



USER MANUAL

MODEL:

SLX-VM

VENTURI MIXING STATION - SINGLE STATION

English (Original Instructions)

Updated: 11/16/22



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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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READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Overview

The SLX wall mounted water driven mixing station is a low to medium volume decentralized spray system that works with city water pressure to dilute and spray chemistry and detergents at a range of flow rates. The unit features a split body design for easy servicing and maintenance.

The included instructions apply to both polypropylene and stainless steel venturi mixing stations regardless of insert size. Model specific specifications will be identified as necessary.

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: 160°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 or Stainless Steel (dependent on model)
 - Enclosure: 304SS
 - Wetted Parts: PVC, Polypropylene, AFLAS, and Stainless Steel
- Weight: 6 - 8 lbs.
- Dimensions: 7" x 10³/₈" x 5¹/₂"

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

Insert #	Water Flow Rate (GPM)	Hose Size (OD x L)	Dilution Range
V107	10.7	3/4" x 10'	3069:1 - 9.3:1
V126	12.6	3/4" x 10'	2743:1 - 11:1

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



More Information

Please contact Clean Logix at:

(616)-438-9200 or sales@clean-logix.com

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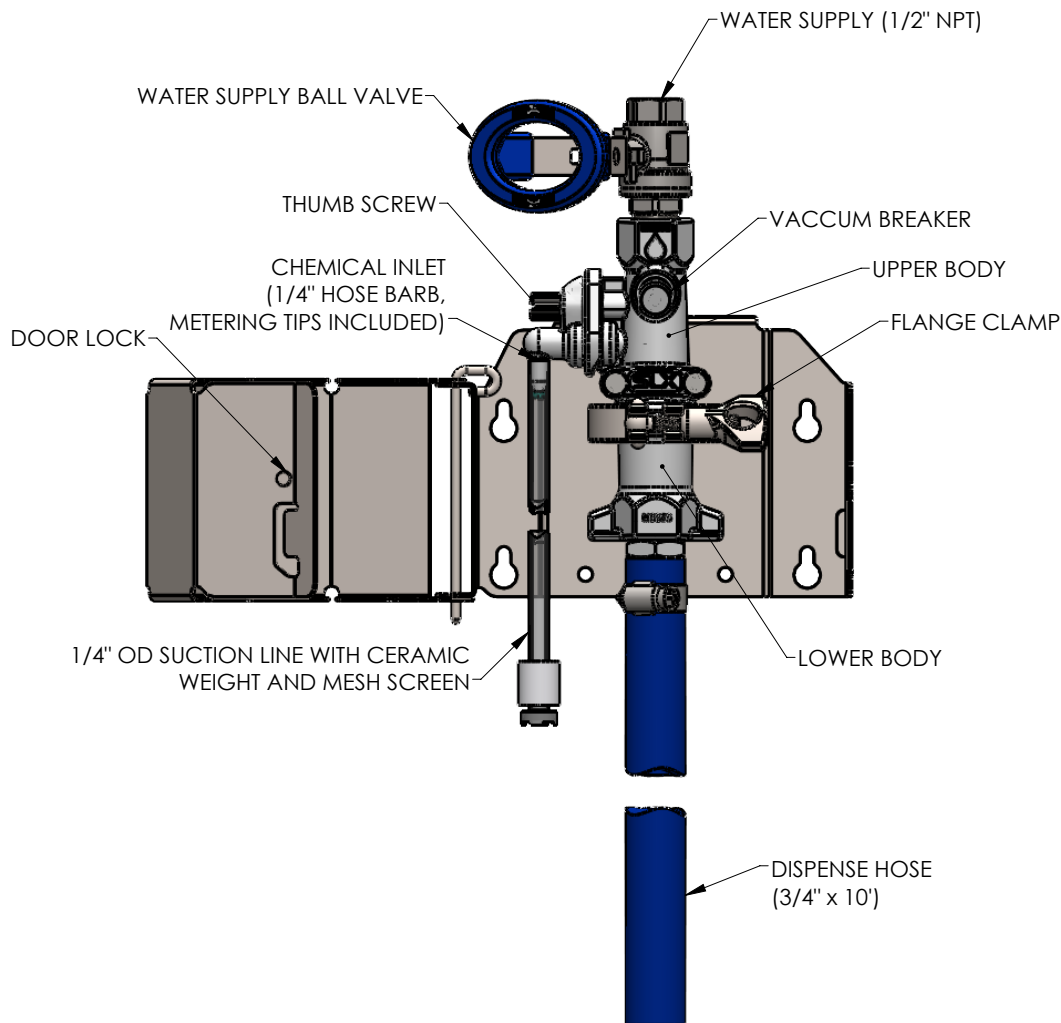
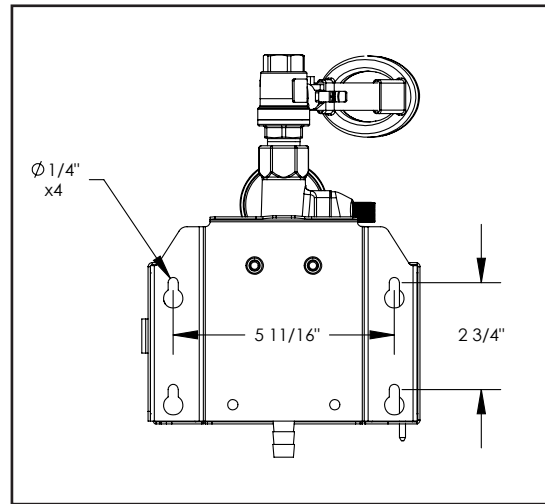
READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



