

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS



RBA2728-Series
RBA2729-Series

Sensor Operated Series
Push Button Series



RBA2729-233 Double AquaContour
Push Button with
Stainless Steel Bubbler



RBA2729-033 Single AquaContour
Push Button with
Stainless Steel Bubble



Model	AquaContour Round Box Wall Mounted Water Coolers
Date	11/03/14

Supersedes all previous

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Note to Installer

- Please leave this documentation with the owner of the fixture when finished.
- Please read this entire booklet before beginning the installation.
- Check your installation for compliance with plumbing, electrical and other applicable codes.
- Unit to be installed in accordance with AS3500.1 & AS 3500.2 and other local codes.

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 chiller to the water supply. A nonmetallic coupler is furnished with this water cooler to meet this requirement.

Rough-in and Dimensional Drawing

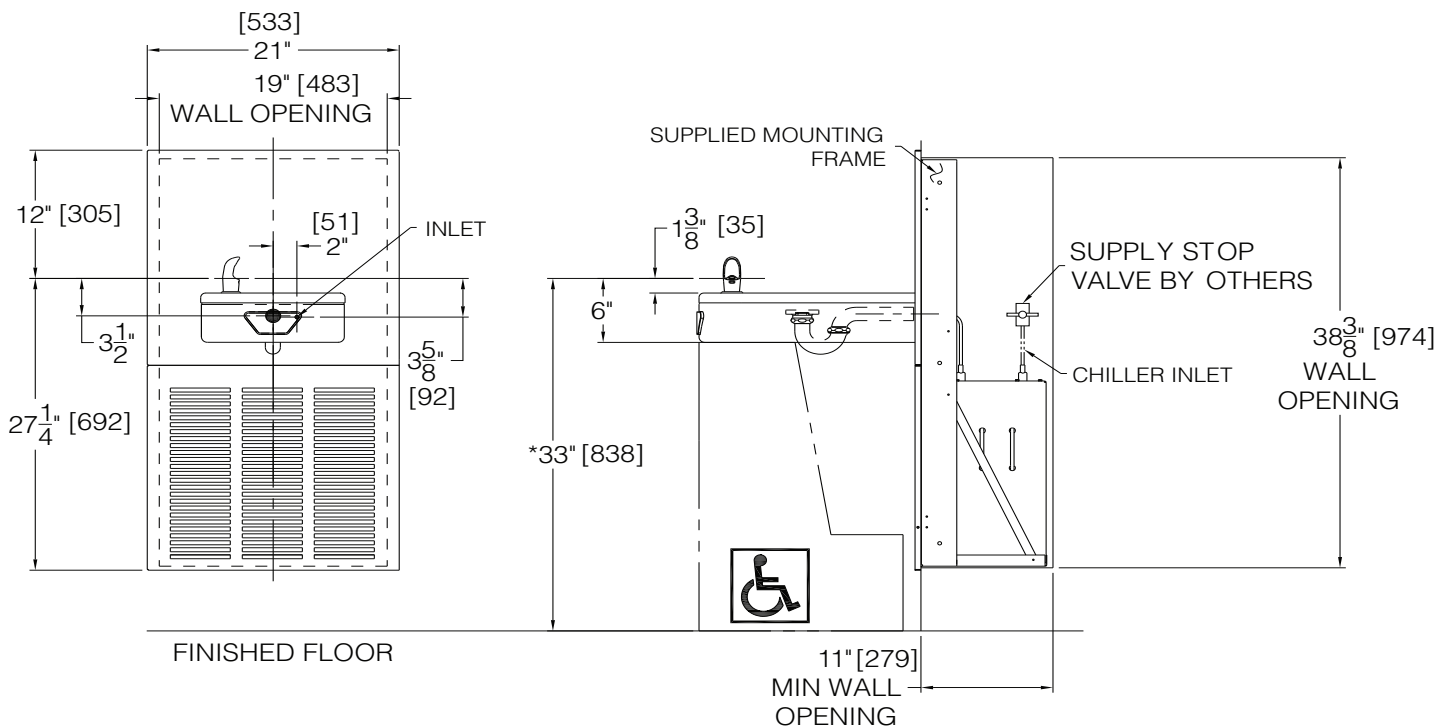
GENERAL NOTES

1. All dimensions are in inches [mm].
2. Dimensions shown are for recommended adult height. Adjust vertical dimensions as necessary to comply with federal, state, & local codes.
3. Water lines from chiller to foundation should be covered with sponge foam rubber or ice water type insulation of adequate thickness.

