

BF11 & BF12 Bottle Filler Series

H₂O
to go!®



BF11

Pushbutton Operated
Bottler Filler

H₂O
to go!®



BF12

Sensor Operated
Bottler Filler

Please visit www.murdockmfg.com
for most current specifications.

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

Technical Assistance E-Mail: 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.

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7020-956-001 10/17/23 RVB

COMPLIES WITH
STANDARDS



NSF/ANSI 61



Federal
Public Law
111-380
(No Lead)



Member of

MORRIS GROUP
INTERNATIONAL

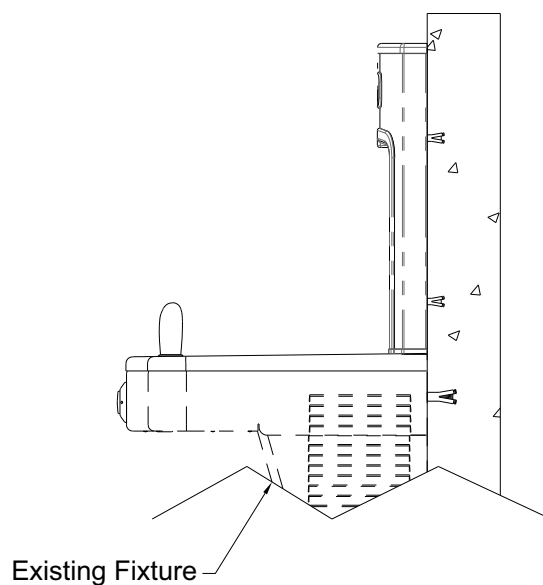
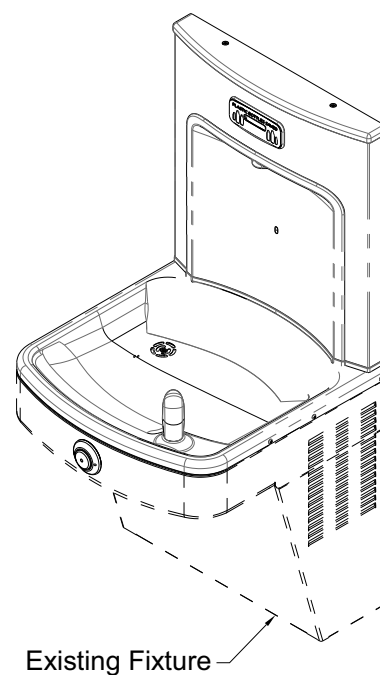
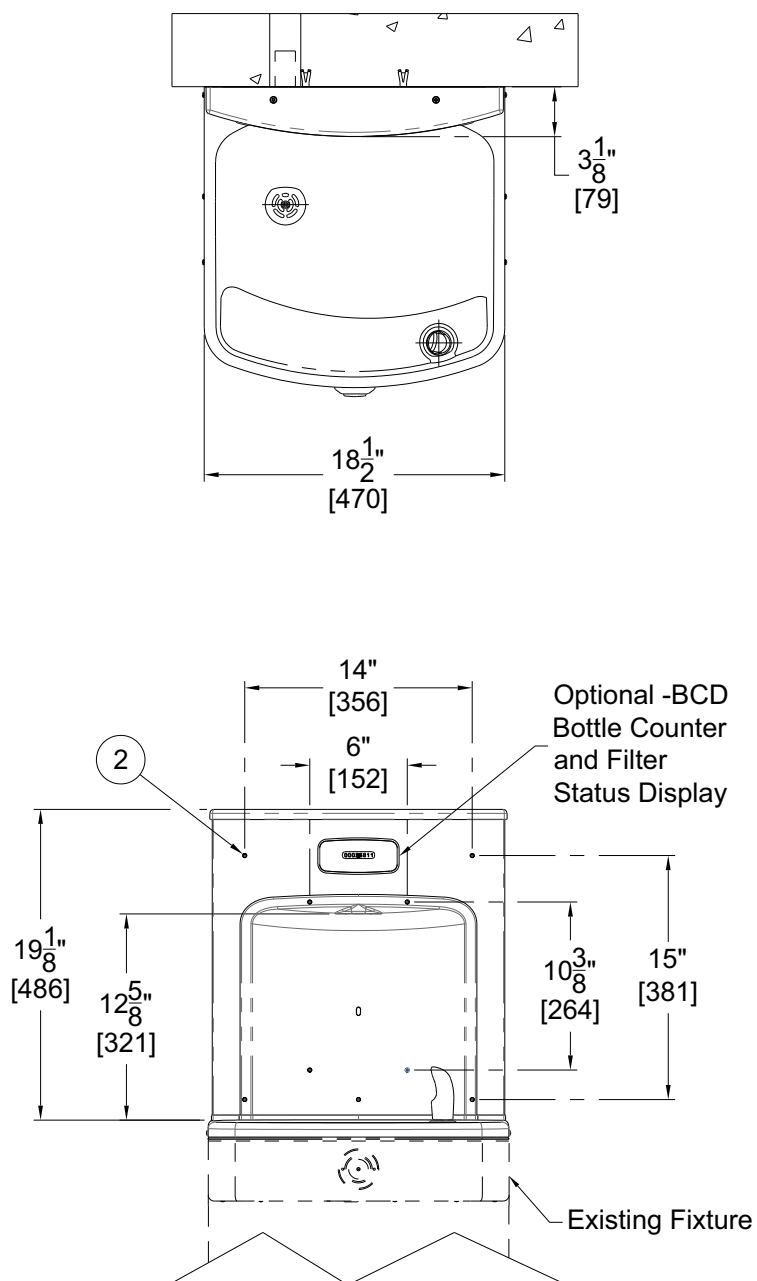
murdock®
SINCE 1853

15125 Proctor Ave, City of Industry,
CA, 91746 U.S.A.
Phone 800-591-9360
626-336-4561
www.murdockmfg.com

DIMENSIONAL DRAWING

Prior to roughing in, consult with local, state, and federal codes for proper mounting height.

Note: Rough-Ins are the same for BF11 & BF12



General Notes:

1. All dimensions are in inches [MM]

2. Ø1/4" Holes, 10 Places for Anchoring Hardware, provided by others

PRIOR TO INSTALLATION:

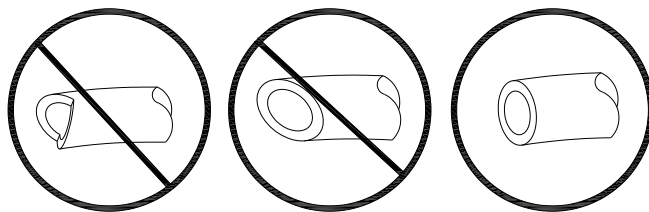
1. Some options may slightly alter installation. To ensure proper installation, review the Manual thoroughly and verify rough-ins before beginning any work. File this Manual with the owner or maintenance personnel upon completion of installation.
2. Carefully remove all fixture components from packaging, preventing scratching or damage. Inspect fixture and all parts for damage.
3. Provide rough-ins as shown on the roughing-in and dimensional drawing. (See rough-in details)
4. Water Supply Service Stop Valve, Water Connections and Electrical Connections to be supplied and installed by others in accordance with local codes.
5. Fixture mounting requirements: Industry standard wall construction, adequate to support the fixture and wall anchors (installer provided) sufficient to secure the fixture.
6. Fixture operates within water pressure range of 20 to 105 PSIG. Murdock will not warranty fixtures damaged when connected to supply lines with flow pressure lower than 20 PSIG or higher than 105 PSIG.
7. Water Supply inlet is 1/4" OD Polyethylene (PE) Tube.
8. Per UPC 609.10-All building water supply systems in which quick-closing 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.
9. 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 will not cause problems with taste, odor, color or sediment.

