

# SPEAKMAN SAFETY PRODUCTS

## Installation, Maintenance & Operation Instructions

### SEF-1800 EYESAVER® FAUCET

#### DESCRIPTION

The SEF-1800 Eyesaver® faucet combines a gooseneck faucet with an independently operated eyewash. The faucet features ¼ turn Speakman Ceramic Perfect® Valves while the eyewash offers twin aerated sprays and flip top dust covers.

#### SPECIFICATIONS

**OPERATION:** Eyewash and faucet operate independently of each other

**SUPPLY:** ½" male connections for hot and cold inlets

**WIDESPREAD VALVES:** Perfect® valves with 1/4 turn ceramic cartridges covered by a 25 year warranty

**FINISH:** Chrome plated brass

**FAUCET HANDLES:** Vandal-resistant 4" wrist handles with color-coded indexes

**EYEWASH ACTIVATION:** Pull handle with graphics

**EYEWASH SPRAYS:** Aerated sprays.

**FAUCET FLOW RATE:** Autoflo® device controls flow to 2.2 GPM/ 8.3 LPM

**EYEWASH FLOW RATE:** 2.6 GPM at 30 psi. flowing. See flow data chart for additional information.

**COUNTER THICKNESS:** Up to 2" thick

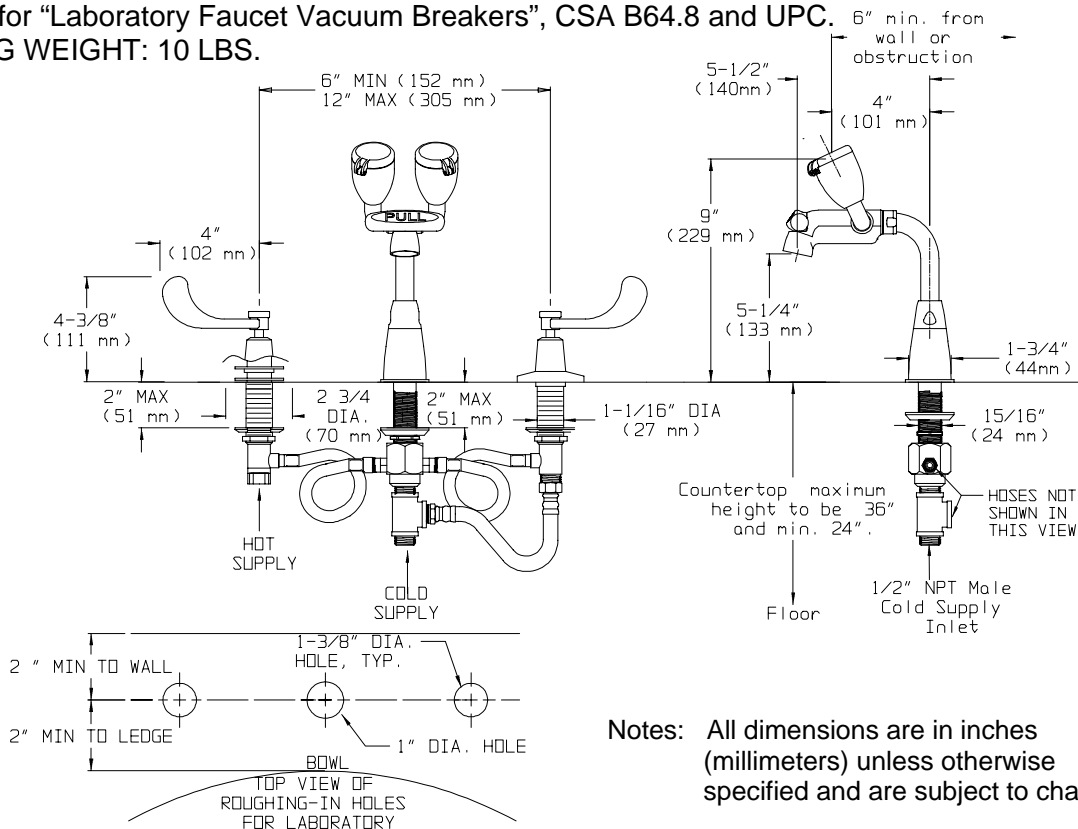
**CENTER DISTANCE:** Adjustable centers of 6" to 12"

**PRESSURE:** 30 psi. minimum flow pressure, 125 psi. maximum static pressure

**APPROVALS:** Meets ASME A112.18.1, ANSI Z358.1 and CSA B125-98

**VACUUM BREAKER (ST option):** Approved by ASSE, UPC and CSA. Meets the ANSI/ASSE 1035 standard for "Laboratory Faucet Vacuum Breakers", CSA B64.8 and UPC.

**SHIPPING WEIGHT:** 10 LBS.

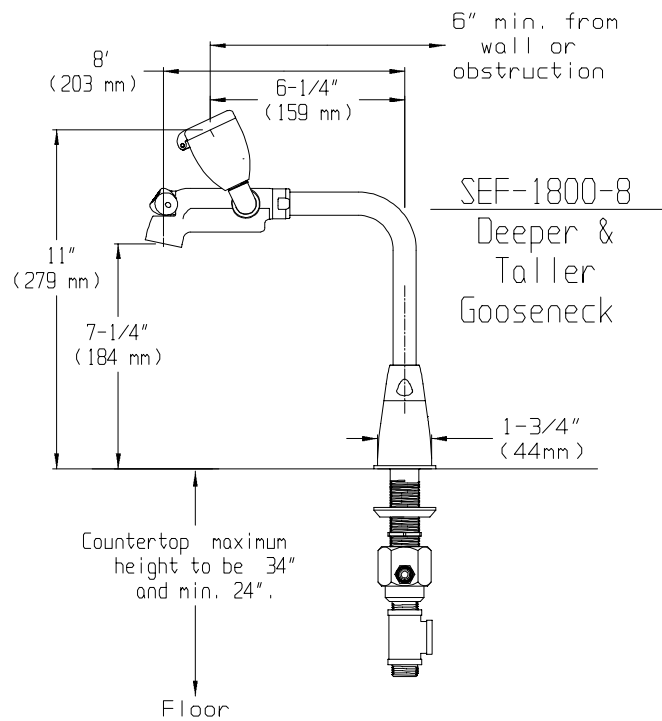
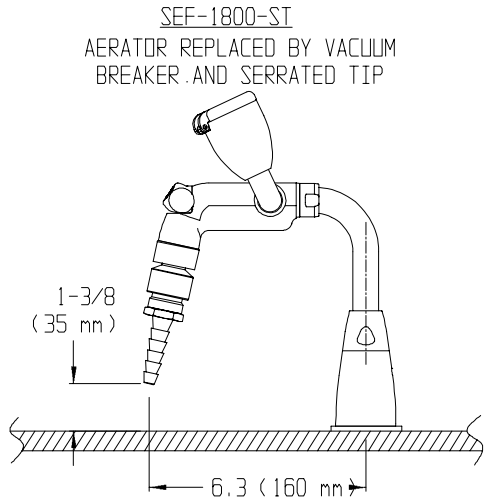


Notes: All dimensions are in inches (millimeters) unless otherwise specified and are subject to change.

