

BF11S & BF12S Stainless Steel Bottle Filler Series



BF11S
Pushbutton Operated
Stainless Steel
Bottle Filler

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



BF12S
Sensor Operated
Stainless Steel
Bottle Filler
(BF12S-BCD Shown)

TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:

1-800-743-8259

Technical Assistance E-Mail: Fieldservice@acorneng.com

! IMPORTANT

NOTE: To ensure fresh water supply, BF12S Stainless Steel Bottle Filler is provided with an Auto-Purge Sensor feature. Auto-Purge function is Factory pre-programmed to activate Bottle Filler for 10 second duration, 24 hours after the last activation of the unit. Purge cycle adjustments are possible with the optional **-AP Auto-Purge Function Controller** offered with the fixture or after the unit has been received using P.N. 2563-398-000.

<https://www.murdockmfg.com/option-ap-auto-purge-bottle-filler>

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

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COMPLIES WITH
STANDARDS



NSF/ANSI 61



Federal
Public Law
111-380
(No Lead)



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MORRIS GROUP
INTERNATIONAL

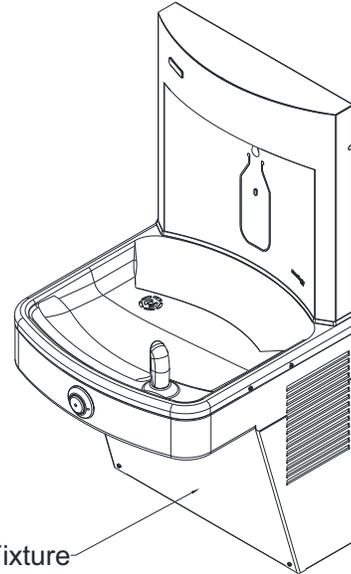
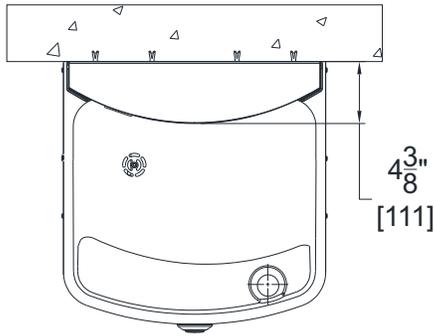
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SINCE 1853

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

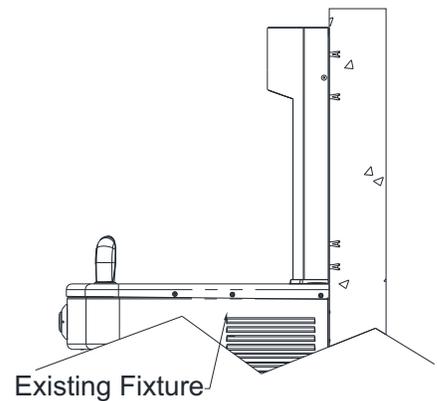
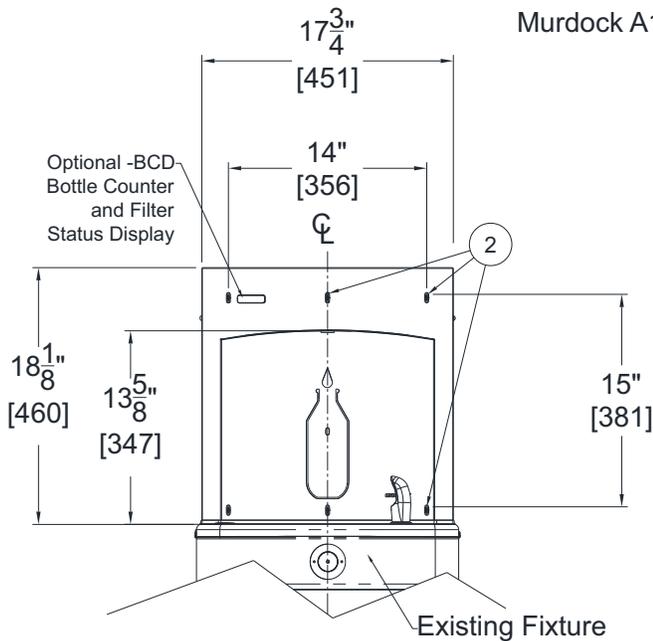
DIMENSIONAL DRAWING

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

Note: Backing / Mounting Rough-Ins are the same for BF11S & BF12S Bottle Fillers
(Electrical required for BF12S series using Cooler Receptacle).



Existing Fixture
Murdock A171/172-UG Series



General Note:

1. All dimensions are in inches [MM]

2. Ø1/4" Holes, 6 Places for anchoring
Hardware provided by others.

PRIOR TO INSTALLATION:

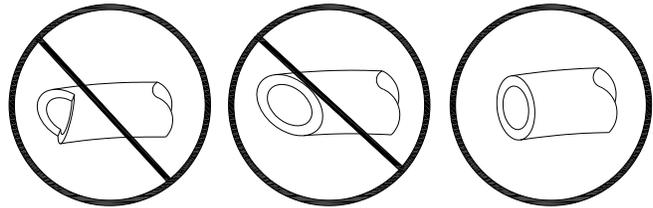
1. Some options may slightly alter installation. To ensure proper installation, review the Manual thoroughly and verify rough-ins before beginning any work. File this Manual with the owner or maintenance personnel upon completion of installation.
2. Carefully remove all fixture components from packaging, 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.

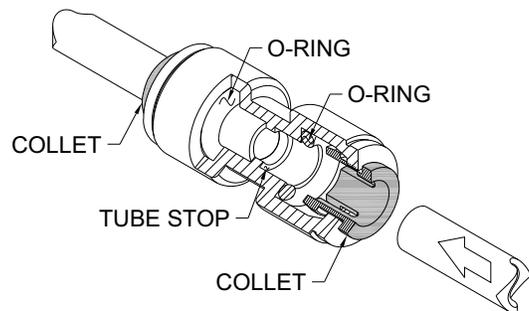
TO CUT TUBE:

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.

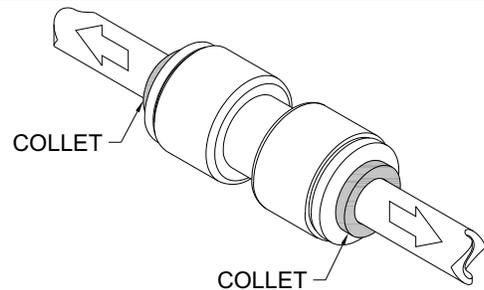


INSERTING THE TUBE:

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

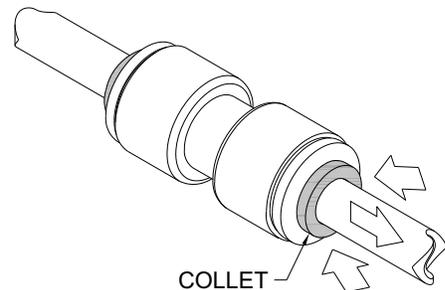


2. Pull on the fitted Tubing to ensure it is secure. Tube should not come free from the Fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.

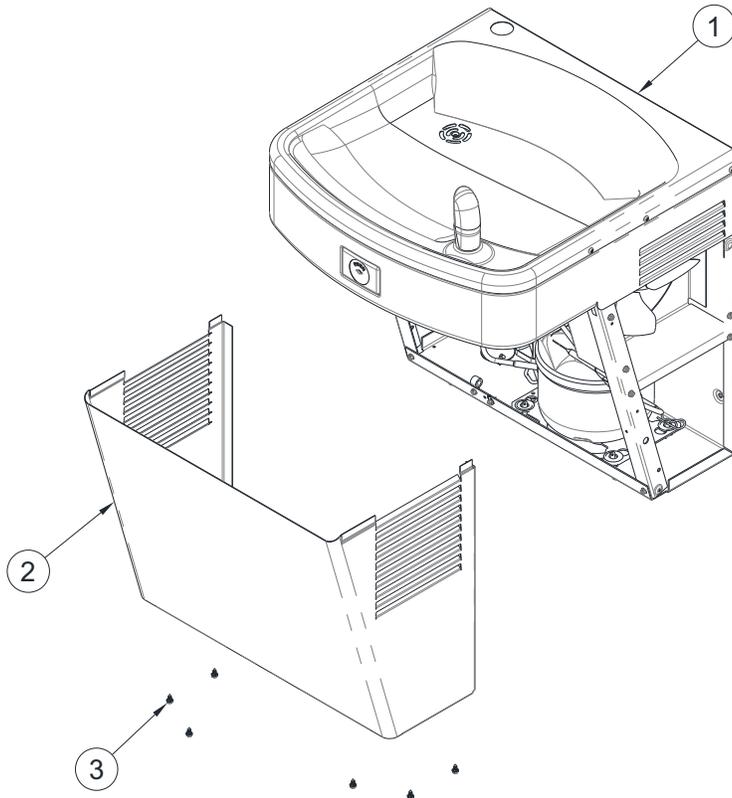


DISCONNECTING THE TUBE:

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.



