

RBA2731-000	Granite Sensor Bottle Filler			
RBA2731-001	Granite Push Button Bottle Filler			
RBA2732-000	Stainless Sensor Bottle Filler			
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Model Bottle Filler Date 25/02/14

Supercedes all previous

Prior to Installation

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.

- Prior to rough-in consult with local, state & federal codes for proper mounting height. Installation to be done in accordance with AS/NZS 3500.1 and AS/NZS 3500.2
- Fixture mounting requirements: Industry standard wall construction, adequate to support the fixture and (installer provided) wall anchors sufficient to secure the fixture.
- Fixture operates within water pressure range of 200 to 600kpa. Acorn Engineering will not warranty fixtures damaged when connected to supply lines
 with flow pressure lower than 200kpa or higher than 600kpa.
- 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 pressureabsorbing devices will be installed as close as possible to the quick closing valve.
- Water supply inlet is 1/4" OD polyethylene tube. Connection is made inside the water cooler the unit is mounted on.
- Completely flush supply of all foreign debris before connecting to fixture. Bottle filler is designed to provide trouble free drinking water unaffected by fixture connection tubing and fittings and not cause problems with taste, odor, color or sediment.
- It is common for electrical equipment to be grounded to water lines either within a structure or away from it. Because this fixture is intended to dispense water that has been lowered in temperature, but otherwise remains unchanged by the materials in the water cooler, every attempt should be made to prevent this kind of grounding from generating feedback into the water cooler creating electrolysis. Electrolysis will cause a metallic taste or cause water metal content to increase.
- Receptacle(s) must be wired to a protected circuit. Fixture must be earth grounded as per electrical codes.
- Batteries are NOT included with this product. If using a battery pack provide 6 AA Alkaline or lithium batteries

Installation Instructions

1. Remove drinking fountain access panel and shut off water supply, then actuate valve to relieve pressure.



2. Drill 1/2" dia. hole thru drinking fountain deck (where shown above). Deburr hole and install grommet provided.

DRILLING NOTES:

- Wear approved safety glasses when drilling.
- Prior to drilling stainless steel, adhere masking tape over drilling area to protect finish and provide marking surface.
- Use a short, sharp high-speed drill bit and drill speed of 400-600 RPM; applying heavy pressure. Drill must cut at all times. DO NOT allow the drill bit to ride, this will cause work hardening and will make very difficult to drill or tap. Bibb washers, placed on drill shank will help to prevent marring the surface after the drill has broke through.



- 3 Mark vertical (plumb) center line on the wall.
- 4. Use the frame as a template. Align notches in frame with vertical center line, with frame sitting on the deck NOTE: FOUNTAINS SHOULD BE LEVEL.
- 5. Mark four mounting holes.
- 6. Install the four anchors (by others).
- Remove top and channel, disconnect the PE tube from the fill tube. 7
- Align mounting frame and mounting channels to the anchors (as shown) attach to wall with mounting fasteners (by others). 8
- In drinking fountain access compartment, ensure the "Y" strainer is installed on the drinking fountain inlet connection 9
- 10. *In drinking fountain access compartment, remove the 1/4" push-in fitting from evaporator outlet and replace it with 1/4" push-in tee fitting. Reconnect the PE tube form the cartridge valve assembly to top of tee. (See page 4) See insert on page 4, for special installation instructions when installing on bi-level drinking fountains.

NOTE: BEFORE PERFORMING STEP 11 REFER TO ELECTRICAL INSTALLATION STEP 1 AND 2 WHEN INSTALLING SENSOR OPPERATED UNITS.

- Remove the 450mm piece of insulation from the 1/4" OD 750mm PE tube . Pass the end of the 750mm PE tube through the hole in the deck of 11. the drinking fountain. Reinstall 450mm piece of insulation on to the 750mm PE tube, under basin. Connect the 750mm PE tube to the side of the previously installed tee fitting, from step 10. (See page 4)
- Reconnect 600mm PE to fill tube. Engage the left side of the bottle filler housing behind the mounting channels, then stretch the housing over the 12 right end of the mounting channels, make sure that the rubber trim on the housing is touching the deck. Secure the housing to the top channel, with 10-32 truss head screws provided.