PUSH-IN FITTING INSTALLATION

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

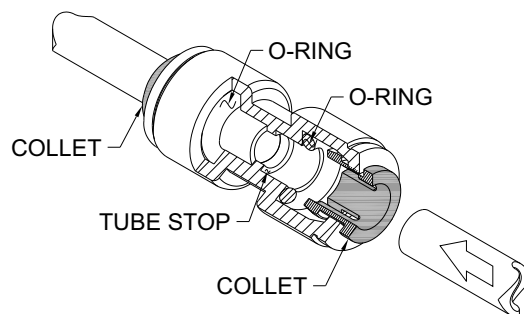
TO CUT TUBE:

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.

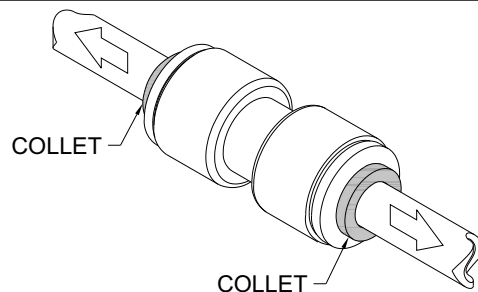


INSERTING THE TUBE:

1. Firmly and fully insert the Tubing end into the Push-In Fitting up to the Tube Stop located approximately 1/2" deep.

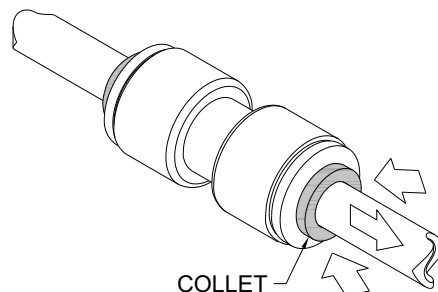


2. Pull on the fitted Tubing to ensure it is secure. Tube should not come free from the Fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



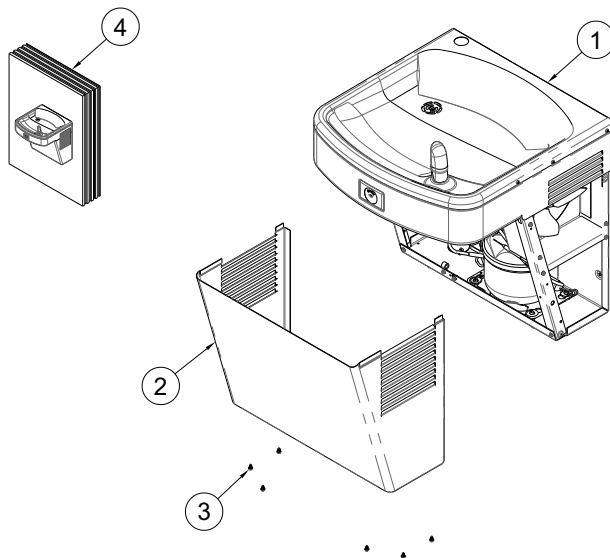
DISCONNECTING THE TUBE:

Prior to disconnecting 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.



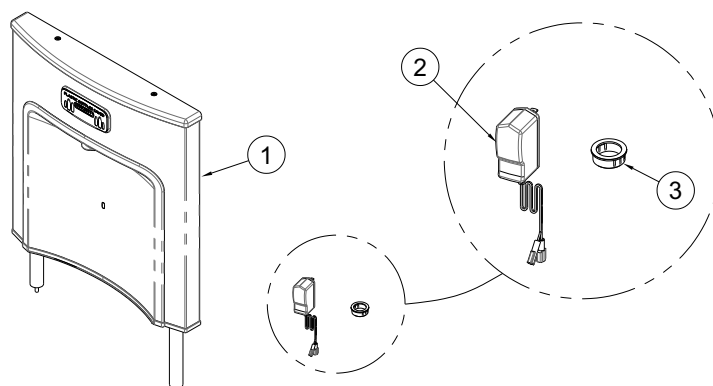
BF11/BF12 INSTALLATION INSTRUCTIONS

- 1** Install the newly obtained Water Cooler per the Installation Manual provided with the unit. Do not install Access Panel at this time. Shut-off water supply, then actuate Valve to relieve pressure. Place Screws and Panel in secure location for further use in Manual.



- ① Water Cooler Assembly
- ② Access Panel
- ③ #8 x 3/8" Hex Washer Head Screw
- ④ Water Cooler Installation Manual

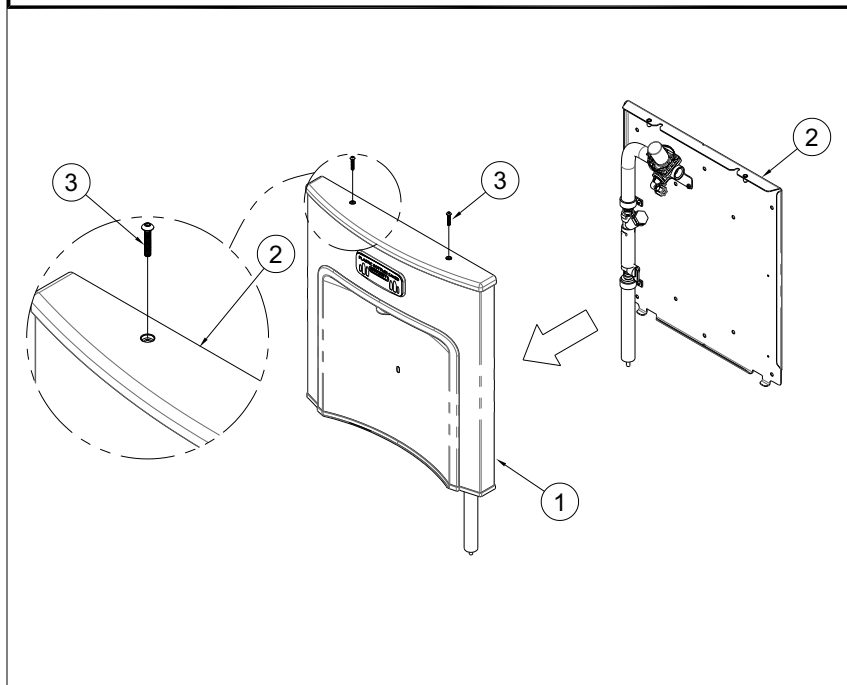
- 2** Remove Bottle Filler Assembly, Power Supply and Grommet from packaging, careful to avoid damage to Fixture and Fixture Sub Assemblies. Set Power Supply aside in a secure location.



- ① Bottle Filler Assembly
- ② Power Supply (Not provided with BF11)
Input: 100-240VAC, 50-60Hz,
Output: 9VDC, 0.8A
- ③ Locking Grommet

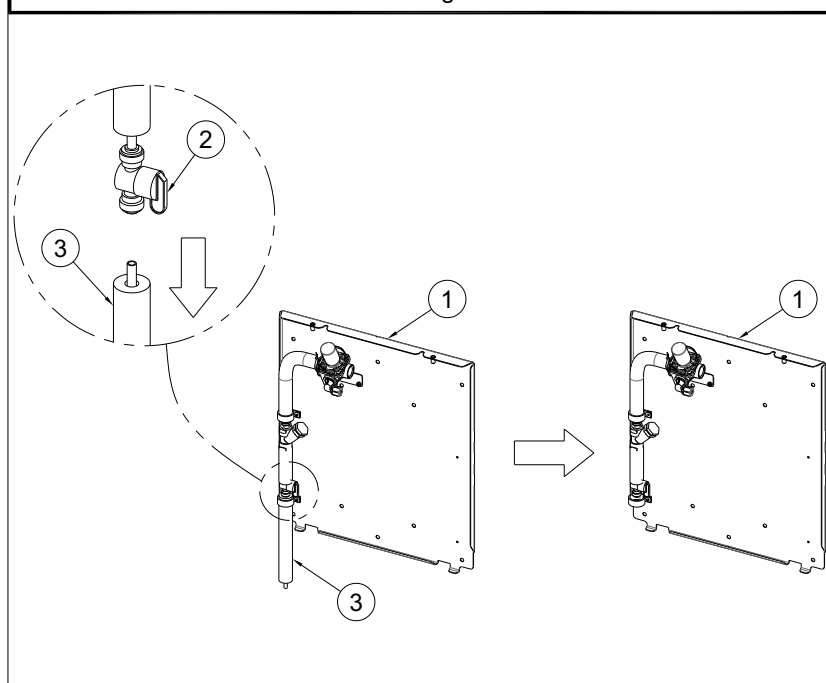
BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

- 3** Unfasten Screws that hold the Bottle Filler Housing to the Mounting Panel. Place Bottle Filler Panel and Screws in a secure location.