**IMPORTANT:** The supply line for plumbed units shall provide an uninterrupted supply of flushing fluid at a minimum of 30 psi. of flow pressure. If shut off valve are installed in the supply line of the eyewash for maintenance purposes, provisions shall be made to prevent unauthorized shut off.

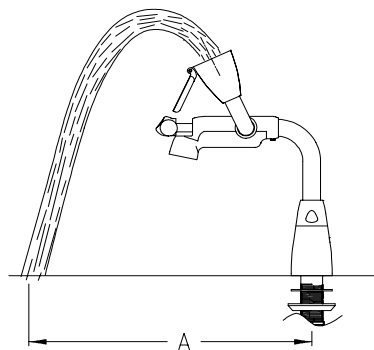
**OPTIONS**

◇ BOCA – Vandal-Resistant 0.5 gpm Flow Control	◇ 6WH – 6” Wrist Handles
◇ D75 – Diamond 75 Escutcheons	◇ LF – Laminar Flow Outlet 2.2gpm
◇ ST – Serrated Tip with Vacuum Breaker (see figure)	◇ 8 – 8” Gooseneck Depth (see figure)



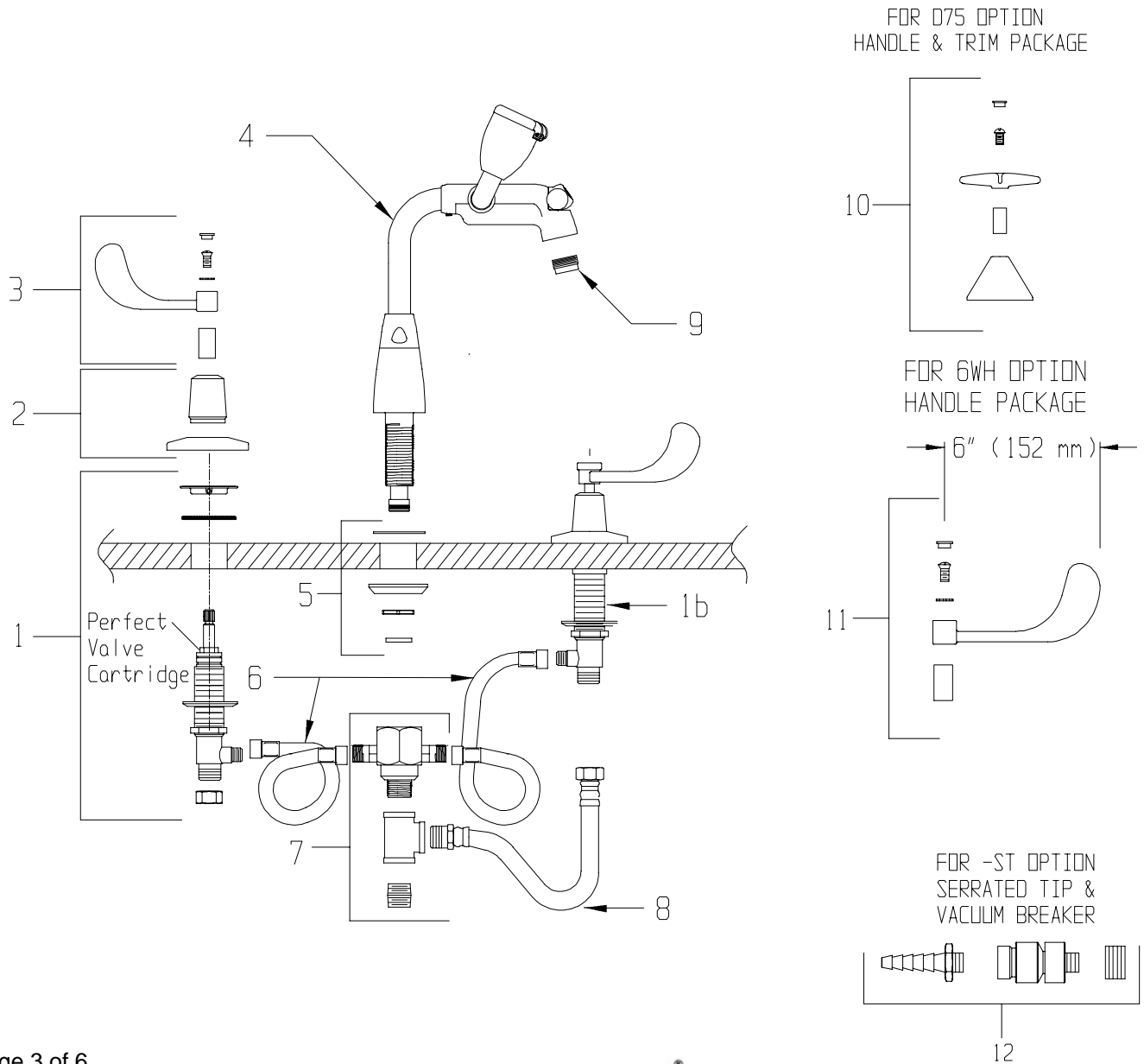
**FLOW DATA**

Flowing Pressure- (BAR)	psi.	30 (2.07)	40 (2.76)	50 (3.45)	60 (4.14)	70 (4.83)	80 (5.52)
Flow Rate- (LPM)	gpm	2.6 (9.8)	2.9 (11)	3.0 (11.4)	2.8 (10.6)	2.8 (10.6)	3.0 (11.4)
Distance Eyewash Plume, 'A' -	ins. (cm.)	13 (33.0)	14-1/2 (36.8)	15 (38.1)	15 (38.1)	15 (38.1)	16 (40.6)



