

AL81.8 Series
FULLY RECESSED, WALL MOUNTED ELECTRIC DRINKING FOUNTAIN



AL81408S-BF, SHOWN

AL81408S & AL81408S-BF
TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:
1.800.743.8259

Technical Assistance E-Mail: Fieldservice@acorneng.com

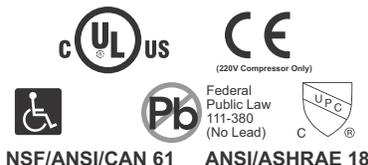
NOTES TO INSTALLER:

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.

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

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COMPLIES WITH
STANDARDS



murdock[®]
SINCE 1853

Member of

MORRIS GROUP
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Phone 800-453-7465
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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.

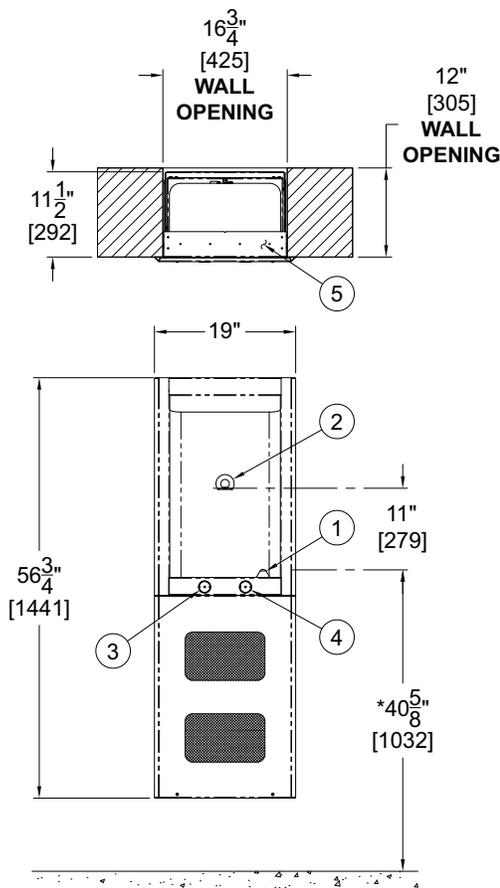
NOTICE

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.

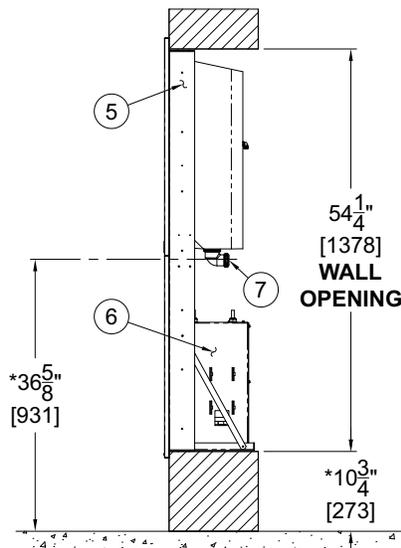
ROUGHING-IN AND DIMENSIONAL DRAWING

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

AL81408S-BF FULLY RECESSED, WALL MOUNTED ELECTRIC DRINKING FOUNTAIN



1. LIGATURE RESISTANT BUBBLER
2. OPTIONAL -BF LIGATURE RESISTANT CUP/BOTTLE FILLER
3. VANDAL RESISTANT PUSHBUTTON ACTUATOR FOR CUP/BOTTLE FILLER
4. VANDAL RESISTANT PUSHBUTTON ACTUATOR FOR BUBBLER
5. MOUNTING FRAME ASSEMBLY
6. 8.0 GPH CHILLER
7. 1-1/4" O.D. CLOSE ELBOW FOR WASTE ASSEMBLY BY INSTALLER



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. STOP VALVE NOT PROVIDED

PRIOR TO INSTALLATION:

Important: Some options may slightly alter installation. To ensure proper installation, review the Manual thoroughly and verify rough-ins before beginning work. Leave 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 GFCI protected circuit. Fixture must be earth grounded per NEC (National Electric Code).
- All components are shipped loose and must be inspected to ensure all parts are present and not damaged.
- To avoid a hazard due to instability, fixture must be installed in accordance with the instructions.

IMPORTANT:

1. Waste P-Trap, Water Supply Service Angle Stop Valve. A P-Trap (by others) must be used for the Drain connection.
2. Water Supply Inlet is 3/8" Outer Diameter copper Tubing. Waste Outlet is 1-1/4" Outer Diameter.
3. Completely flush supply lines of all foreign debris before connecting to fixture. Water Cooler is designed to not cause problems with taste, odor, color, or sediment. Optional (-WF1 or -WF3) Water Filter is available should any of these problems arise from the Water Supply.
4. **DO NOT SOLDER** Tubing inserted into the Coupler as damage to the O-Ring may result.
5. All burrs must be removed from outside of cut Tubing before inserting into Coupler or other components.
6. Power Supply must be identical in voltage, cycle and phase to that specified on the Water Cooler Data Plate.
7. This unit must be grounded per the requirements of applicable electrical codes.
8. Warranty is voided if installation is not followed per current Murdock Mfg. installation instructions and if components are assembled to the fixture that are not approved by Murdock Mfg.
9. Fixture is to operate within a water pressure range of 20 PSIG (138 kPa) to 105 PSIG (724 kPa). Warranty is void if the unit is allowed to operate outside the range of 20 PSIG (138 kPa) to 105 PSIG (724 kPa). **Consult with UPC and local codes for maximum allowable water pressures.**
10. Due to cold waste water, Murdock Mfg. recommends that P-Trap supplied by installer be insulated to prevent excessive condensation.
11. **609.10 Water Hammer.** *Building water supply systems where quick-acting valves are installed shall be provided with water hammer arrester(s) to absorb high pressures resulting from the quick closing of these valves. Water hammer arresters shall be approved mechanical devices that comply with ASSE 1010 or PDI-WH 201 and shall be installed as close as possible to quick-acting valves.*
12. **609.10.1 Mechanical Devices.** *Where listed mechanical devices are used, the manufacturer's specifications as to location and method of installation shall be followed.*