- ① Bottle Filler Housing
- ② Mounting Panel
- ③ #10-32 x 1" Button Head Screw

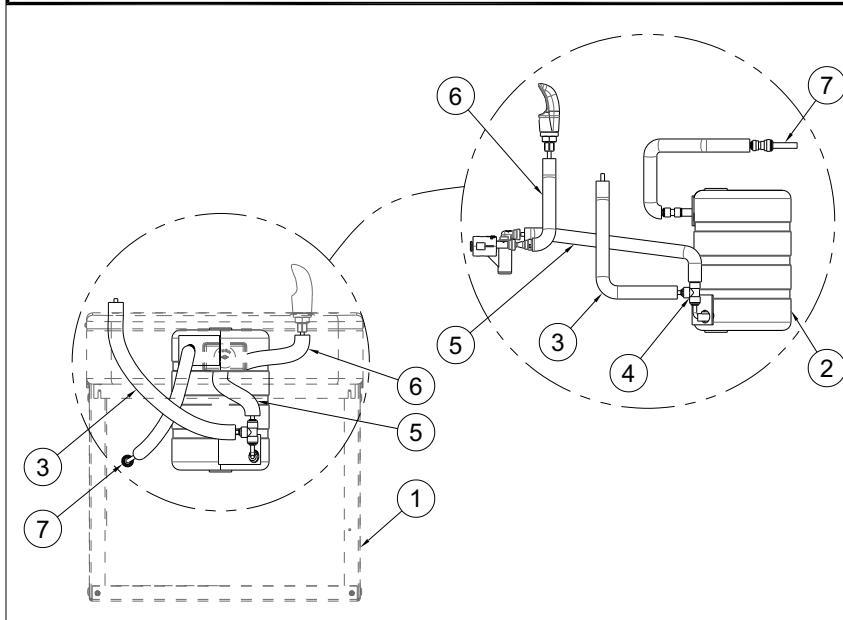
- 4** Disconnect the Water Supply Insulation and Tubing from 1/4" Shut-Off Valve that is located on the Mounting Panel.



- ① Mounting Panel
- ② Shut-Off Valve
- ③ 1/4" OD Tubing & Insulation

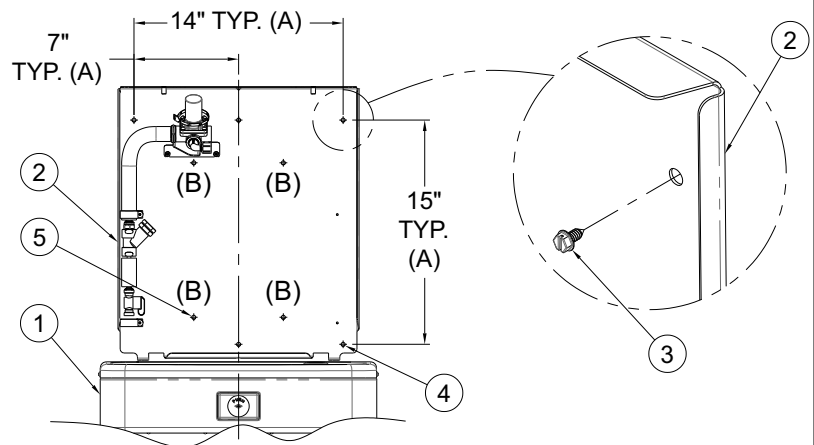
BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

- 5** Connect the Bottle Filler Supply Tubing to the 1/4" Push-In Tee located on the Evaporator. The Evaporator is located within the Water Cooler Assembly. If fixture differs from layout, refer to page 12 for specific unit connections.



- ① Water Cooler Assembly
- ② Evaporator
- ③ 1/4" OD Tubing & Insulation (Bottle Filler Supply Tube)
- ④ 1/4" Push-In Tee
- ⑤ Water Supply Tubing (To Pushbutton Valve Inlet)
- ⑥ Water Supply Tubing (To Bubbler)
- ⑦ Supply Inlet

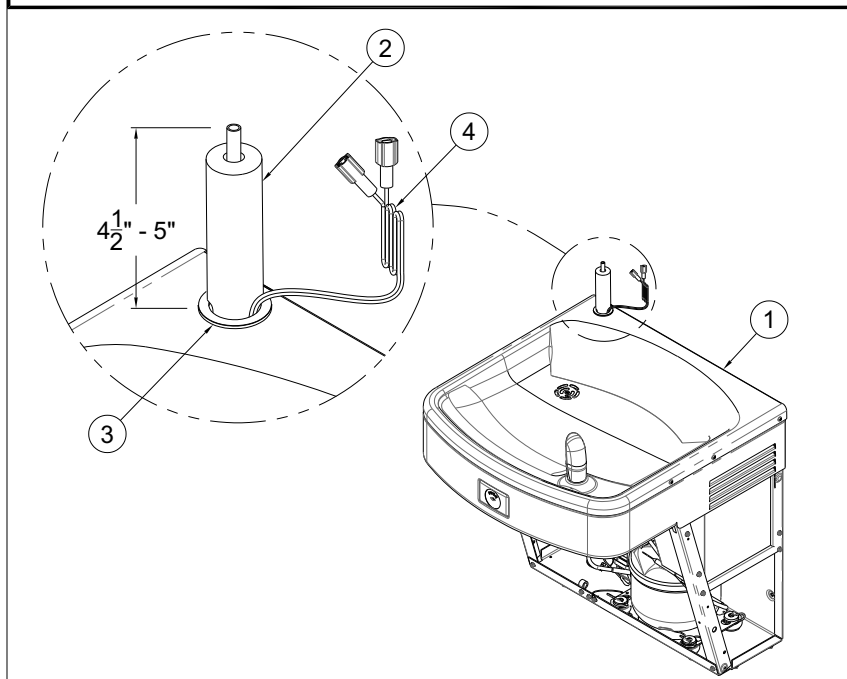
- 6** Center Mounting Panel on top of Deck to finished wall and Secure with Anchoring Hardware, by others, for Ø1/4" Mounting Holes.



- ① Water Cooler Assembly
- ② Mounting Plate
- ③ Anchoring Hardware, by others
- ④ 6x Ø1/4" Mounting Holes (A)
- ⑤ Auxiliary Ø1/4" Mounting Holes (B) (If replacing BF2)

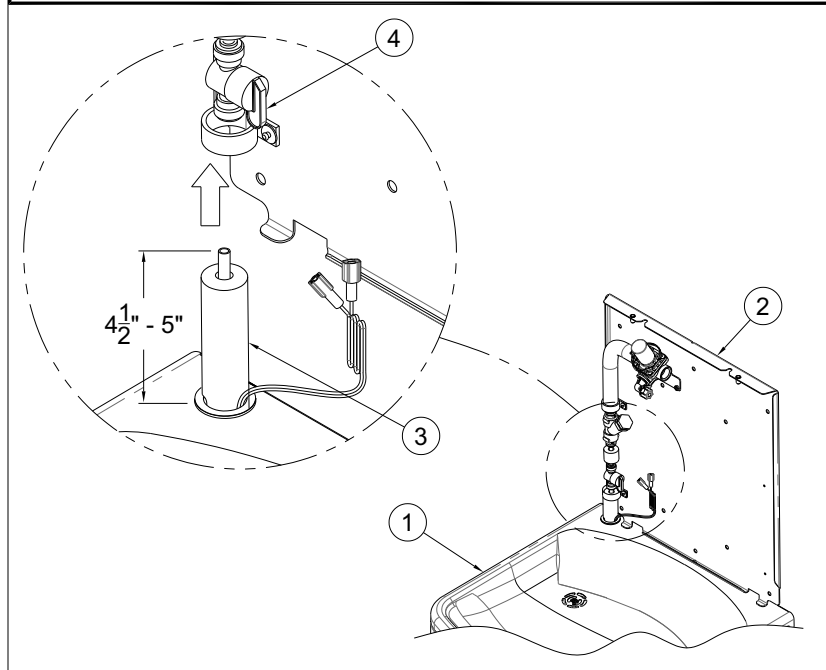
BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

- 7** Push Tubing with Insulation and Power Wires up through hole in Basin. Install Grommet.