Installation

1. Mount the enclosure to the wall.
2. Flush water supply line to ensure it is flowing properly and free of debris.
3. Connect water to water supply inlet (1/2" NPT)
4. Connect discharge hose and spray wand to the bottom hose barb and secure with hose clamp.

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



System may vary depending on model and optional upgrades.

Dilution

Metering Tips

1. Place chemical container below unit.
2. Using the included metering tips, identify which tip is appropriate for your dilution ratio.

NOTE: Review dilution recommendations for the chemistry being used. GPM's calculated at 40 PSI water pressure. For different pressure estimates use following formula:

$$\text{Dilution Ratio} = \frac{(\text{GPM} \times 128)}{\text{Oz/Gal}}$$

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).

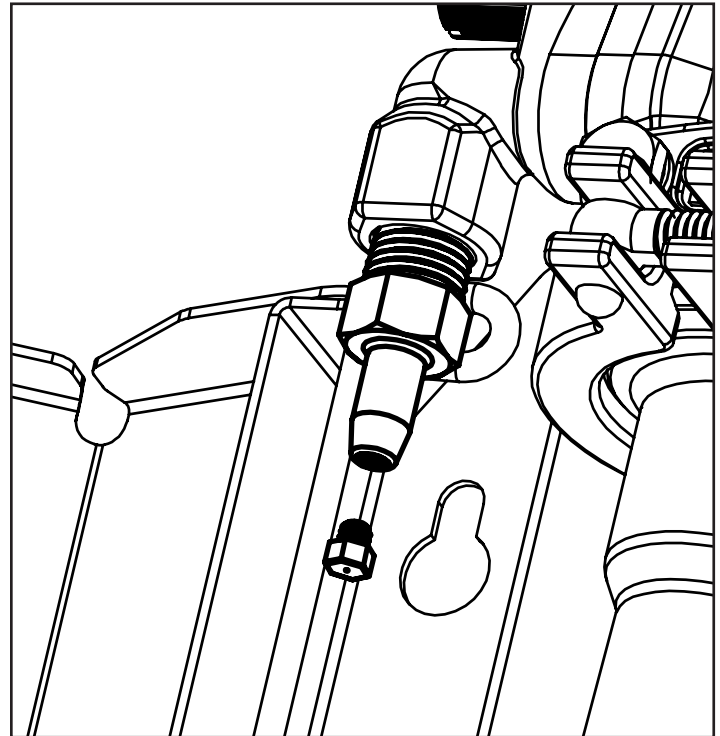


Fig. 5.1: Metering tip and hose barb

Metering Tip Dilution Ratios

Color	Oz/Min	V107	V107
Copper	0.56	2411:1	2880:1
Pumpkin	0.73	1850:1	2209:1
Burgundy	0.90	1500:1	1792:1
Lime	1.28	1055:1	1260:1
Orange	1.70	794:1	949:1
Turquoise	2.15	628:1	750:1
Pink	2.93	461:1	550:1
Corn Yellow	3.84	352:1	420:1
Dark Green	4.88	277:1	330:1
Orange	5.77	234:1	280:1
Gray	6.01	225:1	268:1
Light Green	7.01	193:1	230:1

**Metering Tip Calculator
Mobile App:**



Color	Oz/Min	V107	V107
Med. Green	8.06	168:1	200:1
Clear Pink	9.43	143:1	171:1
Yellow Green	11.50	117:1	140:1
Maroon	11.93	113:1	135:1
Pale Pink	13.87	97:1	116:1
Light Blue	15.14	89:1	107:1
Dark Purple	17.88	76:1	90:1
Navy Blue	25.36	53:1	64:1
Clear Aqua	28.60	47:1	56:1
Black	50.00	27:1	32:1
[No Tip]		9.3:1	11:1

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



Operation

Initial Use

When operating the mixing station for the first time some alterations may need to be made to ensure the unit is drawing chemistry as intended.

1. Ensure unit is properly connected and the water valve is closed
2. Place a chemical container below the hose drop (or place the hose inside the container).
