

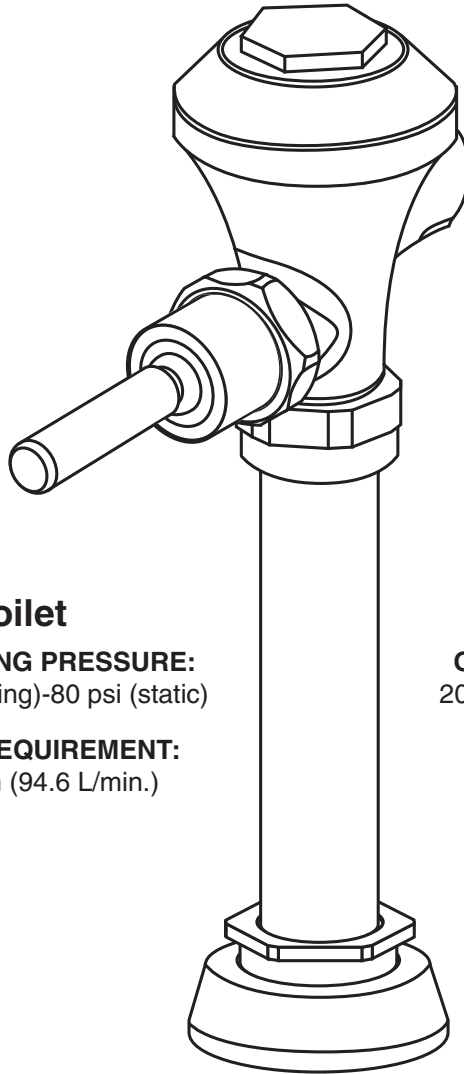
# Installation Instructions

## Ultima™ Manual Flush Valve Diaphragm-Type

MODEL NUMBERS

6147 Series

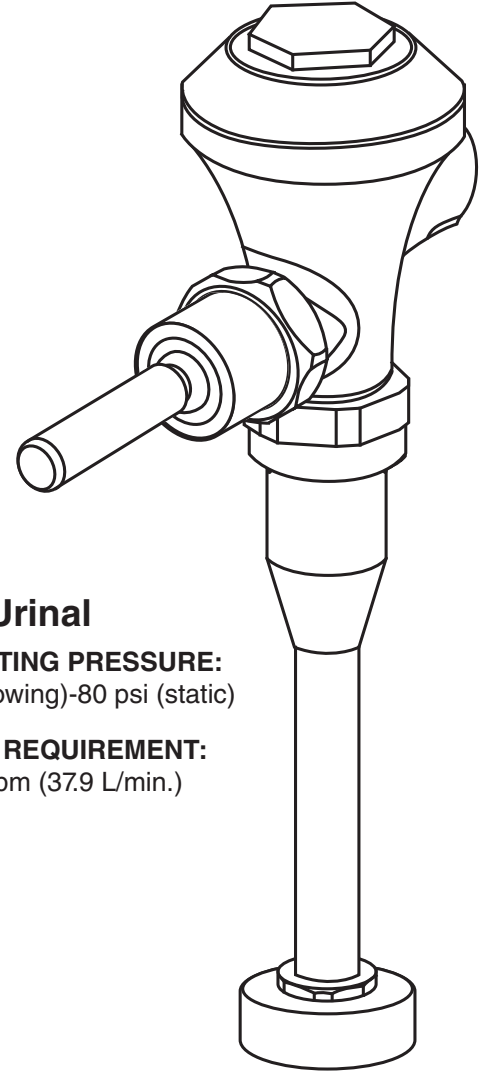
6145 Series



### Toilet

**OPERATING PRESSURE:**  
25 psi (flowing)-80 psi (static)

**FLOW REQUIREMENT:**  
25 gpm (94.6 L/min.)



### Urinal

**OPERATING PRESSURE:**  
20 psi (flowing)-80 psi (static)

**FLOW REQUIREMENT:**  
10 gpm (37.9 L/min.)

**Certified to comply with:**

- ASSE 1037
- ANSI/ASME A112.19.2
- ADA Compliant

*American Standard*

**NOTE TO INSTALLER: Please give this manual to the customer after installation.**

To learn more about American Standard Selectronic® Products visit our website at: [www.americanstandard-us.com](http://www.americanstandard-us.com)  
or e-mail us at: [CRTTEAM@lixilamericas.com](mailto:CRTTEAM@lixilamericas.com)

For Parts, Service, Warranty or other Assistance,  
please call (844) CRT-TEAM / (844) 278-8326 (In Canada: 1-800-387-0369)  
(In Toronto Area only: 1-905-306-1093)

*American Standard*  
**CRT**  
Certified Response Technician

Thank you for selecting American-Standard...the benchmark of fine quality for over 100 years. To ensure that your installation proceeds smoothly--please read these instructions carefully before you begin.