- ① Water Cooler Deck
- ② 1/4" OD Tubing & Insulation
- ③ Grommet
- ④ Power to Bottle Filler
(Not required with BF11)

- 8** Connect Water Supply Tube to the 1/4" Shut-Off Valve that is located on the Mounting Panel. Refer to page 4 for proper connection.

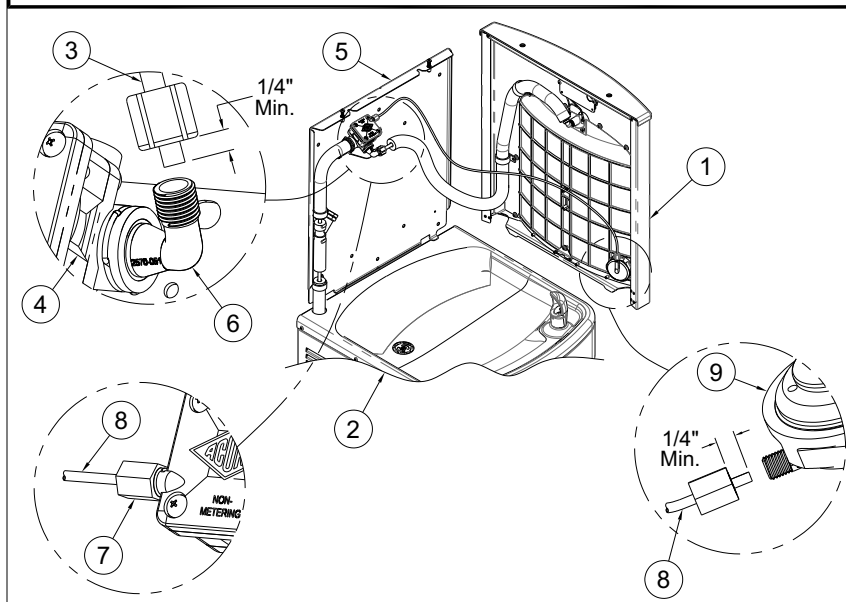


- ① Water Cooler Deck
- ② Mounting Plate
- ③ 1/4" OD Tubing & Insulation
- ④ Shut-Off Valve

BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

BF11 SERIES

9A With Mounting Panel secured, place Bottle Filler Housing on top of the Water Cooler and connect water supply line from Bottle Filler to Pneumatic Valve Outlet. Connect 1/8" Air-Line to Pushbutton and Pneumatic Valve Inlet.



- ① Bottle Filler Housing
- ② Water Cooler Assembly
- ③ 1/4" O.D. Polyethylene Supply Line
- ④ Pneumatic Valve
- ⑤ Mounting Panel
- ⑥ Valve Water Supply Outlet Elbow
- ⑦ Valve Air-Line Supply Inlet
- ⑧ 1/8" O.D. Polyethylene Supply Line
- ⑨ Pushbutton

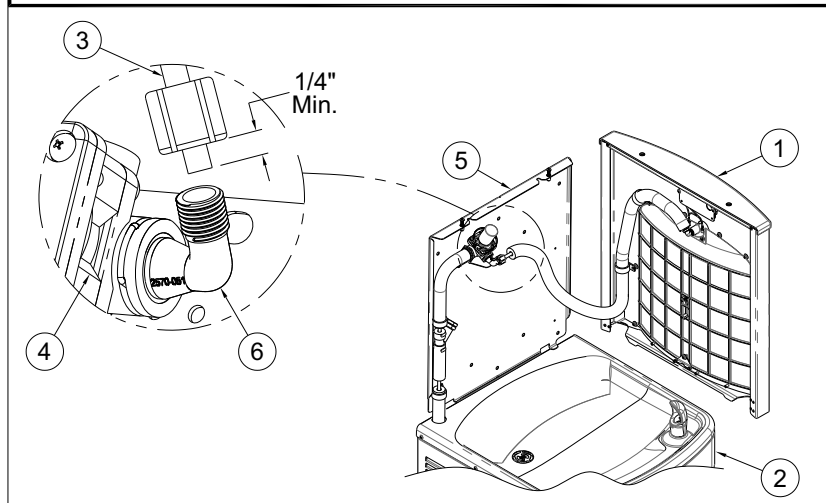


!IMPORTANT

FOR BF11 SERIES, FOLLOW STEP 9A
FOR BF12 SERIES, FOLLOW STEP 9B

BF12 SERIES

9B With Mounting Panel secured, place Bottle Filler Housing on top of the Water Cooler and connect water supply line from Bottle Filler to Solenoid Valve Outlet.

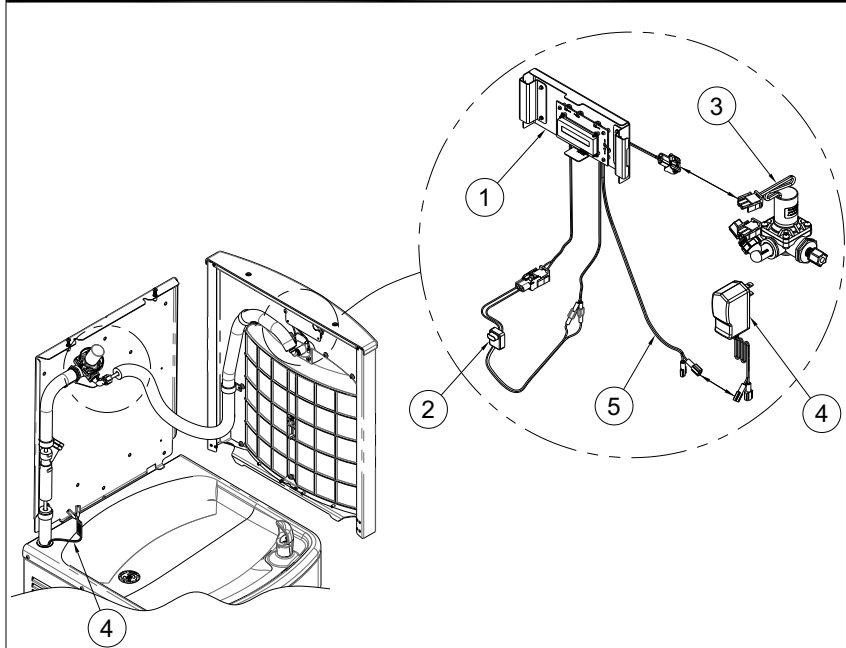


- ① Bottle Filler Housing
- ② Water Cooler Assembly
- ③ 1/4" O.D. Polyethylene Supply Line
- ④ Solenoid Valve
- ⑤ Mounting Panel
- ⑥ Valve Water Supply Outlet Elbow

BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

BF12-BCD SERIES

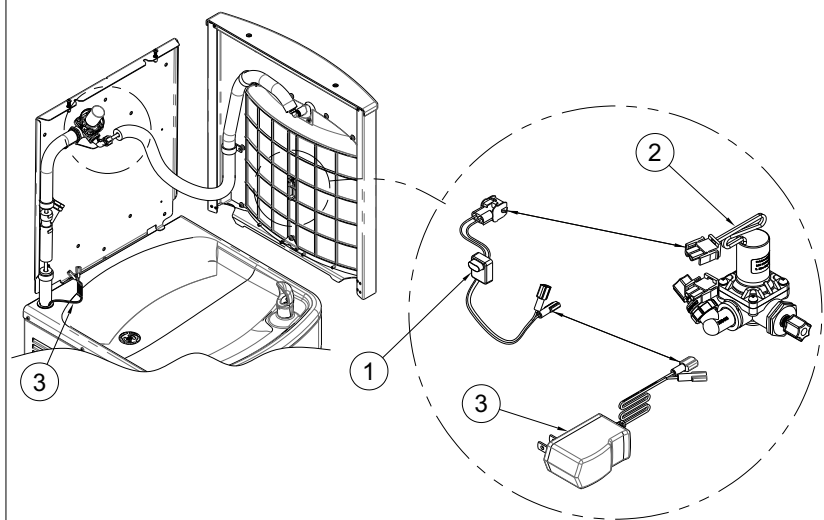
10A Connect Electrical wiring as shown in diagram. If unit does not have -BCD Bottle Count Display, skip to step 10B.