**PACKING LIST**

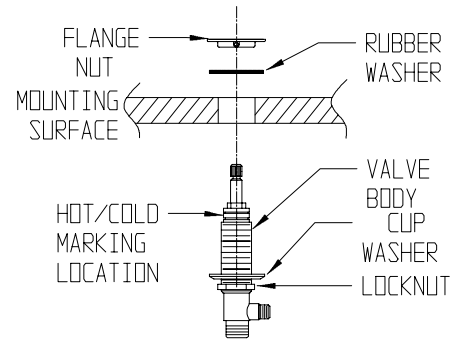
Item	Description	Qty.	Item	Description	Qty.
1	Valve Body Assembly, Hot side	1	9	Aerator	1
1b	Valve Body Assembly, Cold side	1	10	Handle and Trim package for – D75 option, (replaces item 2 & 3)	2
2	Trim Package	2	11	Handle package for – 6WH option, (replaces item 3)	2
3	Handle Package	2	12	Serrated Tip and Vacuum Breaker for –ST option, (replaces item 9)	1
4	Goosneck Assembly	1	13	.5 gpm aerator for – BOCA option, Item not shown (replaces item 9)	1
5	Washer Bag Group	1	14	Laminar flow outlet for – LF option, Item not shown (replaces item #9)	1
6	Valve Body Hose	2			
7	Adapter Tee Group	1			
8	½" Hose	1			



## **INSTALLATION**

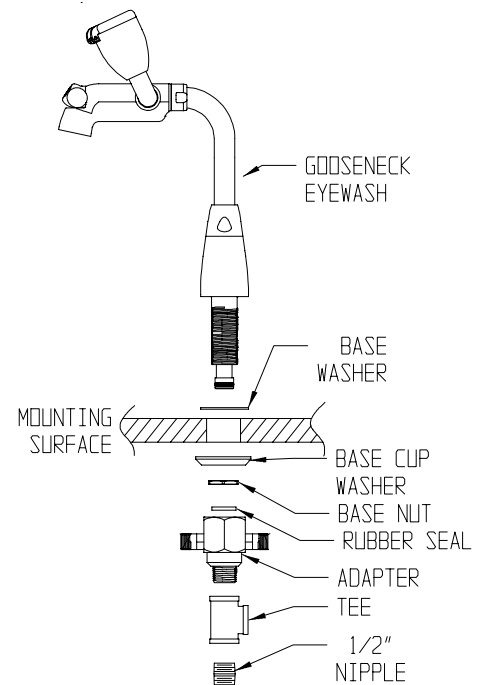
**Step 1: Valve Body Mounting-** The valve bodies are marked with red marker for the hot supply and blue marker for the cold supply.

- a. Screw locknuts down onto the valve body assemblies.
- b. Place the cup washers onto valve bodies.
- c. Working from below the sink, insert the valve body assemblies through holes in sink or countertop. From above sink, place rubber washers onto the valve bodies.
- d. Next, screw flange nuts onto valve bodies with flat side up, flush with top of valve bodies and tighten flange nut using the set-screw.
- e. From under sink, screw locknuts up hand tight. Position
- f. bodies so that outlets are accessible and wrench tighten locknuts
- g. while holding bodies in place.



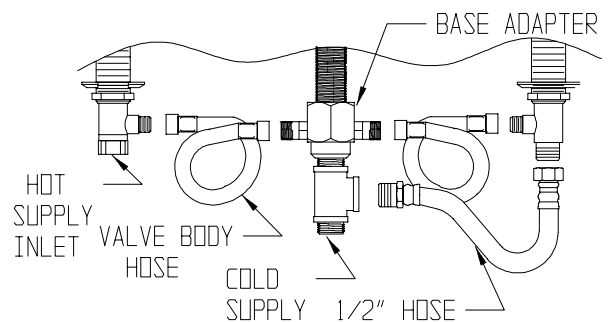
### **Step 2: Gooseneck Eyewash Mounting-**

- a. Slip the base washer onto the gooseneck eyewash and slip through the center hole of the sink or countertop.
- b. The gooseneck eyewash swivels through 200° of rotation. Position the base of the gooseneck eyewash so the setscrew hole in the base is pointing towards the back of the sink or countertop. Note- For rigid gooseneck, position the gooseneck and tighten the setscrew in the mounting base. From below the sink slip the cup washer onto the shank and use the nut to tighten the assembly down onto the sink or countertop.
- c. **Important-** Next insert the rubber seal into the adapter and screw the adapter onto the shank of the gooseneck eyewash until it bottoms out (Tape may be applied to the shank). If the adapter needs to be positioned for hose attachment, it can be backed off up to a maximum of 1 / 2 turn.
- d. Apply tape or sealant and connect the tee and nipple so that the tee outlets are accessible.



### **Step 3: Hose Connections-**

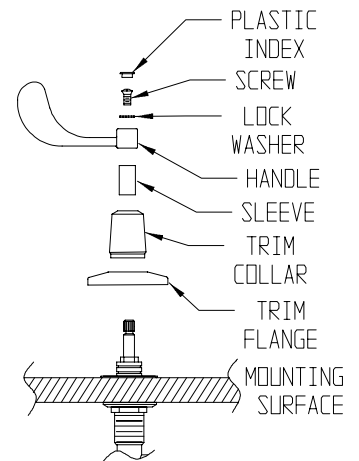
- a. Screw valve body hoses onto the side outlets of the valve bodies and tighten. Screw the other end of the hoses onto base adapter.
- b. Apply tape to the male end of the 1/2" hose and connect to the side port of the tee as shown. Attach the other end to the cold side valve body inlet and tighten.
- c. Connect the vertical inlet of the tee to the cold water inlet supply.
- d. Connect the hot water supply line to the inlet of the hot water valve body and tighten the



coupling nut.

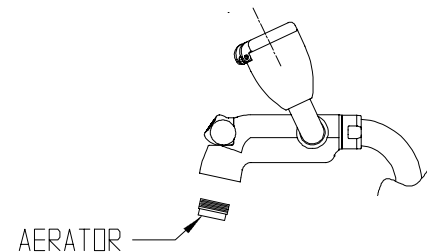
#### Step 4: Trim Package-

- From above sink, place the trim flange over the valve spindles.
- Screw trim collar onto the valve body and tighten. The flange should be secure at this point. If not, back off the flange nut that was assembled in step 1 and reassemble the trim.
- Slip sleeves onto valve spindles.
- Position the handles and secure using the lock washer and screw.
- Position the red index button on the handle for the hot water valve and press into place. Position the blue index button on the handle for the cold water valve and press into place.



#### Step 5: Unit Flushing-

- After the assembly is complete, turn the hot and cold water supplies on and check for leaks.
- Activate the faucet to flush both the hot and cold sides of fixture. Check all connections for leaks.
- Install the aerator into the faucet outlet.
- At this time activate faucet and then activate the eyewash by pulling the handle and assure proper spray formation and no leaks.