BF11S/BF12S INSTALLATION INSTRUCTIONS

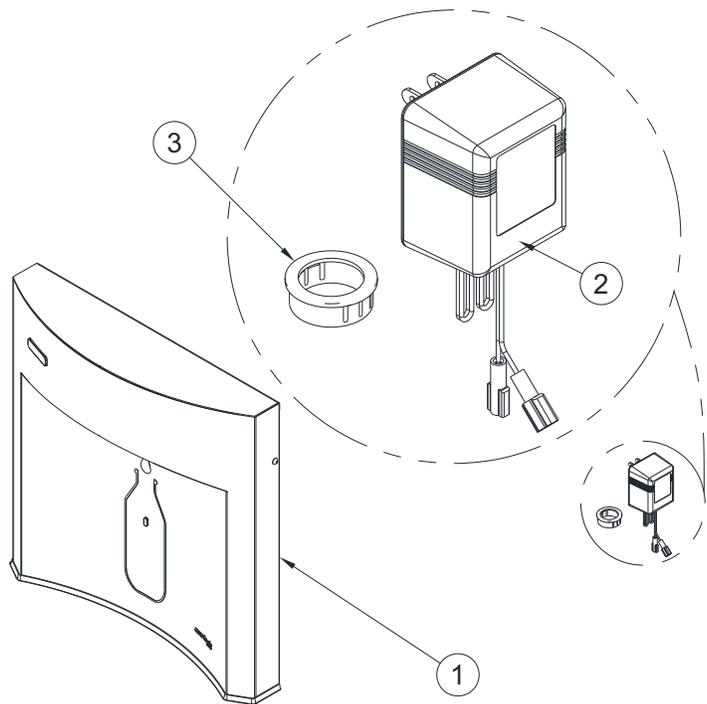


2 Remove Bottle Filler Assembly [1], Power Supply [2] (BF12S Models) and Grommet [3] from packaging, careful to avoid damage to Fixture and Fixture Sub Assemblies. Set Power Supply aside in a secure location.

- ① Bottle Filler Assembly
- ② Power Supply (BF12S ONLY)
Input: 100-240VAC, 50-60Hz,
Output: 9VDC. 0.8A
- ③ Locking Grommet

1 Install the newly obtained Water Cooler [1] per the Installation Manual provided with the unit. Do not install Access Panel [2] 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.

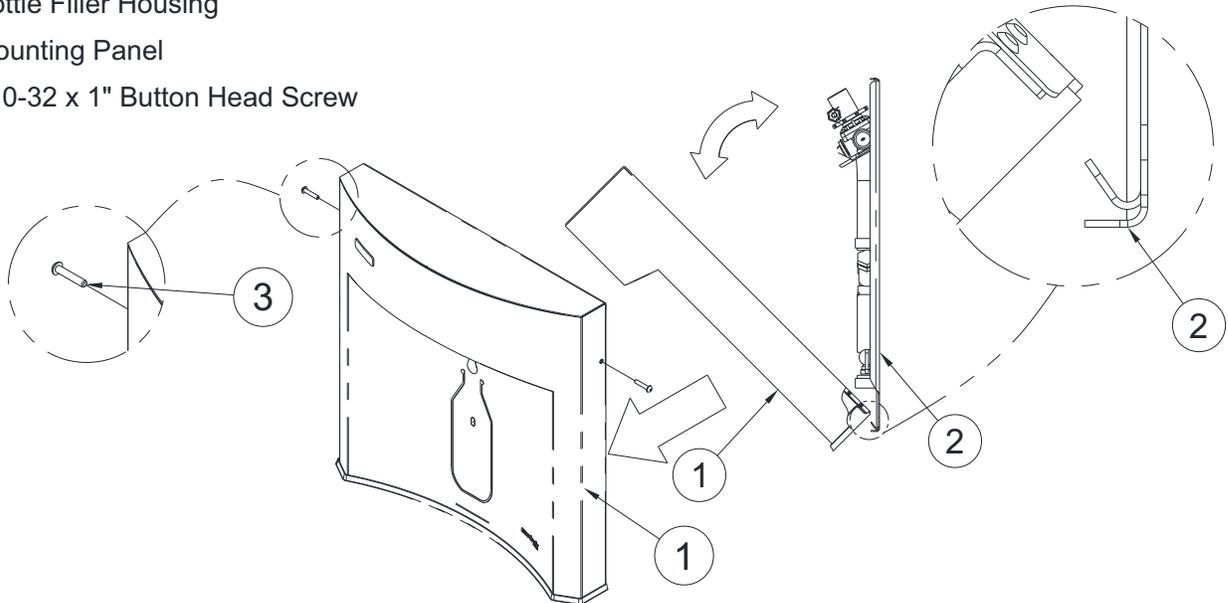
- ① Drinking Fountain/
Water Cooler Assembly
- ② Access Panel
- ③ #8 x 3/8" Hex Washer Head Screw



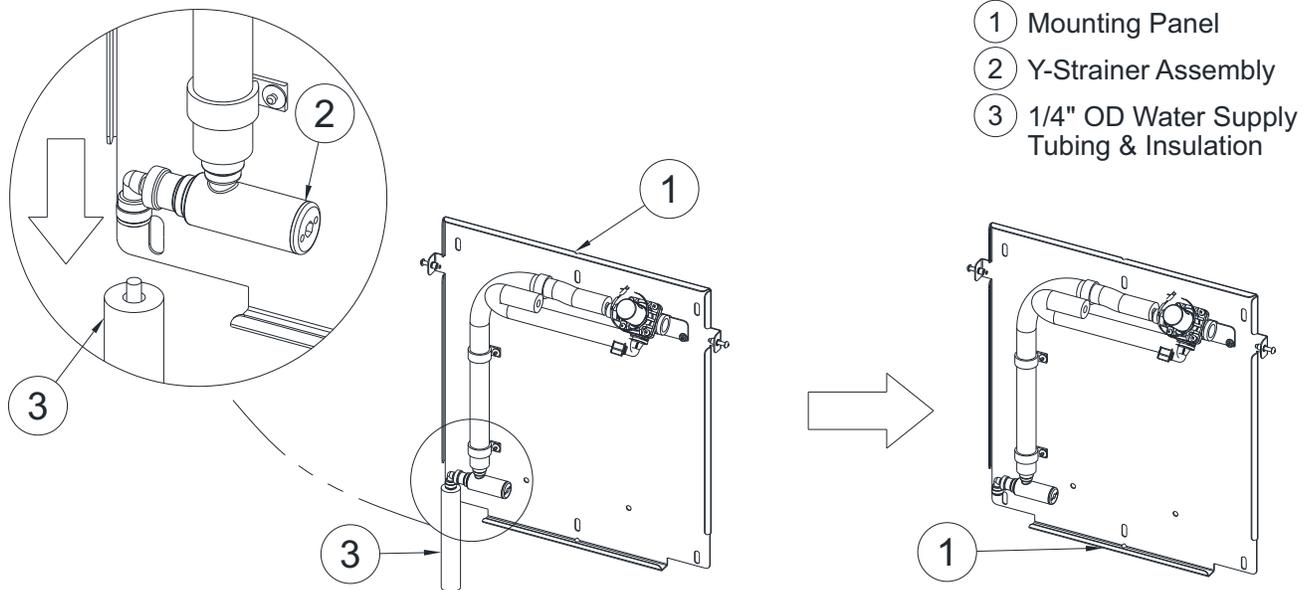
BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

3 Unfasten Screws that hold the Bottle Filler Housing [1] to the Mounting Panel [2]. Swing the Bottle Filler Housing [1] down and pull up and away from the Mounting panel [2] to separate the two pieces. Place Bottle Filler Panel and Screws [3] in a secure location.

