



The FBXSF foam brush system is a high capacity foam supply system that will provide consistent foam supply to multiple bays. Constructed with a stainless steel manifold and a combination of stainless steel and brass wetted parts to resist corrosion. The air driven double diaphragm pump maintains constant supply volumes and operates on a demand basis by pumping at a higher or lower rate as required.

The solution and air quantity are controlled at the unit to prevent air locks and reduce solution line draining. Individual solution and air controls for each bay allow for independent and precise metering and control of foam quality. Pump output pressure is controlled by its own dedicated air regulator. Gauges provide easy visual monitoring of the pressure at the pump and the manifolds.

This manual is intended to assist you with the installation and set up of your FBXSF unit as well as provide the necessary information to help you to become familiar with the safe operation and the maintenance requirements of your foam brush system.

Please read all instructions before installing and operating your unit.

IMPORTANT OPERATING INSTRUCTIONS

Water Supply

The water supplied to the suction reservoir of the FBXSF unit must not exceed a maximum pressure of 70 PSI (483 KPa) and a maximum temperature of 49 °C (120 °F). It is recommended that a water supply capable of at least 4 USGPM be used. The water supply should be a flexible hose with a male garden hose fitting which will attach to the female garden hose fitting on the MagikMinder proportioner on the solution tank lid. See the “MagikMinder” manual for details regarding the setup and operation of the MagikMinder.

Before you Start

Before running your FBXSF unit ensure that you are familiar with its operation by thoroughly

reading this manual and familiarizing yourself with the connections and controls on the unit. Ensure that all the plumbing connections are complete and that all wiring connections are correct.

Freezing Conditions

The pump, reservoirs and water lines must be protected from freezing conditions to prevent damage to these items. The unit should be operated and stored in a location that remains above 0 °C (32 °F) and below 50 °C (122 °F).

Air Supply

The air supply to your FBXSF unit should be clean and dry and be regulated to a maximum of 120 PSI. The supply air requirements for the system are shown in the specification

SETUP & OPERATION

	FBXSF1/2/3/4	FBXSF5/6/7/8
Number of Bays	1 to 4	5 to 8
Min. Water Supply	3 GPM - 5 GPM	6 GPM - 8 GPM
Recommended Air Supply Pressure	90-120 PSI	
Min. Air Supply	3-4 CFM @70-80 PSI	8-10 CFM @70-80 PSI
Solution Outlet Fittings	3/8" Tube Quick Release Type	
Air Outlet Fittings	1/4" Tube Quick Release Type	
Solution Reservoir	4 US gal/15L Polyethylene	
Solution Control	MagikMinder Auto Proportioner	
Dispensing Control	Solution-Needle Valve Air - Adj. Regulator	

Mounting the Unit

Your FBXSF unit should be placed on a level floor and should be positioned so as to facilitate the connection of the lines running to the bays. This will normally be at least 12" from the wall. Once the location has been determined the unit should be securely anchored to the floor using the mounting feet. The water supply line should be a flexible hose and the solution and air discharge lines should normally be flexible poly tubing with a minimum operating pressure of 100 PSI. Do not make rigid connections to the unit. A water shut-off should be located close by. A minimum 3/8"-1/2" air supply line should be run to within 3 ft of the unit.

Wiring connections to the Unit

Refer to the wiring diagram for wiring connections to the unit.

Connecting the Bay Supply Lines

With the poly bay supply lines all terminating at the unit you can begin to insert them into the outlet fittings. The 3/8" lines insert into the 3/8"

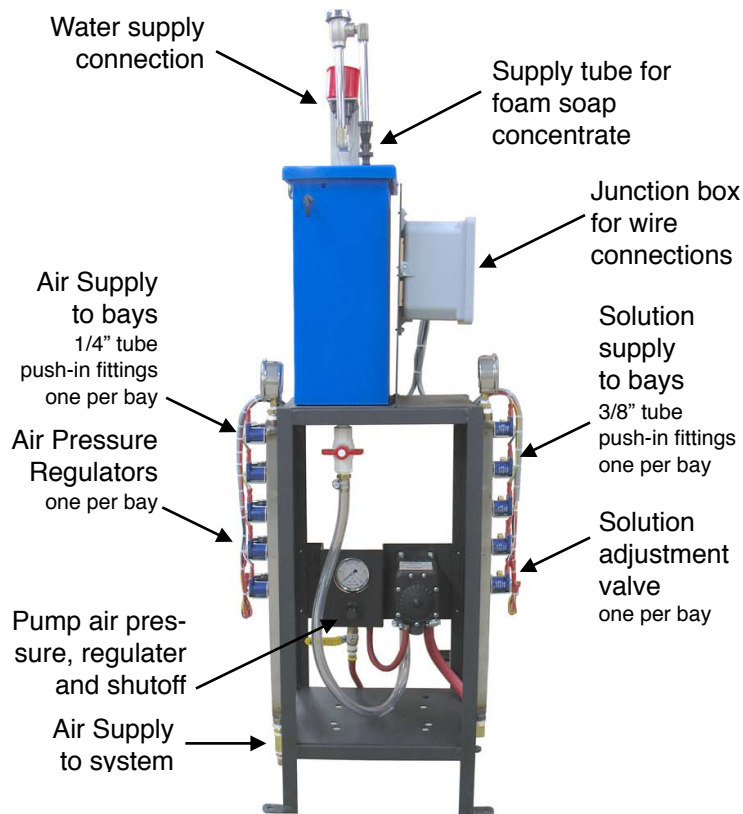
solution fittings and the 1/4" air lines insert into the 1/4" air fittings. Ensure the ends of the tubing are cut squarely and cleanly and push them into the fittings as far as possible. Leave enough slack in the lines for movement and vibrations. If you need to remove a line from the a fitting, simply push the collar surrounding the line in toward the fitting and hold while pulling on the line firmly. See the bay connection diagram for bay connection details.