INSTALLATION:

1. Slide A0000000-MF19 Mounting Frame to wall stud frame and finished wall opening, so that Frame Flanges are against the finished wall. Secure Frame to wall studs or wall frame with Installer Provided Hardware. **NOTE:** Adjust height of Mounting Frame so Bubbler discharge height is at required height based upon local requirements.
2. Place Chiller onto Chiller Shelf. Refer to Chiller installation instructions for further instructions: <https://www.murdockmfg.com/uploads/fileLibrary/7020-900-001%20-A910.8A.pdf>

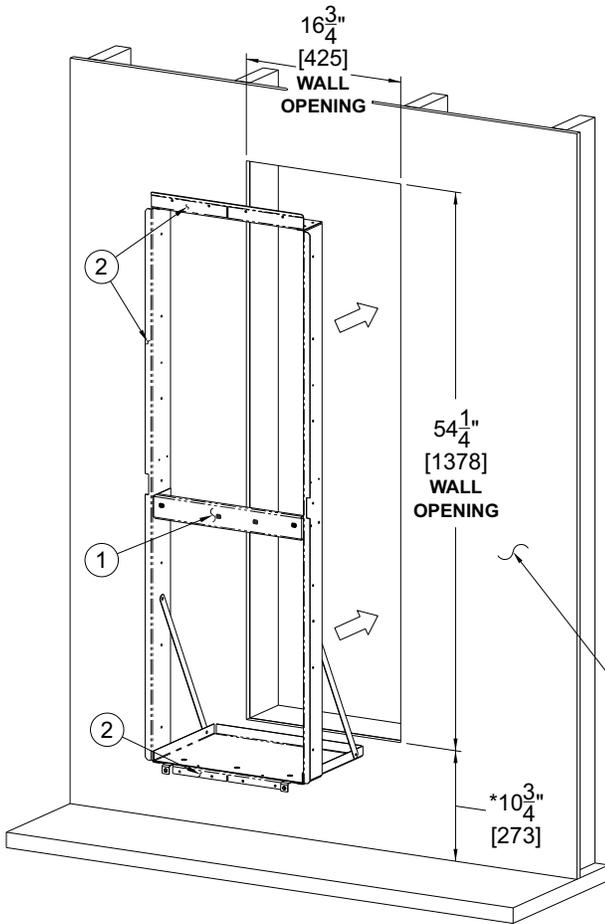


3. Push Drinking Fountain Housing against wall and slide downward to engage onto the Frame Mounting Angle. Secure Housing to Frame Cross Member with provided hardware.
4. Thoroughly flush the 3/8" O.D. supply line and then connect Water Cooler to water supply Angle Stop Valve (by others) with supplied 3/8" O.D. Copper Tubing and connect to fixture Tubing.
5. Make up 1-1/4" O.D. Waste Connection for Tailpiece and P-Trap (by others).
6. Connect Chiller to Cartridge Pushbutton Supply Tube.

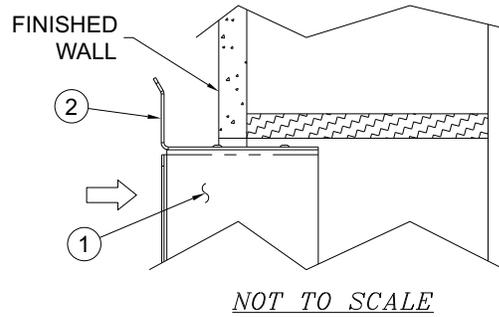
START UP:

1. **Ensure electrical power to unit is turned off:** With Ventilation Panel removed, turn on fixture water supply and check all connections for leaks, make repairs if required.
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. Thoroughly flush and purge air from supply line by depressing 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 to the chiller still **NOT ON** and front panel of chiller removed, carefully rotate Cooling Fan manually to insure proper clearance and free Fan action.
6. Reinstall front panel of chiller with six sheet metal screws.
7. Turn power on to unit and make sure unit begins to function. **IMPORTANT:** After turning power on to initiate cooler and cool down, immediately purge (chiller) water by operating unit continuously for approximately 1 minute.
8. **IMPORTANT! Thoroughly, inspect all unit connections for water leaks.**
9. Install Ventilation Panel and secure with Provided Vandal Resistant Hardware.

