

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

## Model # 975350 • Portable 16 Gallon Small Area Cleaning System (SACS)

### REQUIREMENTS

#### Foaming & Sanitizing Chemical Concentrates

#### Water to Fill Tank

##### Water Usage Rates:

Foam	0.5 GPM
Rinse	1.5 GPM
Sanitize	0.5 GPM

Hose	3/8" x 15'
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#### Nozzles

Foam	#10 Bullet Foam Nozzle
Rinse	2510
Sanitize	2510

### OPTIONS

#### Alternate Check Valve - EPDM Standard

Check Valve, Chemical, PP/Viton, 1/4"	# 491315
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**WARNING! READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

### OVERVIEW

The Small Area Cleaning System (SACS) is a self-contained low volume Foam/Rinse/Sanitize cleaning system for multiple chemical applications. This convenient system uses a re-chargeable battery and 12V pump to draw fresh water from the 16 gallon tank and create the pressure to run the system. It uses precision metering tips to accurately dilute two chemical concentrates from the attached jug rack and projects one chemical as wet foam, a second as a fan spray, and rinses. Perfect for precision cleaning in small areas where water pressure is unavailable.

## SAFETY &amp; OPERATIONAL PRECAUTIONS

- Always turn unit off at the switch on the outside of the cabinet after each use and relieve pressure in the hose by pulling the trigger on the trigger gun.
- For proper performance do NOT modify, substitute nozzle, hose diameter or length.
- Manufacturer assumes no liability for the use or misuse of this unit.
- Wear protective clothing, gloves and eye wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.
- Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician per Local and State Electrical Codes.

## TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

## BATTERY CHECK

1. Turn on unit with the switch and, when the pump turns on, observe the battery meter.
2. If battery meter is flashing between red and yellow (or the charge is insufficient for the required cleaning time), turn off the unit with the switch and charge battery.

## BATTERY CHARGING

1. Ensure the unit and floor are DRY before plugging in charger
2. Plug the battery charger into a 110 Volt power supply only.
3. Insert charging plug into the charging socket on the cabinet side. Cord lights up when charging.
4. Charge for a minimum 3 hours. Check battery meter light for full charge (green).
5. Remove the charging plug from the cabinet side before moving or using the cart. Unit battery is charged for use.

## TO PREPARE FOR USE

1. Remove lid from the water tank and fill with WATER ONLY to the desired level. Replace lid.
2. Place the chemical concentrates in the jug rack and insert chemical suction tubes. Do not connect the clear tubes to the check valves until metering tips are installed.

Set the chemical dilution ratio by threading one of the color coded metering tips into each chemical check valve. See chemical labels for dilution ratio recommendation or consult your chemical supplier.

- For the strongest dilution ratio do NOT install a colored metering tip.
- The dilution ratios in the metering tip chart are based on water thin chemicals with a viscosity of 1CPS.
- Thicker chemicals will require a larger tip than the ratios shown in the chart.
- Application results will ultimately determine final tip color.
- Select the tip color that is closest to your desired chemical strength and thread it into the tip holder. **DO NOT OVER-TIGHTEN.**
- Push the chemical tube over the check valve barb and place the suction tube in the chemical concentrate.
- If necessary, cut suction tube(s) to length before attaching suction strainer.

## TO OPERATE

## TO FOAM

1. With combo gun in hand, open wash (foam) ball valve on cart
2. Open wash ball valve on combo gun. Allow several seconds for chemical to be drawn and reach nozzle.
3. Foam nozzle can be adjusted to project a wide angle pattern or a zero degree stream. Rotate in 1/4 turns.
4. Make final metering tip adjustments based on cleaning and foaming results.
5. When finished, close wash ball valve on combo gun, then on cart.

## TO RINSE

1. With combo gun in hand, open rinse ball valve on cart.
2. Open rinse/sanitize ball valve on combo gun. Allow several seconds for chemical to purge from hose.
3. When finished, close rinse/sanitize ball valve on the combo gun, then on the cart.