NOTES

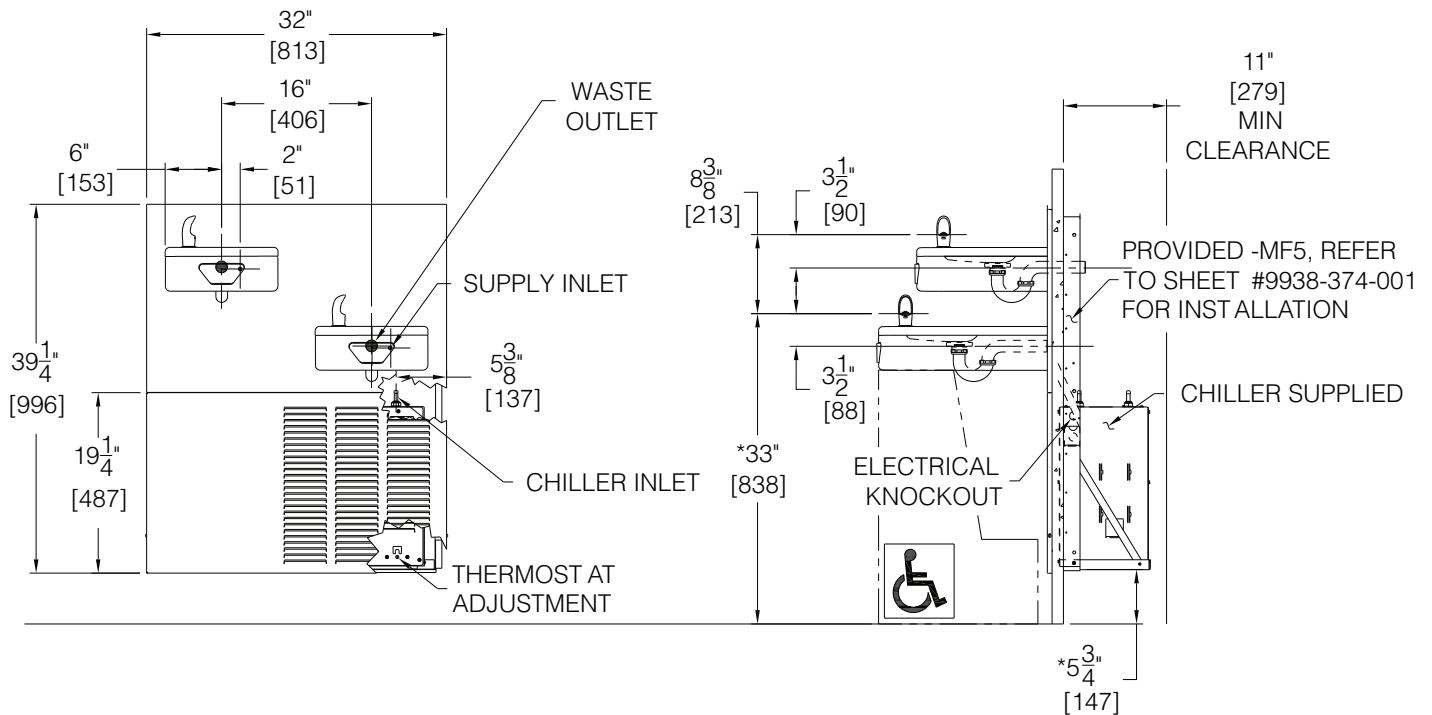
Dimensions shown for Adult ADA compliant installation. For Child ADA compliant parallel approach installation, decrease height of installation by 3 inches. Provide clear floor space as required. Adjust vertical dimensions as required to comply with federal, state, and local codes.

SINGLE WALL MOUNTED DRINKING FOUNTAIN



INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

DOUBLE WALL MOUNTED DRINKING FOUNTAIN



* Meets US ADA requirements

Prior to Installation

IMPORTANT

1. Water Supply Service Stop Valve, Water Connections and Electrical Connections to be supplied by others in accordance with local codes.
2. Provide (100mm) 4" minimum clear space in front of bottom trim panel and above in-wall chiller to allow for proper ventilation.
3. Waste is 40mm Outlet. Chiller water inlet is 1/2" BSP connection. Water line by others from in-wall chiller to drinking fountain must have adequate insulation.
4. Completely flush supply lines of all foreign debris before connecting to fixture. Water cooler designed to not cause problems with 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 tubes inserted into the chiller or the fountain strainer as damage to the o-rings on the push-in fittings may result.
6. All burrs must be removed from outside of cut tubes before inserting into strainer or other components.
7. Power supply must be identical in voltage, cycle and phase to that specified on the chiller data plate.
8. This unit must be grounded per the requirements of applicable electrical codes.
9. **WARNING:** Warranty is voided if installation is not made following current installation instructions and if components are assembled to the fixture that are not approved by Acorn Engineering.
10. Fixture operates within water pressure range of 200 to 600kpa. Acorn Engineering will not warranty chiller damaged when connected to supply lines with flow pressure lower than 200kpa or higher than 600kpa. A pressure regulator must be furnished by others on supply line if inlet pressure is greater than 600kpa.
11. Due to cold waste water, Acorn Engineering recommends that waste piping supplied by installer be insulated appropriately to prevent excessive condensation.
12. 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 shall be installed as close as possible to the quick closing valve.