-MF19 MOUNTING FRAME INSTALLATION:



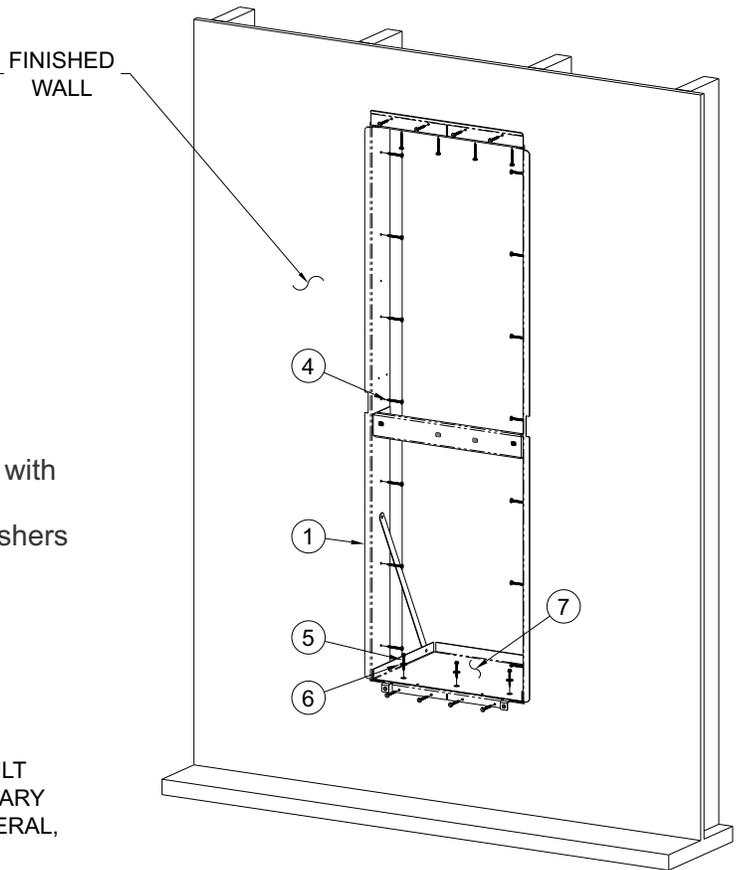
1 Slide -Mf19 Mounting Frame **1** to wall stud frame and finished wall opening, so that Frame Flanges **2** are against the finished wall.



A Secure Frame **1** to wall studs or wall frame with Installer Provided Hardware **4**.
NOTE: Ensure bottom Hardware **5** has Washers **6** to ensure secures the Chiller Shelf **7**.

