

# **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.

SEF-18XY - 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 and SEF-18XY - 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.**

**NOTE- SEE THE SEF-9000/9200 ROUGHING-IN DIAGRAM ON PAGE 4 FOR ADDITIONAL DETAILS**

#### **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 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).

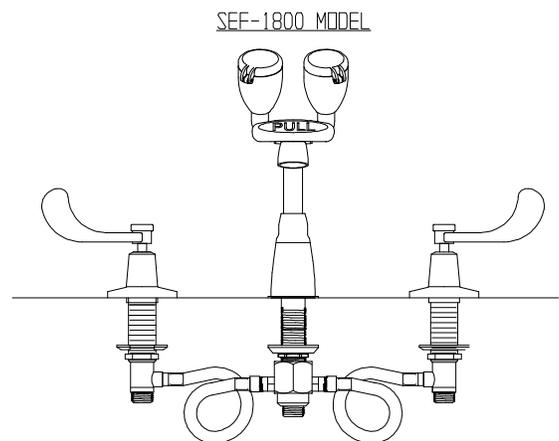
**NOTE-** REFER TO THE SEPARATE IMO SHEET LOCATED IN THE MIXING VALVE BOX FOR ADJUSTMENT, TESTING, & MAINTENANCE INSTRUCTIONS.

- 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.

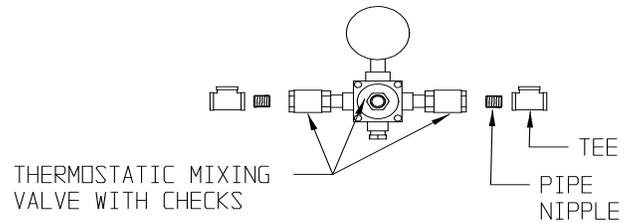


#### **Adding SEF-TW to New Installation of SEF-1800 Models**

- 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.

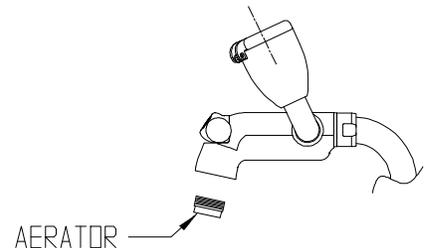
### **All Installations:**

- 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.