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

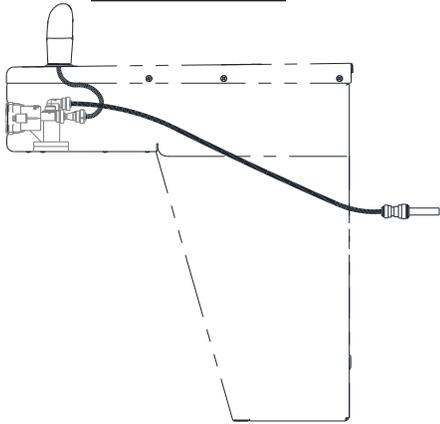


4 Disconnect the Water Supply Insulation and Tubing [3] from the Auto Y-Strainer [2] that is located on the Mounting Panel [1].

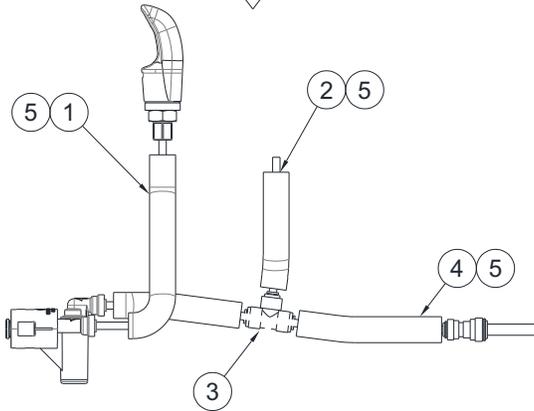
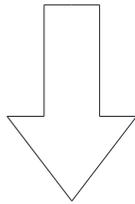


Water Supply Tubing to Bottle Filler Diagram

BF11S

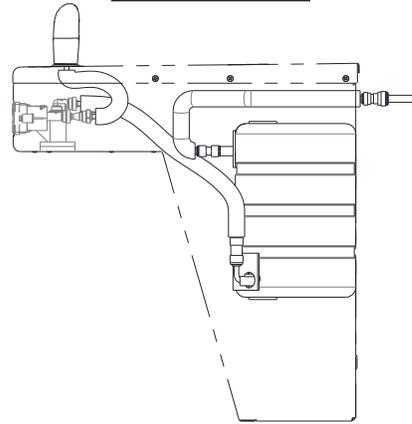


Non-Refrigerated Unit
(Drinking Fountain)

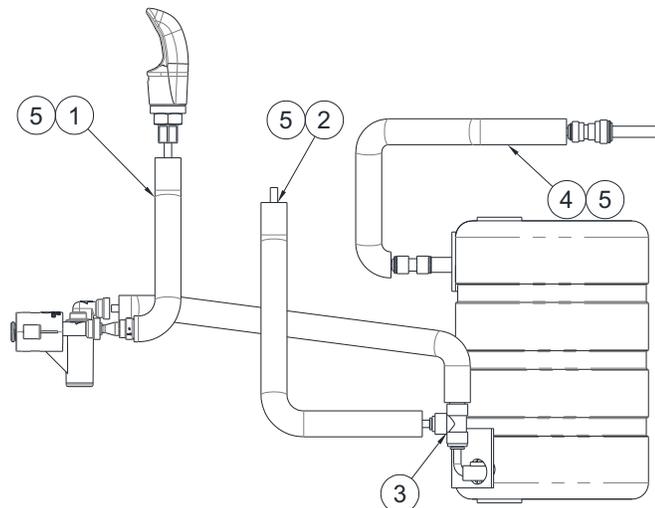
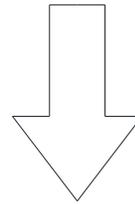


- ① Water Supply Line, to Bubbler
- ② Water Supply Line, to Bottle Filler
- ③ 1/4" O.D. Push-In Tee
- ④ Water Supply Line, Inlet
- ⑤ Foam Insulation (Recommended)

BF12S

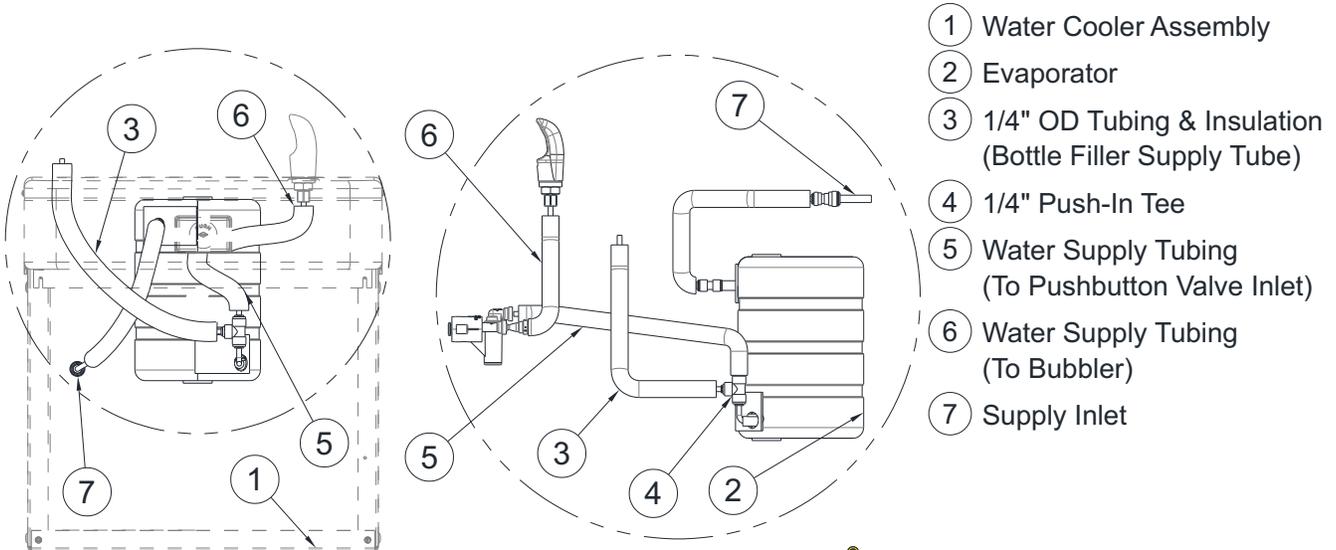


Refrigerated Unit
(Water Cooler)



BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

5 Connect the Bottle Filler Supply Tubing [3] to the 1/4" Push-In Tee [4] located on the Evaporator [2]. The Evaporator [2] is located within the Water Cooler Assembly [1]. If fixture piping differs from layout shown, refer to page 7 for specific unit connections.

