USER MANUAL

MODEL:

SLX-MS2-RN-VA

VENTURI RINSE & AIRLESS FOAMER - MULTI STATION

English (Original Instructions)
Updated: 06/02/23

USER MANUAL: SLX-MS2-RN-VA
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

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Table of Contents

General Precautions

- For proper performance **do not** substitute nozzle or alter the diameter or length of the included hose.
- **Never** point the spray wand at another individual or electrical devices. Always direct the discharge away.
- For pressures over 100 PSI, remove the discharge valve or lower pressure.
- **Never** leave water supply inlet ball valve on when unit is not in use.
- **Never** mix chemicals without consulting the chemical manufacturer first.
- Manufacturer assumes no liability for the use or misuse of this unit or chemical compatibility.
- Specifications and parts are subject to change without notice.

⚠ Safety Warning

- All personnel servicing this unit must be familiar with the information contained in this manual. Follow all installation and maintenance instructions.
- Follow safety instructions of chemical manufacturer (SDS).
- Wear proper PPE when working with chemicals (gloves, safety glasses, face shield, etc.)
- Always follow plant and OSHA guidelines.

- Avoid contact of chemicals with skin and eyes. If contact occurs, see SDS sheet for further first aid measures.
- Follow all local codes for backflow prevention when connecting to a potable water supply.
- **WARNING: Severe damage to your facility, or contamination of your water supply, can occur without proper backflow prevention.**

PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe way according to local waste disposal regulations.

♺ Always remember to recycle.

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Overview

The SLX Rinse & Airless Foam multi-station provides an all in one set up to quickly and effectively foam and rinse equipment using standard water pressure (35-125 PSI) from one location using two discharge hoses.

This low to medium volume decentralized airless foam system uses a water driven venturi effect to dilute concentrated foam solutions or other chemistries. Both the rinse station and airless foamer are securely mounted onto a stainless-steel wall bracket for easy installation.

Requirements

- Water Pressure: 35 - 125 PSI

  NOTE: A back flow preventer must be installed in the water supply to this unit, per local codes.

- Max Temperature: 140°F
- Chemical compatibility: Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials (see specifications).

  NOTE: For more information on chemical compatibility consult the chemical manufacturer.

Specifications

- Materials of Construction:
  - Body: Polypropylene
  - Enclosure: 304SS
  - Wetted Parts: PVC, Polypropylene, AFLAS, and Stainless Steel
- Weight:
  - System with enclosure: 17 lbs.
  - Hose Assembly: 10 - 17.5 lbs. (each)
  - Spray wand: 1.2 - 1.3 lbs. (each)
- Dimensions: 14-3/4" x 15-5/8" x 6"

  NOTE: Weights will vary depending on model configuration and construction materials (i.e. stainless vs. polypropylene)

Station / Insert	Water Flow Rate (GPM)	Hose Size (OD x L)	Spray Wand
Foamer V14	1.4	1/2" x 50'	M2516
Rinse	7.2	3/4" x 50'	M2393

Flow rates and coverage time may vary depending on supply pressure, metering tip size, and chemistries. Always test prior to normal operation to ensure facility requirements are met for cleaning procedures.

ℹ **More Information**
Please contact Clean Logix at:
(616)-438-9200 or **sales@clean-logix.com**

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Installation

1. Mount the enclosure to the wall.

2. Flush water supply line to ensure it is flowing properly and free of debris.

3. Install backflow prevention per local codes.

4. Connect water to water inlet at top of unit (3/4" NPT)

5. Connect discharge hoses and spray wands to the bottom hose barbs and secure with hose clamps.

> **NOTE:** Hose and wand sizes/types will vary. Consult system specifications to ensure the proper hose and wand are used for ideal performance.