IMPORTANT Some options may slightly alter installation. To ensure proper installation review the manual thoroughly and verify rough-ins before beginning any work. File this manual with the owner or maintenance personnel upon completion of installation.

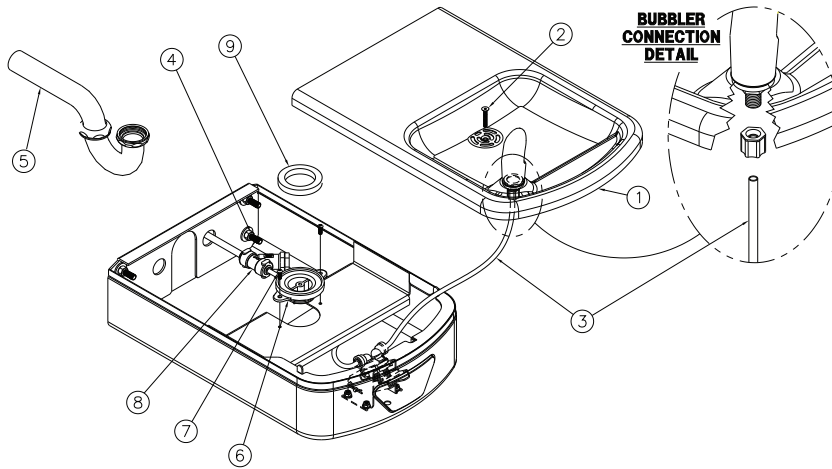
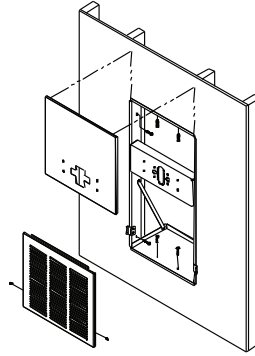
- Fixture mounting requirements: industry standard wall construction, adequate to support the fixture and installer provided wall anchors sufficient to secure the fixture.
- Receptacle(s) must be wired to a GPO protected circuit. Fixture must be grounded to earth as per relevant Australian Standards.
- Inspect fixture and all parts from damages and all parts are bolted on.

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Installation Instructions - Single Wall Mounted Drinking Fountain

INSTALLATION

1. Install –MF3 Chiller and Drinking Fountain Wall Mounting Frame following the instructions included with the frame.
2. Verify frame chiller shelf is secure and install the chiller following the instructions included with the chiller
3. Hang upper trim panel on mounting frame.
Note: The included 25mm brackets do not get used with this installation and the plastic spacers are typically not required and can be discarded.
4. Install the four threaded studs into the Wall Mounting Frame.



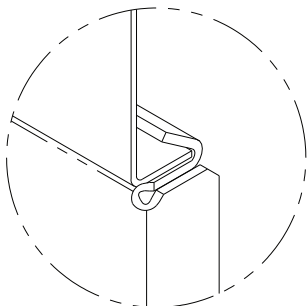
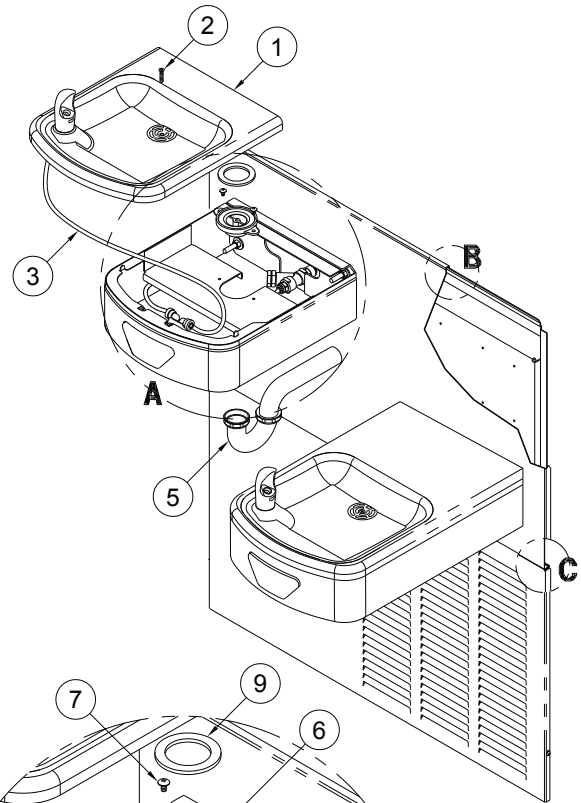
5. Remove the drinking fountain top 1 by taking out the drain screw 2 and lifting at the front while pulling forward. Disconnect bubbler tube 3 . Set top 1 aside in a safe place where it will not be damaged. Place the screw 2 in a secure location where it will not be lost.
6. Slide fixture over studs and secure with nuts and washers 4 .
7. Assemble p-trap 5 to drain adapter 6 and then assemble to unit with Phillips screws 7.
8. Make-up waste connection.
9. After thoroughly flushing the supply line, connect water supply to in-wall chiller and provide connection from chiller to drinking fountain in-line strainer 8.
10. **FOR SENSOR OPERATED ONLY:** With transformer NOT plugged in, run wire from behind the Wall Mounting Frame and Trim Panel into lower drinking fountain and connect to sensor.
11. Place drain gasket 9 on drain adapter 6 . Reconnect bubbler tube 3 . Reassemble top 1 to unit by engaging back clip and securing with screw 2 .
12. Install bottom louvered panel by top of louvered panel slips underneath trim panel. Engage screws into anchoring clips through louvered panel and trim panel to secure.

