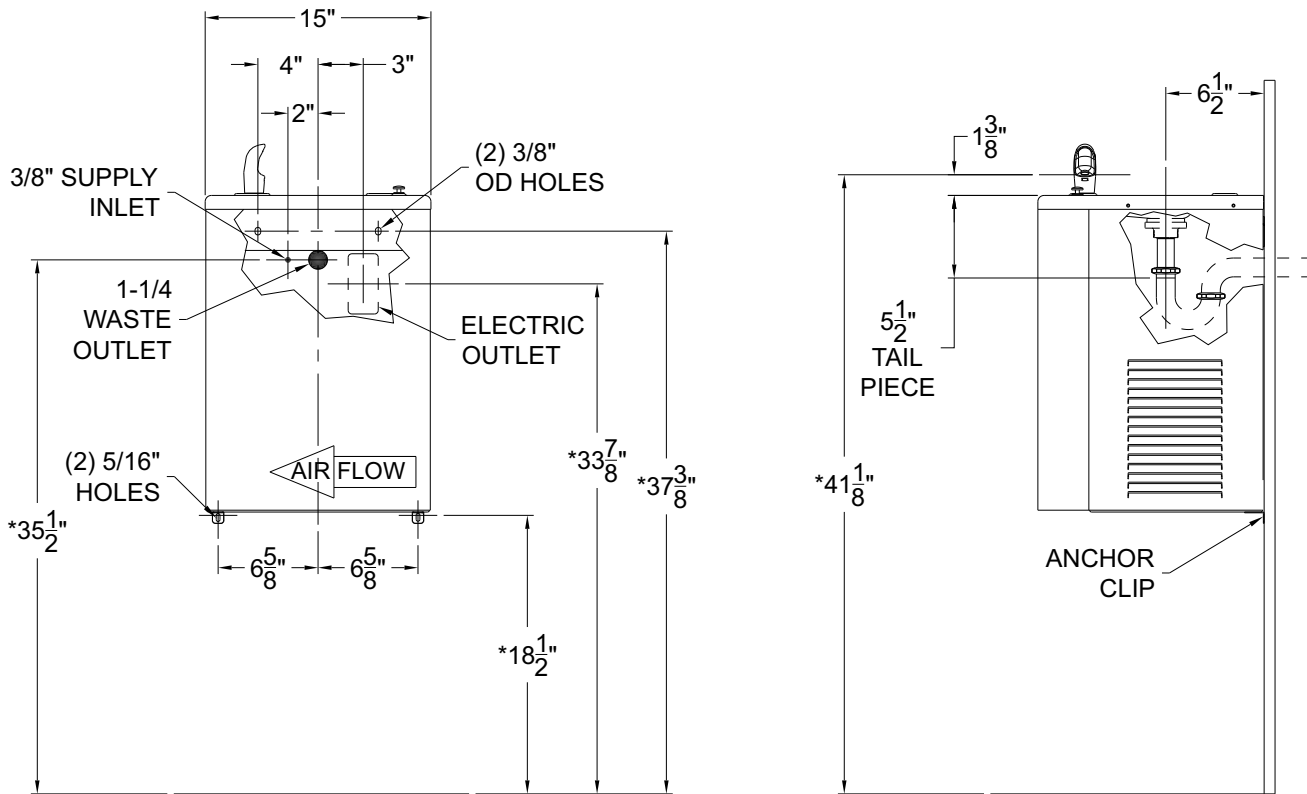
This fixture is intended to dispense water that has been lowered in temperature, but otherwise remains unchanged by the materials in the water cooler. It is common for electrical equipment to be grounded to water lines either within a structure or away from it. Every attempt should be made to prevent 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**

A dielectric coupling must be used to connect the water cooler 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 mounting height.



**GENERAL NOTES:**

1. ALL DIMENSIONS ARE IN INCHES [MM]
2. ALLOW 4 INCHES [102 MM] MINIMUM CLEARANCE PER SIDE FOR VENTILATION
- \*3. DIMENSIONS SHOWN ARE FOR RECOMMENDED ADULT HEIGHT. ADJUST VERTICAL DIMENSIONS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, & LOCAL CODES
4. STOP VALVE, P-TRAP, & ELECTRICAL OUTLET NOT SUPPLIED
5. IMPORTANT: COOLER MUST BE ATTACHED TO WALL WITH ANCHOR SCREWS

**INSTALLATION:**

1. Mount hanger bracket to wall horizontally level as shown in Roughing-In and Dimensional Drawing. Note: Adjust height of bracket if bubbler outlet height is required to vary from that shown. Hanger Bracket **MUST** be securely anchored to wall with fasteners sufficient to support 3 times the weight of cooler. If wall can not provide adequate support, order and install optional fixture support carrier.
2. Remove the bottom cover from the water cooler and set aside in a safe place. Save the screws in a secure location for re-use in later stages of installation.
3. Hang the water cooler on the hanger bracket ensuring the bracket tabs engage **AND** seat in the slots in the back of the water cooler. Verify if water cooler is level, left to right **AND** front to back from bottom of unit.