⚠ WARNING

Backflow prevention required - consult local codes.
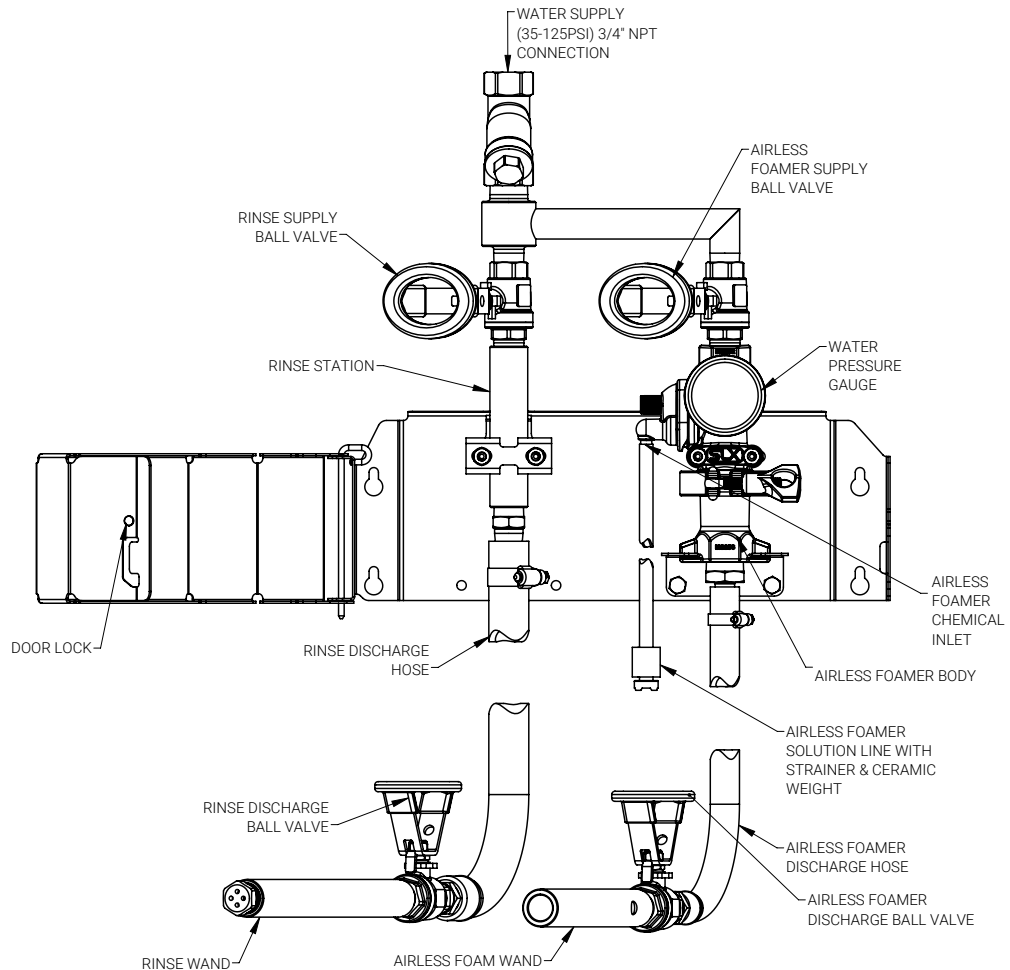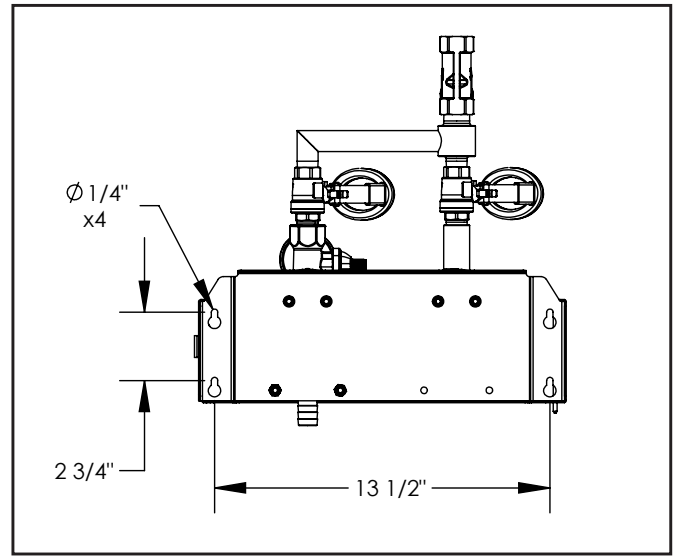
Dilution

Metering Tips

1. Place chemical container(s) below unit.

2. Using the included metering tips, identify which tip is appropriate for your dilution ratio for each system

> **NOTE:** Review dilution recommendations for the chemistry being used. GPM's calculated at 40 PSI water pressure. For different pressure estimates use following formula:
>
> $$\text{Dilution Ratio} = \frac{(\text{GPM x 128})}{\text{Oz/Gal}}$$