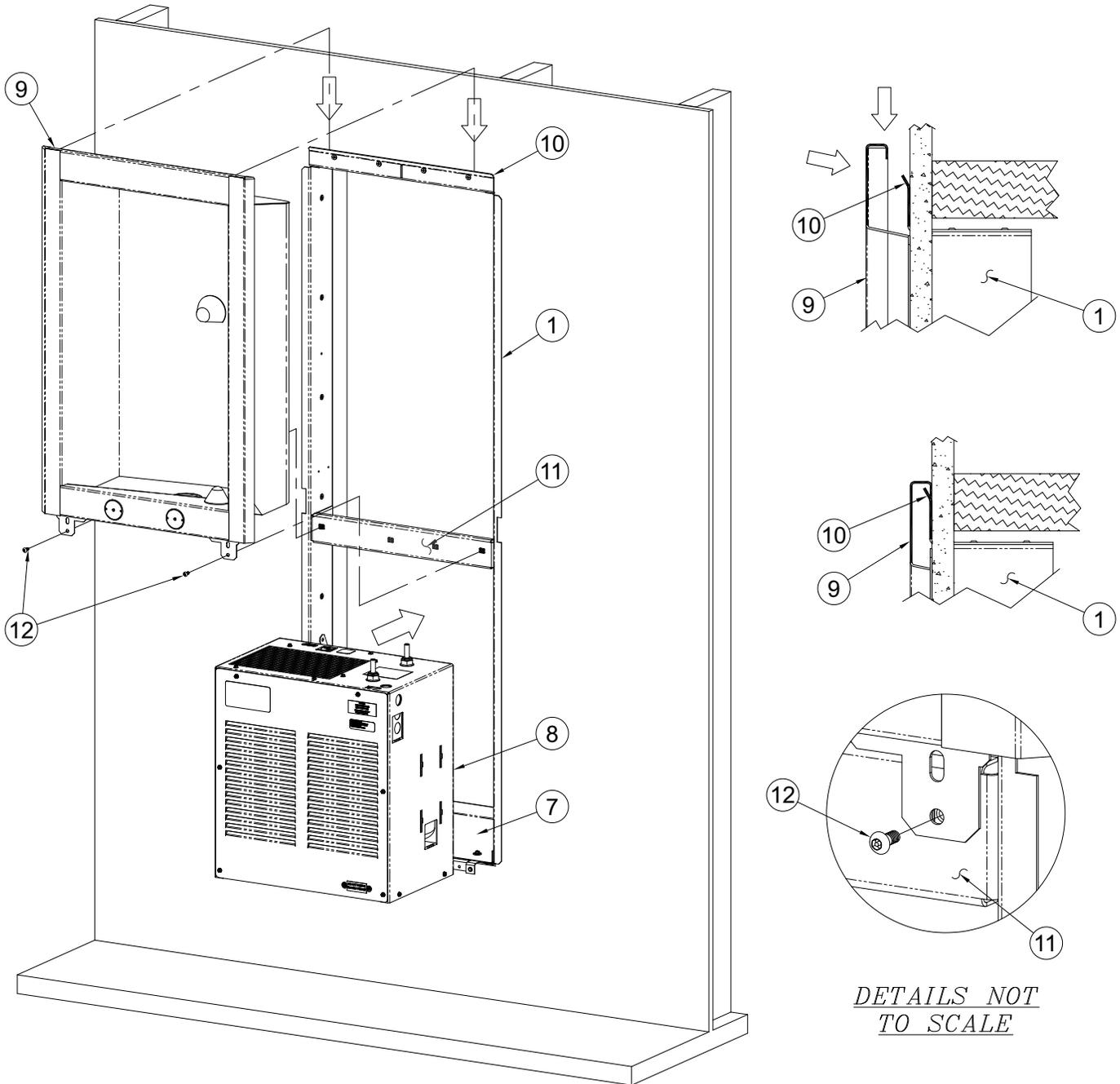
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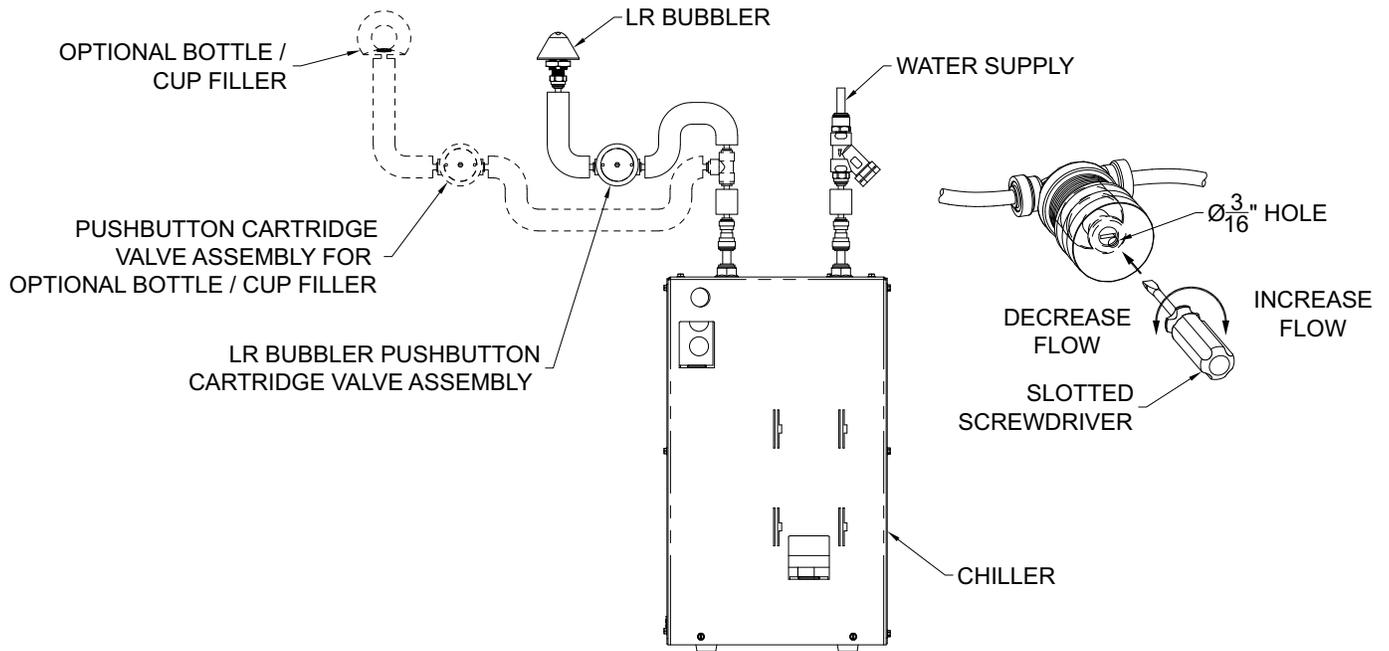
AL81408S INSTALLATION:

- 2** With -MF10 Mounting Frame **1** secured to wall frame, set Chiller **8** onto Chiller Shelf **7**. Insert Drinking Fountain Housing **9** into Mounting Frame **1** by holding against finished wall then press down so the Housing **9** engages onto Frame Mounting Angle **10**. Secure Drinking Fountain Housing **9** to Frame Cross Member **11** with provided Screws **12**.