NOTE: The bubbler stream may be adversely affected if units are not square and level. Bottom of units and louvers should be used as reference to verify unit is square and plumb.

4. Anchor the water coolers to the wall at the lower mounting points in each back panel. Shim lower mounting points to level unit if necessary.
5. Outlet tube from evaporator has an in-line tee with a tube going to the refrigerated unit's valve and the "TEE" not connected. Connect the loose supply tube from refrigerated unit to the "TEE".
6. Thoroughly flush the 3/8" O.D. supply line and then connect water cooler to water supply angle stop valve (by others) with supplied 3/8" O.D. copper tube.
7. Use supplied flexible hose and clamps to connect waste tailpiece from the upper unit to the waste tailpiece of lower unit and then make up 1-1/4" O.D. p-trap waste connection. Waste p-trap by others.

**START UP:**

1. Before connecting power supply and assembling bottom cover to water cooler, but after thoroughly flushing the supply line and connecting it to the fixture, turn on building water supply and check all connections for leaks.
2. Air within the water cooler system or the structure supply piping will cause an irregular bubbler outlet stream until purged out by incoming water. Covering the bubbler with a clean cup (or similar object) is recommended when first activating water cooler to prevent excessive splashing. Depress the pushbutton until steady water stream is achieved.
3. If water flow requires adjustment, insert a slotted narrow blade screwdriver through the hole centered on the pushbutton to the flow regulator. Turning clockwise will increase flow and turning counterclockwise will decrease flow.
4. Recheck all water and drain connections with water flowing through system.
5. With power still **NOT** connected, carefully manually rotate cooling fan to insure proper clearance and free fan action.
6. Plug water cooler in to electrical outlet and make sure unit begins to function.
7. Assemble bottom cover to water cooler with screws furnished.

**IMPORTANT:**

1. Waste P-Trap, Water Supply Service Angle Stop Valve and 2" x 4" Electrical Plug-In Receptacle to be supplied by others in accordance with local codes. A metallic p-trap (by others) must be used for the drain connection.
2. Provide 4" minimum clear space on fixture sides to allow for proper ventilation through cabinet louvers.
3. Water supply is 3/8" Outside Diameter copper tube. Waste is 1-1/4" Outside Diameter.
4. Completely flush supply lines of all foreign debris before connecting to fixture. Water cooler designed to not affect taste, odor, color, or sediment. Optional water filter (Wf1) is available should any of these problems arise from the water supply.
5. Do **NOT** solder copper tube when inserted into the coupler as damage to the o-ring will result.
6. All burrs must be removed from outside of cut tubes before inserting into coupler or other components.
7. Power supply must be identical in voltage, cycle and phase to that specified on the cooler data plate. Electrical outlet and furnished power cord with plug must be used to supply power to fixture. Do **NOT** wire compressor directly to the power supply.
8. This unit must be grounded per the requirements of applicable electrical codes.
9. **Warranty is voided if installation** is not made following current Acorn Engineering installation instructions and if components are assembled to the fixture that is not approved by Acorn Engineering.
10. Fixture operates within water pressure range of 20 to 105 psig. Acorn Engineering will not warranty fixtures 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.
11. Due to cold waste water, Acorn Engineering recommends that p-trap supplied by installer be insulated to prevent excessive condensation.
12. Per UPC 609.10- *All building water supply systems in which quick acting valves are installed shall be provided with devices to absorb the hammer caused by high pressure resulting from the quick closing of the valve. These pressure-absorbing devices shall be approved mechanical devices. Water pressure-absorbing devices will be installed as close as possible to the quick closing valve.*

**TROUBLE SHOOTING:**

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

**IMPORTANT : ASSUREZ-VOUS QUE LA FONTAINE D'EAU POTABLE RÉFRIGÉRÉE SOIT DÉBRANCHÉE DE LA PRISE DE COURANT MURALE ET QUE LE ROBINET D'ALIMENTATION D'EAU SOIT FERMÉ AVANT D'EFFECTUER LES RÉPARATIONS NÉCESSAIRES.**