3. Thread metering tip into hose barb on chemical inlet to install. [Fig 5.1]

4. Connect suction line to hose barb.

5. Connect suction line in chemical container (suction line with ceramic weight and strainer included for this purpose).
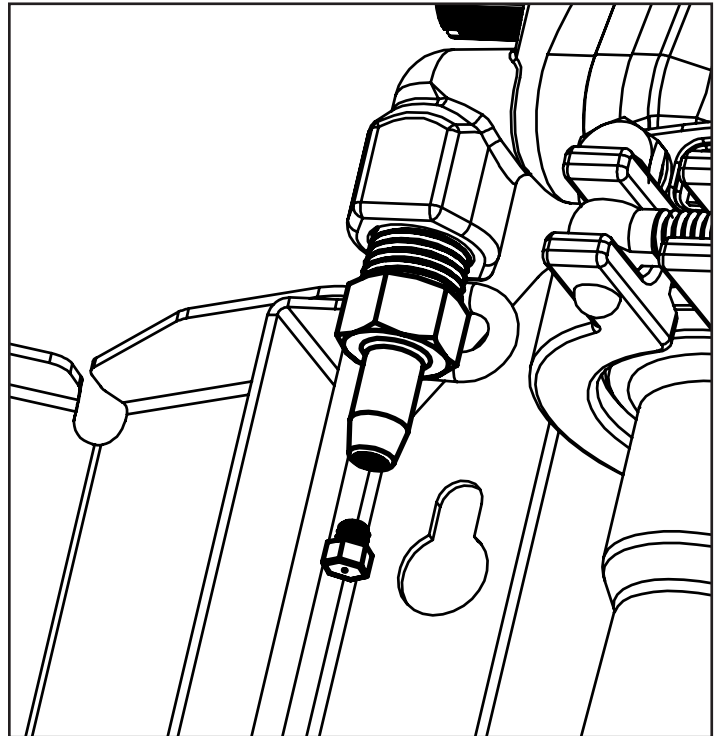
6. Repeat for other unit.

Fig. 5.1: Metering tip and hose barb

Metering Tip Calculator Mobile App:

> **NOTE:** Dilution ratios may vary depending. Always test chemical dilution prior to normal operation.

Dilution (cont.)

The following estimates are for guideline purposes only. Results may differ. Always test chemistry for proper dilution ratio prior to normal operation. Contact your distributor or chemical manufacturer for support or dilution recommendations.

Tip	Color	Oz/Min	V14
	Copper	0.44	407:1
	Pumpkin	0.54	332:1
	Burgundy	0.67	267:1
	Lime	0.85	211:1
	Orange	1.70	105:1
	Turquoise	2.15	83:1
	Pink	2.93	61:1
	Corn Yellow	3.84	47:1
	Dark Green	4.88	37:1
	Orange	5.77	31:1
	Gray	6.01	30:1
	Light Green	7.01	26:1
	Med. Green	8.06	22:1
	Clear Pink	9.43	19:1
	Yellow Green	11.5	16:1
	Maroon	11.93	15:1
	Pale Pink	13.87	13:1
	Light Blue	15.14	12:1
	Dark Purple	17.88	10:1
	Navy Blue	25.36	7:1
	Clear Aqua	28.6	6:1
	Black	50	4:1

Unit Flow Rates

PSI	INSERT GPM
	V14
35	1.35
40	1.40
45	1.45
50	1.50
55	1.60
60	1.65
65	1.70
70	1.70
75	1.75
80	1.80
85	1.85
90	1.90
95	1.95
100	2.00
105	2.05
110	2.05
115	2.10
120	2.15

Operation

Initial Use

When operating the foamer or sanitizer for the first time some alterations may need to be made to produce the desired foam quality and ensure the unit is drawing chemistry as intended.

1. Ensure systems are properly connected and the water valves are closed [Fig. 7.1]

2. Take hold of the spray wand.

3. Open ball valve on spray wand [Fig. 7.2]

4. Fully open water valve.

   • The spray wand will slowly begin discharging water.

   • Chemical will be drawn up the suction line and introduced to the fluid path.

   • Air will be drawn into the wand to create foam - this may take a few seconds to produce the desired foam quality

NOTE: Do not block air inlet on wand. If blocked, the unit will not produce foam.