Filling the Solution Tank

1. With the water supply connected, attach the float chain to the MagikMinder and set the float at a preliminary level of approximately 15-18 ball links. The final level can be set once the tank fills to maintain it at around the half full level.
2. The MagikMinder comes with various metering orifices which alter the solution concentration levels. If you know the concentration level you wish to attain install the corresponding orifice into the inlet fitting on the side of the MM10 educator. Then slide the weight over the hose and carefully place the suction hose over the fitting and tighten the gear clamp.
3. If you do not know the final concentration you desire in the tank then start with the red orifice and adjust the concentration with another orifice later.
4. Place the strainer end of the suction hose into the foaming liquid soap concentrate and turn on the water supply to the unit. It may take a couple of fills to get the concentrate up into the hose and to the MagikMinder especially if the soap is very viscous.
5. You can now adjust the level higher or lower in the tank by lengthening or shortening the ball chain on the float however you must ensure that liquid always remains over the suction strainer when the float is at it's lowest position.

Starting the FBXSF Unit

1. Ensure the all electrical connections are made and correct. Ensure the air supply will be adequate and is connected to the unit and turned



on. The gauge on the air manifold will indicate the air pressure being supplied to the unit. This should be between 90 and 120 PSI.

2. Open the ball valve on the bottom of the solution tank and turn all the needle valves clockwise until they are gently closed.
3. Gently pull on the air regulator knobs to unlock them and give each one a half turn counter-clockwise.
4. Open one needle valve one full turn counter-clockwise corresponding to the first bay you are planning to set up.
5. Open the ball valve supplying air to the pump and adjust the regulator by gently pulling the knob out to unlock and turning clockwise to increase the pressure or counter-clockwise to reduce it. The gauge should read approximately 70 to 80 PSI.
6. Activate the bay you are setting up by inserting the required vend and set the selector switch to "Foam Brush". The FBXSF unit will start as soon as one of the bays are activated and the selector switch is in the "Foam Brush" position.
7. The pump may at first pump very rapidly while it expels the air inside the chambers but should

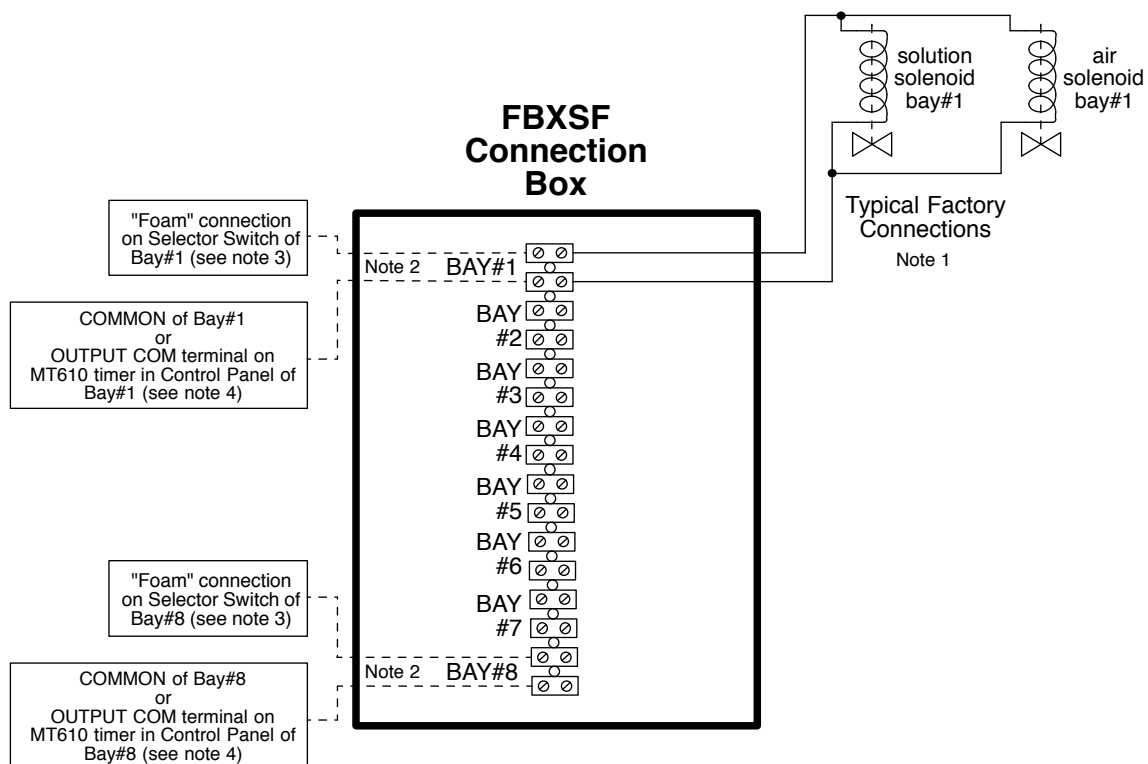
start to pump solution within a very short time and solution will eventually begin to run out of the brush in the bay. The gauge on the solution manifold will increase and decrease as solution is being discharged and as the pump cycles. Depending on how far away the bay is from the unit and the time setting for the bay, it may initially take several vends to fill up the lines and have the solution discharge from the brush. If the amount of solution discharging does not appear to be sufficient you can increase the amount by opening the needle valve more. The pump will only pump if solution is being discharged and/or the pressure in the solution manifold is lower than the pump discharge pressure even though the unit may be energized.