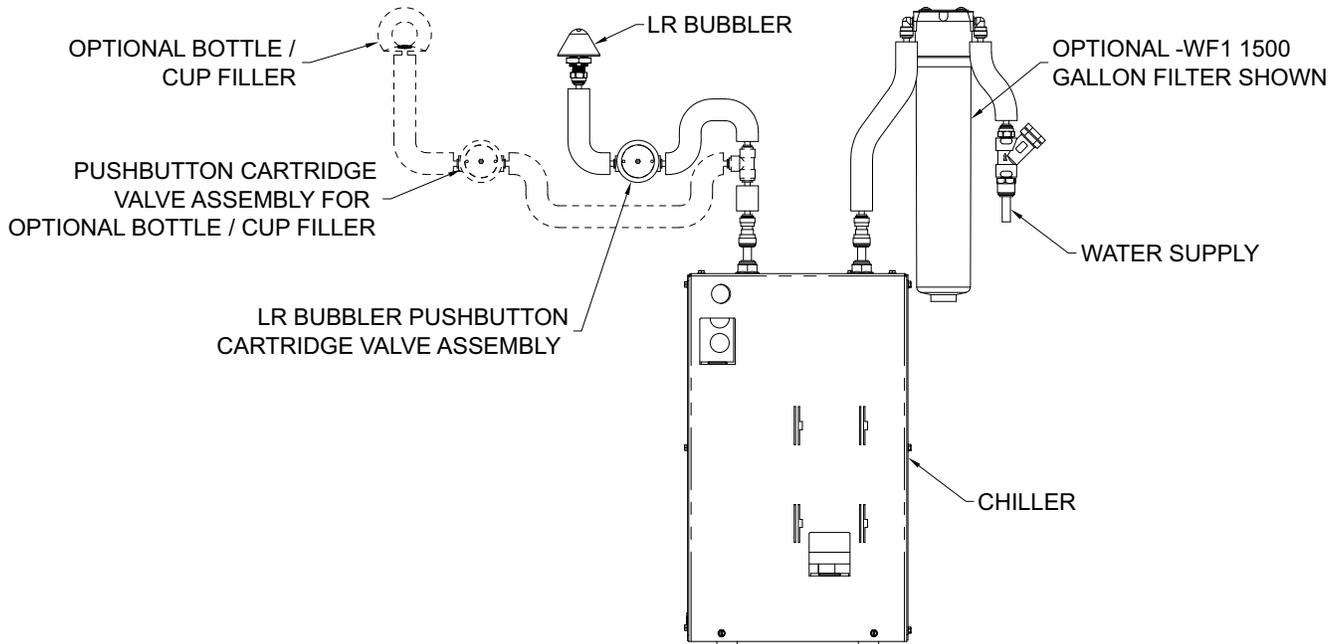


AL81408S INSTALLATION: PIPING DETAIL

STANDARD PIPING SCHEMATIC (WITH OPTIONAL -BF)

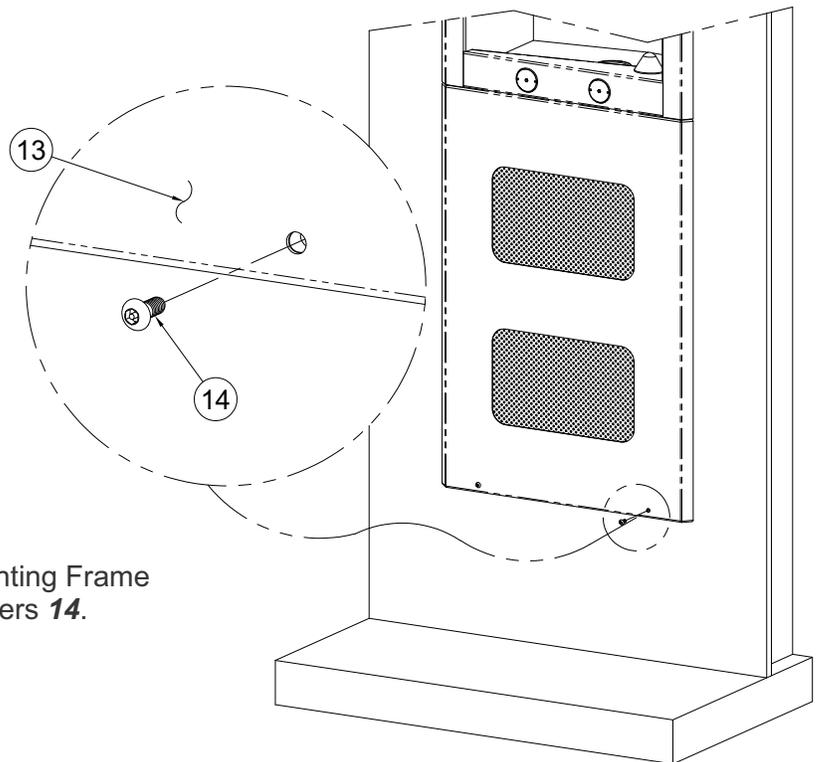
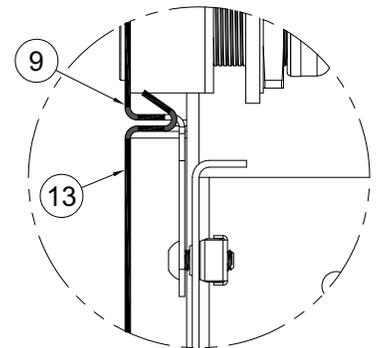
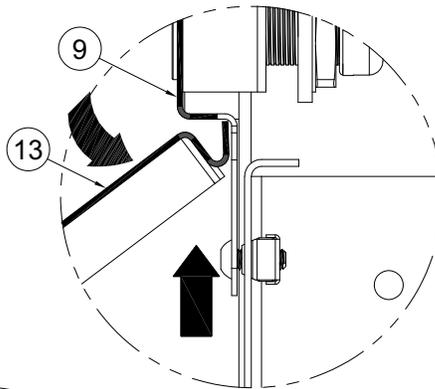
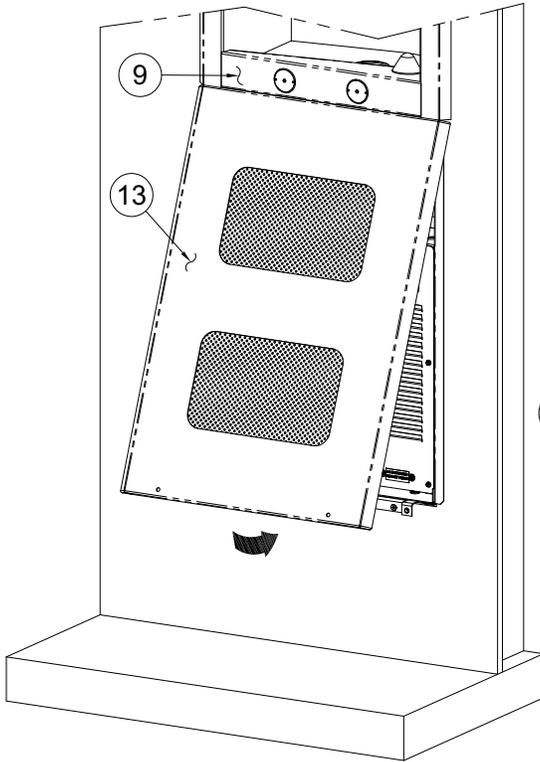


STANDARD PIPING SCHEMATIC WITH OPTIUONAL -WF (WITH OPTIONAL -BF)



AL81408S INSTALLATION:

3 With Start-Up procedures completed, install the Ventilation Panel **13** by hooking the top of the Ventilation Panel **13** and engaging it to the bottom of the Drinking Fountain Housing **9**.