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

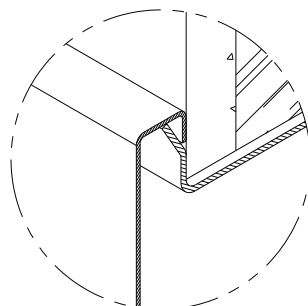
Installation Instructions - Double Wall Mounted Drinking Fountain

INSTALLATION

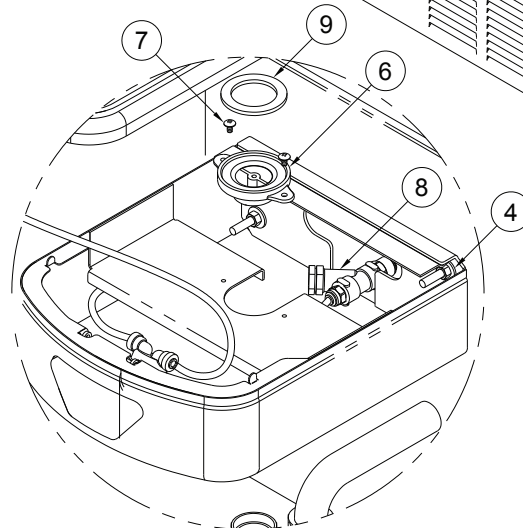
1. Install mounting frame by following the instructions from install sheet #9938-374-001 included with the frame.
2. Verify frame chiller shelf is secure and install the chiller according to the instructions provided with the chiller.
3. Hang upper trim panel on mounting frame by engaging over top jogged out frame flange. Note: The included (25mm) brackets do not get used with this installation and the plastic spacers are typically not required and can be discarded.
4. Remove the drinking fountain tops 1 by taking out the drain screw 2 and lifting at the front while pulling forward. Disconnect bubbler tubes 3 by removing 1/4" Nylon Nut. Set top 1 aside in a safe place where it will not be damaged. Place the screws 2 in a secure location where it will not be lost.
5. Install the eight threaded studs (four for each drinking fountain) into the Wall Mounting Frame.
6. Slide fixture over studs and secure with nuts and washers 4.
7. Assemble P-Traps 5 to drain adapters 6 and then assemble to unit with Phillips screws 7.
8. Make-up waste connection.
9. After thoroughly flushing the supply lines, connect water supply to in-wall chiller (refer to install) and provide plumbing from chiller to each drinking fountain in-line strainers 8.
10. **FOR SENSOR OPERATION ONLY:** With transformer NOT plugged-in, run wire from behind the Wall Mounting Frame and Trim Panel into lower drinking fountain and connect to sensor.
11. Reconnect bubbler tubes 3. Reassemble tops 1 on units by engaging back clips and securing with screws 2.
12. Install bottom louvered panel by top of louvered panel slips underneath trim panel. Engage screws into anchoring clips through louvered panel and trim panel to secure.



DETAIL C



DETAIL B



DETAIL A

Start Up Procedure

1. Before connecting power supply, but after thoroughly flushing the supply line and connecting it to the cooler, turn on building water supply and check all connections for leaks.
2. Air within the drinking fountain 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 drinking fountain to prevent excessive splashing.
 - **SENSOR OPERATED:** Plug in transformer, trigger lower unit sensor and depress upper unit front push pad until water stream is achieved.
 - **STANDARD UNITS:** Depress front push pad until steady water stream is achieved.
3. If water flow requires adjustment, insert a slotted narrow blade screwdriver in the hole centered on the underside of the fixture in the knee clearance area up to the flow regulator. Turning clockwise will increase flow and turning counterclockwise will decrease flow.
4. Recheck all water connections with water flowing through system.
5. With power still NOT connected, carefully manually rotate cooling fan to ensure proper clearance and free fan action.
6. Provide power to water chiller and make sure unit begins to function.
7. Assemble louvered bottom trim panel with screws provided to brackets on either side of wall mounting frame.