8. When sufficient solution is being discharged from the brush you can slowly start to supply air to the brush by turning the corresponding air regulator clockwise. This should be done in 1/4 to 1/2 turn increments while someone else watches the brush for changes in the discharge consistency.
9. It may take up to 30 seconds for changes to become apparent at the brush. As the air is added the solution should begin to change into foam. The more air that is supplied the "drier" the foam will become. For best results the foam should be thick but still wet and somewhat "drippy". If too much air is supplied it is possible to get a situation where only air will be discharged with little or no solution. This is why it is important to increase the air being supplied to the bay in small increments. Foam that is too dry and "fluffy" does not provide the results or customer satisfaction desired and may take excessive time to discharge from the brush.
10. Once the desired foam consistency is achieved you can repeat the procedure for the other bays. You may have to perform some final "fine tuning" as the system is being used since small changes occur when more than one bay is operating at once. The solution concentration, air supply pressure to the unit, pump air supply pressure setting and individual bay settings all effect the quality and quantity of the foam supplied at the bay.

TROUBLESHOOTING

Problem	Cause	Remedy
Pump does not operate	<ul style="list-style-type: none"> • Check air supply to unit. Ball valve for pump air is closed. • No call for foam. Selector switch in bay not on "Foam Brush" position. • Needle valve for bay is closed all the way. 	<ul style="list-style-type: none"> • Turn on air supply/compressor or open ball valve. • Ensure switch is in "Foam Brush" position and that bay timer is operating. • Open solution needle valve more.
Solution dispensing rate too high or detergent consumption too high	<ul style="list-style-type: none"> • Needle valve(s) open too much. • Pump supply pressure too high. • Concentration too high in reservoir. 	<ul style="list-style-type: none"> • Reduce needle valve setting. • Reduce pump supply pressure to 70-90 PSI. • Reduce concentration and use smaller orifice in Magikminder.
Foam is too "runny"/dry	<ul style="list-style-type: none"> • Incorrect ratio of solution/air. 	<ul style="list-style-type: none"> • Increase air to bay for drier foam and decrease air/increase solution for more fluid foam.
Inconsistent foam quality	<ul style="list-style-type: none"> • Air pressure supply fluctuating too much due to lack of capacity. • Concentration of solution fluctuating. • Low quality or inconsistent product 	<ul style="list-style-type: none"> • Use larger compressor. • Check MagikMinder operation/connections. • Ensure soap product being used is foaming soap designed for use with foam brush system.
Pump & control operational but no product discharges from 1 or more bays.	<ul style="list-style-type: none"> • Solenoid malfunction or loose wire. • Line(s) to bay blocked or generator plugged. 	<ul style="list-style-type: none"> • Check wires and solenoid operation. • Clear line(s) /generator.

- This diagram represents the wiring for a typical installation. However, due to differences in equipment, your installation may not follow this diagram exactly. Contact your supplier should you require further information.
- Field wiring shown in dotted lines. Minimum field wire size is #18. Wire colour codes shown are optional and are for reference only.
- All field installations must meet applicable codes. Always disconnect power before servicing.



Note 1: These connections are made at the factory. Connections for the other bays that the foam system is equipped to support are also made at the factory in a manner similar to that shown for bay#1.

Note 2: Connections to these terminals must be made for each bay by the installer. The diagram shows the connection only for bay #1 and bay#8. Other bays are connected in the same manner using the terminals corresponding to that bay.

Note 3: It is assumed that the "FOAM" connection on the selector switch provides 24vac between itself and the COMMON connection for that bay when the selector switch is placed in the FOAM BRUSH position. Before making this connection to the FBXSF control panel, use a voltmeter to ensure that this is correct.

Note 4: If you are using the CPAX control panel or other control panel with the MT610 timer, simply run this wire to the OUTPUT COM terminal of the MT610 timer for that particular bay.



BAY CONNECTION DIAGRAM

- FOR THE FBXSF MULTIBAY FOAM SYSTEM -