- ① -BCD Bottle Count Display
- ② Sensor
- ③ Solenoid Valve
- ④ Power Supply
- ⑤ Black Wire - BCD

BF12 SERIES

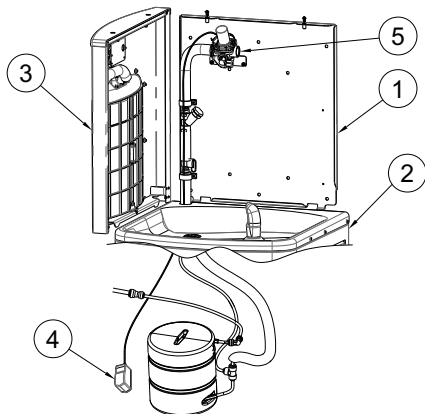
10B Connect Electrical wiring as shown in diagram. If unit has -BCD Bottle Count Display, see step 10A before continuing.



- ① Sensor
- ② Solenoid Valve
- ③ Power Supply

BF11/BF12 INSTALLATION INSTRUCTIONS (CONTINUED)

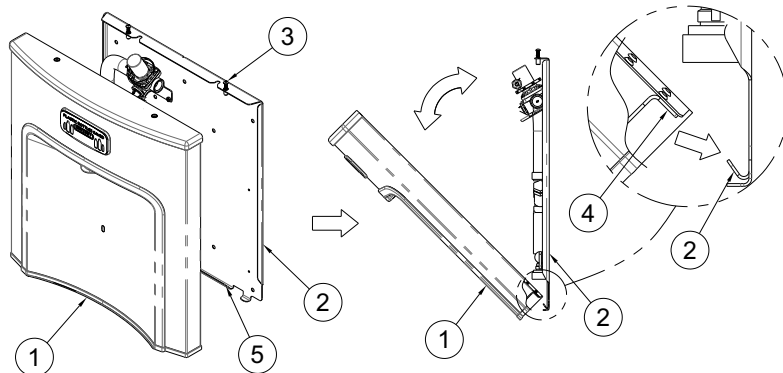
- 11** Connect Power Supply, turn on water and check for leaks throughout the system.



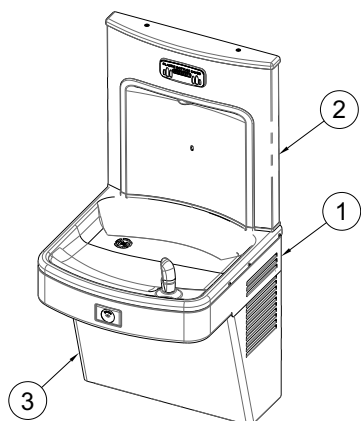
- ① Mounting Panel
- ② Water Cooler Assembly
- ③ Bottle Filler Housing
- ④ Power Supply
- ⑤ Solenoid Valve

- 12** With fixture tested, install Housing to Mounting Panel. Angle Housing and engage Housing Bottom Flange to Mounting Panel Flange and close unit. Secure with Screws from step 3.

- ① Bottle Filler Housing
- ② Mounting Panel
- ③ #10-32 x 1" Button Head Screw
- ④ Housing Bottom Flange
- ⑤ Mounting Panel Flange



- 13** Mount Water Cooler Access Panel to Water Cooler.



- ① Water Cooler
- ② Bottle Filler
- ③ Access Panel

ELECTRICAL INSTALLATION:

NOTE: PLUG-IN POWER IS A STANDARD FEATURE.

- 1A. Plug-In Operation: Plug Transformer provided into GFCI protected electrical service, used by the Bottle Filler.
2. Connect the Power Supply Wires to either the Sensor or -BCD Bottle Counter Display (if equipped).

START UP:

1. Air within the Bottle Filler System or the structure supply Piping 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 until steady water stream is achieved.

OPERATING INSTRUCTIONS:

Position container to be filled directly in front of the Sensor and centered under the Filler Spout. Water flow starts automatically. When the container is almost filled, remove container. The water will stop flowing.

BOTTLE COUNTER ADJUSTING & RESETTING INSTRUCTIONS:

NOTE: Bottle Counter Has Multiple Functions

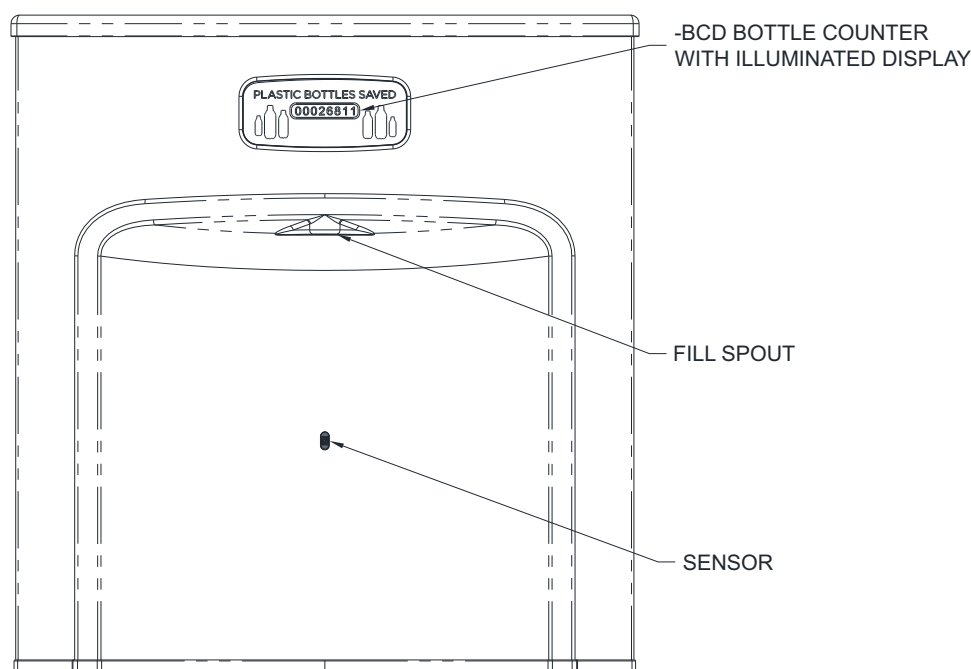
- Reset/ Mode Button
- Counts refilled bottles
- Adjustable for units with and without Filters
- "REPLACEMENT FILTER" alert function
- Alert reset, when Filter is replaced

Description

Illuminated LCD Display counts bottles and has a Filter replacement alert function.

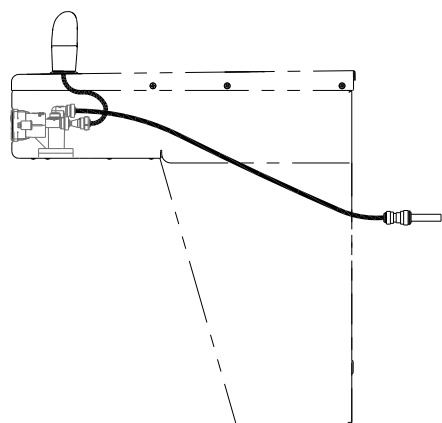
Bottle Counting Function

The software applies a flow volume of approximately 16.9 fl oz (volume in standard size plastic water bottle) to each bottle counted. If the flow volume is less than 16.9 fl oz, there will be no count but the volume will accumulate, so that part way through the next cycle the total bottle count will change.