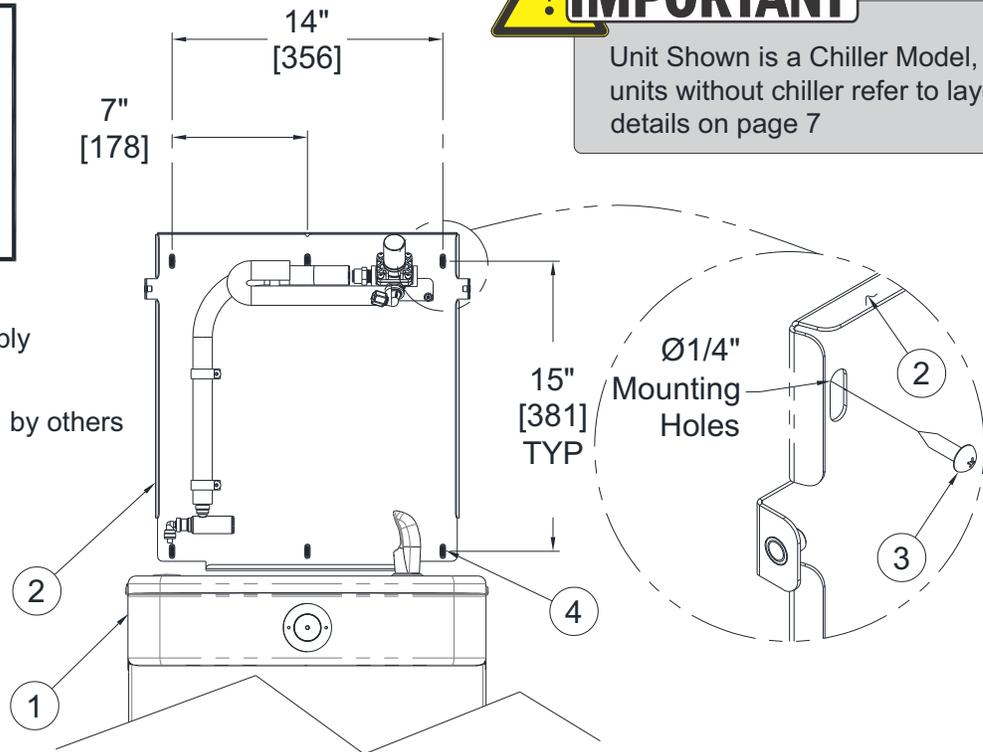


6 Center Mounting Panel [2] on top of Deck to finished wall and Secure with Anchoring Hardware, by others [3].



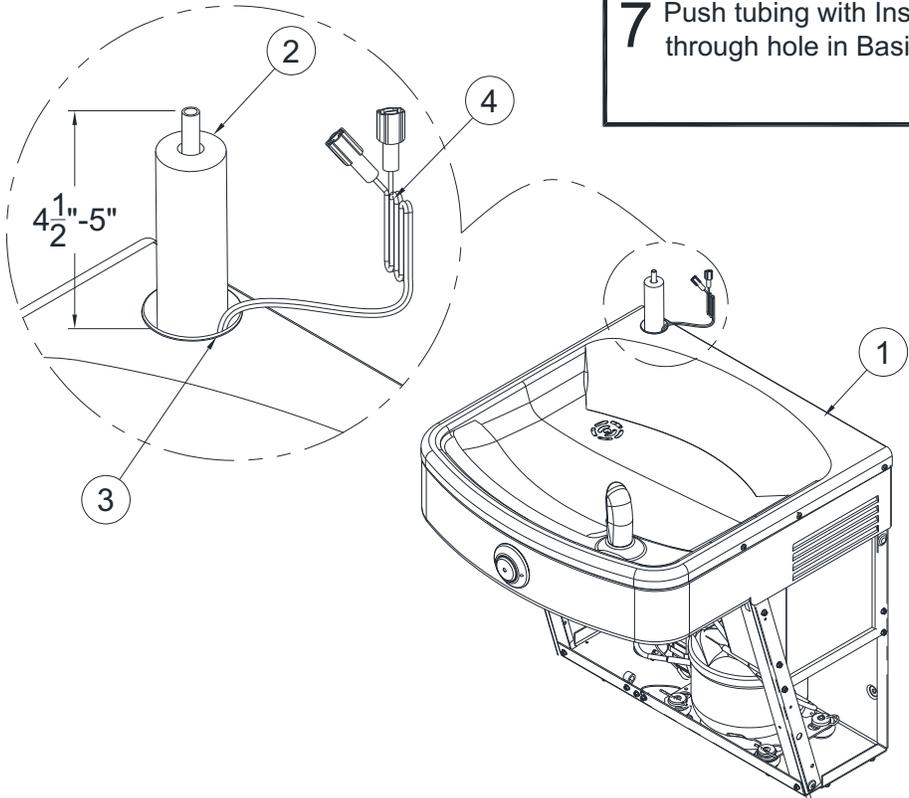
Unit Shown is a Chiller Model, for units without chiller refer to layout details on page 7

- ① Drinking Fountain/ Water Cooler Assembly
- ② Mounting Plate
- ③ Anchoring Hardware, by others
- ④ 6x Mounting Holes



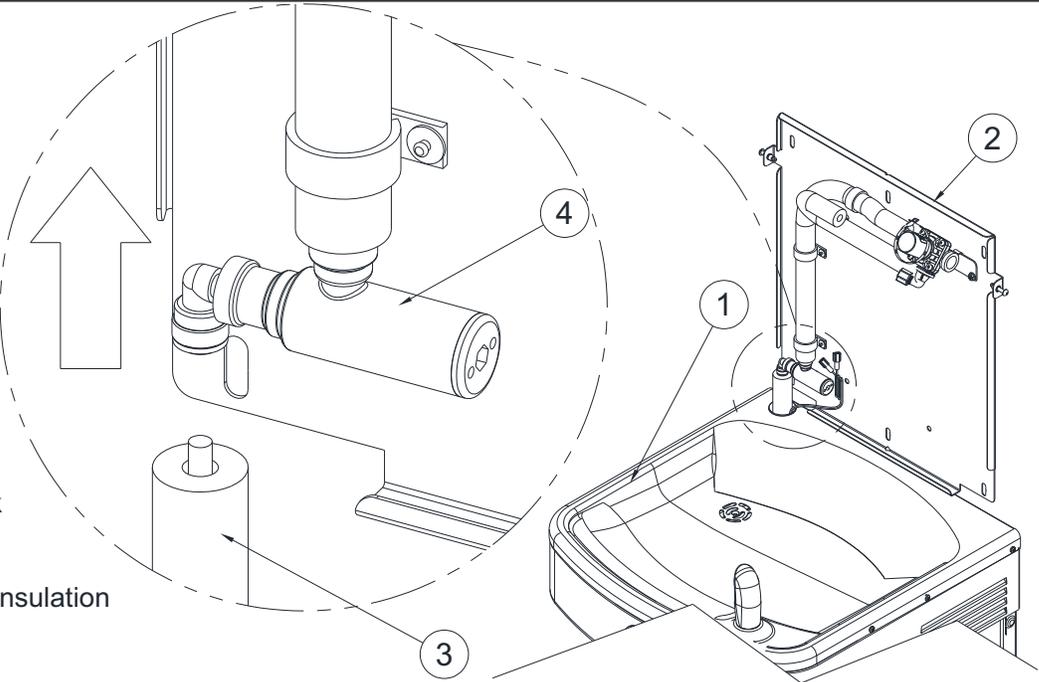
BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

7 Push tubing with Insulation [2] and Power Wires [4] up through hole in Basin. Install Grommet [3].



- ① Water Cooler Deck
- ② 1/4" OD Water Supply Tubing & Insulation
- ③ Grommet
- ④ Power to Bottle Filler (Not required with BF11S)

8 Connect Water Supply Tube to the Auto Y-Strainer [2] that is located on the Mounting Panel [2]. Refer to page 4 for proper connection.

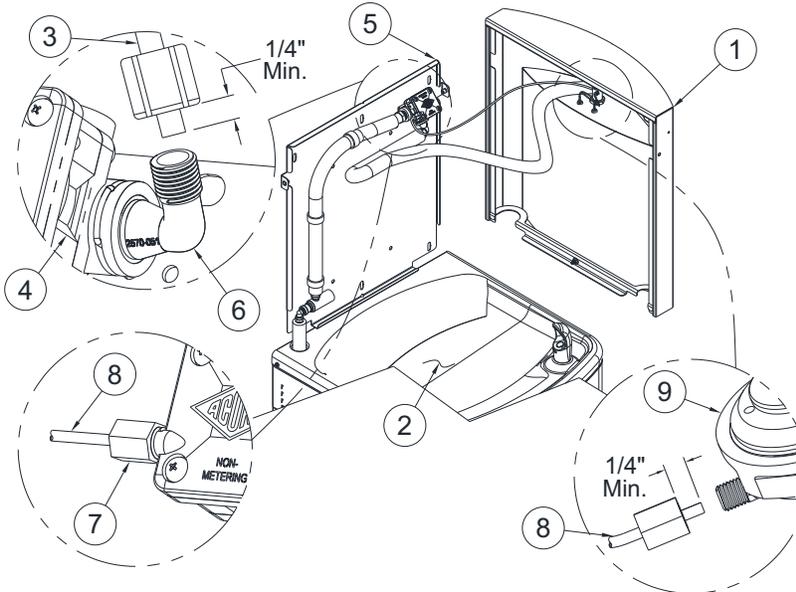


- ① Water Cooler Deck
- ② Mounting Plate
- ③ 1/4" OD Tubing & Insulation
- ④ Auto Y-Strainer

BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

BF11S (PUSHBUTTON OPERATED)

9A With Mounting Panel [5] secured, place Bottle Filler Housing [1] on top of the Water Cooler [2] and connect water supply line [3] from Bottle Filler to Pneumatic Valve Outlet Elbow [6]. Connect 1/8" Air-Line [8] to Pushbutton [9] and Pneumatic Valve Inlet [7].