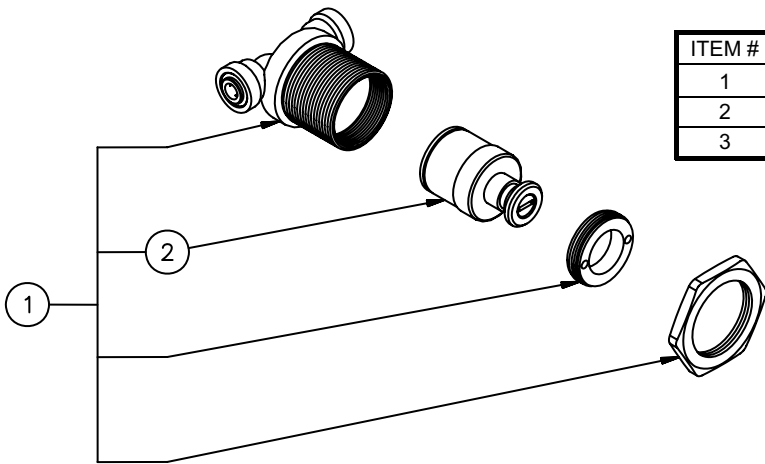
1. Adjustments
  - a. Cartridge – The water flow can be adjusted through the pushbutton using a straight blade screwdriver and turning clockwise to increase flow and counterclockwise to decrease flow.
  - b. Cold Water Thermostat – The water temperature can be adjusted using a slotted screwdriver and turning clockwise to make colder and counterclockwise to make warmer.
  - c. Bubbler Stream – Bubbler can be rotated slightly to direct the stream backwards or forwards. Adjust the stream to minimize splashing. Splashing may occur from bubbler stream if the unit is not level. Shim lower mounting points, if necessary, to level cooler.

2. Compressor Does Not Run
  - a. Check the electrical receptacle for power and correct voltage. The incoming voltage must be within 10% of the rated voltage on the serial nameplate.
  - b. The cold thermostat is accessible by removing the bottom access cover. 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 cooler 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 cooler to run without producing cold water is a loss of refrigerant. The water cooler 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 cooler 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. Make sure the water cooler is correctly mounted to the wall. Absence of the two lower mounting bolts may cause excess noise and vibration.
  - c. 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 bubbler tubing.
  - d. Check the water inlet strainer. Sediment from the main supply can get trapped in the screen along with installation materials such as pipe dope and flux. The screen should be cleaned and checked on a regular basis and replaced if needed.
  - e. The cartridge valve located in the water control assembly or bubbler can also become clogged with foreign material. The cartridge valve can only be replaced and not repaired.
  - f. The water cooler 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 cooler 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.
3. Periodically remove access panels and clean out in-line strainer.
4. Do NOT use harsh chemicals, abrasive or petroleum based cleaners. Use of these will void the Murdock warranty.
5. Exterior panels can be cleaned using mild household detergents or warm, soapy water. Extra care must be used cleaning chrome plated items and mirror finished stainless steel. They can scratch easily and should only be cleaned using a clean, soft cloth and mild soap with water or a mild glass cleaner.

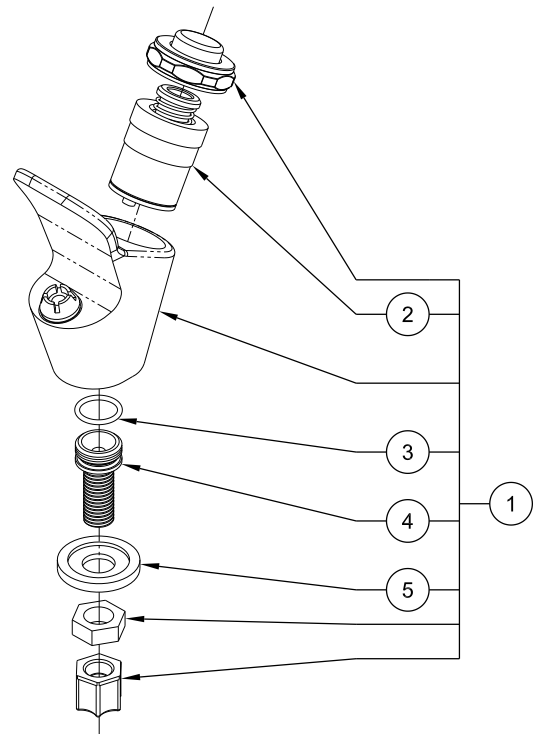
**STANDARD CARTRIDGE VALVE PARTS BREAKDOWN**



ITEM #	PART NUMBER	DESCRIPTION
1	7000-050-001	Valve Cartridge Assembly
2	7000-060-000	Valve Cartridge
3	7000-053-199	Jam Nut