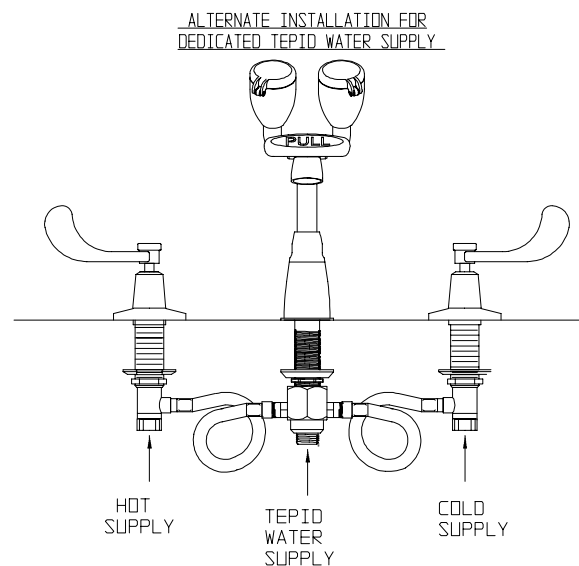


### ALTERNATE INSTALLATION FOR DEDICATED TEPID WATER SUPPLY

The unit is designed so the eyewash has a dedicated supply line. This allows the eyewash to have a tepid water supply. For this type of installation, follow the installation instructions but do not assemble the tee, nipple and 1/2" hose (Steps 2d, 3b and 3c). Attach the tepid water supply to the center adapter as shown in the figure and your cold water supply to the cold valve body.

ANSI Z358.1-1998 requires that the delivered flushing fluid temperature shall be tepid. Also, in circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature of each application.

**IMPORTANT:** The supply line for plumbed eyewash units shall provide an uninterrupted supply of flushing fluid at a minimum of 30 psi. of flow pressure. If shut off valve is installed in the supply line of the eyewash for maintenance purposes, provisions shall be made to prevent unauthorized shut off.



## **OPERATION**

Faucet-Simply rotate the handles to operate the lavatory faucet.

Eyewash- The eyewash is activated by pulling the handle out. Once the eyewash is activated, the eyewash caps will flip off and water will come out of the aerated spray heads. The eyewash will continually discharge water until the handle is manually pushed back into the off position.

The flow of the individual spray heads is controlled by built-in flow controls. Each spray assembly is tested and aligned in the factory.

## **TESTING PROGRAM**

ANSI Z358.1 requires that all emergency equipment shall be tested weekly to verify proper operation and inspected annually to assure conformance with ANSI Z358.1 - 1998 requirement.

## **MAINTENANCE (CARE and CLEANING)**

End body valves are washer-less and require no routine maintenance. The gleaming finish of your SPEAKMAN Eyesaver® faucet can be cleaned by using mild soap and warm water. Rinse thoroughly and dry immediately with a soft, clean cloth for best results.

## **REPAIR PARTS LISTING**

<b>Part or Group Number</b>	<b>Description</b>	<b>Refer to Packing List Figure</b>
RPG04-0316-PC	4" wrist handle group with screw and index buttons	Item 3
RPG10-0070-PC	Collar and flange	Item 2
RPG20-1895	End Body Assembly (red) with mounting hardware	Item 1 (hot supply)
RPG20-1894	End Body Assembly (blue) with mounting hardware	Item 1b (cold supply)
RPG05-0534	Perfect valve cartridge only (red)	Perfect valve cartridge (hot supply)
RPG05-0535	Perfect valve cartridge only (blue)	Perfect valve Cartridge (cold supply)
RPG38-0388	Yellow spray head and aerator repair parts assembly	Part of item 4
RPG49-0003	Repair parts for internal seals of the gooseneck eyewash	Not shown
G05-0724-PC	Faucet 2.2 gpm aerator	Item 9
RPG04-0366	Eyewash handle with yellow text and set screw	Part of item 4

# SPEAKMAN SAFETY PRODUCTS

## Replacement Instructions for seals on the SEF-1800 EYESAVER® FAUCET

To service the seals for your SEF-1800, determine the issue to be addressed. The figure below shows different areas and indicates which seal to replace if needed. **Shut off water supply** before beginning any work on the SEF-1800 unit.

Area	Eyewash Valve	Faucet Valve	Replace Seals	Disassembly Instructions
A	Off	Off	2c, 4	Follow Step 3 for seal 2c. Follow Step 4 for seal 4.
A	On	Off	2b	Follow Step 1
B	On	Off	2a	Follow Step 1 & Step 2
C	Off	On	2b	Follow Step 1
C	Off	Off	1	Follow Step 1
D	Off	On	3a	Follow Step 1
E	Off	On	3b	Follow Step 3
F	Off	On	5	Follow Step 3
G	Off	On	6	Follow Step 4

### Disassembly Instructions:

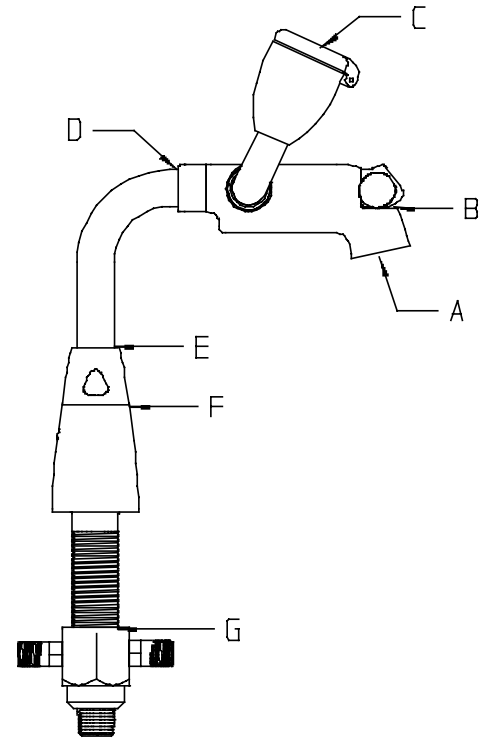
Step 1- While holding the body, back off the nut slightly and then unscrew the body all the way off. Replace the necessary seals. To reassemble, screw the body back on the tube until it cannot be screwed on any further. At this point, back off the body to position the spray heads vertical, then tighten the nut onto the body securing it in place.