- 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

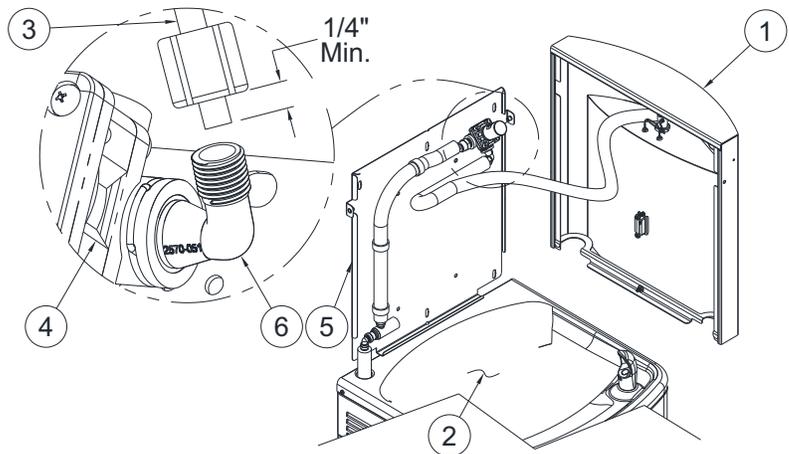


FOR BF11S SERIES, FOLLOW STEP 9A
FOR BF12S SERIES, FOLLOW STEP 9B

9B With Mounting Panel [5] secured, place Bottle Filler Housing [1] on top of the Water Cooler [2] and connect water supply line [3] from Bottle Filler to Solenoid Valve [4] Outlet [6].

BF12S (SENSOR OPERATED)

- 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

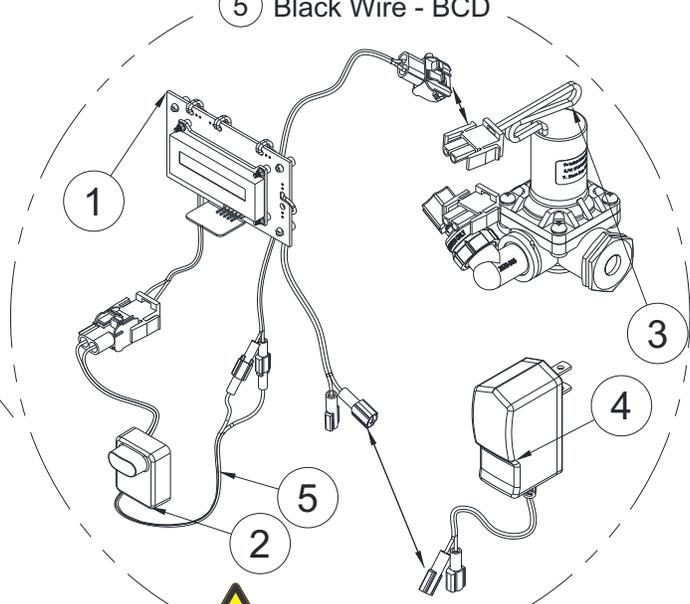
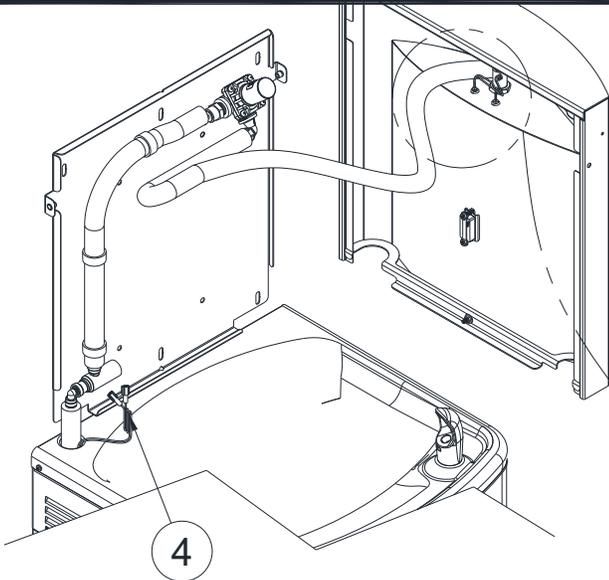


BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

BF12S -BCD OPTION

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

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



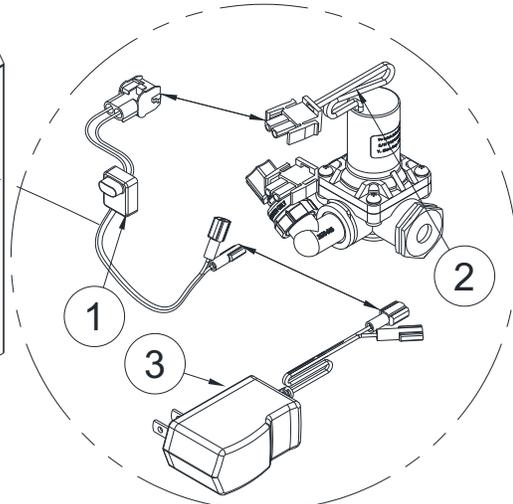
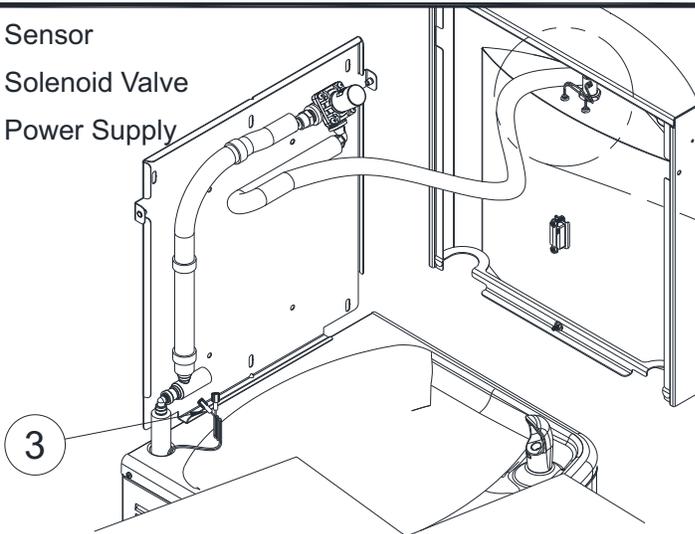
BF12S LESS -BCD OPTION

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



- If a BF11S unit is being installed proceed to next page.
- If BF12S (Without BCD) proceed to step 10B.

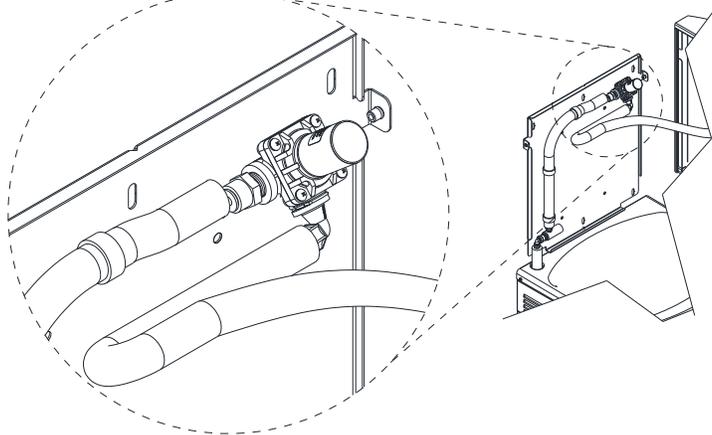
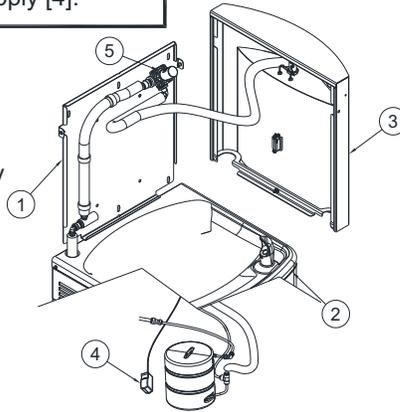
- ① Sensor
- ② Solenoid Valve
- ③ Power Supply