NOTE: BEFORE PERFORMING STEP 13 REFER TO ELECTRICAL INSTALLATION STEP 1 AND 2 WHEN INSTALLING SENSOR OPPERATED UNITS.

- Install top with round head screws provided. 13
- 14. Turn on the water supply stop, test unit and check for leaks, then reinstall access panel.

INSERT DETAIL For Bi-Level drinking fountain when mounting bottle filler on unit with no compressor, only.					
Cut tube and Install tee To cartridge Cold water tube from evaporator					

Transformer/Battery Wiring And Water Tubing Connections For Sensor Operated Units



Air & Water Tubing Connections For Push Button Units



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 $\frac{1}{2}$ " 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.



Electrical Installation for Sensor Operated Units

Note: Plug in or Battery power is a standard feature

- 1. Plug-In Operation: Plug transformer provided into protected electrical service (by others), in the drinking fountain. Thread transformer wire through hole in deck and connect to red sensor wire.
- Battery Operation: Peel off paper backing from hook & loop pads then press battery holder firmly in place. (See page 4). Connect the battery holder wires to the red sensor wires. Unit requires six AA, alkaline or lithium batteries (not included). Note: When the battery holder is connected, the unit is active.
- 3. Connect the blue sensor wires to the solenoid valve wires. (See Page 4)

Start Up

- 1. Air within the bottle filler system or the structure supply pipping will cause an irregular spout outlet stream until purged out by incoming water. Hold cup (or similar object) directly below filler spout is recommended when first activating bottle filler to prevent excessive splashing. Activate sensor or push button until steady water stream is achieved.
- 2. Using the same method, hold cup (or similar object) directly over bubbler(s) and activate bubblers until air purged out and a steady stream is achieved.

Operating Instructions

SENSOR OPERATED UNITS

Hold container to be filled just below the sensor in the center of the unit, then move the container upward, (make sure the container is centered under the fill spout) water flow starts automatically. When the container is almost filled, lower the container below the sensor until the water stops flowing. (see label on the Bottle Filler)

PUSH BUTTON OPERATED UNITS

Hold container to be filled just below the filler tube in the center of the unit, then push pushbutton. When the container is almost filled, release the pushbutton.



Fill Spout

Push Button Operated Unit

Sensor Operated Unit

Trouble Shooting

SENSOR OPERATED UNITS

- 1. If light within sensor does not flash once when user is within range
 - a Verify input & 9VDC output of transformer/battery pack output is 9VDC.
 - b Replace defective transformer/batteries.
 - 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 second before checking.
 - e Sensor is picking up a highly reflective surface. Eliminate cause of reflection and wait 30 seconds before checking.
 - f Replace defective sensor.

2. If light within sensor lens flashes once when the user 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 center or two holes in convolution of the water diaphragm. Remove and clean.

3. 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 twist or kinks in spout tubing.
- d Check the water inlet "Y" 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 replace if needed.
- e Flow control in solenoid valve outlet elbow clogged, remove & clean.
- 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.
- g Low or dead batteries.
- h No power to transformer connections loose or wires cut.