A Secure Ventilation Panel **13** to Mounting Frame **1** provided Vandal Resistant Fasteners **14**.

TROUBLESHOOTING:

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 using a slotted narrow blade Screwdriver and turning clockwise to increase flow and counterclockwise to decrease flow.
- b. 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 Water Cooler.
- c. Cold Water Thermostat – **IMPORTANT:** Thermostat is Factory pre-set. Thermostat settings should never be field adjusted since damage to fixture may occur, voiding product Warranty.

2. Compressor Does Not Run

- a. Check the Power Supply Cord.
- b. Check the electrical Receptacle for power and correct voltage. The incoming voltage must be within 10% of the rated voltage on the Serial Nameplate.
- c. 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.
- d. Check for loose wires within the Compressor Box. The incoming power Leads must be connected to the Overload and Relay.
- e. 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.
- 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

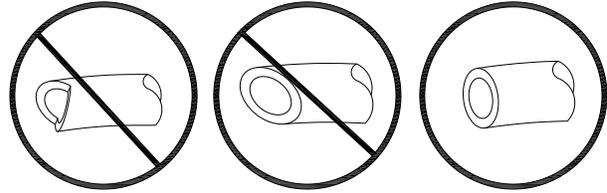
- a. Ensure water supply service stop valve is fully open.
- b. Verify minimum 20 psig supply line flow pressure.
- c. Check for twists or kinks in bubbler tubing.
- d. Check the water inlet strainer. Sediment from the main supply can get trapped in the screen along with installation materials such as pipe dope and flux. The screen should be cleaned and checked on a regular basis and replace if needed.
NOTE: STRAINER SCREEN MUST BE IN PLACE FOR WATER TO FLOW.
- 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. Check flow adjustment. See start up note #3.
- g. The water cooler may develop a freezing condition in which the water will become frozen inside the evaporator coil. This indicates a refrigeration problem or thermostat failure. Disconnect the electrical power and have the unit 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 product 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.

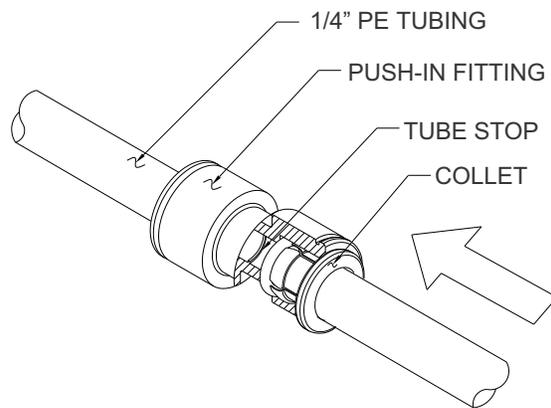
PUSH-IN FITTING INSTALLATION

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

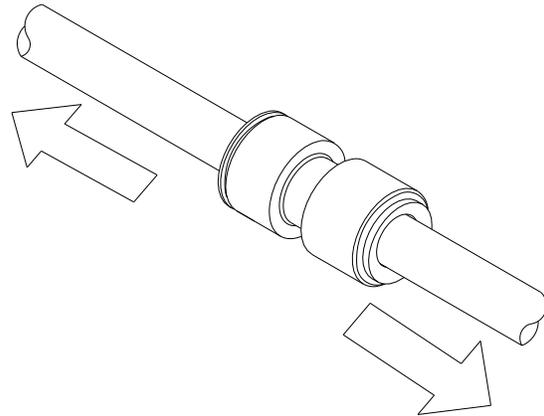


1. Cut to fit length of 1/4" PE tubing and remove any burrs or sharp edges. Ensure that the outside diameter is free from score marks. Tube ends should be square.

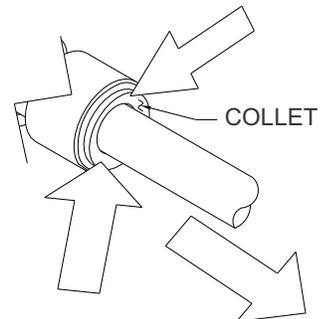
2. Firmly and fully insert the tubing end into the push-in fitting up to the tube stop located approximately 1/2" deep.



3. 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.



4. To disconnect the tube from the fitting ensure that the water supply is off. 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.



AL81408S -WF INSTALLATION:

-WF1 FILTER CARTRIDGE INSTALLATION:

WATER FILTER HAS 1500 GALLON CAPACITY, CARTRIDGE WILL REQUIRE REPLACEMENT AFTER 50 HOURS OF ACTUAL OPERATIONAL USAGE. FREQUENCY OF FIXTURE OPERATION WILL DETERMINE TIME FRAME FOR CARTRIDGE REPLACEMENT.