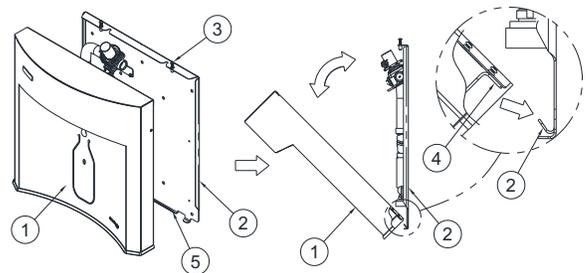
BF11S/BF12S INSTALLATION INSTRUCTIONS (CONTINUED)

11 Turn on water and check for leaks throughout the system. Then connect the Power Supply [4].

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



12 With fixture tested, install Housing [1] to Mounting Panel [2]. Angle Housing and engage Housing Bottom Flange [4] to Mounting Panel Flange [5] and close unit. Secure with Screws [3] from step 3.



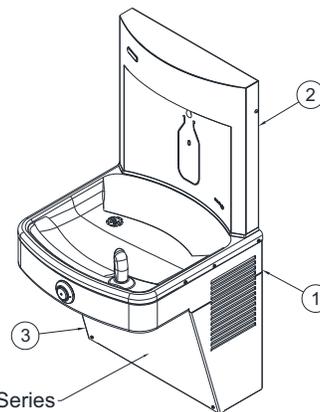
- ① Bottle Filler Housing
- ② Mounting Panel
- ③ #10-32 x 1" Button Head Screw
- ④ Housing Bottom Flange
- ⑤ Mounting Panel Flange

! IMPORTANT

To Properly Close Cover, Riser Tubing should reside within Upper Housing Chamber without interfering with other components. Avoid crimping Riser Tubing which connects Solenoid Valve to Bottle Filler Outlet by positioning the Solenoid Valve Elbow Outlet "slightly upward" before closing the Housing to Mounting Panel and positioning the Riser Tubing accordingly.

13 Mount Water Cooler Access Panel [3] to Water Cooler [1].

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



A171/172-UG-VR Series

BF12S SENSOR OPERATED ELECTRICAL INSTALLATION:

NOTE: PLUG-IN POWER IS A STANDARD FEATURE FOR BF12S AND BF12S-BCD.

1. Plug-In Operation: Plug Transformer provided into GFCI protected electrical service, used by the Bottle Filler.

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.

OPTIONAL -BCD BOTTLE COUNTER ADJUSTING & RESETTING INSTRUCTIONS:

NOTE: Bottle Counter Has Multiple Functions

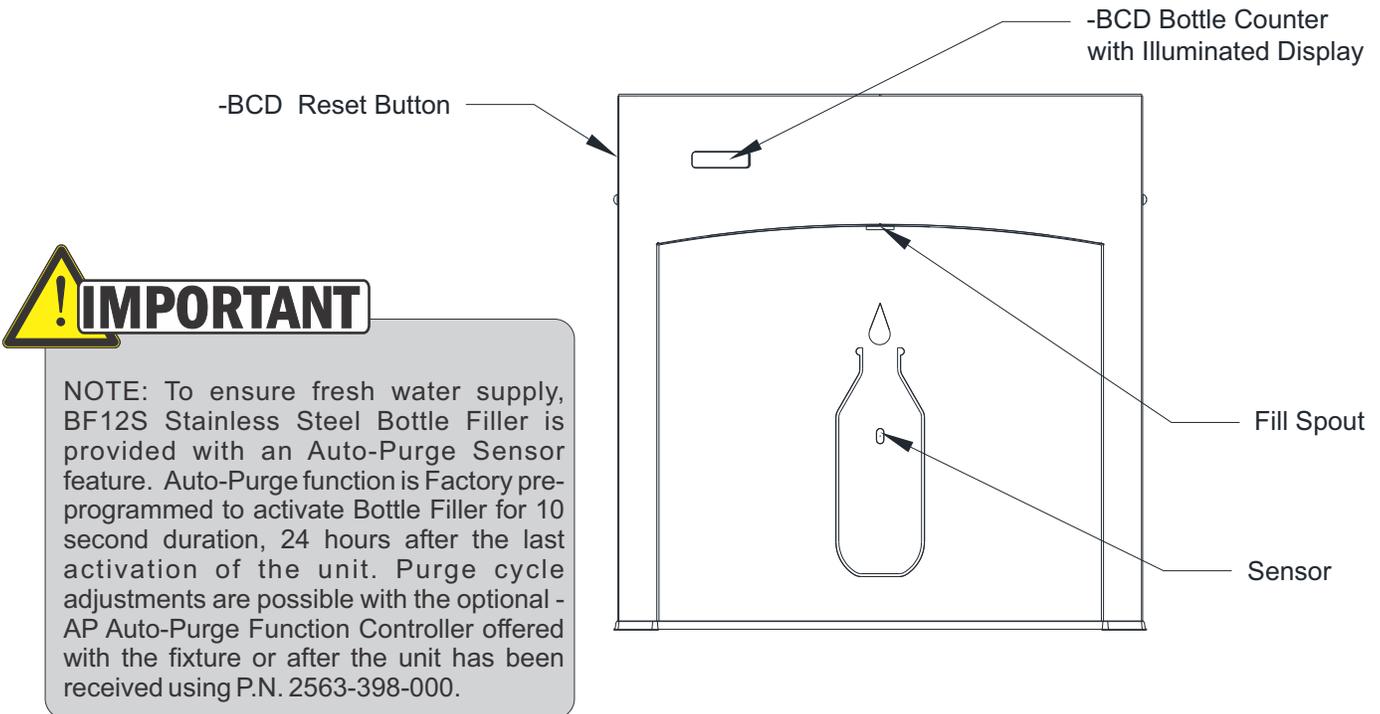
- Reset/ Mode Button
- Counts refilled bottles
- Adjustable for units with and without Filters
- "REPLACEMENT FILTER" alert function
- Alert reset, when Filter is replaced

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.



OPTIONAL -BCD 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 locating the 1/8" hole on the same side as the display. Using a small object such as an Allan wrench push the lever to activate the 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:

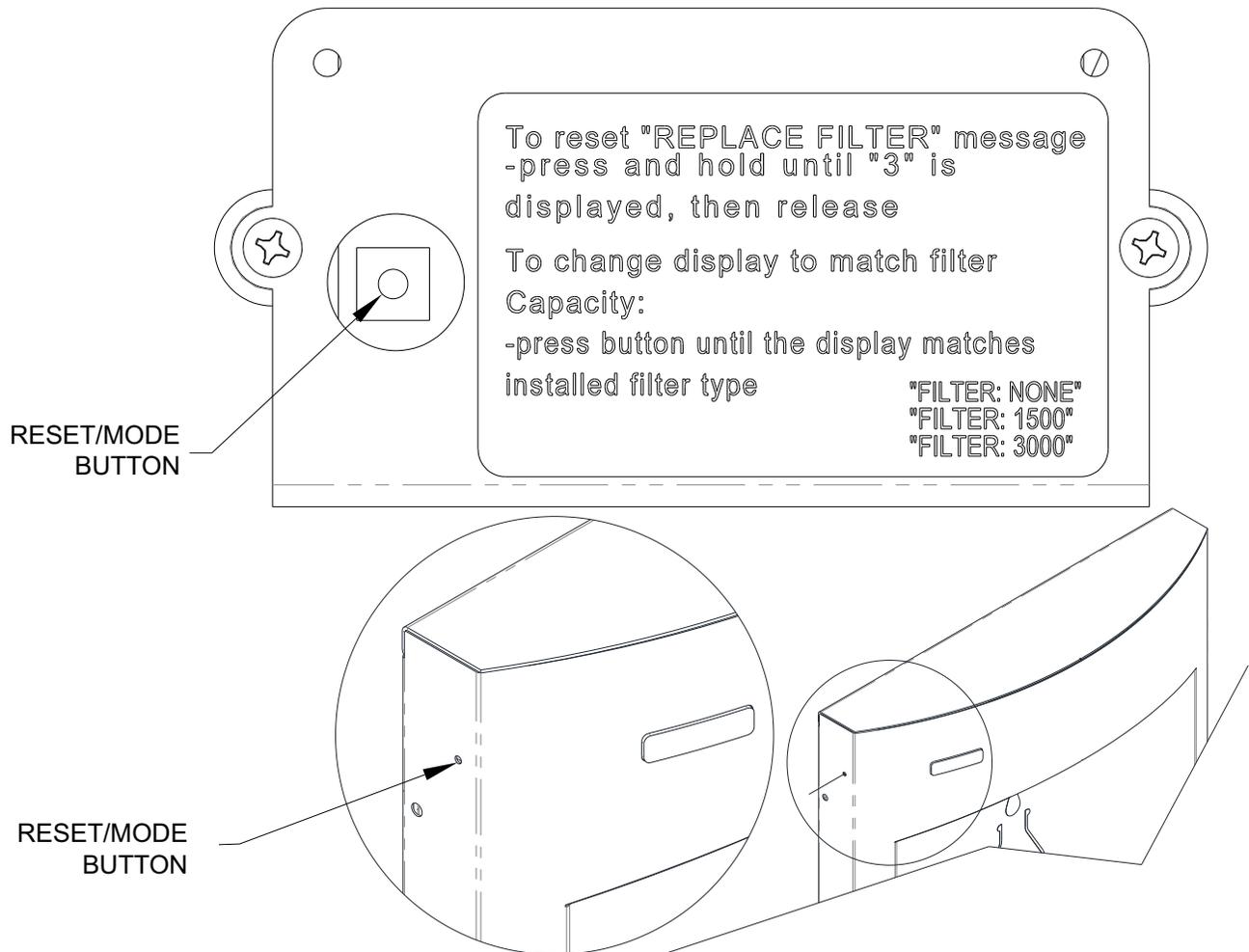
-Press and hold Button until the display matches installed Filter type, then release.

"FILTER NONE"

"FILTER 1500"

"FILTER 3000"

FACILITY FILTER



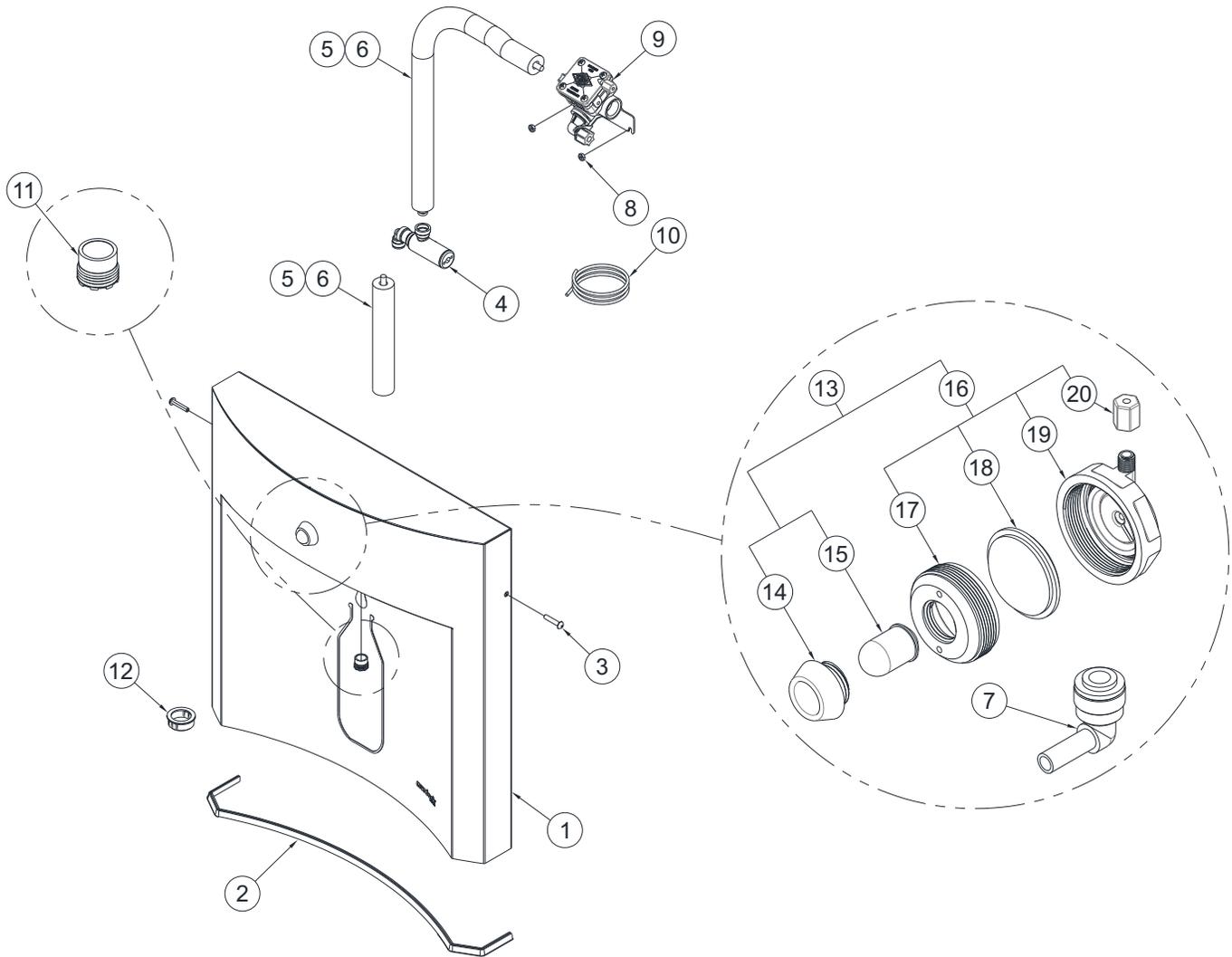
TROUBLE-SHOOTING:

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:

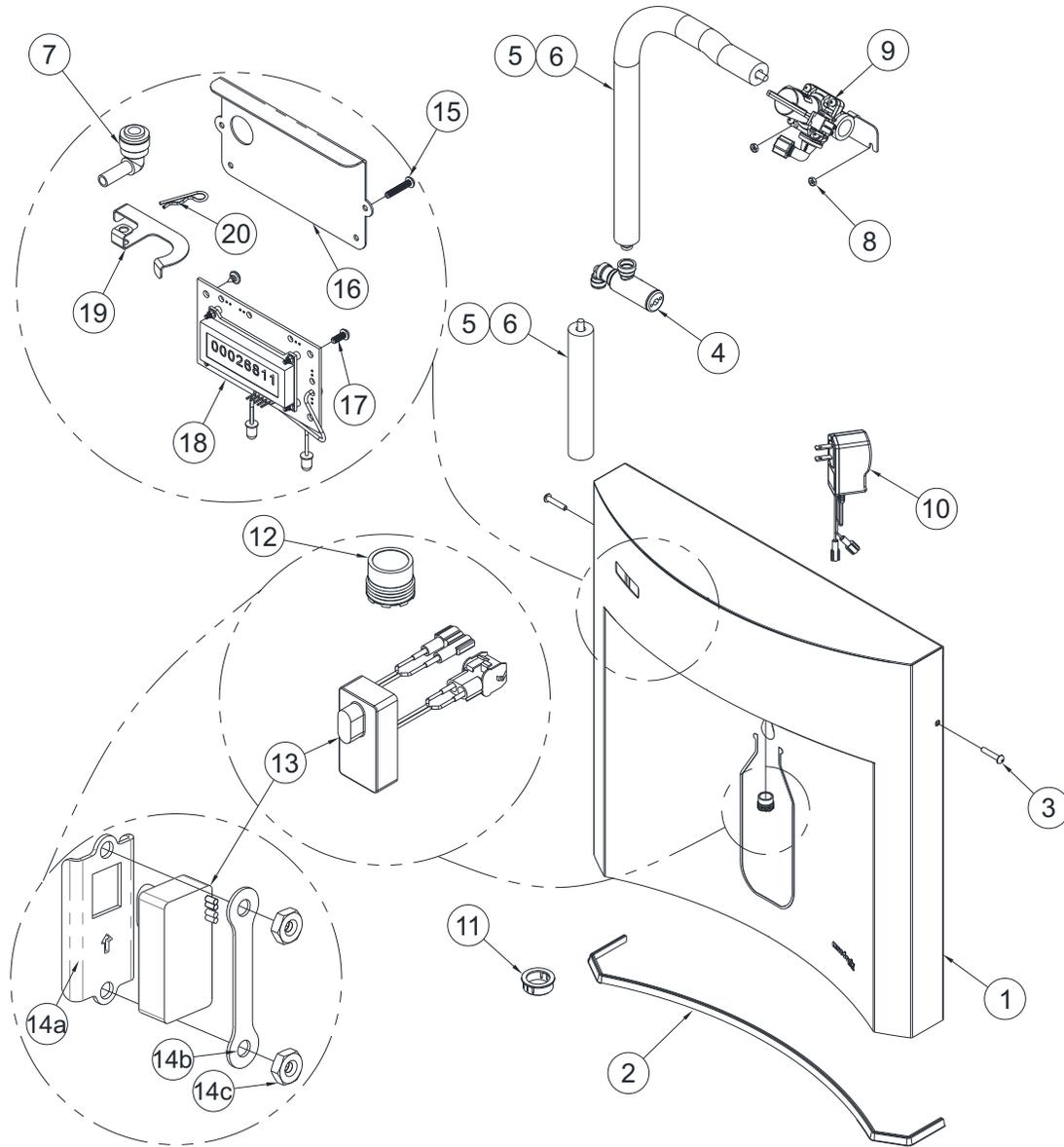
1. To remove water spots or rust spots, stainless steel cleaner/polish on a cloth is recommended.
2. If there are stubborn spots or if you wish to treat a scratch, synthetic abrasive general purpose pads such as Scotch-Brite[®] is recommended.
3. Apply stainless steel cleaner/polish to the synthetic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