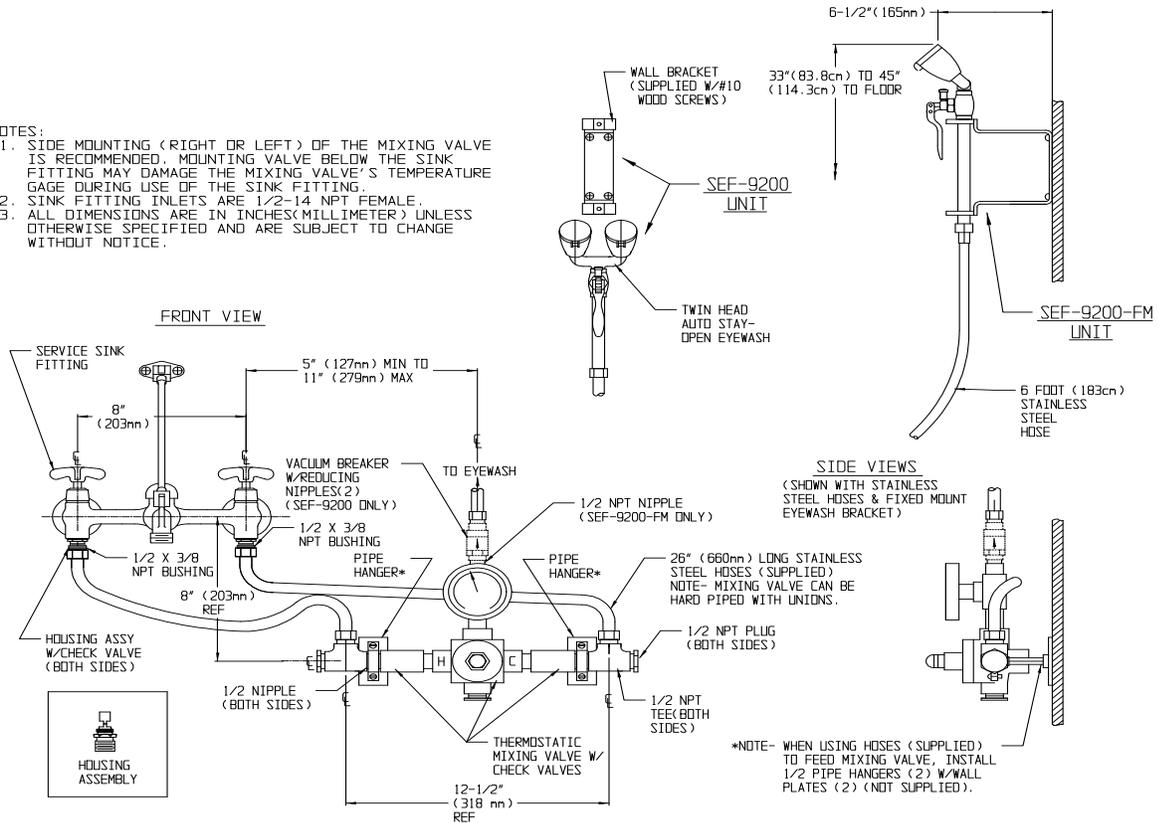
### **Testing Program:**

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.

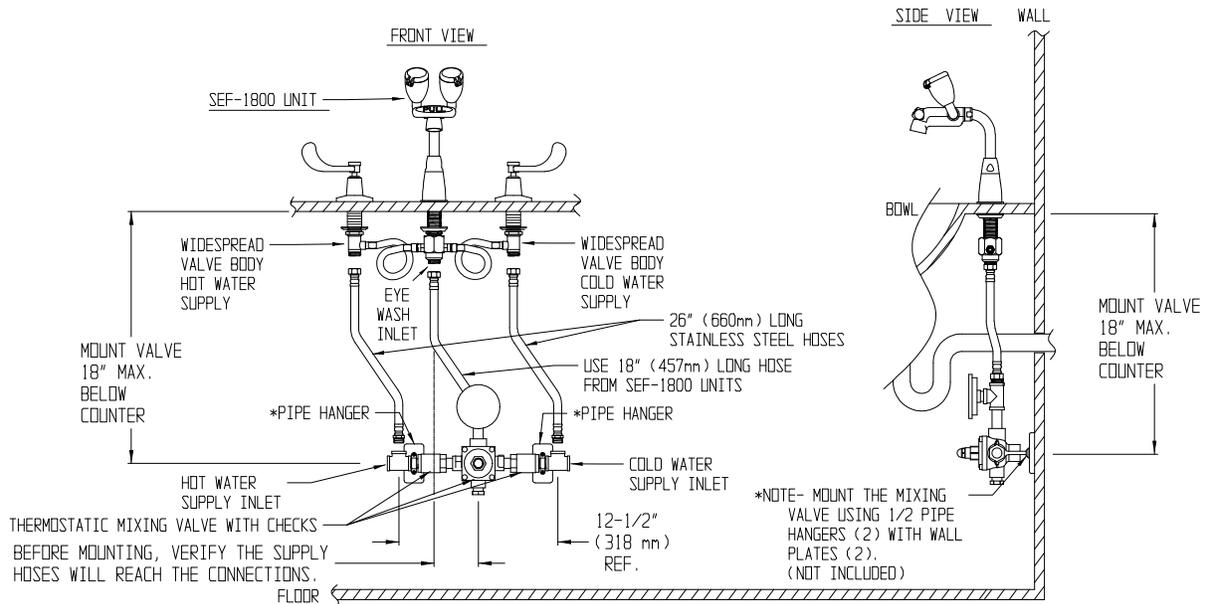
## ROUGHING-IN for SEF-9000/9200 with SEF-TW

**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

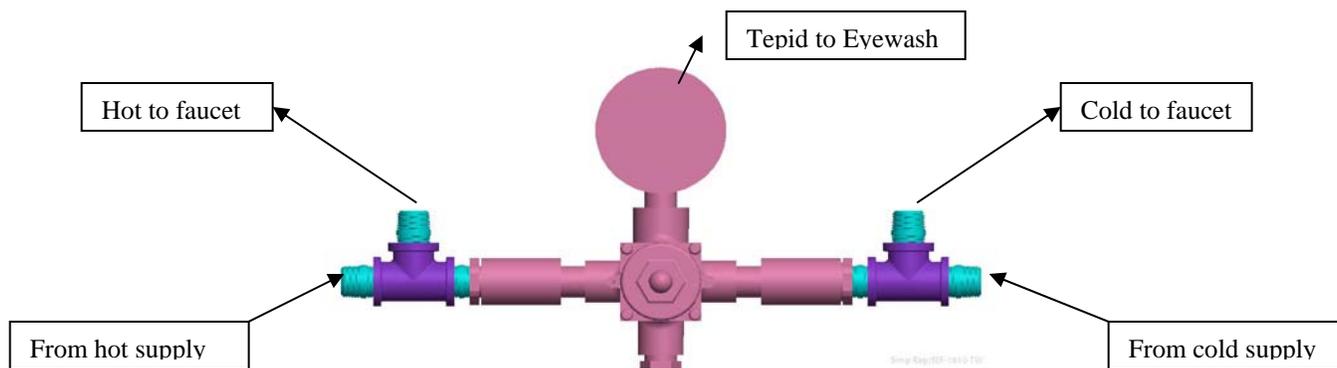


### Adding SEF-TW to New or Existing Installed SEF-18XY Units with Electronic Sensorflow:

- a. With the hot & cold supplies for the sink fitting turned off, remove hot and cold hoses for water supply from the stop spindle/nut from the sink fitting, which are located on the bottom side of the sink fitting. Unscrew the eyewash hose from the Central Inlet of Eyewash Faucet.
- c. 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.

### INSTALLATION INSTRUCTION for SEF-TW on SEF-18XY

The unit is designed so the eyewash has a dedicated supply line. This allows the eyewash to have a tepid water supply, set with a Thermostatic Mixing Valve (-TW). Weight is 11.2 lbs and Flow rate is 2.5Gpm at min.35psi. For this type of installation, follow the installation instructions below:



#### **Installation:**

- g. Attach the (2) TEEs and (6) brass pipe nipples to the hot and cold inlet of the thermostatic mixing valve with checks. Use Teflon tape on all threaded connections.
- h. See the installation and maintenance manual provided for the SE-370 Emergency Eye Wash Valve for the required installation recommendations. 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.
- i. Mount the thermostatic mixing valve to the wall and fasten the valve to the wall using 1/2" pipe hangers with wall plates (not supplied).
- j. Connect the (2) supply (hot-cold) hoses (3/8"compression x 1/2"NPS) to the mixing valve TEE and using wrench tighten. Connect the other end of the hoses (with fiber washer) to the water supplies, making sure the hot is to hot & the cold is too cold and wrench tighten.
- k. Connect the other branches of the 2 TEEs to the rest of the faucet with (2) hoses (3/8"compress x 1/2"NPS)
- l. Connect the center outlet of the tepid water supply valve directly to the eyewash inlet (don't use any TEE there) but use the hose (1/2"-14 NPT x 1/2"-14 NPSM).

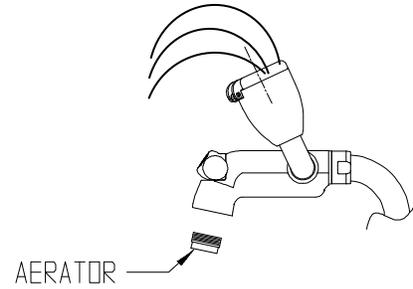
**NOTE: Refer to the separate IMO sheet located in the Valve Box for adjustment, testing and maintenance.**

ANSI Z358.1 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.

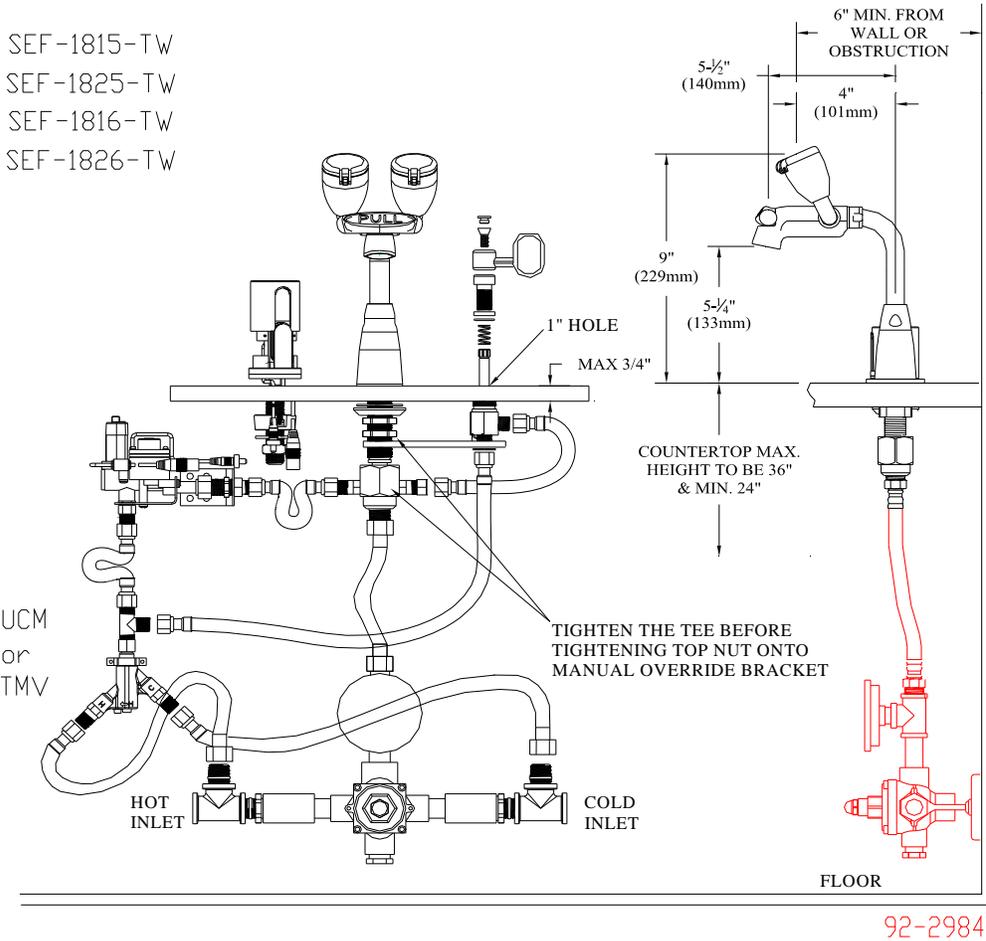
**IMPORTANT:** The supply lines shall provide an uninterrupted flushing fluid at a minimum of 30 psi. of flow. If shut off valve is installed in the supply line for maintenance purposes, provisions shall be made to prevent shut off.

**Unit Flushing:**

- a. After the assembly is complete, turn on the hot and cold water supplies and check for leaks.
- b. Check all connections for leaks.
- c. Activate the faucet and then activate the eyewash by pulling the handle and assure proper spray formation and no leaks.
- d. Adjust the tepid water temperature for the eye spray



**All series SEF-18XY-TW -have added the (SEF-TW kit for tepid eyewash ) to the basic model SEF-18XY**



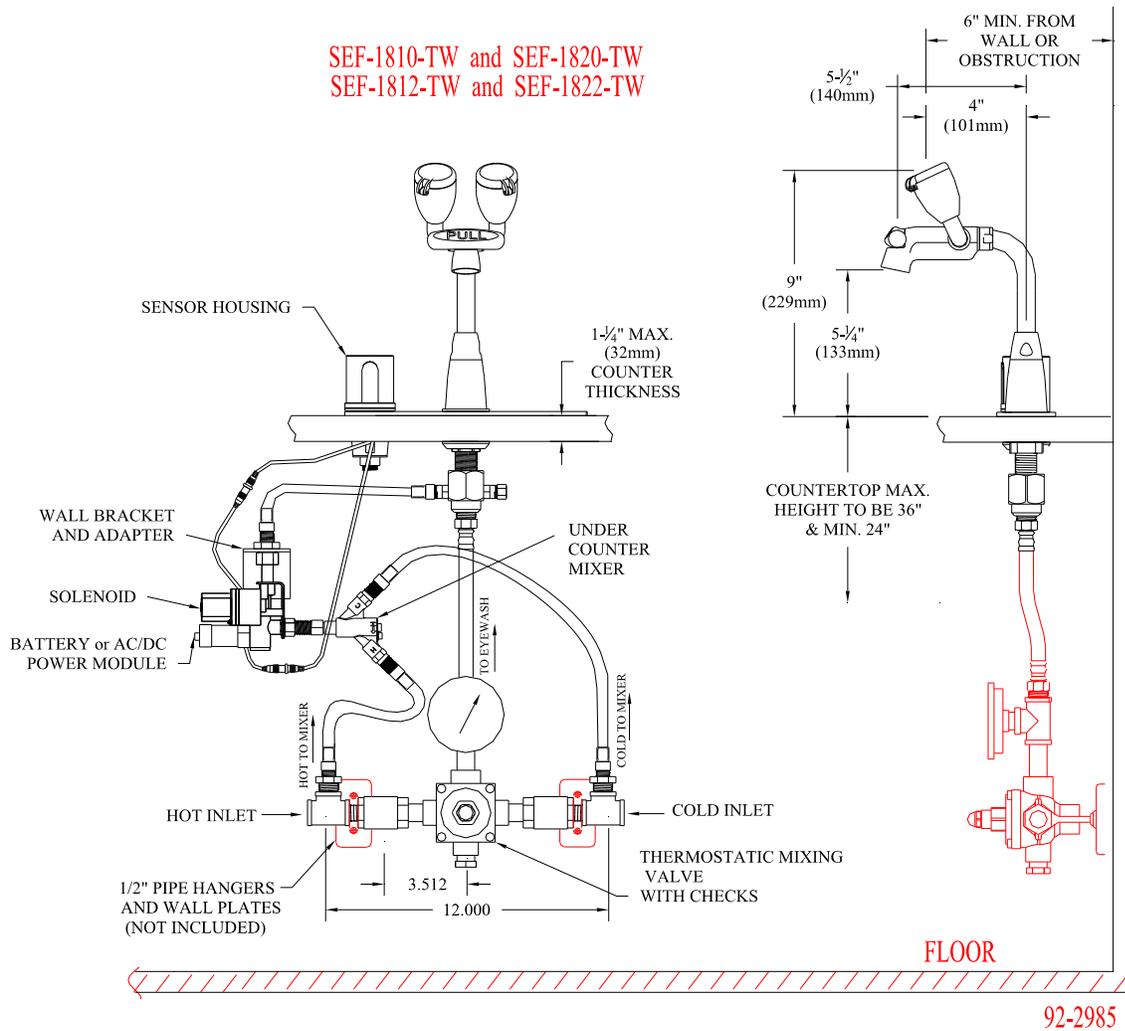
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**SEF-1815-TW** -8” Sensorflow, eyewash faucet, **UCM, MO**, battery and Thermostatic Valve for Eyewash  
**SEF-1825-TW** -8” Sensorflow, eyewash faucet, **UCM, MO**, AC/DC and Thermostatic Valve for Eyewash

**SEF-1816-TW** -8” Sensorflow, eyewash faucet, **TMV, MO**, battery and Thermostatic Valve for Eyewash  
**SEF-1826-TW** -8” Sensorflow, eyewash faucet, **TMV, MO**, AC/DC and Thermostatic Valve for Eyewash

**Rough In**

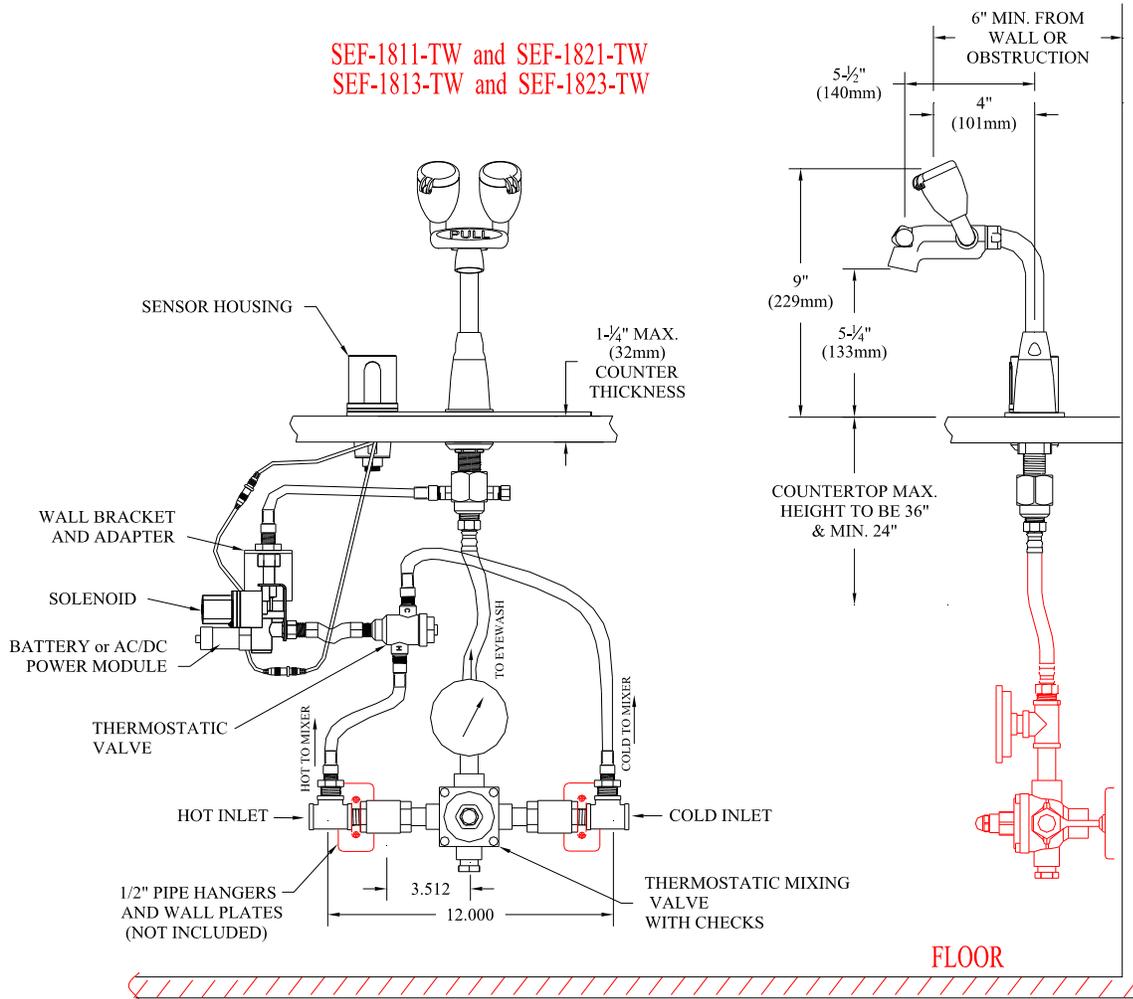
SEF-1810-TW and SEF-1820-TW  
SEF-1812-TW and SEF-1822-TW



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<b>SEF-1810-TW</b>	-4" Sensorflow, eyewash faucet, <b>UCM</b> , battery and Thermostatic Valve for Eyewash
<b>SEF-1820-TW</b>	-4" Sensorflow, eyewash faucet, <b>UCM</b> , AC/DC and Thermostatic Valve for Eyewash
<b>SEF-1812-TW</b>	-8" Sensorflow, eyewash faucet, <b>UCM</b> , battery and Thermostatic Valve for Eyewash
<b>SEF-1822-TW</b>	-8" Sensorflow, eyewash faucet, <b>UCM</b> , AC/DC and Thermostatic Valve for Eyewash

SEF-1811-TW and SEF-1821-TW  
SEF-1813-TW and SEF-1823-TW



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- |                    |   |
|--------------------|---|
| <b>SEF-1811-TW</b> | -4" Sensorflow, eyewash faucet, <b>TMV</b> , battery and Thermostatic Valve for Eyewash |
| <b>SEF-1821-TW</b> | -4" Sensorflow, eyewash faucet, <b>TMV</b> , AC/DC and Thermostatic Valve for Eyewash   |
| <b>SEF-1813-TW</b> | -8" Sensorflow, eyewash faucet, <b>TMV</b> , battery and Thermostatic Valve for Eyewash |
| <b>SEF-1823-TW</b> | -8" Sensorflow, eyewash faucet, <b>TMV</b> , AC/DC and Thermostatic Valve for Eyewash   |