-WF3 FILTER CARTRIDGE INSTALLATION:

WATER FILTER HAS 3000 GALLON CAPACITY, CARTRIDGE WILL REQUIRE REPLACEMENT AFTER 100 HOURS OF ACTUAL OPERATIONAL USAGE. FREQUENCY OF FIXTURE OPERATION WILL DETERMINE TIME FRAME FOR CARTRIDGE REPLACEMENT.

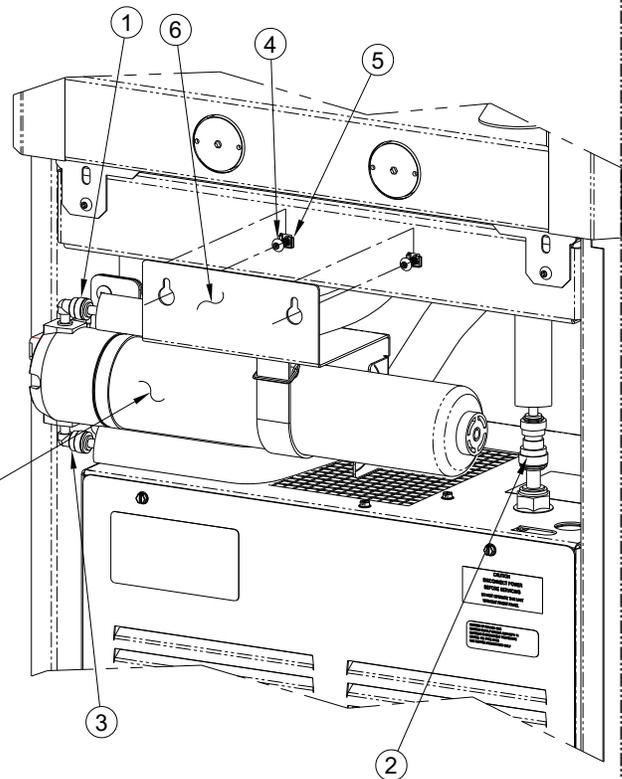
IMPORTANT:

FLUSH 3-5 GALLONS OF WATER THROUGH THE FILTER BEFORE INITIAL USE!
(Bubbler run time for approximately 10-15 minutes, Bottle Filler run time for approximately 3-5 minutes.)

DETAIL "A" -WF NEW INSTALLATION:

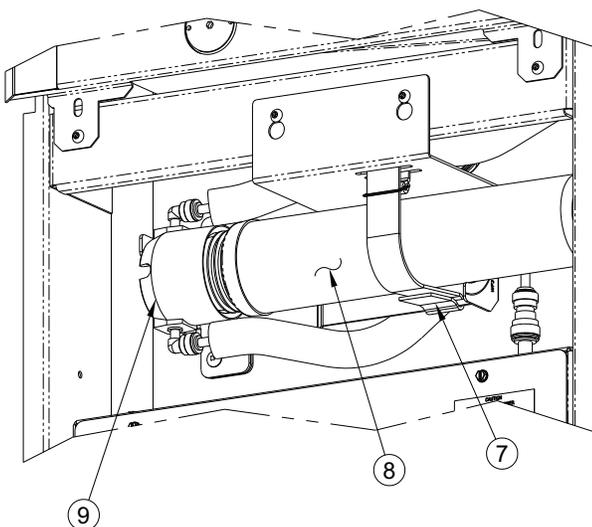
With Ventilation Panel removed and **supply stop closed** (not shown) make up connections to Filter Inlet **1** from Chiller Outlet **2** and Filter Outlet **3** to Bubbler and Bottle filler supply fitting (not shown, refer to page (7) for piping schematic). Thread mounting screws **4** into Tinnerman Nuts **5**. Slide Mounting Bracket **6** over Mounting Screws **4** and slide Bracket **6** so it engages onto the Mounting Screws **4** and tighten. Install or reinstall Ventilation Panel, refer to page (8).

DETAIL "A"



REPLACEMENT CARTRIDGE
-RFW1 PART # 7012-313-000
-RFW3 PART # 7012-318-000

DETAIL "B"

