

# LAFFERTY EQUIPMENT MFG., INC.

## INSTALLATION / OPERATION INSTRUCTIONS

# PUSH LEVER CHEMICAL MIXING STATIONS

### Requirements

25 – 100 PSI Water

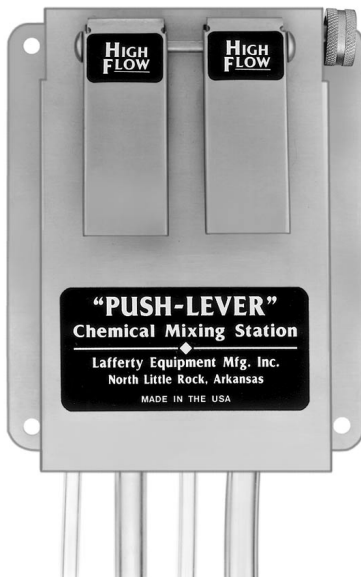
### Water Temperature

Ambient – 140° F

**MODEL # 980100**



**MODEL # 980200**



**MODEL # 980300**



## OPTIONS

- Fresh Water Outlet
- 10' Water Supply Hose
- Available in Bottle Fill, Low Flow, High Flow or Your Preferred Combination

**Ask About Our Ball Valve Activated Chemical Mixing Stations**

# INSTALLATION AND OPERATION INSTRUCTIONS PUSH LEVER CHEMICAL MIXING STATIONS

## IMPORTANT:

Prior to use, read the Safety Data Sheet supplied with your chemical. NEVER use chemicals that are not compatible if mixed. ALWAYS wear protective clothing, gloves, and eye wear. Fill only approved chemical resistant containers.

NEVER put a shut-off on the discharge tube (this will cause the tube to blow off of the barbs).

## TO INSTALL (See Parts Diagram, Facing Page)

1. Securely mount the mixing station to a suitable surface.
2. Connect your 25-100 PSI water supply to the mixing station.
3. *Stapled to these instructions, with a matching color-coded chart, are metering tips which control your chemical to water dilutions. You will need to know the water pressure and the number of ounces of chemical needed per gallon of water to determine the correct tip color. (See chemical label for manufacturer's recommendation.)*
  - A. Locate your water pressure in the chart. The number below it is your water flow rate in **gallons per minute**.
  - B. Multiply the **gallons per minute** by the number of **ounces of chemical needed per gallon** of water.
  - C. Match your answer(s) to the *nearest* number in the metering tip selection chart. **[Tip selection chart is based on water-thin chemical. Thicker chemicals will require a larger metering tip.]**

- D. Remove cover by inserting thumbs in each bottom corner. Pull corners out and up to remove. Install selected metering tip into *each* metering tip holder (see parts diagram on facing page). Next, push chemical tube over metering tip holder and immerse foot valve strainer into chemical concentrate. Then, push discharge tube over the barb on the injector. Repeat for each injector on 2, 3, and 4 Way stations. Replace cover.

**When using Bottle Fill Mixing Stations the discharge tube may be shortened to a minimum of 8" for convenient filling of smaller containers. Do not kink the discharge tube.**

## TO OPERATE

**Depress only one lever at a time.**

1. Hold the discharge tube inside the container to be filled.
2. Completely depress appropriate lever on the station and fill the container.
3. After filling the container, release the lever for automatic shut-off.
4. Before removing discharge tube from container, allow tube to drain completely.

***SUGGESTION:** Create and attach corresponding labels to station for easy chemical identification.*

### EXAMPLE OF METERING TIP SELECTION

Low Flow Station at 40 PSI

- 40 PSI = 1.8 GPM
- 4 oz. of chemical per gallon of water
- $1.8 \times 4 = 7.2$
- $7.2 \cong 7.0$  for thin chemical (light green tip)  
(thicker chemicals will require a larger tip)