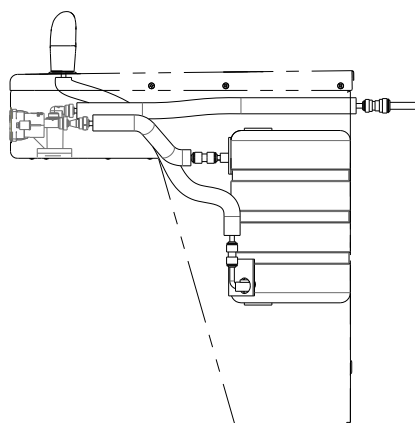


BF11/BF12 Water Supply Tubing Diagram

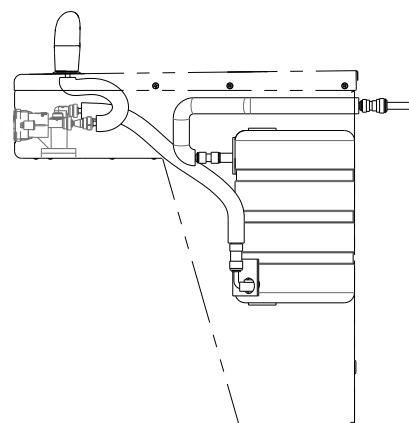
Install Tubing as shown below to add Bottle Filler to Fixture



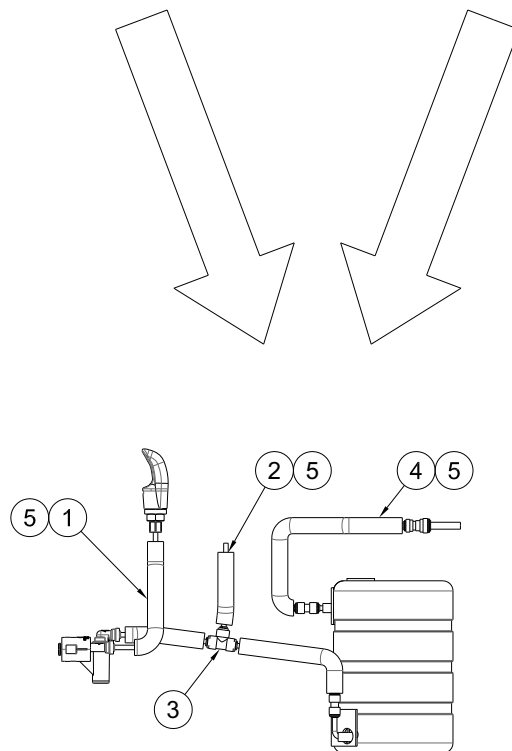
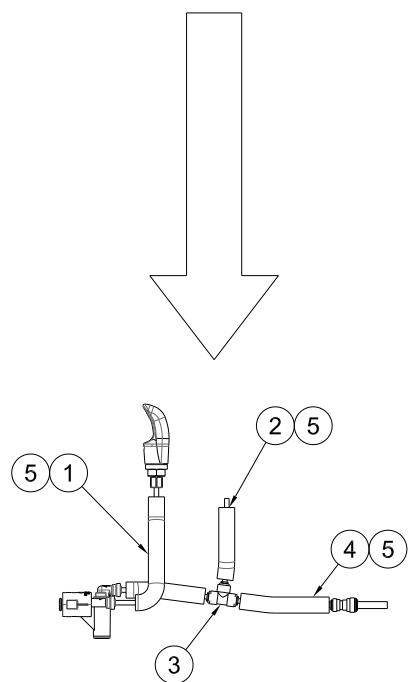
Non-Refrigerated Unit
(Drinking Fountain)



Non-Pressurized Unit
(Water Cooler)



Pressurized Unit
(Water Cooler)



Pressurized with Bottle Filler

- ① Water Supply Line, to Bubbler
- ② Water Supply Line, to Bottle Filler
- ③ 1/4" O.D. Push-In Tee
- ④ Water Supply Line, Inlet
- ⑤ Foam Insulation

FILTER REPLACEMENT FUNCTIONS:

NOTE: When the volume accumulates to Filter capacity, the “REPLACE FILTER SOON” alert will appear on the display every time the Bottle Filler is activated.

Counter Modes

Located on the back of the display you will find the Reset/Mode button for the mode settings. The Reset/Mode Selection Button is accessible by removing the Housing, then locate the large hole in the back of the Display Mounting Bracket. Use your finger or nonconductive object to depress the Reset/Mode Selection Button.

CAUTION: DO NOT USE SHARP OR METAL OBJECTS

With this Reset/Mode Button, you are able to indicate whether or not the unit has a Filter or does not have a Filter. The Reset/Mode Button is used to remove the “REPLACE FILTER” alert after the Filter has been replaced.

Systems With or Without Filter:

- **To reset “REPLACE FILTER” message:**

- Press and hold Button until “3” is displayed, then release.

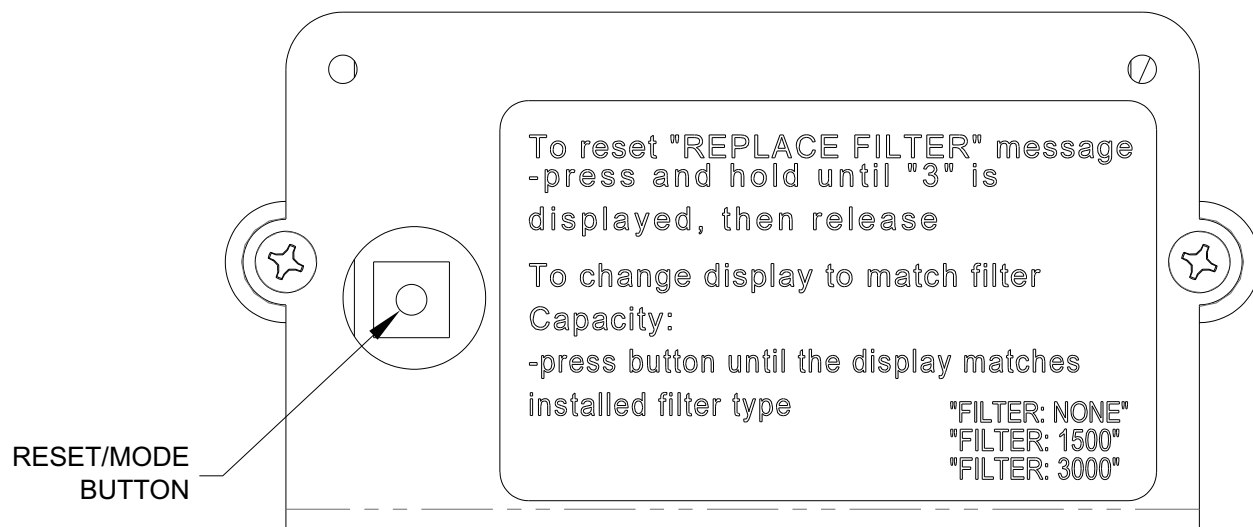
- **To change display to match Filter capacity:**

- Press and hold Button until the display matches installed Filter type, then release.