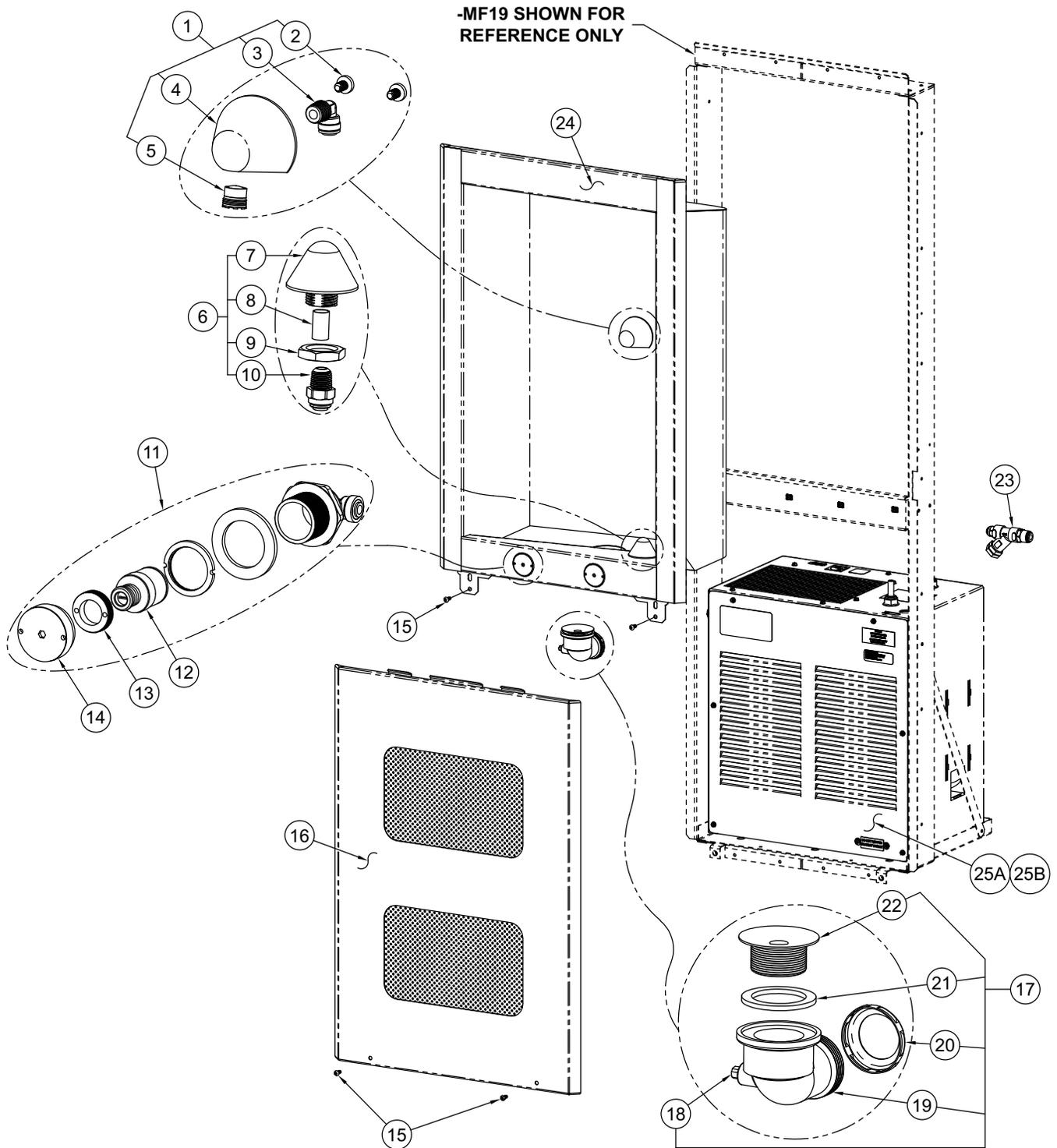


DETAIL "B" -WF REPLACEMENT:

Loosen Filter Strap **7**, turn the Filter **8** counter-clockwise and remove Filter **8** from Filter Head **9**. Inset Filter **8** into Filter Head **9** and turn Clockwise to tighten, and tighten Filter Strap **7**. Activate Bubbler and check for leaks, tighten if required. Reinstall Ventilation Panel per page (8). Flush Filter as noted above.

AL8408S PARTS BREAKDOWN:

NOTE: See next page for corresponding parts table below



AL8408S PARTS BREAKDOWN TABLE:

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

ITEM #	PART NUMBER	DESCRIPTION
1	4854-030-001	LIGATURE RESISTANT CUP/BOTTLE FILLER ASSEMBLY
2	0126-504-000	1/4"-20 x 3/8" S/S PHILLIPS PAN HEAD SCREW
3	1895-705-000	PUSH-IN ELBOW, 1/4" NPT x 1/4" O.D.
4	4854-031-199	LIGATURE RESISTANT CUP/BOTTLE FILLER
5	7013-199-000	1.0 GPM LAMINAR NOZZLE
6	4854-020-001	LIGATURE RESISTANT DECK MOUNTED BUBBLER ASSEM.
7	4854-021-199	LIGATURE RESISTANT DECK MOUNTED BUBBLER
8	4854-025-199	LAMINAR CARTRIDGE
9	0380-020-000	1/2" NPS BRASS NUT
10	1895-125-000	1/4" x 1/4" NPT PUSH-IN FITTING
11	7000-065-001	PUSHBUTTON CARTRIDGE ASSEMBLY
12	7000-060-000	0.5 GPM FLOW REGULATOR CARTRIDGE
13	7000-051-000	VALVE RETAINING NUT
14	7000-091-001	RECESSED PUSHBUTTON
15	0112-002-000	#10-32 x 1/2" VANDAL RESISTANT BTN HEAD SCREW
16	7035-454-001	LOWER VENTILATION TRIM PANEL
17	4956-056-001	LIGATURE RESISTANT GRID STRAINER w/ CLOSE ELBOW
18	1830-001-000	1/8" NPT SQUARE PLUG
19	4926-055-199	1-1/4" NPS GRID STRAINER ELBOW
20	4950-001-000	1-1/4" SLIP JOINT NUT w/ GASKET
21	0431-219-000	RUBBER GASKET
22	4956-057-199	LIGATURE RESISTANT STRAINER
23	7000-021-002	"Y" STRAINER ASSEMBLY 3/8" O.D. x 1/4" O.D.
24	7035-410-002	RECESSED FOUNTAIN HOUSING
25A	7008-010-001	COMPLETE 110 VAC CHILLER, FOR PARTS REFER TO MANUAL 7020-900-001
25B	7008-701-001	COMPLETE 220 VAC CHILLER, FOR PARTS REFER TO MANUAL 7020-900-001