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Trouble Shooting

IMPORTANT: Before making any of the repairs listed, make sure the waterchiller is disconnected from the electrical supply and the water supply valve is shut off.

1. Adjustments

- a. Cartridge – The water flow can be adjusted using a slotted narrow 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 point, if necessary, to level chiller..

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. Disconnect electrical supply to 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 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 200 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.
NOTE: Strainer screen must be in place for water to flow
- 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.
- f. Check flow adjustment. See start up note #3.
- g. 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.
- h. No power to transformer connections, loose or wires cut.

7. Water Drips Or Will Not Shut Off:

- a. Open fixture. Loosen nuts holding valve bracket assembly to bottom of fixture but do not remove. Move complete valve bracket assembly further back from the front push pad and tighten to lock in place.
- b. Replace valve cartridge.

8. If Light Within Sensor Does Not Flash When User Is Within Range:

- a. Verify transformer input and output voltages: 240 VAC input & 9VDC output
- b. Replace defective transformer..
- c. Transformer polarity crossed. Replace transformer, sensor may be damaged and also need replacement.
- d. Sensor in "Security Mode" after 30 seconds of constant detection. Remove source of detection and wait 30 seconds before checking.
- e. Sensor is picking up a highly reflective surface. Eliminate cause of reflection and wait 30 seconds before checking.
- f. Replace sensor.

9. If Light Within Sensor Lens Flashes Once When Use Is Within Range:

- a. Repair bad connection from sensor to solenoid.
- b. There is debris or scale in the solenoid assembly. Remove solenoid, pull out plunger and spring. Clean with scale remover solution.
- c. There is debris or scale in the center or two holes in convolution of the water diaphragm. Remove and clean.

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Cleaning & Maintenance Guide

OVERVIEW

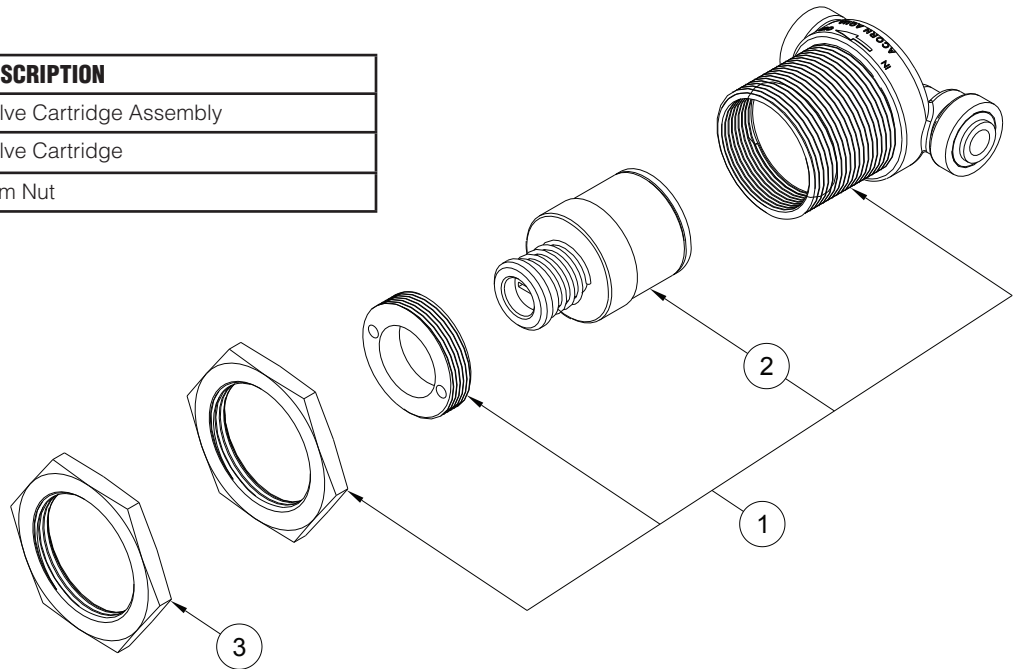
1. Motors have lifetime lubrication and do not require scheduled maintenance.
2. Excess dirt or poor ventilation will cause the compressor overload protector to turn the compressor off and it will cycle on and off with no cold water coming out of bubbler. Periodically clean with vacuum cleaner, air hose or brush the condenser fins and cabinet ventilation louvers. In environments where dirt and dust is more prevalent, clean more frequently.
3. Periodically remove fountain top and clean out in-line strainer.
4. DO NOT use harsh chemicals, abrasive or petroleum based cleaners. Use of these will void the Acorn Engineering 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.