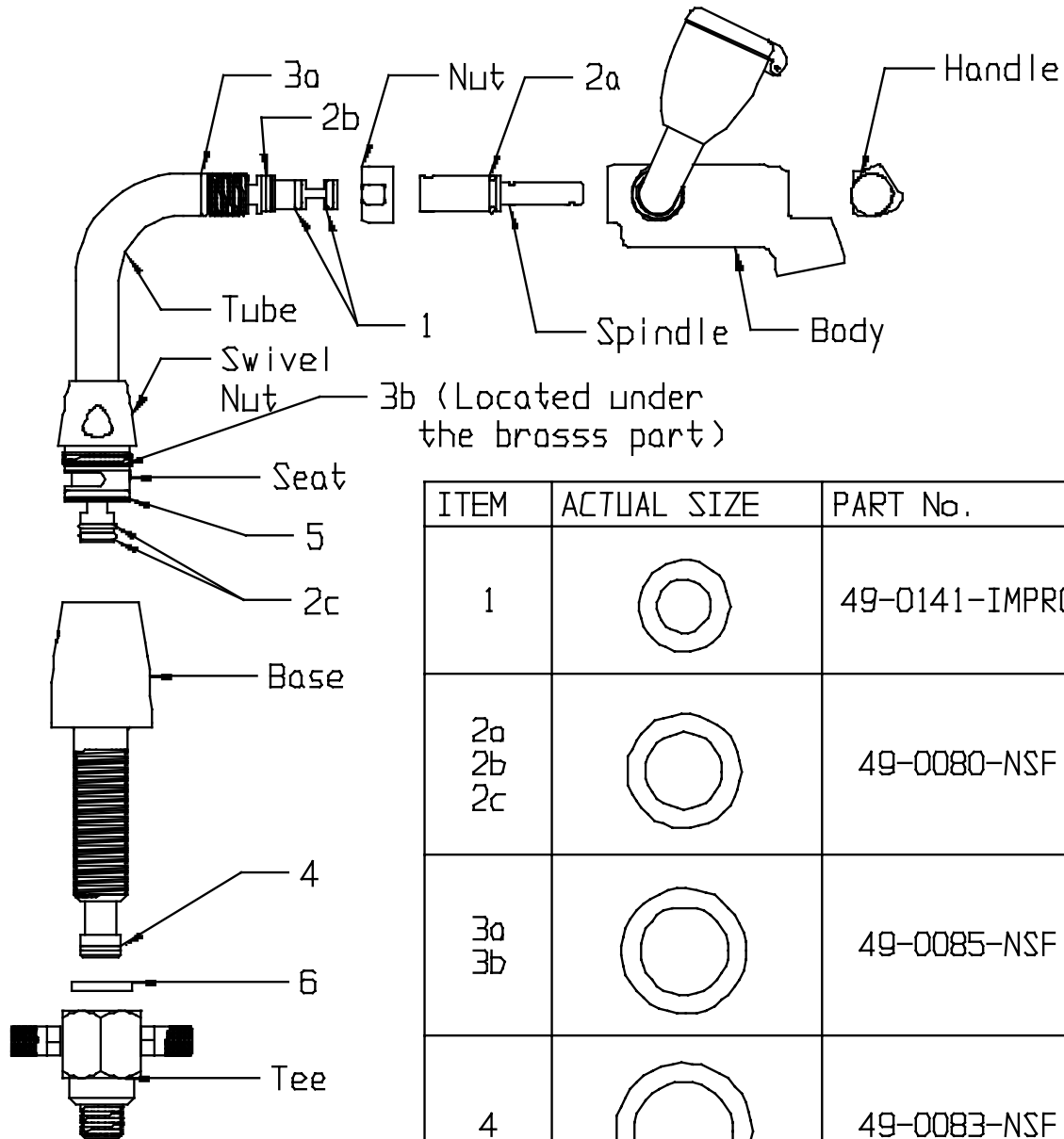
Step 2- To gain access to seal 2a, while the body is disassembled from Step 1, pull the handle out. This will expose a setscrew on the bottom. Remove the setscrew and push the spindle out. Replace the necessary o-ring. Put the spindle back in the body and attach the handle with the setscrew.

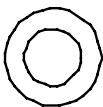
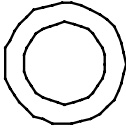
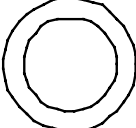
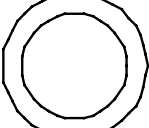
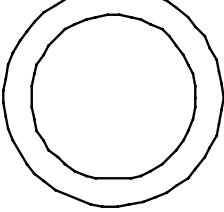
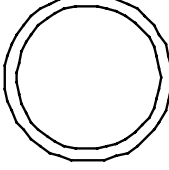
Step 3- Take the setscrew out of the back of the base. Unscrew the swivel nut and pull the tube out to get access to the seals. Replace the necessary seals. To reassemble, place the tube back into the base and screw down the swivel nut. Screw the setscrew into the back of the base. Do not tighten the setscrew. The tube should freely rotate.

Step 4- Disconnect any hoses to the tee. Unscrew the tee and replace any necessary seals. Screw the tee back on tight and connect the hoses.

After reassembly of the unit, with the valve in the off position, turn the water service back on and check for leaks. Verify proper operation of the eyewash and faucet.





ITEM	ACTUAL SIZE	PART No.	QTY.
1		49-0141-IMPRG	2
2a 2b 2c		49-0080-NSF	4
3a 3b		49-0085-NSF	2
4		49-0083-NSF	1
5		49-0157--NSF	1
6		45-0736	1



# **SPEAKMAN SAFETY PRODUCTS**

## **Installation Instructions**

### **SEF-TW**

#### **DESCRIPTION**

The SEF-TW is a thermostatic mixing valve kit for supplying tepid water to the Speakman SEF line of Eyewash – Faucets. The thermostatic mixing valve attaches directly to the SEF Eyewash-Faucet with no Additional plumbing required.

#### **SPECIFICATIONS**

THERMOSTATIC MIXING VALVE: Speakman SE-370

FINISH: Rough brass (Mixing Valve)

EYEWASH FLOW RATE: SEF-9000/9200- 2.2 GPM at 40 psi flowing  
SEF-1800- 2.5 GPM at 35 psi flowing.

PRESSURE REQUIREMENT: SEF-9000/9200 – 40 psi. flowing at the service sink fitting inlets (with the service sink fitting at full flow). SEF-1800- 35 psi flowing with the faucet at full flow.

SHIPPING WEIGHT: 11.2 LBS.