3. Open the water supply valve.
 - Chemical will be drawn up the suction line and introduced to the fluid path as solution is dispensed through the discharge hose
4. Turn off water supply to stop mixing.
5. Check dilution amount and adjust as necessary.
 - Metering tip size may need to be changed if dilution ratio is still not adequate.

Normal Use

1. Ensure unit is properly connected and the water valve is closed
2. Place a chemical container below the hose drop (or place the hose inside the container).
3. Open the water supply valve.
 - Chemical will be drawn up the suction line and introduced to the fluid path as solution is dispensed through the discharge hose
4. Turn off water supply to stop mixing.

General Use

Removing Venturi Insert

1. Ensure water supply line is 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 line 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 venturi 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. 8.1]
6. The insert can be cleaned using warm water or descaling acid compatible with PVC.

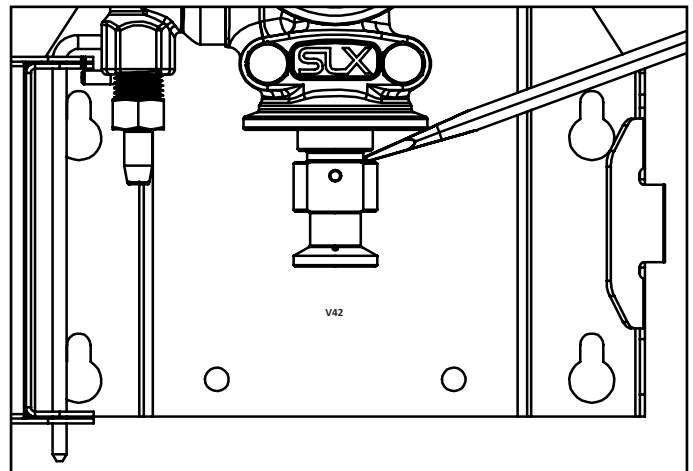


Fig. 8.1: Venturi insert removal using screwdriver

General Use (cont.)

Removing Venturi Insert (cont.)

7. Replace insert with clean or new version by sliding it back into the upper venturi 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 all connection points are secure.
11. Close enclosure door and lock if necessary.
12. Follow initial setup procedures to test before resuming normal operation.

Removing Check Valve

1. Ensure supply line is 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. [Fig 9.2]
4. Pull the elbow away from the mixing station body.
5. The check valve will be seated either inside of the elbow or the main body. Grab it and pull to remove. [Fig 9.3]
6. Clean or replace if damaged.
7. To reinsert, orient the check valve with the arrow pointing towards the mixing station body and press into place.
8. Reattach the elbow and tighten the thumb screw until secure.