5. Ensure water pressure is above 35 PSI

6. Check spray quality and dilution amount per facility standards.

7. Metering tip size may need to be changed if dilution ratio is still not adequate.
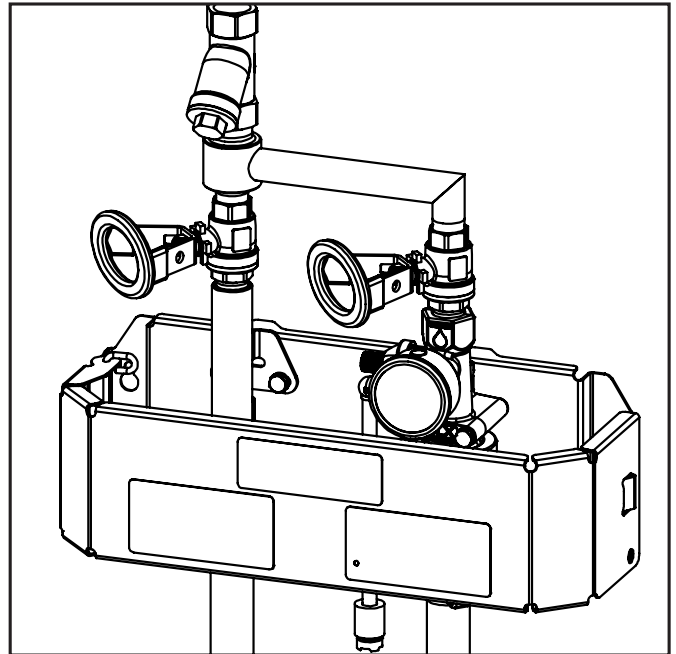
Fig. 7.1: Water supply ball valves closed.

Do not cover!
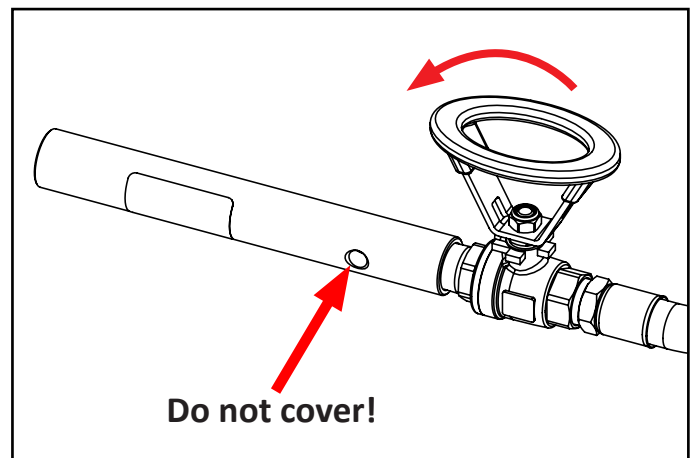
Fig. 7.2: Airless foam wand with open valve.

Operation (cont.)

Normal Use

1. Ensure system is properly connected and the water supply valves are closed

2. Take hold of the spray wand for the intended system

3. Open ball valve on spray wand

4. Fully open water valve.

   • The spray wand will begin discharging water.

5. Apply solution as necessary:

   • Foam: apply bottom to top, ensuring even coating. Rinse before foam dries to avoid streaking.

   • Rinse: apply top to bottom

6. Turn spray wand ball valve off to temporarily stop spraying (there may be kick-back when re-opening).

7. When complete, turn off supply lines.

8. Open spray wand ball valve(s) and exhaust pressure completely.

9. Rinse hose(s).

10. Store hoses depressurized, with the ball valve open and coiled properly coiled to prevent kinks or damage.

WATER SUPPLY (35-125PSI) 3/4" NPT CONNECTION

AIRLESS FOAMER SUPPLY BALL VALVE — 2

2 — RINSE SUPPLY BALL VALVE

RINSE STATION

WATER PRESSURE GAUGE

DOOR LOCK

RINSE DISCHARGE HOSE

AIRLESS FOAMER CHEMICAL INLET

AIRLESS FOAMER BODY

AIRLESS FOAMER SOLUTION LINE WITH STRAINER & CERAMIC WEIGHT

1 — RINSE DISCHARGE BALL VALVE

AIRLESS FOAMER DISCHARGE HOSE

AIRLESS FOAMER DISCHARGE BALL VALVE — 1

RINSE WAND

AIRLESS FOAM WAND

General Use

Removing Venturi Insert

1. Ensure supply lines are off and system is depressurized.

> ⚠️ **WARNING**
>
> Depressurize system prior to servicing! Always wear appropriate personal protective equipment (PPE) when handling chemical per SDS recommendations.