#### **INSTALLATION INSTRUCTIONS for SEF-9000/9200**

**IMPORTANT- AFTER INSTALLING SERVICE SINK FITTING, INSTALL THE THERMOSTATIC MIXING VALVE BEFORE INSTALLING THE EYEWASH UNIT. ON INSTALLATIONS THAT ALREADY HAVE THE EYEWASH UNIT INSTALLED, IT MAY BE NECESSARY TO RELOCATE IT, SO THAT THE MIXING VALVE CAN BE PROPERLY INSTALLED. USE THREAD SEALANT ON ALL PIPE THREAD CONNECTIONS.**

#### **Adding Mixing Valve To New SEF-9000/9000-FM Unit (SEF-9200/9200-FM):**

- a. If applicable, install the service sink fitting by using the installation instruction sheet located in the sink fitting box. Keep in mind that the thermostatic mixing valve will be mounted along side of the sink fitting.
- b. With the hot & cold supplies for the sink fitting turned off, remove both hot & cold stop spindles/nuts from the sink fitting, which are located on the bottom side of the sink fitting.
- c. Unbag the (2) housing assemblies. Remove the protective sleeve from one assembly and lubricate the housing o-ring with o-ring lube. Screw the assembly into the cold side stop location of the sink fitting (See Roughing-In). Tighten with a wrench. Repeat Step “b”, for the hot side. Assemble the (2) bushings to the housings and carefully tighten. At this time go to “**All Installations**” below.

#### **Adding Mixing Valve To Existing Installed SEF-9000 Unit (SEF-9200):**

- a. With the hot & cold supplies for the sink fitting turned off, remove the hot stop spindle/nut from the sink fitting, which is located on the bottom side of the sink fitting. Unscrew eyewash hose from the vacuum breaker on sink fitting. Remove vacuum breaker from the cold side housing. Note that this connection has been thread sealed.
- b. Unbag the housing assembly. Remove the protective sleeve from the assembly and lubricate the housing o-ring with o-ring lube. Screw the assembly into the hot side stop location of the sink fitting. Tighten with a wrench. Assemble the (2) bushings to the housings and carefully tighten. At this time go to “**All Installations**” below.

### Adding Mixing Valve To Existing Installed SEF-9000-FM Unit (SEF-9200-FM):

- a. With the hot & cold supplies for the sink fitting turned off, remove hot stop spindle/nut from the sink fitting, which are located on the bottom side of the sink fitting. Unscrew the eyewash hose from the cold housing on the sink fitting.
- b. Unbag the housing assembly. Remove the protective sleeve from the assembly and lubricate the housing o-ring with o-ring lube. Screw the assembly into the hot side stop location of the sink fitting. Tighten with a wrench. Assemble the bushing to the hot housing and carefully tighten. At this time go to “**All Installations**” below.

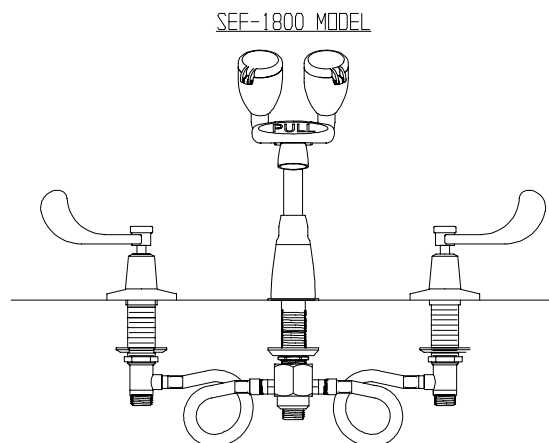
### All Installations:

- a. Assemble the nipples, tees, and plugs to the mixing valve hot & cold inlets (See Roughing-In). If eyewash unit has an in-line vacuum breaker, assemble it to the mixing valve outlet using the (2) reducing nipples on both side of the vacuum breaker. If eyewash unit does not have a vacuum breaker, assemble the pipe nipple to the mixing valve outlet. Tighten all of the connections.
- b. Mount the thermostatic mixing valve to the wall along side the sink fitting (See Roughing-In). Fasten valve to the wall using ½ pipe hangers with wall plates (not supplied). Connect the (2) supply hoses (male end) to the mixing valve tee inlets and wrench tighten. Connect the other end of the hoses (with fiber washer) to the sink fitting housings, making sure the hot is to hot & the cold is too cold. Wrench tighten.
- c. Screw the eyewash assembly hose onto the outlet of the mixing valve. Hand tighten, then wrench tighten ½ -1 turn. Place the eyewash valve assembly into the eyewash bracket (If applicable).  
NOTE- REFER TO THE SEPARATE IMO SHEET LOCATED IN THE MIXING VALVE BOX FOR ADJUSTMENT, TESTING, & MAINTENANCE INSTRUCTIONS.
- d. Go to **Step 3** of the SEF-9200/9200-FM Installation Instruction Sheet at this time, if applicable.

### INSTALLATION INSTRUCTION for SEF-1800 MODELS

#### Adding SEF-TW to Existing Installed SEF-1800 Models

- a. Turn off hot and cold supply water before starting any work.
- b. Disconnect the hot and cold supply lines from the unit.
- c. Remove the tee from the tepid water supply inlet which supplied the eyewash and the cold water valve.
- d. The unit should now look like the figure to the right.
- e. Go to ‘All Installation’ step.

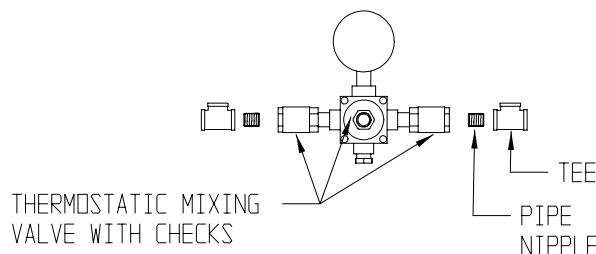


#### Adding SEF-TW to New Installation of SEF-1800 Models

- a. Follow the SEF-1800 product installation sheets for a ‘Dedicated Tepid Water Supply’ Installation.
- b. The unit should look like the figure above.
- c. Go to ‘All Installation’ step.