CARTRIDGE REPLACEMENT / STRAINER MAINTENANCE

Note: Use the universal maintenance tool to perform the following:

1. Strainer plug must be removed before cartridge replacement and strainer maintenance (no need to turn the water off at the angle stop). Some residual water will drain during plug removal.
2. Clean strainer as needed using clean water.
3. Cartridge replacement - insert diamond end of the universal tool into pushbutton, rotate 90 degrees and pull firmly to remove the button. Remove cartridge retaining nut . Remove and replace cartridge. When replacing cartridge be sure to align the inlet and outlet ports on the cartridge with the ports in the valve body.

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



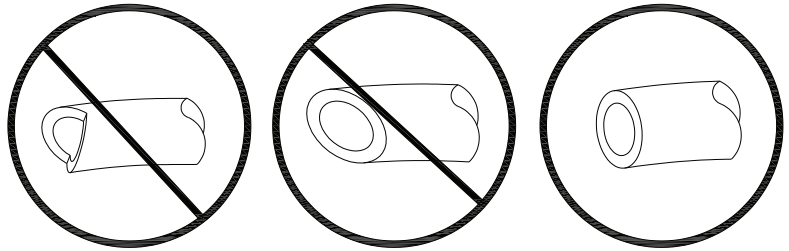
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Push-in Fitting Installation

Note: Fittings and tube should be kept clean, bagged and undamaged prior to installation.

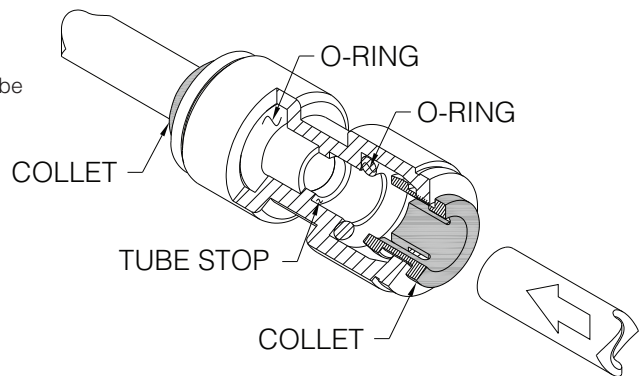
TO CUT TUBE

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.

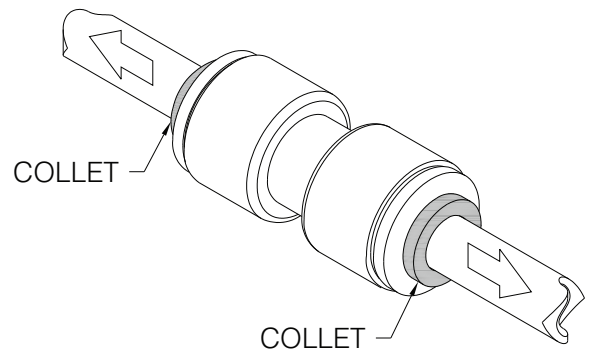


INSERTING THE TUBE

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

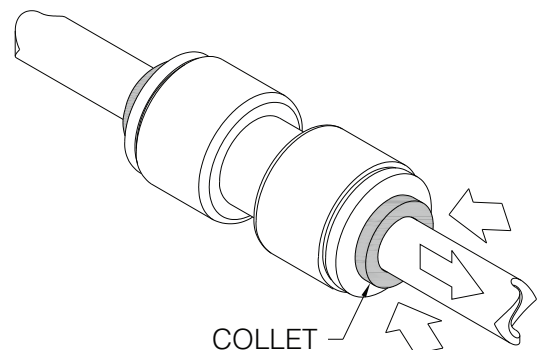


2. Pull on the fitted tubing to ensure it is secure. Tube should not come free from the fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