2. Open the enclosure door.

3. Loosen the tri-clamp fitting to disconnect the upper and lower body.

> **NOTE:** Supply lines and discharge hose can remain connected during this process. Ensure there is adequate hose/tubing length for maneuverability.

4. Pull the lower body down, away from the upper section.

> ⚠️ **WARNING**
>
> An o-ring is positioned between the upper and lower bodies. Ensure it is not lost during servicing.

5. With the bottom half removed the venturi insert can be accessed; pull straight down to remove.

   • Force may be required due to o-rings and/or chemical build-up.

   • A screwdriver can be used to pry the insert out if necessary [Fig. 9.2]

6. The insert can be cleaned using warm water or descaling acid compatible with PVC.
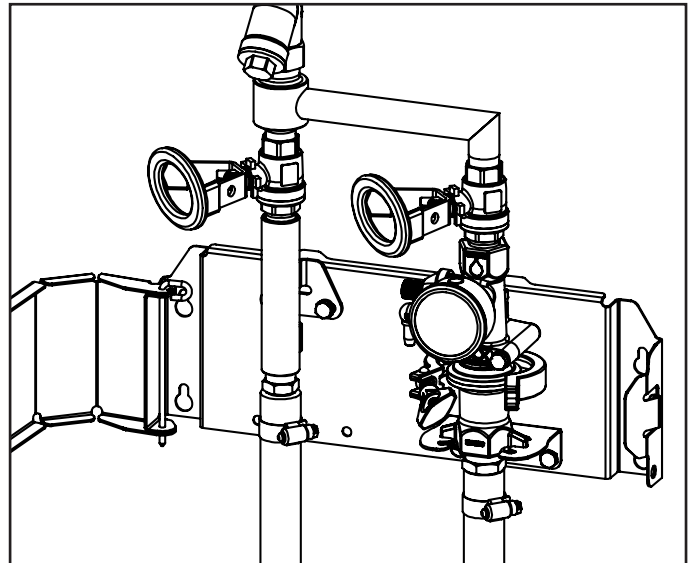
Fig. 9.1: Tri-clamp open
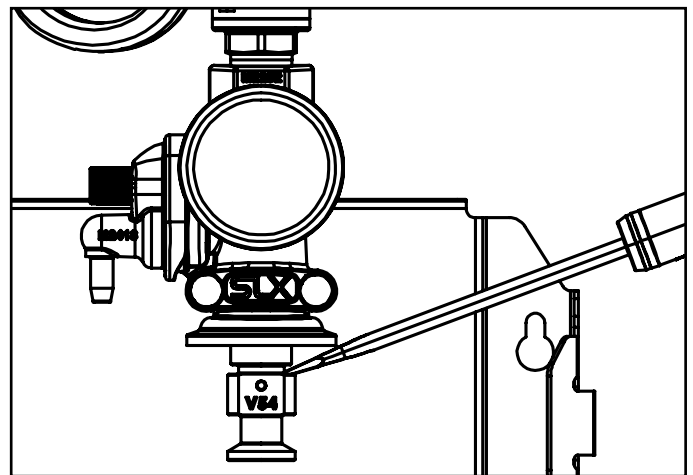
Fig. 9.2: Venturi insert removal using screwdriver

General Use (cont.)

Removing Venturi Insert (cont.)

7. Replace insert when clean or with a new version by sliding it back into the upper body, o-ring section first.

8. Reconnect the lower body to the upper section.

> ## ⚠ WARNING
>
> Ensure o-ring is positioned between the upper and lower bodies and is seated properly. Failure to do so may result in leaks or improper performance.