### All Installations:

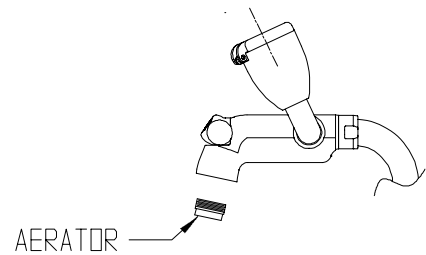
- a. Attach the tees and pipe nipples to the hot and cold inlet of the thermostatic mixing valve with checks. Use Teflon tape on all threaded connections



- b. See the installation and maintenance manual provided for the SE-370 Emergency Eye Wash Valve for the required installation recommendations. The drawing above provides the roughing in dimensions for mounting the unit. The valve should be mounted less than 18" from the sink surface. This allows enough clearance for the supply hoses to reach the inlets. Verify the supply hoses reach the connections before mounting the valve.
- c. Mount the thermostatic mixing valve to the wall and fasten the valve to the wall using ½ pipe hangers with wall plates (not supplied).
- d. Connect the (2) supply hoses (male end) to the mixing valve tee and wrench tighten. Connect the other end of the hoses (with fiber washer) to the widespread valve bodies, making sure the hot is to hot & the cold is too cold and wrench tighten.
- e. Connect the center outlet of the tepid water supply valve to the eyewash inlet using the hose from the existing SEF-1800 unit and wrench tight.
- f. Connect the hot and cold water supply lines to the tees on the tepid water supply valve.

**Unit Flushing:**

- a. After the assembly is complete, turn the hot and cold water supplies on and check for leaks.
- b. Activate the faucet to flush both the hot and cold sides of fixture. Check all connections for leaks.
- c. Install the aerator into the faucet outlet.
- d. At this time activate faucet and then activate the eyewash by pulling the handle and assure proper spray formation and no leaks.



**\*Adjusting the Tepid Water Supply Temperature:**

ANSI Z358.1-2004 requires that the delivered flushing fluid temperature shall be tepid. Also, in circumstances where chemical reaction is accelerated by flushing fluid temperature, a medical advisor should be consulted for the optimum temperature of each application. Refer to the IMO sheet located in the thermostatic mixing valve box for adjustment, testing and maintenance instructions to adjust the valve to the proper temperature.

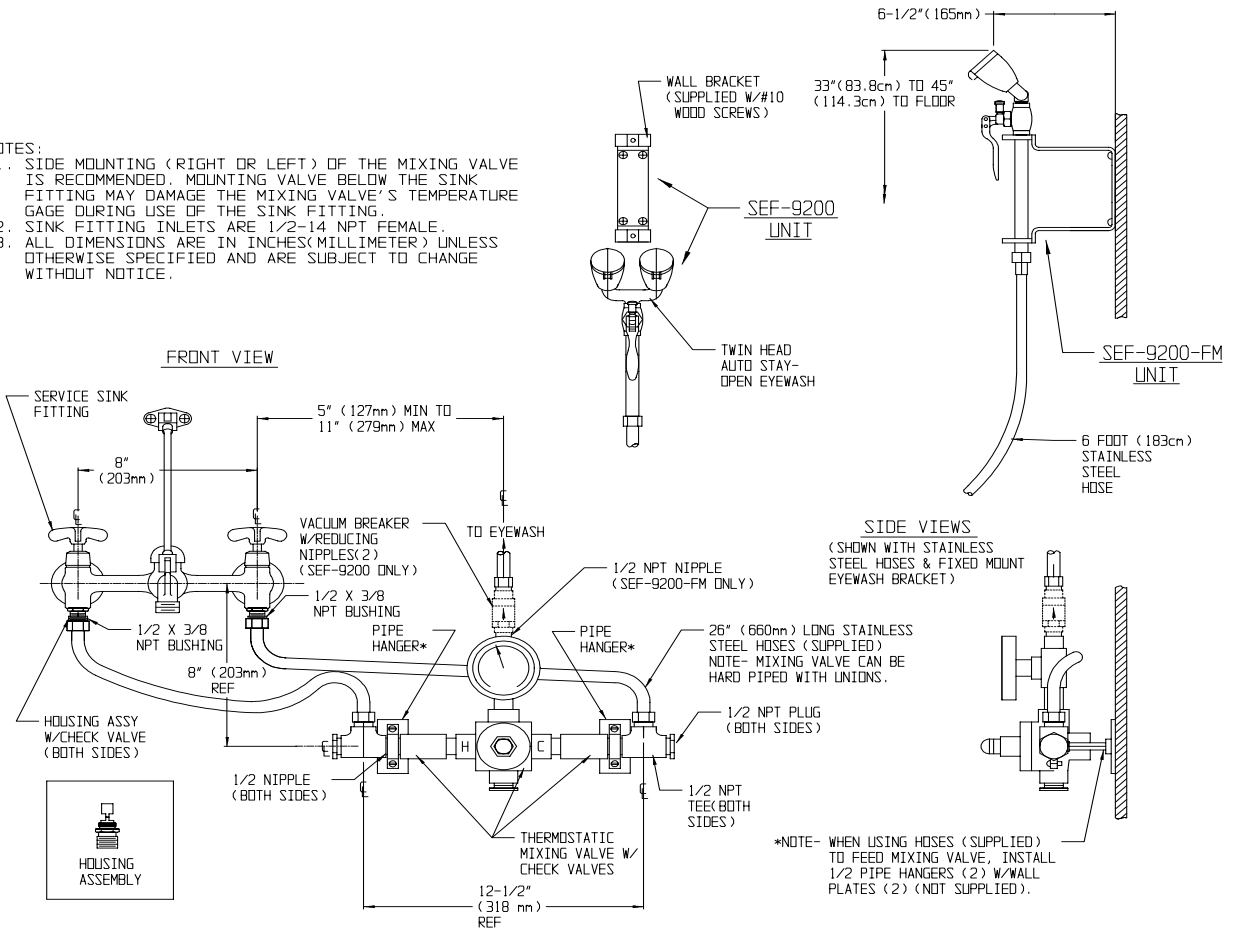
**Testing Program:**

ANSI Z358.1 requires that all emergency equipment shall be tested weekly to verify proper operation and inspected annually to assure conformance with ANSI Z358.1 - 2004 requirement.

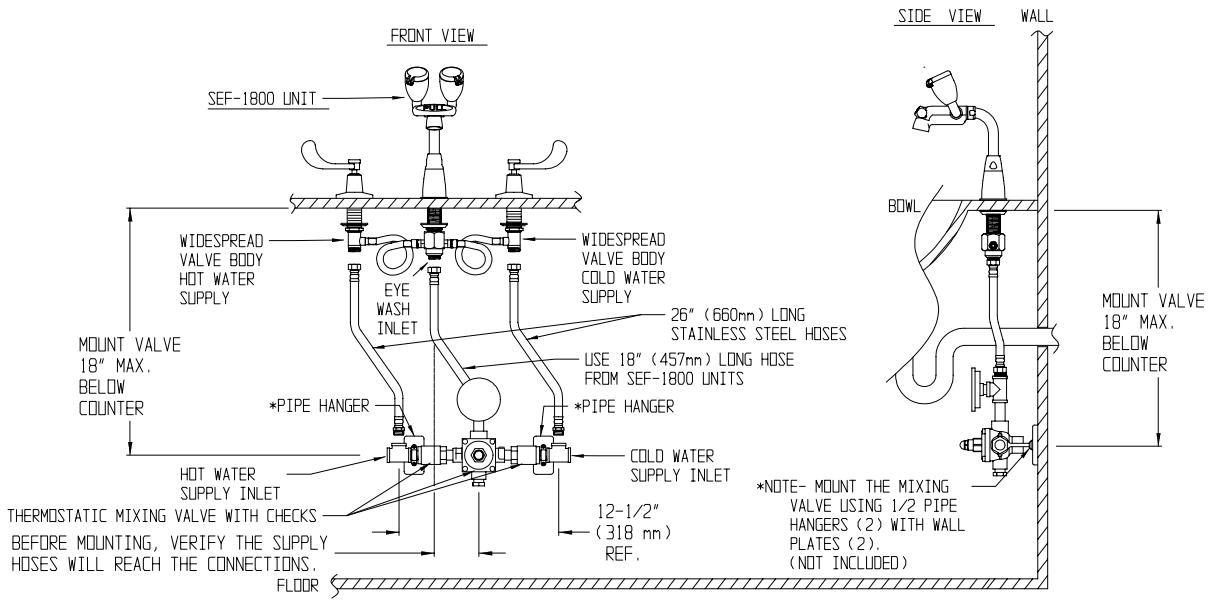
**ROUGHING-IN for SEF-9000/9200 with SEF-TW**

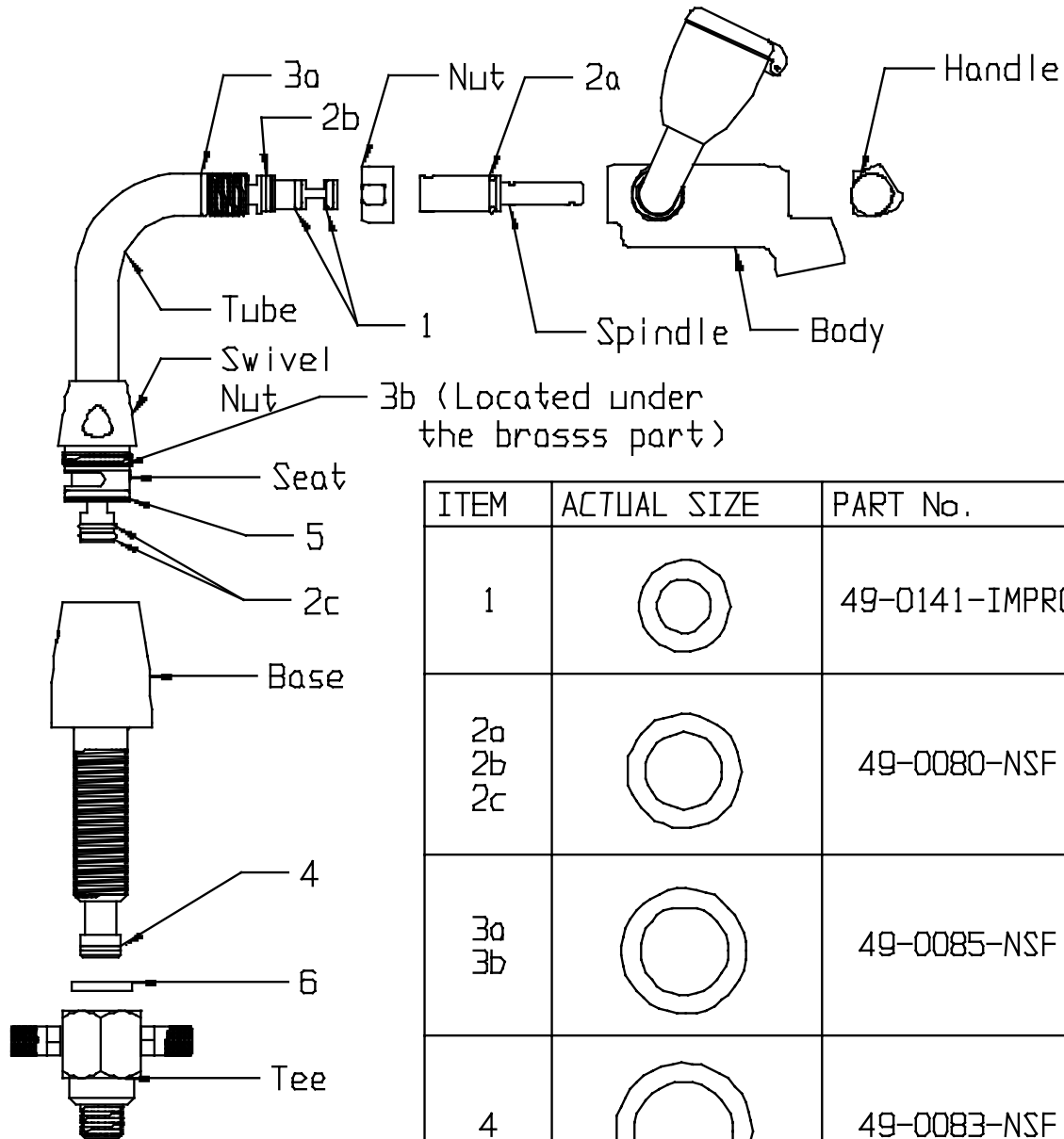
**NOTES:**

1. SIDE MOUNTING (RIGHT OR LEFT) OF THE MIXING VALVE IS RECOMMENDED. MOUNTING VALVE BELOW THE SINK FITTING MAY DAMAGE THE MIXING VALVE'S TEMPERATURE GAGE DURING USE OF THE SINK FITTING.
2. SINK FITTING INLETS ARE 1/2-14 NPT FEMALE.
3. ALL DIMENSIONS ARE IN INCHES (MILLIMETER) UNLESS OTHERWISE SPECIFIED AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.



**ROUGHING-IN for SEF-1800 with SEF-TW**





ITEM	ACTUAL SIZE	PART No.	QTY.
1		49-0141-IMPRG	2
2a 2b 2c		49-0080-NSF	4
3a 3b		49-0085-NSF	2
4		49-0083-NSF	1
5		49-0157--NSF	1
6		45-0736	1