## TO SANITIZE

1. With combo gun in hand, open sanitize ball valve on cart.
2. Open rinse/sanitize ball valve on combo gun. Allow several seconds for chemical to be drawn and reach nozzle.
3. Make final metering tip adjustments based on sanitizing performance.
4. When finished, close rinse/sanitize ball valve on combo gun, then on cart.

**WHEN FINISHED** -- ALWAYS flip the switch "OFF" and open and close one of the ball valves on combo gun to release pressure in hose. Empty tank completely and recharge after EACH use.

**NOTE:** ALWAYS ENSURE THAT POWER LIGHT NEXT TO SWITCH IS OFF WHEN SYSTEM IS NOT BEING USED.

## METERING TIP SELECTION

METERING TIP COLOR	OZ / MIN	DILUTION RATIO @ 70 PSI		
		FOAM	RINSE	SANITIZE
Brown	0.56	126:1	-	126:1
Clear	0.88	80:1	-	80:1
Bright Purple	1.38	51:1	-	51:1
White	2.15	33:1	-	33:1
Pink	2.93	24:1	-	24:1
Corn Yellow	3.84	18:1	-	18:1
Dark Green	4.88	14:1	-	14:1
Orange	5.77	12:1	-	12:1
Gray	6.01	12:1	-	12:1
Light Green	7.01	10:1	-	10:1
No Tip Ratio Up To:		8.0:1	-	8.0:1
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.				