9. Place the tri-clamp around the lip where the two halves meet, tighten in place until secure.

10. Ensure gauge is facing forward and all connection points are secure.

11. Close enclosure door and lock if necessary.

12. Follow initial setup procedures to test insert and spray quality before resuming normal operation.

O-Ring
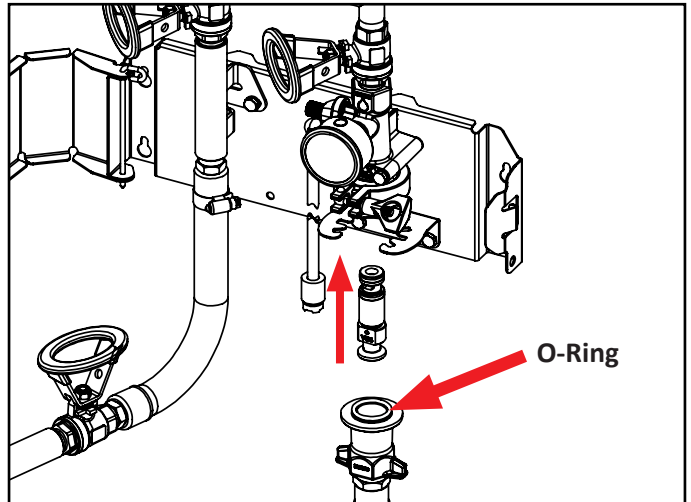
Fig. 10.1: Replacing venturi insert and foamer body

Removing Check Valve

1. Ensure supply lines are off and system is depressurized.

2. Open the enclosure door

3. Loosen the thumb screw on the elbow by hand or using a flathead screwdriver.

4. Pull the elbow away from the main body.

5. The check valve will be seated either inside of the elbow or the body. Grab it and pull to remove. [Fig 10.2]

6. Clean or replace if damaged.

7. To reinsert, orient the check valve with the arrow pointing towards the main body and press into place.

8. Reattach the elbow and tighten the thumb screw until secure.
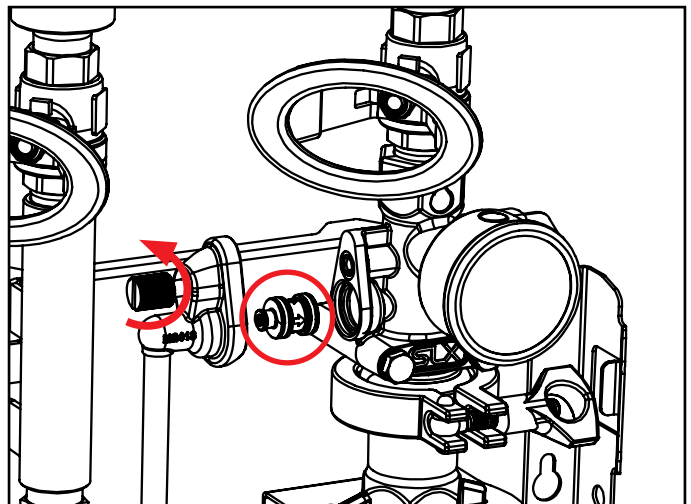
Fig. 10.2: Chemical inlet check valve removed

Maintenance

The following maintenance procedures are recommended for normal use. Units which see a high amount of use should be inspected more frequently.

> ⚠ **WARNING**
>
> Depressurize system prior to servicing! Always wear appropriate personal protective equipment (PPE) when handling chemical per SDS recommendations.

Daily:

- Check condition of hose (damage or leaks)
    - Replace as necessary.
- Ensure water lines are not receiving backflow of chemistry.
    - Ensure check valve is operating properly, replace as necessary.
- Verify ball valves are operating properly.
    - Replace as necessary.

Weekly:

- Ensure metering tip is free of clogs
    - Remove from chemical inlet and clean with water.
- Ensure tri-clamp is secure and bodies are sealed
    - Verify o-ring is seated properly and is not damaged. Replace as necessary.
    - Check that tri-clamp is seated properly and tighten till secure.

Monthly

- Verify check valves are operating properly
    - Remove and ensure spring is functioning properly. Replace as necessary.
- Check venturi insert for clogs and debris.
    - Remove and inspect - if clogged or scale has built up clean with water or de-scaling acid compatible with PVC.
- Check o-rings on inserts and check valves.
    - Remove and replace as necessary.
    - O-rings can be purchased individually or pre-installed as complete check valve or insert assemblies.