**CARTRIDGE VALVE PARTS BREAKDOWN**

ITEM #	PART NUMBER	DESCRIPTION
1	7000-000-001	Pushbutton Bubbler Assembly
2	7000-060-001	Valve Cartridge
3	0401-015-000	O-Ring
4	7000-008-199	Bubbler Adapter
5	7000-003-000	Bubbler Washer



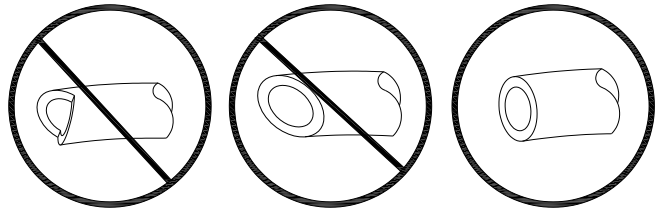
Repairs must be made with Acorn Engineering parts only.  
Please order through your local representative or distributor.  
The phone number to locate your local representative is  
1.800.591.9360.

**PUSH-IN FITTING INSTALLATION**

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

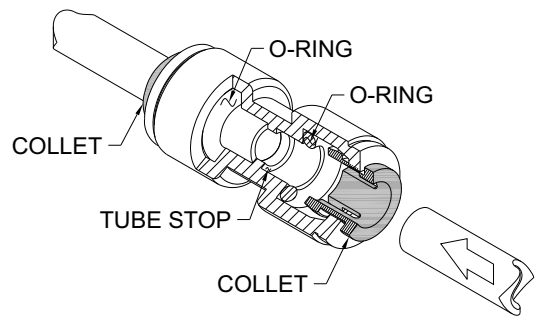
**TO CUT TUBE:**

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.

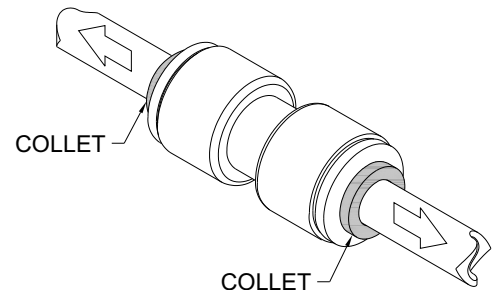


**INSERTING THE TUBE:**

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

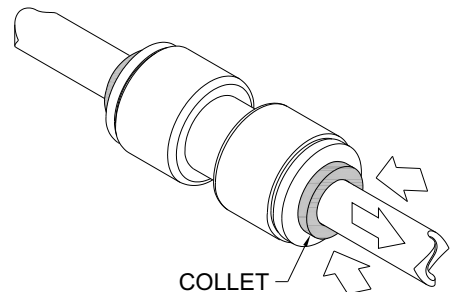


2. Pull on the fitted tubing to ensure it is secure. Tube should not come free from the fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.