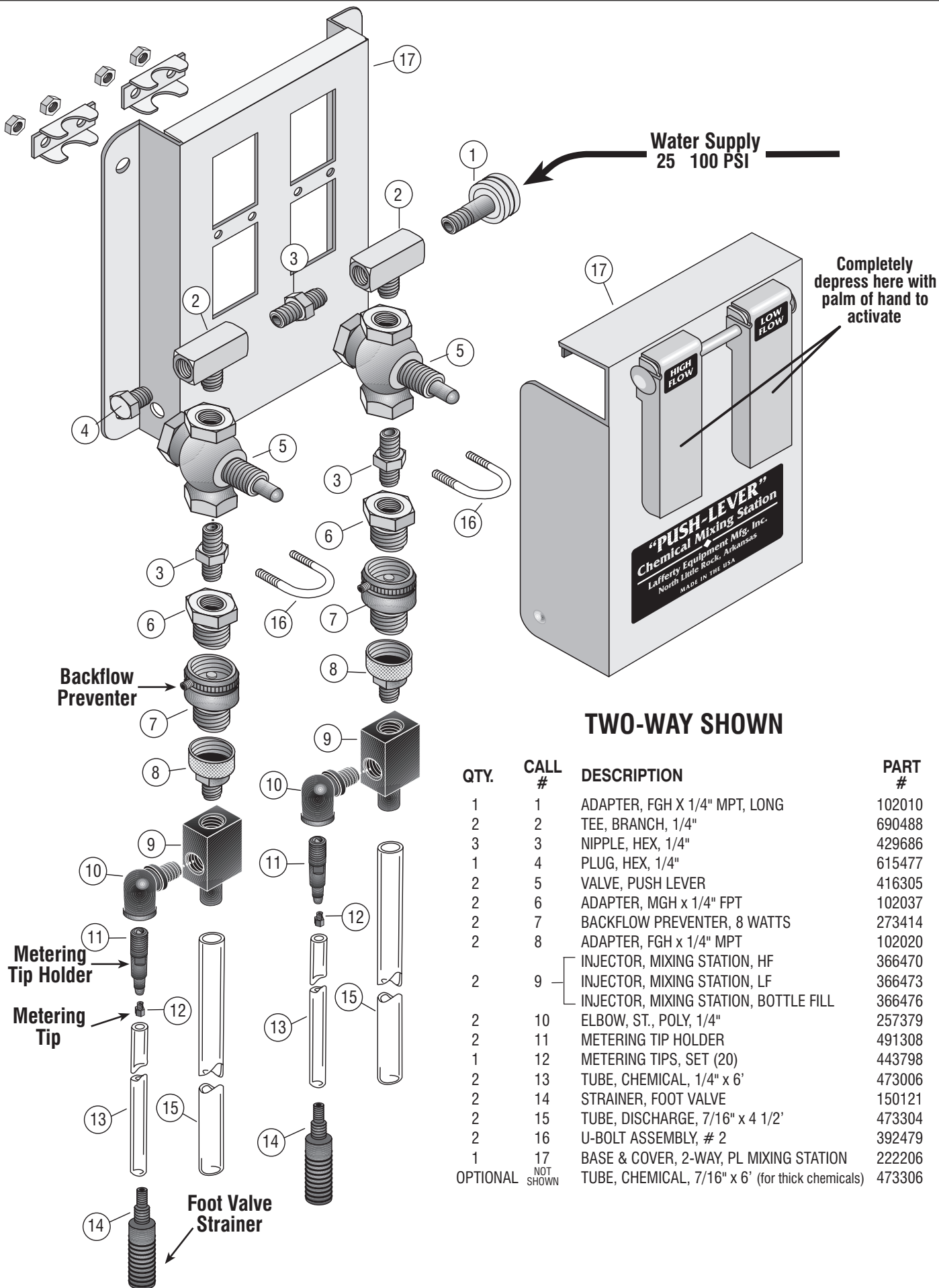
**\* NOTE:** If water pressure is unknown—first, make certain foot valve strainer is *not* in chemical concentrate, then place discharge tube in measuring container and fully depress one lever on the station for one minute, then release the lever and measure collected water and match to chart.

MIXING STATION	MIXING STATION WATER FLOW RATE						
	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI
<b>BOTTLE FILL</b>	0.34 GPM	0.78 GPM	0.84 GPM	0.88 GPM	0.93 GPM	1.00 GPM	1.05 GPM
<b>LOW FLOW</b>	1.64 GPM	1.8 GPM	1.95 GPM	2.1 GPM	2.25 GPM	2.4 GPM	2.55 GPM
<b>HIGH FLOW</b>	3.57 GPM	4.0 GPM	4.42 GPM	4.9 GPM	5.32 GPM	5.7 GPM	6.1 GPM

The number under each color in the chart below represents the **average ounces of chemical which will pass through the tip per minute.**