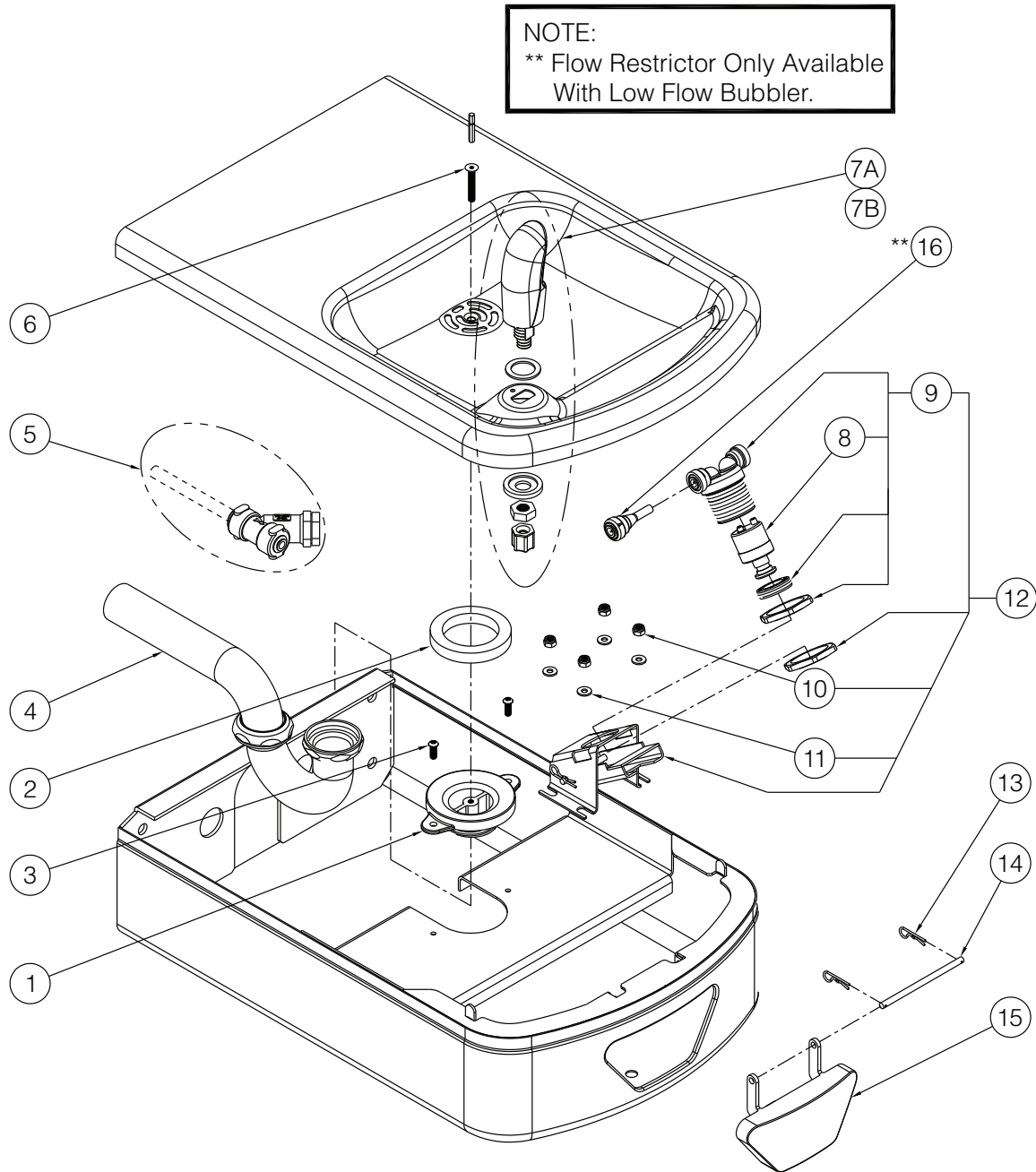
DISCONNECTING THE TUBE

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.



INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Push Button and Fountain Parts Breakdown