- “FILTER NONE”

- “FILTER 1500”

- “FILTER 3000”



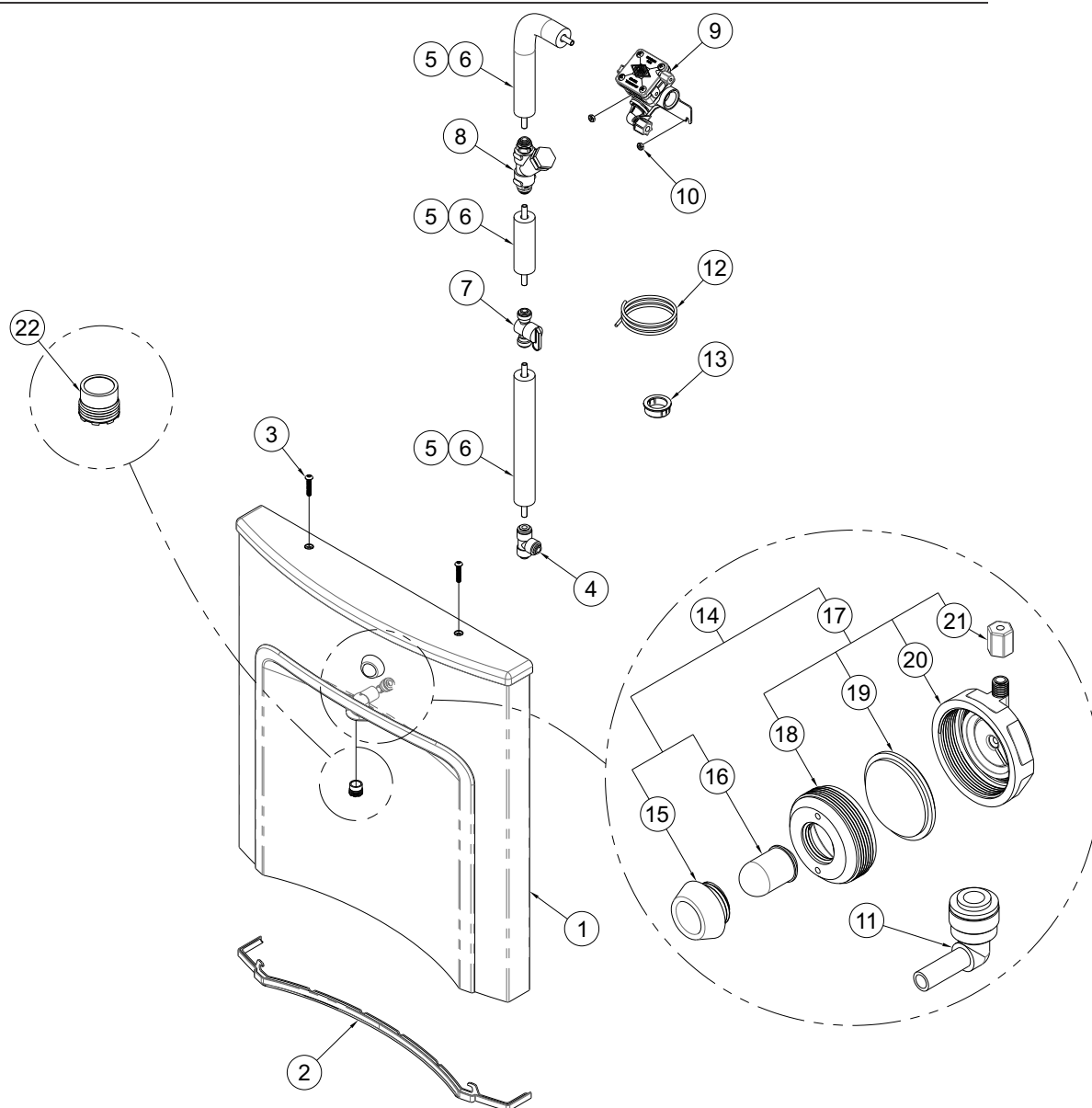
TROUBLE-SHOOTING:

1. IF LIGHT WITHIN SENSOR DOES **NOT** FLASH ONCE WHEN USER IS WITHIN RANGE:
 - a. Verify 120VAC input & 9VDC output of Transformer.
 - b. Replace defective Transformer.
 - c. Sensor in "Security Mode" after 20 seconds of constant detection. Remove source of detection and wait 30 seconds before checking.
 - d. Sensor is picking up a highly reflective surface. Eliminate cause of reflection and wait 30 seconds before checking.
 - e. 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 20 PSIG 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 spout 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. No power to Transformer connections loose or wires cut.

CLEANING & MAINTENANCE GUIDE:

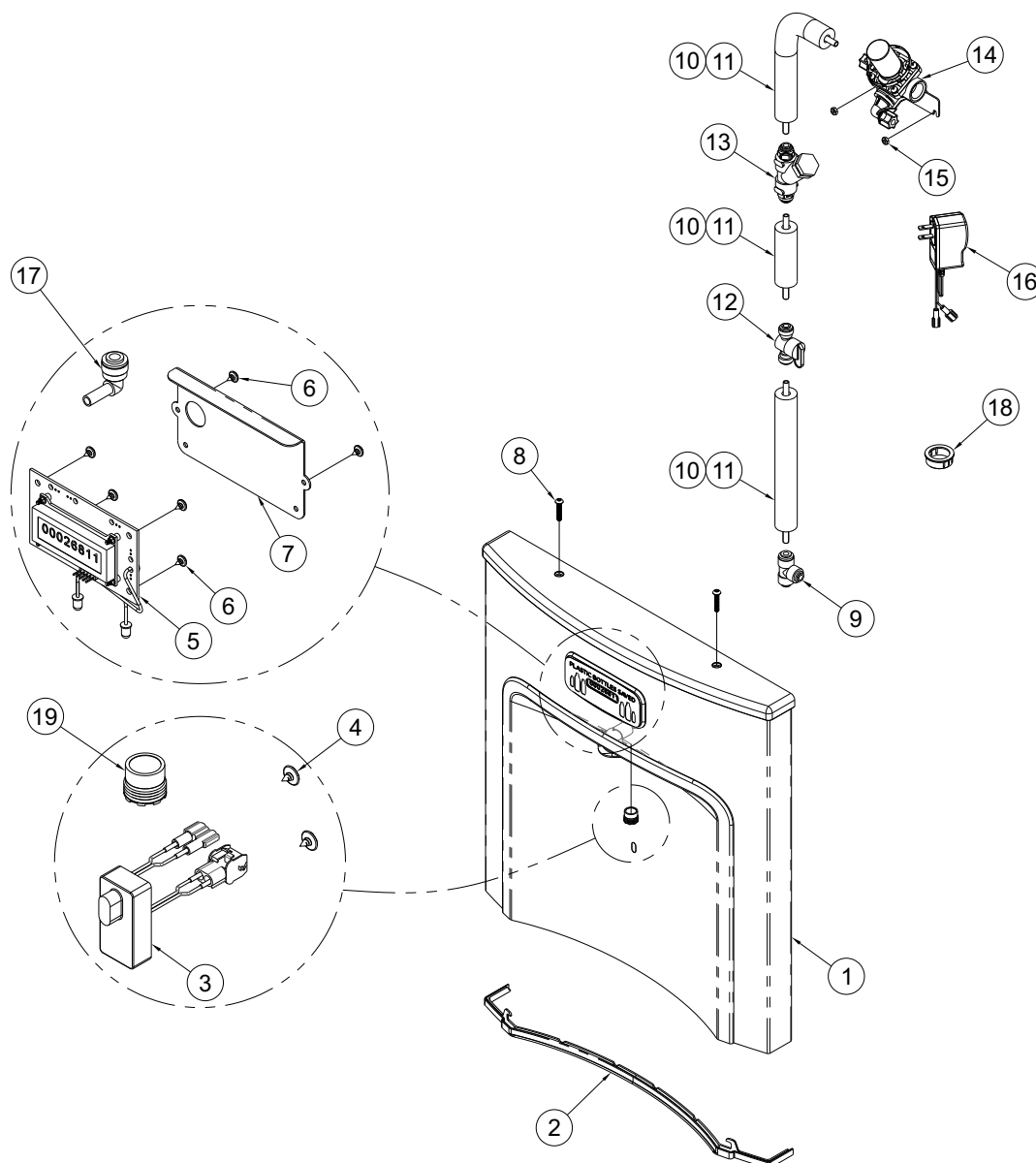
1. To remove water spots or rust spots, stainless steel cleaner/polish on a cloth is recommended.
2. If there are stubborn spots or if you wish to treat a scratch, synthetic abrasive general purpose pads such as Scotch-Brite® is recommended.
3. Apply stainless steel cleaner/polish to the synthetic abrasive 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 Murdock 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 Panels and clean out inline "Y" Strainer.