Annually

- Replace discharge hose (and wand if necessary)
- Replace insert, check valves, and gauges

> ⓘ **More Information**
> Please contact Clean Logix at:
> **(616)-438-9200** or **sales@clean-logix.com**

Troubleshooting

Venturi will not draw chemical

	Cause	Solution
Start-up	Improper water pressure	Increase water pressure or water volume
	Inlet or discharge ball valve is not completely open	Completely open the ball valves.
	Chemical ball valve not open **(2-way only)**	Open chemical ball valve
	Not enough chemistry is being diluted	Install larger metering tip to use more chemistry
	Chemical supply is empty or suction line is not fully submerged	Immerse tube or replenish.
	Discharge hose too long or wrong size or kinked	Straighten the hose or replace hose with correct size and length (see system specifications based on insert size)
	Wand or Nozzle size is incorrect	Replace nozzle or wand with correct size (see system specifications based on insert size)
Extended Use	Venturi insert is clogged	Open foamer body and check for debris or obstructions. Clean as necessary with water or air.
	Chemical strainer or metering tip partially blocked	Clean or replace chemical strainer and/or metering tip.
	Chemical tube stretched out or pin hole/cut in chemical tube sucking air.	Cut off end of tube or replace tube.
	Vacuum leak in chemical pick-up connections	Tighten the connection.
	Improper water pressure	Increase water pressure or water volume
	Chemical check valve stuck or failed	Clean or replace.
	Airless Foam Wand screen clogged	Remove fittings and soak wand in descaling acid.
	Hard water scale or chemical build-up may have formed in the sanitizer body causing poor or no chemical pick-up	Open foamer body and check for build-up. Remove and clean with water or descaling acid (insert is PVC). Replace as necessary.

Foamer is using too much chemistry (too strong, not diluted enough)

Cause	Solution
No metering tip installed or metering tip too large	Install smaller metering tip and test.

For Technical Support:

Troubleshooting

Foamer is using too little chemistry (too diluted, not strong enough)

	Cause	Solution
Start-up	Water pressure or water volume too low/inlet piping too small causing poor chemical pick up	Increase water pressure or water volume
	Inlet or discharge ball valve is not completely open	Completely open the ball valves.
	Chemical ball valve not open **(2-way only)**	Open chemical ball valve
	Not enough chemistry is being diluted	Install larger metering tip to use more chemistry
	Improper chemical	Ensure product is recommended for sanitizing/spraying and the application.
	Chemical supply is empty or suction line is not fully submerged	Immerse tube or replenish.
	Discharge hose too long or wrong size or kinked	Straighten the hose or replace hose with correct size and length.
	Nozzle size too small	Replace nozzle with correct size.
Extended Use	Chemical strainer or metering tip partially blocked	Clean or replace chemical strainer and/or metering tip.
	Chemical tube stretched out or pin hole/cut in chemical tube sucking air.	Cut off end of tube or replace tube.
	Vacuum leak in chemical pick-up connections	Tighten the connection.
	Chemical check valve stuck or failed	Clean or replace.
	Hard water scale or chemical build-up may have formed in the foamer body causing poor or no chemical pick-up	Open foamer body and check for build-up. Remove and clean with water or descaling acid (insert is PVC). Replace as necessary.
	More than one chemical ball valve is open **(2-way only)**	Close one of the ball valves and ensure the other is fully open.

Water is backing up into chemical container

Cause	Solution
Chemical check valve stuck or failed	Clean or replace.

Chemistry is backing up into water supply line

Cause	Solution
Inlet ball valve left on when not in use	Turn off ball valve

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Parts Call-Out

Purchase Replacement Parts:

WARNING:
A BACKFLOW PREVENTER IS
REQUIRED AND MUST BE
SUPPLIED BY THE END USER.
FOLLOW ALL LOCAL CODES.