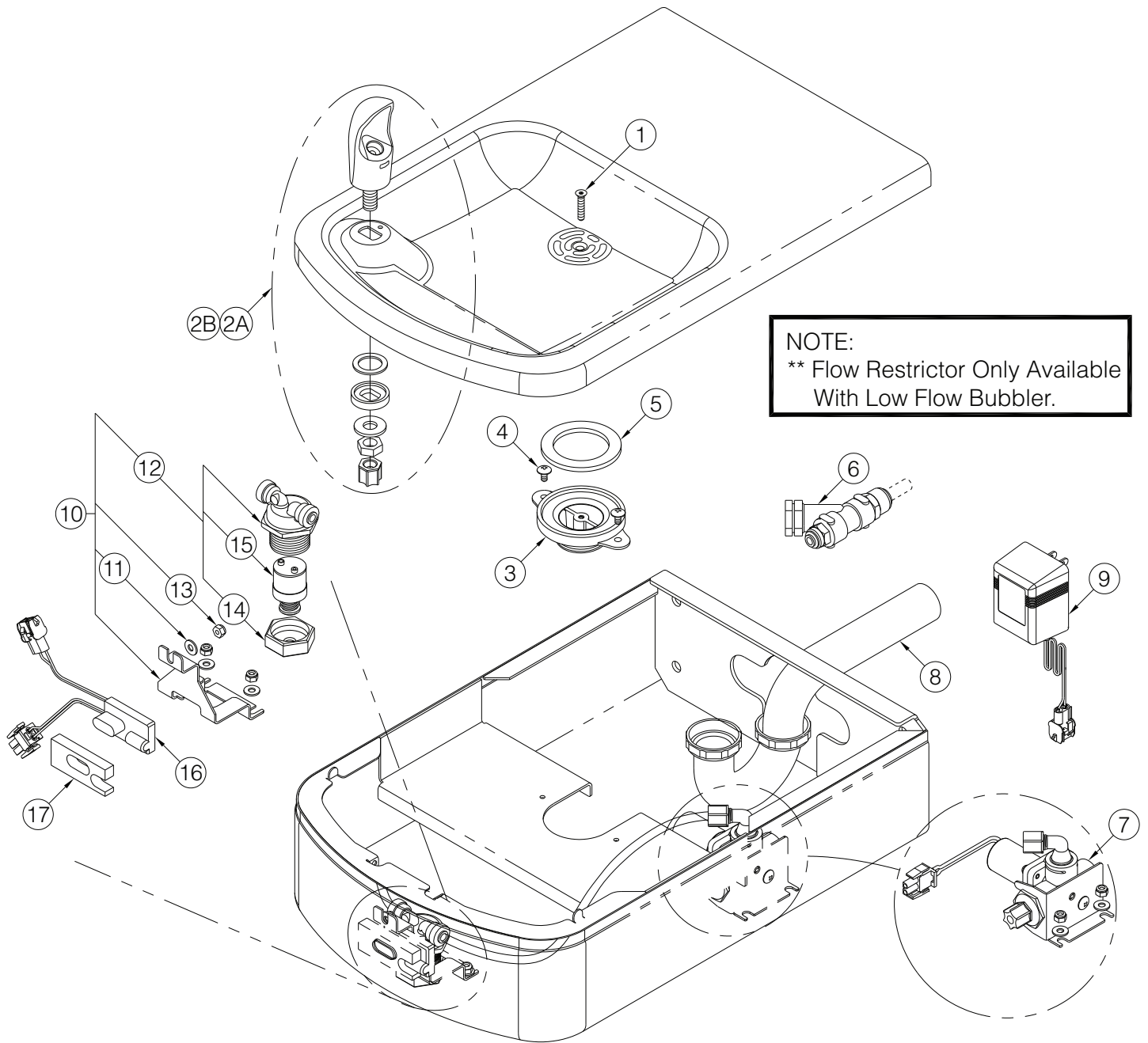


ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7000-005-199	Drain Adapter	9	7000-050-001	Valve Assembly
2	0116-016-000	Phillips Truss Head Screw	10	0308-009-000	Nylon Insert Locknut
3	7000-006-000	Flat Drain Adapter Gasket	11	0331-004-000	Flat Washer
4	7000-015-000	1-1/4" Outer Diameter P-Trap	12	7001-008-001	Valve Activation Assembly
5	7000-022-000	"Y" Strainer	13	0341-100-000	Wire Clip
6	0152-040-000	Allen Flat Head Screw	14	7000-100-199	Black Delrin Shaft
7A	7000-002-001	Standard Chrome Plated Brass Bubbler Assembly	15	7000-004-000	Push Pad
7B	7000-099-002	"F" Option Flexible Gray Bubbler Ass embly	16	7003-093-001	Flow Restrictor - Low-Flow Bubbler Only
8	7000-060-000	Valve Cartridge			

Note: For Chiller Parts breakdown refer to Chiller Installation, Operation & Maintenance Manual.

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Sensor Operated Fountain Parts Breakdown



ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	0152-040-000	Allen Flat Head Screw	9	0711-410-001	9V DC Plug-in Transformer
2A	7000-002-001	Standard Chrome Plated Brass Bubbler	10	7000-067-001	Flow Adjustment Valve & Sensor Bracket
2B	7000-099-002	"F" Option Flexible Gray Bubbler Assembly	11	0331-004-000	Flat Washer
3	7000-006-000	Flat Drain Adapter Gasket	12	7000-050-001	Valve Assembly
4	0116-016-000	Phillips Truss Head Screw	13	0308-009-000	Nylon Insert Locknut
5	7000-006-000	Flat Drain Adapter Gasket	14	7000-059-199	Valve Cap
6	7000-022-000	"Y" Strainer	15	7000-060-000	Valve Cartridge
7	7001-200-001	Solenoid Valve Assembly w/ Mounting Bracket	16	2562-373-001	9V DC Sensor Assembly
8	7000-015-000	1-1/4" OD P-Trap	17	7001-202-199	Sensor Spacer