PUSH BUTTON OPERATED UNITS

1. Restricted or no water flow

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- e Flow control in solenoid valve outlet elbow cogged remove & clean.
- 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. To Remove water spots or rust spots, stainless steel cleaner/polish on a cloth is recommended.
- 2. If there are stubborn spots or if you wish to treat a scratch, synthetic abrasive general purpose pads such as scotch brite are recommended.
- 3. Apply stainless steel cleaner/polish to the synthetic abrasive pads and carefully rub the panel with the grain.
- 4. Do NOT use harsh chemicals, abrasive or petroleum based cleaners. Use of these will void the Acorn Engineering warranty. DO NOT use abrasives on powder coated units.
- 5. Stainless steel should be kept clean at all times. If a coating of stainless steel cleaner/polish is maintained, stainless steel surfaces will retain their new, clean, polished appearance indefinitely. Use clean mild soapy water for powder coated units.
- 6. Periodically remove access panel of cooler and clean out inline "Y" strainer. If battery powered, replace batteries if needed. Remove top to access battery holder.
- 7. Low battery is indicated when light within sensor lens flashes multiple times, when activated.

Sensor Operated Bottle Filler Parts Breakdown



ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7000-415-000	Self-Retaining J-Nut, S/S	14	0116-016-000	10-32X3/8" S/S Truss Phil Hd Screw
2	7013-017-001	Valve Assembly	15	7013-000-003	Bottle Filler Sub Assembly
3	0316-018-000	10-32 Stn Stl Nut Retainer	16	7013-002-199	Bottle Filler Top
4	6502-043-000	Phillips Round Hd Screw	17	7013-006-199	Bottle Filler Frame
5	2563-380-001	Sensor Assembly	18	7013-007-199	Channel And Valve Assembly
6	1895-123-000	1/4"X3/8" O.D. Tube Union Push-In	19	7013-008-199	Bottle Filler Channel
7	7013-016-001	AA 6-Pack Battery Holder	20	7013-011-198	Trim (Right Side)
8		9V Plug-In Transformer	21	7013-011-199	Trim (Left Side)
9	7000-022-000	"Y" Strainer	22	7013-010-199	Nano Sensor Bracket
10	1895-710-000	Union Tee, 1/4" Push-In	23	0302-003-000	#8-32 S/S Hex Nut
11	2169-000-000	1/4" O.D. LLDPE Tubing, Blue	24	7013-003-001	Nano Sensor Spacer
12	7012-055-000	Foam Pipe Insulation	25	0331-023-000	#8 S/S Flat Washer
13	7013-020-000	Grommet, 5/8" O.D.	26	6527-108-000	Internal Tooth Lockwasher

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Push Button Operated Bottle Filler Parts Breakdown



ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	7013-002-199	Bottle Filler Top	11	7013-011-199	Bottle Filler Trim (Left)
2	7000-415-000	Self-Retaining J-Nut, S/S	12	7013-011-299	Bottle Filler Trim (Right)
3	7013-027-001	Channel and Valve Assembly	13	7000-022-000	"Y" Strainer
4	0316-018-00	10-32 Stn Stl Nut Retainer	14	7013-020-000	5/8" OD Grommet
5	7013-027-002	Air-Control Valve Assembly	15	1895-710-000	1/4" Push-in Union Tee
6	2150-002-199	1/8" x 10" O.D. Clear PE Tubing	16	7013-006-199	Bottle Filler Frame
7	2169-000-000	1/4" OD LLDPE Tubing, Blue	17	0116-016-000	#10-32 x 3/8"Phillips Truss Screw
8	2566-160-001	Pushbutton Assembly	18	7013-008-199	Bottle Filler Channel
9	6502-043-000	#8-32 x 1/2" Phillips Round Screw	19	1895-123-000	1/4" x 3/8" OD Push-In Tube Union
10	7013-026-003	Bottle Filler Sub Assembly	20	7012-055-000	Foam Insulation



Notes



1300 788 778 www.rba.com.au sales@rba.com.au

0800 722 111 www.rbagroup.co.nz sales@rbagroup.co.nz **SYDNEY** Level 1, 32 Frederick St Oatley, 2223

AUCKLAND 300 Richmond Road Grey Lynn 1021 MELBOURNE Unit 9, 56 Norcal Rd Nunawading, 3131 BRISBANE Unit 13, 54 Nealdon Dr Meadowbrook, 4131