METERING TIP SELECTION IN OUNCES PER MINUTE (AVERAGE)																				
COLOR	Brown	Clear	Bright Purple	White	Pink	Corn Yellow	Dark Green	Orange	Gray	Light Green	Medium Green	Clear Pink	Yellow Green	Burgundy	Pale Pink	Light Blue	Dark Purple	Navy Blue	Clear Aqua	Black
<b>Thin Chemical</b>	0.84	1.16	1.4	2.0	2.7	3.4	4.0	5.3	6.1	7.0	8.5	9.2	11.2	12.5	12.9	14.2	17.6	21.4	30.2	40.4

# PUSH-LEVER CHEMICAL MIXING STATION



## TWO-WAY SHOWN

QTY.	CALL #	DESCRIPTION	PART #
1	1	ADAPTER, FGH X 1/4" MPT, LONG	102010
2	2	TEE, BRANCH, 1/4"	690488
3	3	NIPPLE, HEX, 1/4"	429686
1	4	PLUG, HEX, 1/4"	615477
2	5	VALVE, PUSH LEVER	416305
2	6	ADAPTER, MGH x 1/4" FPT	102037
2	7	BACKFLOW PREVENTER, 8 WATTS	273414
2	8	ADAPTER, FGH x 1/4" MPT	102020
2	9	INJECTOR, MIXING STATION, HF	366470
2	9	INJECTOR, MIXING STATION, LF	366473
2	9	INJECTOR, MIXING STATION, BOTTLE FILL	366476
2	10	ELBOW, ST., POLY, 1/4"	257379
2	11	METERING TIP HOLDER	491308
1	12	METERING TIPS, SET (20)	443798
2	13	TUBE, CHEMICAL, 1/4" x 6'	473006
2	14	STRAINER, FOOT VALVE	150121
2	15	TUBE, DISCHARGE, 7/16" x 4 1/2'	473304
2	16	U-BOLT ASSEMBLY, # 2	392479
1	17	BASE & COVER, 2-WAY, PL MIXING STATION	222206
OPTIONAL	NOT SHOWN	TUBE, CHEMICAL, 7/16" x 6' (for thick chemicals)	473306

# TROUBLE SHOOTING GUIDE

*for*

## PUSH LEVER CHEMICAL MIXING STATIONS

PROBLEMS	POSSIBLE CAUSE/SOLUTION												
	1	2	3	4	5	6	7	8	9	10	11	12	13
A) Station will not draw chemical.	•	•	•	•	•	•			•	•	•	•	
B) Station draws too much chemical.							•						
C) Station draws too little chemical.								•					
D) Station does not shut off or is dripping/leaking.													•

### POSSIBLE CAUSE / SOLUTION

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <b>Water pressure and/or volume too low or temperature too high</b> – Increase water pressure and/or volume and ensure water supply line is at least 1/2". Decrease water temperature.</li> <li>2. <b>Water supply valve not completely open</b> – Completely open the water supply valve.</li> <li>3. <b>Chemical tube not immersed in chemical or chemical depleted</b> – Immerse tube or replenish.</li> <li>4. <b>Foot valve strainer or metering tip blocked</b> – Clean or replace foot valve strainer and/or metering tip.</li> <li>5. <b>Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube</b> – Cut approximately 1/2" off end of tube or replace tube.</li> <li>6. <b>Vacuum leak in chemical pick-up assembly</b> – Tighten the connection(s).</li> </ol> | <ol style="list-style-type: none"> <li>7. <b>Chemical to water ratio too high</b> – Install <b>smaller</b> metering tip.</li> <li>8. <b>Chemical to water ratio too low</b> – Install <b>larger</b> metering tip.</li> <li>9. <b>Water scale or chemical build-up may have formed in the injector body causing poor pick-up</b> – To descale, carefully remove body and soak <i>entire</i> injector body in descaling acid.</li> <li>10. <b>Injector inlet blocked</b> – Soak in hot water and/or clean inlet port; do <i>not</i> drill or gouge out port.</li> <li>11. <b>Chemical too thick</b> – Install 7/16" pickup tube (order Lafferty part #s 473306 and 150119).</li> <li>12. <b>Push lever not completely depressed</b> – Completely depress lever.</li> <li>13. <b>Push lever or backflow preventer failed</b> – Replace valve and/or backflow preventer.</li> </ol> |
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