BF11 PARTS LIST BOTTLE FILLER PARTS BREAKDOWN



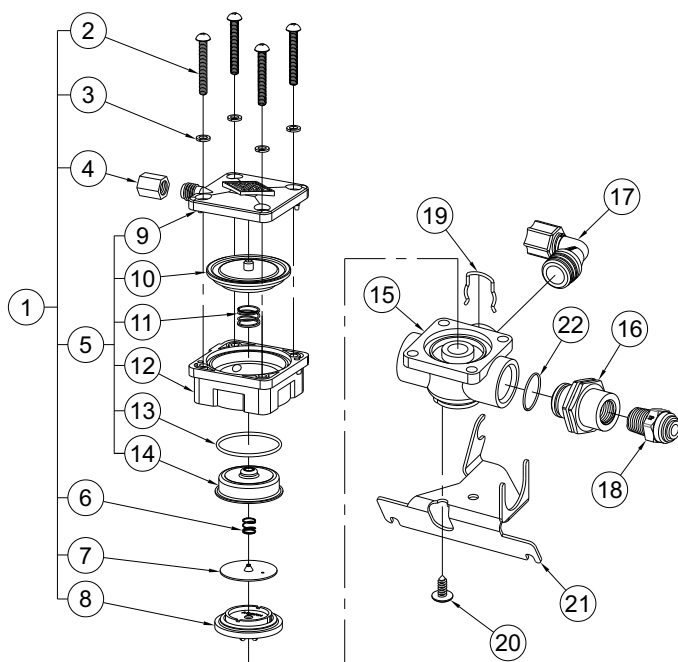
ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	CONTACT FACTORY	HOUSING ASSEMBLY, BF11	12	2150-003-199	1/8" OD LDPE TUBE, NATURAL, 3' LONG
2	7014-257-000	BOTTOM TRIM, H202GO	13	7100-441-000	LOCKING GROMMET, 1.188 DIA HOLE
3	0116-123-000	#10-32 x 1" BUTTON HEAD SCREW	14	2566-160-001	(-PBH) SIDE OUTLET PUSHBUTTON
4	1895-710-000	1/4" PUSH-IN UNION TEE	15	4005-030-199	AIR-TROL PUSHBTN ESCUTCHEON S/S
5	2169-000-000	1/4" O.D. LLDPE TUBING, BLUE	16	4005-031-199	AIR-TROL PUSHBUTTON
6	7012-055-000	FOAM PIPE INSULATION	17	2566-025-002	SIDE OUTLET PUSHBUTTON SUB-ASSY
7	7000-420-000	1/4 TURN SHUT-OFF VALVE	18	2566-022-000	ESCUTCHEON RETAINER
8	7013-210-001	"Y" STRAINER, BOTTLE FILLER	19	2566-001-000	AIR DIAPHRAGM
9	7014-290-005	PNEUMATIC VALVE MOUNTING ASSY	20	2566-055-199	DIAPHRAGM RETAINER SIDE OUTLET
10	0302-011-000	#6-32 UNC HEX NUT	21	1895-450-000	1/8" O.D. NYLON COMPRESSION NUT
11	1895-709-000	ELBOW, 1/4" PUSH-IN x 1/4" STEM	22	7013-119-000	NEOPERL LAMINAR NOZZLE

BF12 PARTS LIST BOTTLE FILLER PARTS BREAKDOWN



ITEM#	PART NUMBER	DESCRIPTION	ITEM#	PART NUMBER	DESCRIPTION
1	CONTACT FACTORY	HOUSING ASSEMBLY, BF11/12	11	7012-055-000	FOAM PIPE INSULATION
2	7014-257-000	BOTTOM TRIM, H202GO	12	7000-420-000	1/4 TURN SHUT-OFF VALVE
3	2563-381-001	SENSOR "A" ASSEMBLY	13	7013-210-001	"Y" STRAINER, BOTTLE FILLER
4	0110-012-000	#6 x 3/16" TRUSS HEAD SCREW	14	7014-293-001	SOLENOID/VALVE MOUNTING ASSY
5	0716-111-001	BOTTLE COUNTER WITH CONNECTORS	15	0302-011-000	#6-32 UNC HEX NUT
6	0110-011-000	#6 x 3/16" PAN HEAD SCREW	16	0710-736-001	POWER SUPPLY
7	7014-253-199	SPLASH GUARD	17	1895-709-000	ELBOW, 1/4" PUSH-IN x 1/4" STEM
8	0116-123-000	#10-32 x 1" BUTTON HEAD SCREW	18	7100-441-000	LOCKING GROMMET, 1.188 DIA HOLE
9	1895-710-000	1/4" PUSH-IN UNION TEE	19	7013-119-000	NEOPERL LAMINAR NOZZLE
10	2169-000-000	1/4" O.D. LLDPE TUBING, BLUE			

BF11 VALVE BREAKDOWN



ITEM #	PART NUMBER	DESCRIPTION
1	2563-000-002	DIRECT ACTING ASSEMBLY
2	0116-012-000	#8-32 x 1-1/4" PHILLIPS ROUND HEAD
3	0331-003-000	#8 LOCKWASHERS
4	1895-450-000	1/8" PLASTIC COMPRESSION NUT
5	2563-000-001	DIRECT ACTING MOTOR ASSEMBLY
6	2563-008-000	PILOT ORIFICE PLATE SPRING
7	2563-019-001	PILOT ORIFICE PLATE ASSEMBLY
8	2563-010-001	WATER DIAPHRAM ASSEMBLY
9	2563-007-000	DIRECT ACTING COVER PLATE
10	2563-004-001	DIRECT ACTING DIAPHRAM ASSEMBLY
11	2563-003-000	ACTUATOR SPRING
12	2563-001-000	MOTOR HOUSING
13	0401-026-000	SEPARATOR CUP O-RING
14	2563-002-199	SEPARATOR CUP
15	2563-000-000	VALVE BODY
16	2800-114-599	1/4" INLET ADAPTER
17	2570-051-001	1/4" OD PLASTIC ELBOW ASSEMBLY
18	1895-125-000	1/4" OD x 1/4" NPT PUSH-IN FITTING
19	0326-100-000	RETAINING CLIP
20	0124-010-000	#10 X 1/2" PHILLIPS TRUSS HEAD
21	7014-293-199	BF11/12 VALVE MOUNTING BRACKET
22	0410-016-000	#16 O-RING, 5/8 x 3/4 x 1/16

BF12 VALVE BREAKDOWN

ITEM #	PART NUMBER	DESCRIPTION
1	2570-140-001	9-12 VDC SOLENOID OP VALVE ASSY
2	6502-043-000	#8-32 UNC x 1/2" PHILLIPS SCREW
3	0331-003-000	#8 LOCKWASHERS
4	2570-061-000	SOLENOID BONNET
5	2563-010-001	WATER DIAPHRAGM ASSEMBLY
6	2570-027-000	VALVE BODY
7	2563-326-001	9VDC LATCHING SOLENOID ASSEMBLY
8	2800-114-599	1/4" INLET ADAPTER
9	2570-051-001	1/4" OD PLASTIC ELBOW ASSEMBLY
10	1895-125-000	1/4" OD x 1/4" NPT PUSH-IN FITTING
11	0326-100-000	RETAINING CLIP
12	0124-010-000	#10 X 1/2" PHILLIPS TRUSS HEAD
13	7014-293-199	BF11/12 VALVE MOUNTING BRACKET
14	0410-016-000	#16 O-RING, 5/8 x 3/4 x 1/16