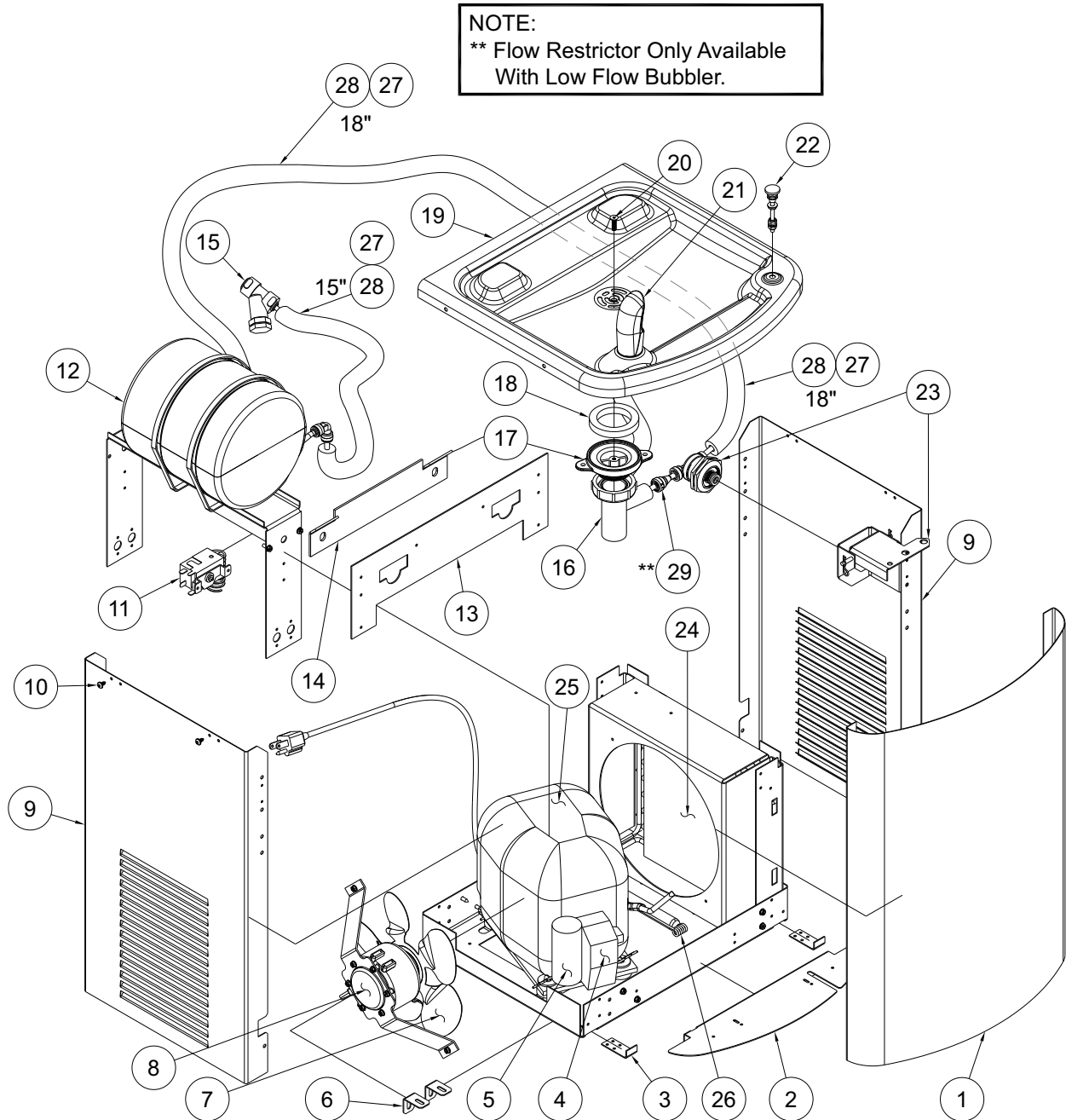


**DISCONNECTING THE TUBE:**

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.



**COOLER PARTS BREAKDOWN DRAWING**



**NOTE:** See next page for table of part numbers corresponding to drawing above.



**COOLER PARTS BREAKDOWN TABLE**

NOTE: See previous page for fixture drawing corresponding to table of parts below.

<b>PART NUMBER</b>	<b>DESCRIPTION</b>
7005-505-020	FRONT PANEL - GRAY
7005-510-001	FRONT PANEL - STAINLESS STEEL
7004-411-199	FRONT PANEL KICK PLATE
7004-409-199	FRONT PANEL CLIP
7012-002-000	START RELAY
7012-031-000	START RELAY 220V
7012-003-000	START CAPACITOR
7012-032-000	START CAPACITOR - 220
7005-504-199	BOTTOM WALL MOUNTING CLIPS
7003-350-000	FAN BLADE
7003-302-000	FAN MOTOR
7012-062-001	FAN MOTOR - 220V
7005-506-020	SIDE PANEL - GRAY
7005-511-199	SIDE PANEL - STAINLESS STEEL
0124-056-000	#8 x 3/8" LONG PHILLIP PH SHEET METAL SCREW
7003-250-000	COLD CONTROL
7003-120-001	EVAPORATOR ASSEMBLY
7004-407-199	BACK PLATE
7004-408-199	HANGER BRACKET
7000-021-001	"Y" STRAINER
7000-032-001	DRAIN TUBE ASSEMBLY
7000-005-199	DRAIN ADAPTER
7000-006-000	FLAT DRAIN ADAPTER GASKET
7005-007-199	BASIN TOP
7005-003-199	Q OPTION BASIN TOP
0152-040-000	ALLEN FLAT HEAD SCREW
7000-099-002	LOW FLOW BUBBLER ASSEMBLY
7000-012-001	STAINLESS STEEL BUBBLER ASSEMBLY
7000-000-001	STAINLESS STEEL PUSHBUTTON BUBBLER ASS
7004-607-001	PUSHBUTTON ASSEMBLY
7004-052-001	ACTIVATION ASSEMBLY
7003-201-000	CONDENSER
7012-001-000	COMPRESSOR
7012-030-000	COMPRESSOR - 220V
7012-050-000	FILTER / DRYER
2169-000-000	1/4" OD LLDPE TUBING, BLUE
7012-055-000	FOAM PIPE INSULATION 3/8" ID x 1/4" THK
7003-093-001	FLOW RESTRICTOR - LOW-FLOW BUBBLER ONI

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