P2466

M2430

P2450
3X

P2269

M2418

M2259

POLY: M2252
STAINLESS: M2219

M2642

M2416

F1212
2X

M2608
2X

F1105
2X

F1210
4X

F1221
4X

F1211
4X

M2239

M2532

M2529

M2258
(POLY BODIED
UNITS ONLY

M2368

M2427
(22 PACK)

P2456

M2423

M2440

P2484

P2292

M2325

POLY: M2256
STAINLESS: M2223

M2424

BLUE: M2273
RED: M2274
WHITE: M2275
YELLOW: M2276
GREEN: M2522

BLUE: M2269
RED: M2270
YELLOW: M2271
GREEN: M2521

M2427

POLY WAND ASSY:
M2393
STAINLESS WAND
ASSY: M2394

M2516

Parts Call-Out

Part Number	Description
F1105	BOLT, HHC, 1/4-20 X 1/2", SS
F1210	WASHER, FLAT, 1/4" X 5/8", 316SS
F1211	NUT, 1/4-20, 316SS
F1212	NUT, NYLOCK, 1/4-20, 316SS
F1221	WASHER, SPLIT LOCK, 1/4" X .487", 316SS
M2219	SLX UPPER BODY, TYPE-1V, SS
M2223	SLX LOWER BODY, TYPE-S, SS
M2224	SLX CHECK ELBOW, 1/4 FNPT, SS
M2239	SLX HINGE PIN V2.1
M2252	SLX UPPER BODY, TYPE-1V, PP
M2256	SLX LOWER BODY, TYPE-S, PP
M2258	SLX LOWER SUPPORT BRACKET
M2259	SLX THUMB SCREW
M2269	HOSE ASSEMBLY, 1/2" X 50', PVC, BLUE, 1/2" MNPT ONE END
M2270	HOSE ASSEMBLY, 1/2" X 50', PVC, RED, 1/2" MNPT ONE END
M2271	HOSE ASSEMBLY, 1/2" X 50', PVC, YELLOW, 1/2" MNPT ONE END
M2273	HOSE ASSEMBLY, 3/4" X 50', PVC, BLUE, 1/2" MNPT ONE END
M2274	HOSE ASSEMBLY, 3/4" X 50', PVC, RED, 1/2" MNPT ONE END
M2275	HOSE ASSEMBLY, 3/4" X 50', PVC, WHITE, 1/2" MNPT ONE END
M2276	HOSE ASSEMBLY, 3/4" X 50', PVC, YELLOW, 1/2" MNPT ONE END
M2325	SLX INSERT ASSEMBLY, V14, W/ AFLAS SEALS
M2368	SLX RINSE COUPLER
M2393	SLX WAND ASSEMBLY, 1/2" BALL VALVE, 4-HOLE RINSE NOZZLE, 10" PP WAND
M2394	SLX WAND ASSEMBLY, 1/2" BALL VALVE, 4-HOLE RINSE NOZZLE, 10" SS WAND

Part Number	Description
M2418	SLX CHECK ELBOW, METERING BARB, PP
M2419	SLX CHECK VALVE, BALL TYPE, AFLAS SEALS, HASTELLOY SPRING, 0.5LB
M2424	PIPE ADAPTER, HOSE BARB, 3/4" NPT X 1/2" BARB, 316SS, 150 PSI
M2427	SLX METERING TIP FULL KIT - 22 TIPS AND DRIVER
M2430	SLX MANIFOLD DUAL - WELDED
M2435	SLX SECURITY SCREW - SOCKET
M2440	SLX SUCTION LINE ASSEMBLY 1/4" X 6' WITH STRAINER AND WEIGHT
M2516	SLX AIRLESS FOAM WAND ASSEMBLY, 1/2" BALL VALVE, .116 POLY
M2521	HOSE ASSEMBLY, 1/2" X 50', PVC, GREEN, 1/2" MNPT ONE END
M2522	HOSE ASSEMBLY, 3/4" X 50', PVC, GREEN, 1/2" MNPT ONE END
M2529	SLX CLAMSHELL DOOR V4.2 SIZE 2
M2532	SLX CLAMSHELL BACKPLATE V4.2 SIZE 2
M2608	SLX U-BOLT, 3.375" x 1.75" x 1/4"-20 - 0.75", 304SS
M2642	BRACKET, SLX RINSE STATION, C-BRACKET
P2269	O-RING, -106, .109" X .380" OD, Viton, Brown
P2292	SANITARY FLANGE CLAMP, 1.0-1.5, 304
P2450	VALVE, BALL, 1/2" FNPT X 1/2" MNPT, 316SS, PTFE, 1000 PSI
P2456	GAUGE, PRESSURE, 2", 0-150psi, 1/4" NPT, SS
P2466	STRAINER, Y, 3/4" NPT, 316SS, 140 MESH (100 MICRON), 800 PSI
P2484	O-RING, SLX BODY, VITON, BROWN

ℹ️ **More Information**

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