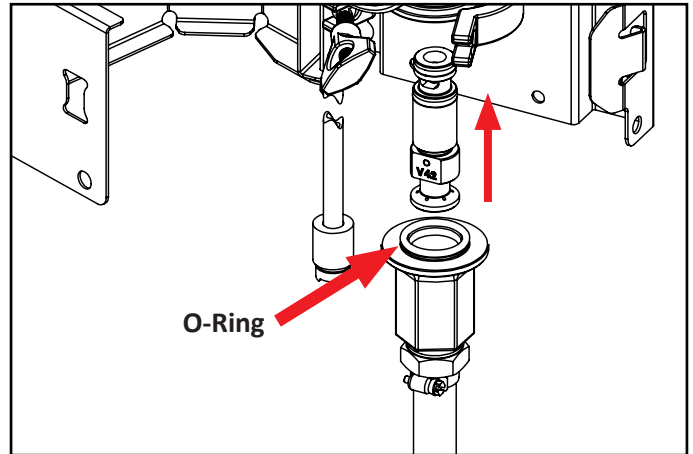


Fig. 9.1: Replacing venturi insert

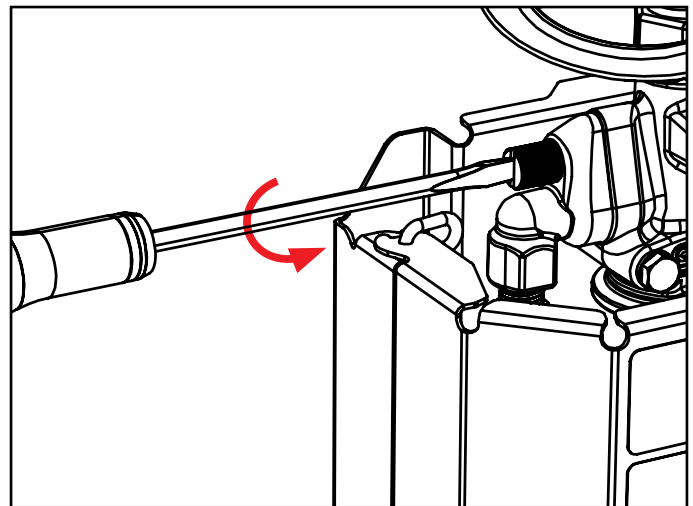


Fig. 9.2: Loosening thumb screw on elbow (chemical inlet)

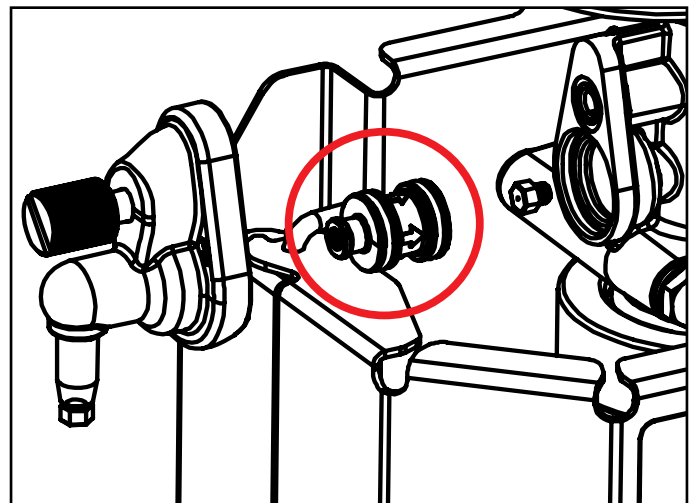


Fig. 9.3: SLX Check Valve (correct orientation)

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 line is not receiving backflow of chemistry.
 - Ensure check valve is operating properly, replace as necessary.
- Verify ball valve is 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 valve is 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 o-ring



More Information

Please contact Clean Logix at:

(616)-438-9200 or **sales@clean-logix.com**

Troubleshooting

Mixing station will not draw chemical

	Cause	Solution
Start-up	Improper water pressure	Check pressure settings.
	Inlet or discharge ball valve is not completely open	Completely open the ball valves.
	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 wrong size or kinked	Straighten the hose or replace hose with correct size
Extended Use	Venturi insert is clogged	Open mixing station 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	Check pressure settings.
	Chemical check valve stuck or failed	Clean or replace.
	Hard water scale or chemical build-up may have formed in the mixing station body causing poor or no chemical pick-up	Open mixing station body and check for build-up. Remove and clean with water or descaling acid (insert is PVC). Replace as necessary.

Mixing station 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

Mixing station 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 valve.
	Not enough chemistry is being diluted	Install larger metering tip to use more chemistry
	Improper chemical	Ensure product is recommended for 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 mixing station body causing poor or no chemical pick-up	Open mixing station body and check for build-up. Remove and clean with water or descaling acid (insert is PVC). Replace as necessary.

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

For Technical Support:

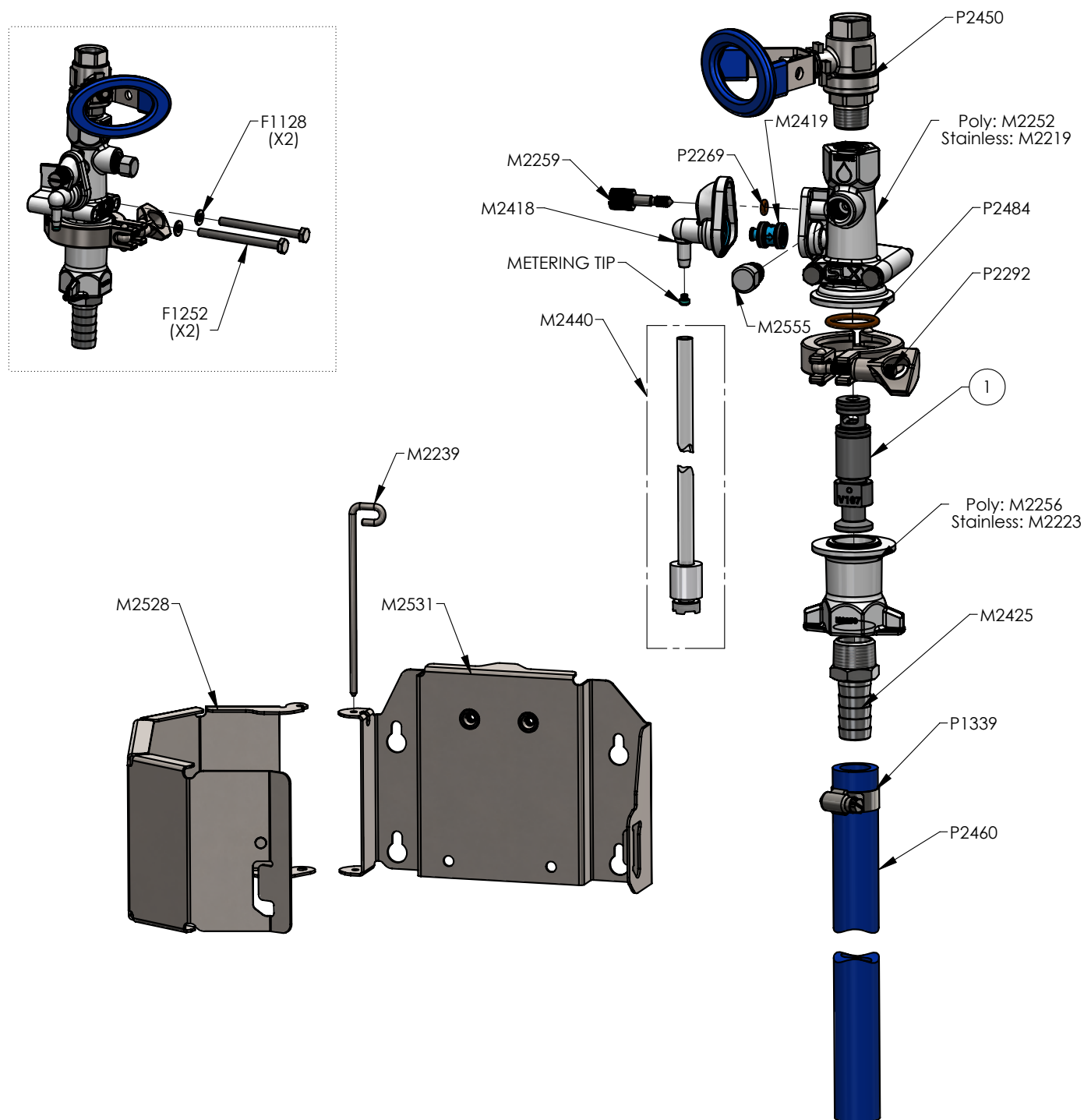
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Parts Call-Out