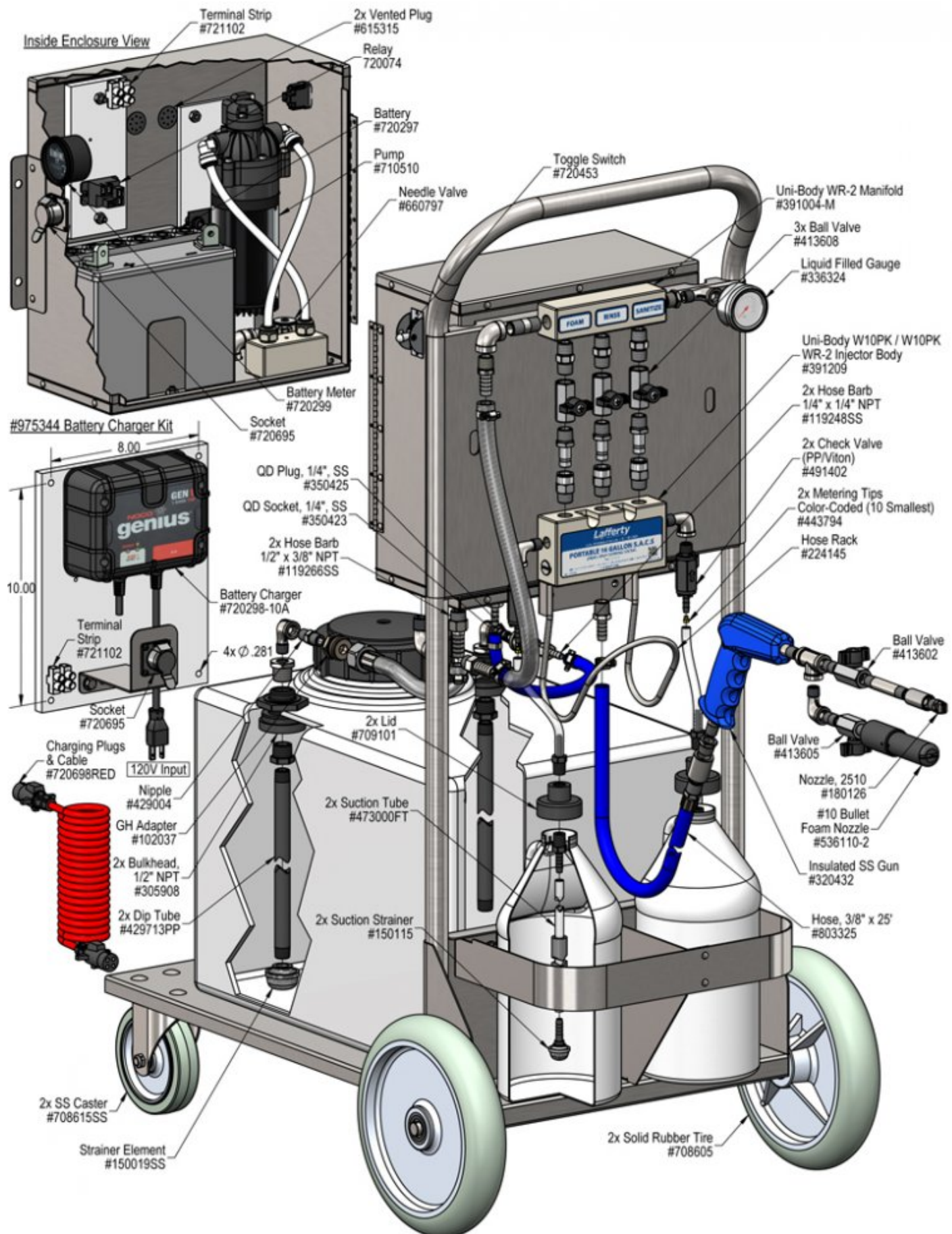
## FORMULA

$$\text{GPM} \times 128 \div \text{Desired Dilution Ratio} = \text{oz/min}$$

- See Unit Flow Rates chart for GPM
- Use 20 for 20:1 dilution ratio, 30 for 30:1, etc.
- Match calculated ounces per minute (oz/min) to nearest oz/min in Metering Tip Selection chart.

## UNIT FLOW RATES

Pressure	Water Flow GPM		
PSI	Foam	Rinse	Sanitize
70	0.55	1.50	0.55



## Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical.	1, 2, 3, 4, 5	9, 11, 12, 13, 14, 15, 16
B) Using too much chemical.	7	
C) Foam/spray does not clean/perform.	6, 8	12, 13, 14, 16
D) Water back flowing into chemical		9

Possible Cause / Solution	
Startup	Maintenance
<b>1. Water pressure too low</b> ◦ Battery is low- recharge battery.	<b>9. Chemical check valve stuck or clogged</b> ◦ Clean or replace.
<b>2. Inlet ball valve or discharge ball valve not completely open.</b> ◦ Completely open the valve.	<b>10. Battery level low</b> ◦ Recharge battery.
<b>3. More than one unit ball valve is open</b> ◦ Open only one unit ball valve at a time.	<b>11. Airless Foam Wand screen blocked</b> ◦ Dried chemical build-up may be obstructing flow through the screen. Remove fittings and soak the entire wand in de-scaling acid.
<b>4. Discharge hose too long or kinked</b> ◦ Straighten or shorten the hose.	<b>12. Metering tip blocked</b> ◦ Clean or replace metering tip.
<b>5. Chemical tube not immersed in chemical or chemical depleted</b> ◦ Immerse or replenish chemical	<b>13. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube</b> ◦ Cut off end of tube or replace tube.
<b>6. Improper chemical</b> ◦ Ensure product is recommended for foaming and/or the application.	<b>14. Vacuum leak in chemical pick-up connection</b> ◦ Tighten the connection.
<b>7. Dilution too strong even with smallest metering tip</b> ◦ Some weak dilutions at lower water pressures are impossible to achieve with a metering tip. Pre-dilute your chemical until desired dilution ratio is achieved.	<b>15. Water tank empty</b> ◦ Refill tank.
<b>8. Dilution too weak</b> ◦ Install larger metering tip.	<b>16. Chemical build-up or scale may have formed in the body causing poor or no chemical pick-up</b> ◦ Remove fittings and soak entire body in de-scaling acid. Replace fittings being careful not to cross thread or over tighten.

**PREVENTIVE MAINTENANCE:** When the unit will be out of service for extended periods, place chemical tube(s) in water and flush the chemical out of the unit to help prevent chemical from drying out and causing build-up. Periodically check and clean chemical strainer and replace if missing.