BF11S BOTTLE FILLER PARTS BREAKDOWN



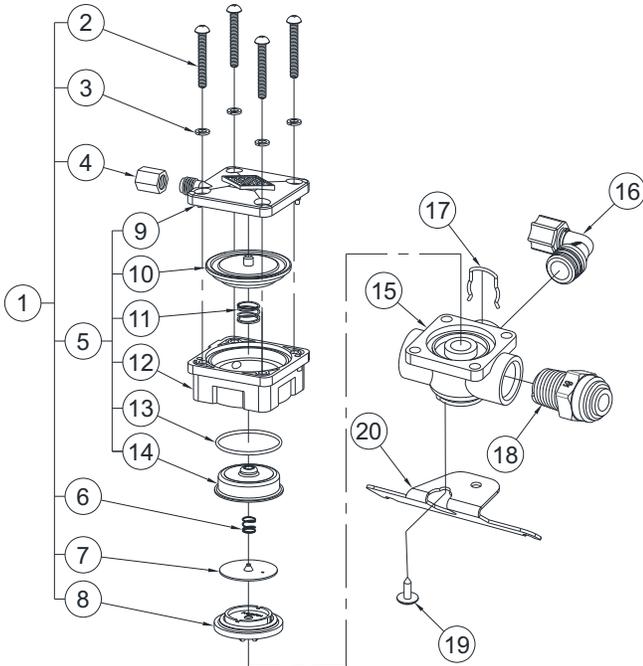
ITEM #	PART NUMBER	DESCRIPTION	ITEM #	PART NUMBER	DESCRIPTION
1	CONTACT FACTORY	HOUSING ASSEMBLY BF11S	11	7040-033-000	NEOPREL LAMINAR NOZZLE
2	7014-520-000	RUBBER TRIM	12	7100-441-000	LOCKING GROMMET, 1.188 DIA HOLE
3	0116-114-000	#10-32 X 1" BUTTON HEAD SCREW	13	2566-160-001	(-PHB) SIDE OUTLET PUSHBUTTON
4	7003-096-001	AUTO 'Y' STRAINER ASSEMBLY	14	4005-030-199	AIR-TROL PUSHBTN ESCUTCHEON S/S
5	7012-055-000	FOAM PIPE INSUL., .375" I.D. X 1.0" OD	15	4005-031-199	AIR-TROL PUSHBUTTON
6	2169-000-000	TUBE, .25" DIA, LLDPE (BLUE)	16	2566-025-002	SIDE OUTLET PUSHBUTTON SUB-ASSY
7	1895-709-000	ELBOW, 1/4" PUSH-IN X 1/4" STEM	17	2566-022-000	ESCUTCHEON RETAINER
8	0302-011-000	#6-32 UNC HEX NUT	18	2566-001-000	AIR DIAHRAGM
9	7014-486-001	NON-METERING AIR-TROL VALVE	19	2566-055-199	DIAPHRAGM RETAINER SIDE OUTLET
10	2150-003-199	1/8" OD LDPE TUBE, NATURAL, 3' LONG	20	1895-450-000	1/8" O.D. COMPRESSION NUT

BF12S BOTTLE FILLER PARTS BREAKDOWN



ITEM#	PART NUMBER	DESCRIPTION	ITEM#	PART NUMBER	DESCRIPTION
1	CONTACTFACTORY	HOUSINGASSEMBLYBF12S	12	7040-033-000	NEOPREL LAMINAR NOZZLE
2	7014-520-000	RUBBER TRIM	13	2563-395-001	SENSOR ASSEMBLY 'A'
3	0116-114-000	#10-32 X 1" BUTTON HEAD SCREW	14a	7014-474-199	SENSOR MOUNT
4	7003-096-001	AUTO 'Y' STRAINER ASSEMBLY	14b	7014-475-199	SENSOR HOLD DOWN
5	7012-055-000	FOAM PIPE INSUL., .375" I.D. X 1.0" OD	14c	0302-003-000	#8-32 HEX NUT
6	2169-000-000	TUBE, .25" DIA. LLDPE (BLUE)	15	0108-106-000	#6-32 UNC X 3/4" S.S. PHIL. RD. HD. SCREW
7	1895-709-000	ELBOW, 1/4" PUSH-IN X 1/4" STEM	16	7014-253-199	SPLASH GUARD
8	0302-011-000	#6-32 UNC HEX NUT	17	0108-103-000	#6-32 UNC X 3/8" S.S. PHIL. RD. HD. SCREW
9	7014-496-001	SOLENOID/VALVE MOUNTING ASSY	18	0716-111-001	BOTTLE COUNTER WITH CONNECTORS
10	0710-736-001	POWER SUPPLY	19	7014-476-199	RESET LEVER
11	7100-441-000	LOCKING GROMMET, 1.188 DIA HOLE	20	0341-103-000	COTTER PIN

BF11S VALVE BREAKDOWN



ITEM #	PART NUMBER	DESCRIPTION
1	2563-000-003	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	2563-000-003	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	2563-000-003	ACTUATOR SPRING
12	2563-001-000	MOTOR HOUSING
13	0401-026-000	SEPARATOR CUP O-RING
14	2563-002-199	SEPARATOR CUP
15	2570-067-000	VALVE BODY
16	2570-052-001	1/4" OD PLASTIC ELBOW ASSEMBLY
17	0326-100-000	RETAINING CLIP
18	1895-115-000	ADAPTER, 3/8" NPT
19	0124-010-000	#10 X 1/2" PHILLIPS TRUSS HEAD
20	7014-497-199	VALVE BRACKET

BF12S VALVE BREAKDOWN

ITEM #	PART NUMBER	DESCRIPTION
1	7014-499-001	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 DIAPHRAM ASSEMBLY
6	2570-067-199	VALVE BODY
7	2563-326-001	9VDC LATCHING SOLENOID ASSEMBLY
8	0326-100-000	RETAINING CLIP
9	2570-052-001	1/4" OD PLASTIC ELBOW ASSEMBLY
10	1895-115-000	ADAPTER, 3/8" NPT
11	0124-010-000	#10 X 1/2" PHILLIPS TRUSS HEAD
12	7014-497-199	VALVE BRACKET