Parts will vary depending on venturi insert size and body material. Review the parts list and following diagrams for the different system types to identify replacement parts for your specific system.



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Parts Call-Out

NO.	V107	V126	DESCRIPTION
1	M2332	M2537	INSERT ASSEMBLY, VENTURI, INCLUDES O-RINGS
	F1128		WASHER SPLIT LOCK 1/4 SS (ORDER IN PACKS OF 100)
	F1252		BOLT HHC 1/4-20 X 3, 316SS (ORDER IN PACKS OF 10)
	M2239		SLX HINGE PIN V2.1
	M2219		SLX UPPER BODY, TYPE-1V, SS
	M2223		SLX LOWER BODY, TYPE-S, SS
	M2252		SLX UPPER BODY, TYPE-1V, PP
	M2256		SLX LOWER BODY, TYPE-S, PP
	M2259		SLX THUMB SCREW
	M2418		SLX CHECK ELBOW, METERING BARB, PP
	M2419		SLX CHECK VALVE, BALL TYPE, AFLAS SEALS, HASTELLOY SPRING, 0.5LB
	M2425		PIPE ADAPTER, HOSE BARB, 3/4" NPT X 3/4" BARB, 316SS, 150 PSI
	M2427		SLX METERING TIP FULL KIT - 22 TIPS AND DRIVER
	M2440		SLX SUCTION LINE ASSEMBLY 1/4" X 6' WITH STRAINER AND WEIGHT
	M2528		SLX CLAMSHELL DOOR V4.2 SIZE 1
	M2531		SLX CLAMSHELL BACKPLATE V4.2 SIZE 1
	M2555		SLX VACUUM BREAKER PLUG ASSEMBLY
	M2575		SLX DECAL, VENTURI MIXING STATION
	P1339		HOSE CLAMP WORM GEAR 316 SS 1/2" Band - 11/16" - 1 1/4" Clamp Range
	P2269		O-RING, -106, .109" X .380" OD, Viton, Brown
	P2292		SANITARY FLANGE CLAMP 1-1/2" 304SS - TRI CLAMP
	P2450		VALVE, BALL, MANUAL, 1/2" NPT FEMALE X 1/2" NPT MALE, OVAL HANDLE, 2-PIECE, FULL PORT, 316SS BODY, PTFE SEAT, 1000 PSI W.O.G.
	P2460		HOSE, 3/4" - PVC, BLUE
	P2484		O-RING, 27 x 3.5, VITON, BROWN
	P2565		GREASE, SYNTHETIC PTFE, NSF, 1cc PACKET
	P2456		GAUGE, PRESSURE, 2", 0-150psi, 1/4" NPT, SS
	P2468		VALVE, BALL, MANUAL, .250 BARB WITH 8-32 THREAD X .250 NPT MALE, ROUND KNOB, PP BODY, VITON SEALS
	P2484		O-RING, SLX BODY, VITON, BROWN



More Information

Please contact Clean Logix at:

(616)-438-9200 or **sales@clean-logix.com**

Purchase Replacement Parts:

