



# SS-PAM surfashower<sup>®</sup>

## PRESSURE ACTUATED MIXER

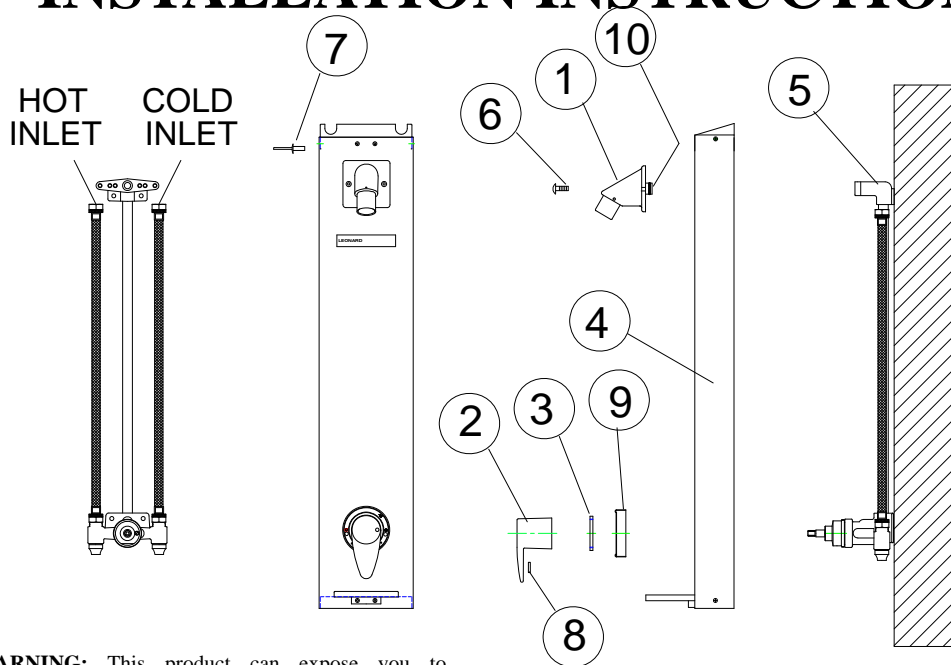
Serial No. PGS0001 and higher

1/2" top inlets



1016

# INSTALLATION INSTRUCTIONS



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.Ca.gov](http://www.P65Warnings.Ca.gov)

1. Remove item (6), 2- #1/4-20 X 3/4" long allen screws from showerhead, and remove.
2. Loosen pointer screw, (8) remove pointer (2), surfashower flange nut (3), surfashower flange (9).
3. Remove stainless steel cover (4).
4. Mount valve and piping assemble (5) directly to wall at desired height, using the integrally cast mounting fittings. See page 2 for drilling dimensions.
5. The inlets are clearly marked on mixing valve. Connect hot water flex hose to the inlet marked "H" and the cold water flex hose to the inlet marked "C". After connections are made, flush pipes thoroughly to remove dirt and excess materials.
6. Replace cover, and reassemble in reverse order. Adding loctite #242 to handle screw if required.
  - a) Note: when re-installing be sure not to cut o'ring (10) (TM-25-6B), when installing into showerhead bracket.
7. Pop rivets (7) for end caps

**REMEMBER!! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS, (SEE MAINTENANCE GUIDE AND RECORD MGR-1000).**

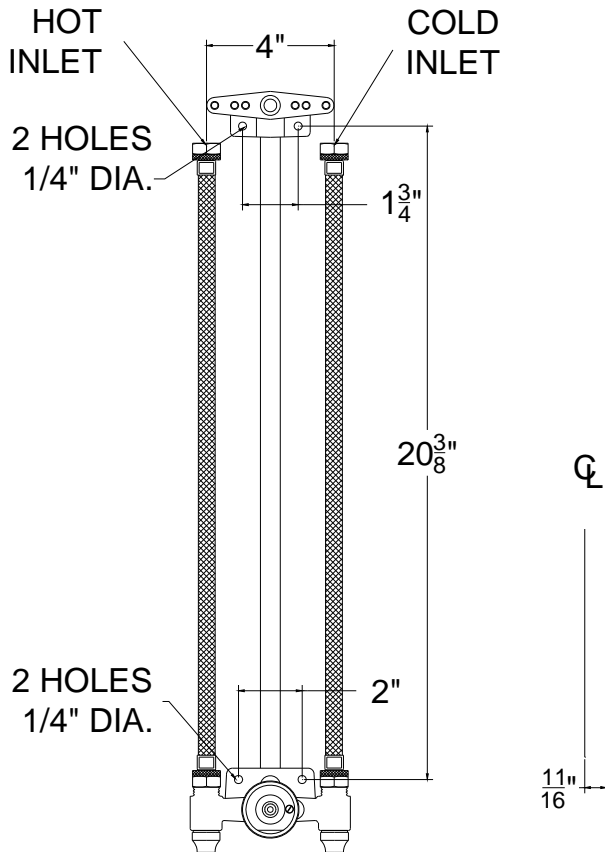
1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: [info@leonardvalve.com](mailto:info@leonardvalve.com)

Web Site: <http://www.leonardvalve.com>

## Standard Unit Mounting Dimensions



### OPERATION

The PAM-II a pressure-actuated water, mixing valve which will compensate for changes in the pressure of hot and cold supplies. The easy to read dial with directional indicators help to eliminate confusion as to where the handle should be located for a particular temperature. Turn the handle counter-clockwise from the "OFF" position through the BLUE (or COLD) area on the dial plate, the shower is on and temperature is cold. As the handle enters the RED (or HOT) area, shower temperature becomes progressively WARMER until the high temperature limit is reached in the full "HOT" position. To turn OFF, move handle back in clockwise direction to the "OFF" position.

### WARNING

**WARNING! THIS MIXING VALVE IS EQUIPPED WITH AN ADJUSTABLE HIGH TEMPERATURE LIMIT STOP FACTORY SET AT APPROXIMATELY 110°F (43°) WITH AN INCOMING WATER SUPPLY TEMPERATURE OF 135°F (57°C). IF INCOMING HOT WATER ON THE JOB IS HIGHER THAN 135°F, THE VALVE WHEN TURNED TO FULL HOT MAY DELIVER WATER IN EXCESS OF 110°F, AND THE HIGH TEMPERATURE LIMIT STOP MUST BE RESET BY THE INSTALLER. (SEE REVERSE)**

**HOT WATER IN EXCESS OF 110°F IS DANGEROUS AND MAY CAUSE SCAULDING!!**

## SERVICING INSTRUCTIONS

	SYMPTOM:	KIT REQUIRED:	PARTS INCLUDED:
PACKINGS & O'RINGS	<ol style="list-style-type: none"> <li>1. Leak at handle.</li> <li>2. Valve will not shut off completely.</li> <li>3. Valve is difficult to pull apart.</li> <li>4. Leak at stop screw.</li> </ol>	Kit 1/ST/N	PV-2, PV-4B, PV-8-1, LVC-16B, 1358, 1356, PV-16 (2)
CONTROL ROD GROUP	<ol style="list-style-type: none"> <li>5. Valve delivers either all hot or all cold water, or will not mix consistently.</li> </ol>	Kit R/67	1358, PV-CR-2, PV-3, PV-16 (2) (also PV-45 if 1/4" hex tool not available).
INSERTED SEAT	<ol style="list-style-type: none"> <li>6. After replacing packings and O-rings, valve will not shut off completely.</li> </ol>	NA	PV-3, PV-16 (2)
CHECKSTOPS, STOPS	<ol style="list-style-type: none"> <li>7. Supplies cannot be shut off completely.</li> <li>8. Leak at checkstop (or stop) bonnet or stem.</li> </ol>	4/LVC	SEE DWG # 5, 6, or 7 ABOVE FOR REPAIR KITS

# INSTRUCTIONS FOR CLEANING AND SERVICING

## TO CLEAN PAM-II AFTER OPERATION

- Loosen pointer set screw, remove pointer (6105) flange nut (23139) and flange (23136) (see DWG 1).
- Turn off hot and cold supply at checkstops .
- Temporarily place pointer on spline and turn LEFT to maximum "HOT" position. Unscrew cover and remove complete interior assembly (See Dwg. 3).
- If valve will not shut off, replace PV-8-1 upper packing, PV-2 lower packing and inspect upper and lower valve seats in PV-3 sleeve (SEE Dwg. 4).
- If valve will not mix properly, piston in PV-CR-2 control rod group may be sticking due to foreign matter (See Dwg. 4).
  - Tap knurled end of control rod against a solid object to free piston or...
  - Remove PV-2 lower packing and screw and tap piston loose with a small drift pin.
  - Submerge lower end of PV-CR-2 in a non-corrosive cleaning solution and flush with clean water.

**NOTE: WHEN ORDERING ANY PART, PROVIDE SERIAL NUMBER STAMPED ON DIAL PLATE (SEE DWG. 1).**

**NOTE:** Before reinserting assembly in valve (with cover gasket) make sure pointer has been turned LEFT to the maximum "HOT" position.

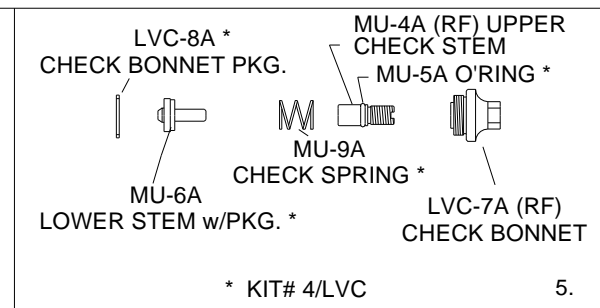
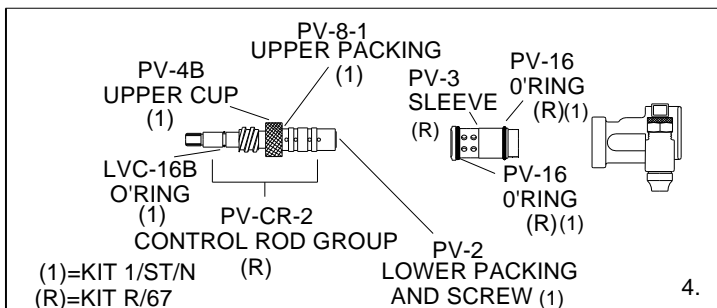
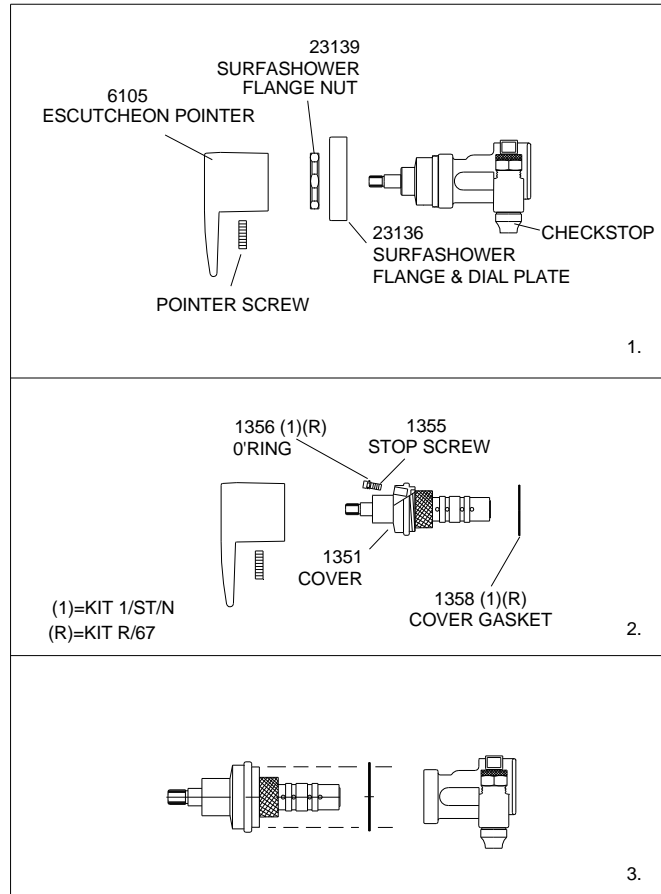
### WARNING

**WARNING! THIS MIXING VALVE IS EQUIPED WITH AN ADJUSTABLE HIGH TEMPERATURE LIMIT STOP FACTORY SET AT APPROXIMATELY 110°F (43°) WITH AN INCOMING WATER SUPPLY TEMPERATURE OF 135°F (57°C). IF INCOMING HOT WATER ON THE JOB IS HIGHER THAN 135°F, THE VALVE WHEN TURNED TO FULL HOT MAY DELIVER WATER IN EXCESS OF 110°F, AND THE HIGH TEMPERATURE LIMIT STOP MUST BE RESET BY THE INSTALLER.**

### TO RESET HIGH TEMPERATURE LIMIT STOP (DWG 2):

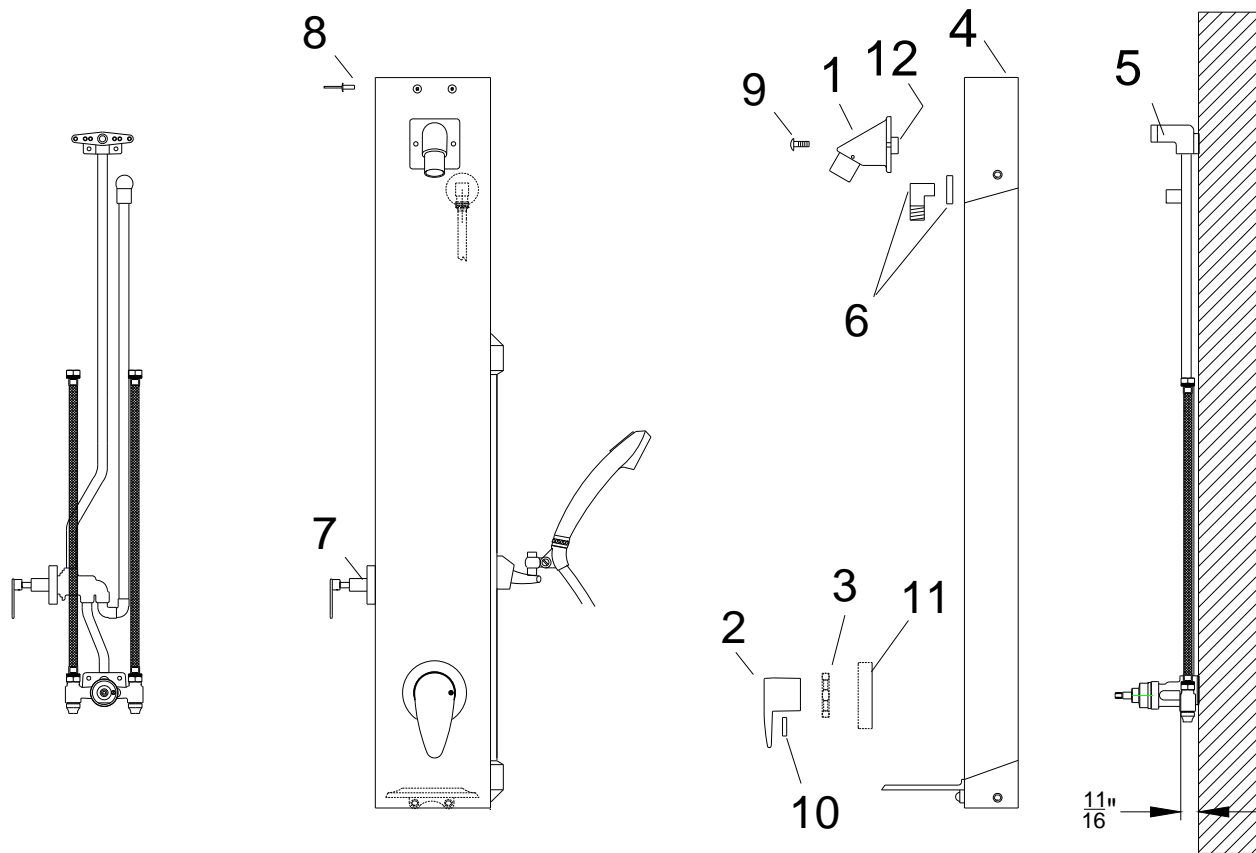
- Remove pointer (6105). Loosen Stop Screw but do NOT remove.
- Replace pointer on spline and turn to the left or right until the valve is delivering the highest temperature OF 110°F OR LOWER, then remove pointer.
- Tighten (1354) Stop Screw. On the cover.
- Reinstall pointer so that it's pointing to the extreme HOT position.

**IMPORTANT! TEST THE NEW HIGH TEMPERATURE SETTING BY HOLDING A THERMOMETER UNDER THE FLOW OF WATER TO BE CERTAIN IT IS AS DESIRED. HOT WATER IN EXCESS OF 110°F IS DANGEROUS AND MAY CAUSE SCALDING.**



**REMEMBER!!! THIS IS A CONTROL DEVICE WHICH MUST BE CLEANED AND MAINTAINED ON A REGULAR BASIS, (SEE MAINTENANCE GUIDE AND RECORD MGR-1000)**

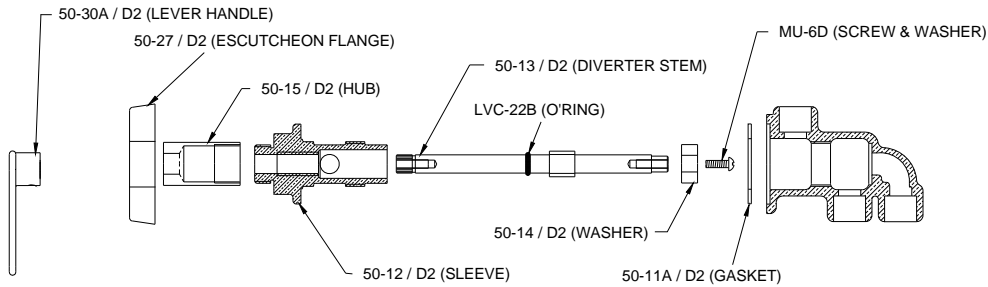
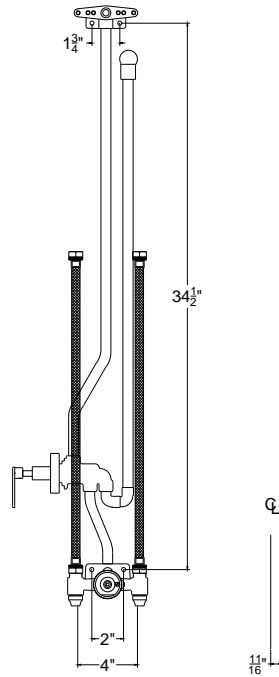
# INSTRUCTIONS FOR HANDICAPPED UNITS



## MOUNTING INSTRUCTIONS

1. Remove item (9), 2-#1/4-20 X 3/4" long allen screws from showerhead, and remove.
2. Loosen pointer screw (10), and remove pointer (2), surfashower flange nut (3), surfashower flange (11).
3. Loosen item (7) diverter, escutcheon flange and diverter hub. (See diagram on page 5)
4. Remove hand spray unit and hand shower elbow item (6).
5. Remove stainless steel cover (4).
6. Mount valve and piping assembly (5) directly to wall at desired height, (**Check Local codes**), using the integrally cast mounting fittings. See page 5 for drilling dimensions.
7. The inlets are clearly marked on mixing valve. Connect hot water to the inlet marked "H" and the cold water to the inlet marked "C". Use solder flux sparingly. After connections are made, flush pipes thoroughly to remove dirt and excess materials.
8. Replace cover, and reassemble in reverse order. Add loctite #242 to handle screw if required.
  - a. Note: when re-installing showerhead be sure not to cut o'ring (12) TM-25-6B when re-installing, to showerhead bracket.
9. Pop Rivets for end caps, item (8)

# Handicapped Unit Mounting Dimensions



## LIMITED WARRANTY

Leonard Valve Company (hereinafter, "Leonard") warrants the original purchaser that products manufactured by Leonard will be free from defects in material or workmanship under normal conditions of use, when properly installed and maintained in accordance with Leonard's instructions, for a period of one year from the date of shipment. During this period, Leonard will at its option repair or replace any product, or part thereof, which shall be returned, freight prepaid, to the Leonard factory and determined by Leonard to be defective in materials or workmanship. Leonard provides no warranty, express or implied, which extends beyond the description contained herein. LEONARD SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Nonetheless, some jurisdictions may not allow the disclaimer of certain implied warranties, in which case Leonard hereby limits such implied warranties to the duration of the limited warranty period contained herein. Some jurisdictions may not allow limitations on how long an implied warranty lasts, so the foregoing durational limitation may not apply to you. In no event will Leonard be liable for labor or incidental or consequential damages. Any alteration or improper installation or use of this product will void this limited warranty. If any provision of this limited warranty is prohibited by law in the applicable jurisdiction, such provision shall be null and void, but the remainder of this limited warranty shall continue in full force and effect.

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