## UNPACKING

All American Standard Products Are Water Tested At Our Factory. Some Residual Water May Remain In The Valve During Shipping

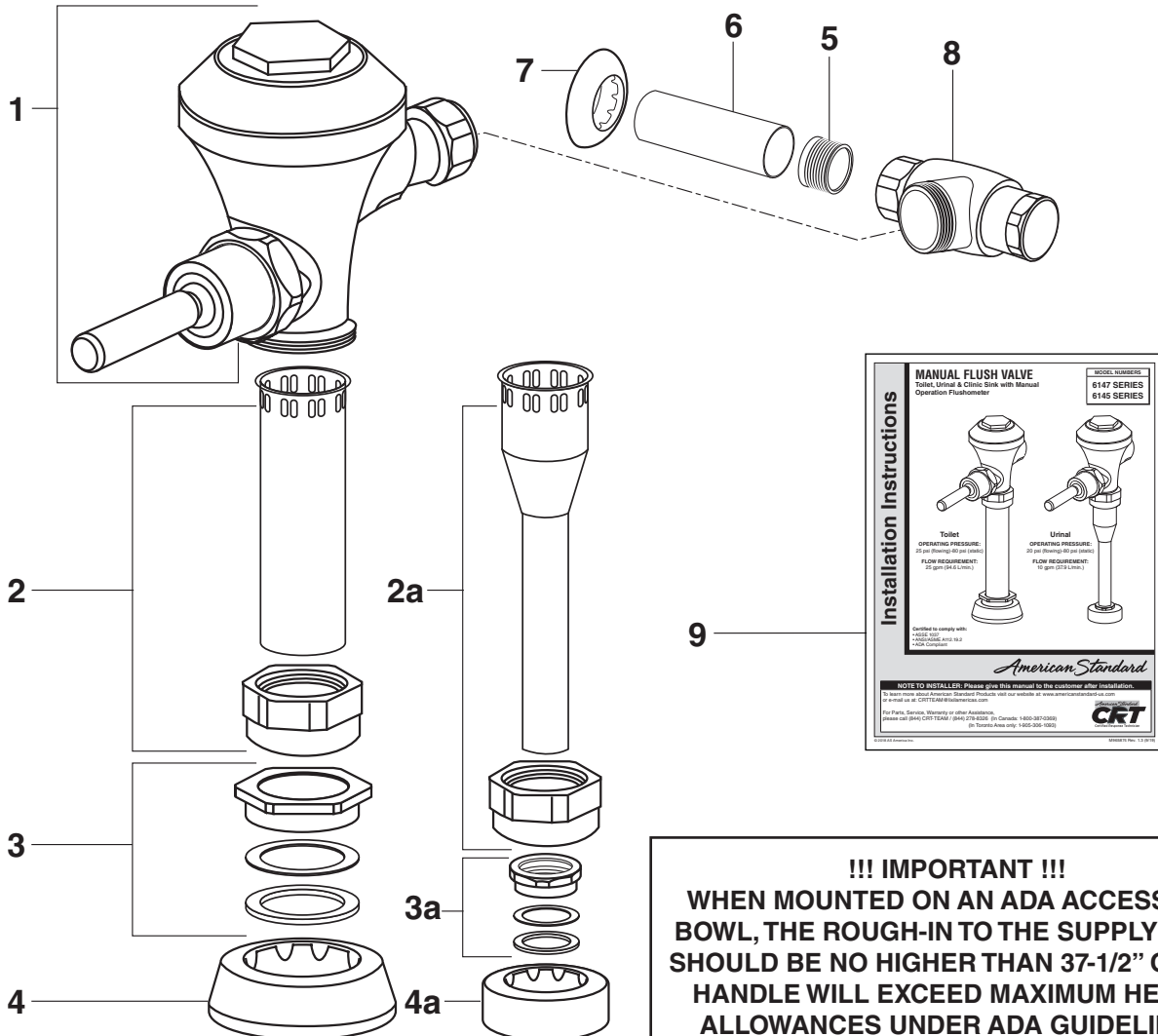
Remove the Flush Valve items from the carton. The illustration below shows all items after they have been removed from the carton. Some items may be packaged partially assembled to other items.

- |  |                             |
|--|-----------------------------|
| 1. Flush Valve Assembly                      | 5. Sweat Solder Adapter     |
| 2. Vacuum Breaker Assembly for Toilet        | 6. Cover Tube               |
| 2a. Vacuum Breaker Assembly for Urinal       | 7. Wall Escutcheon          |
| 3. Spud Coupling Nut and Washers for Toilet  | 8. Supply Stop              |
| 3a. Spud Coupling Nut and Washers for Urinal | 9. Installation Instruction |
| 4. Spud Flange for Toilet                    |                             |
| 4a. Spud Flange for Urinal                   |                             |

### CARE INSTRUCTIONS:

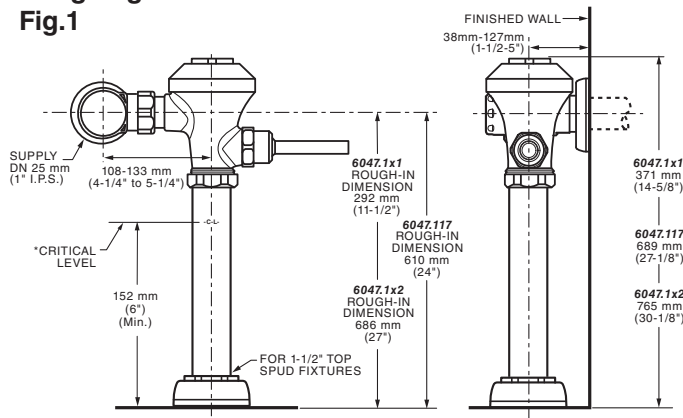
DO: CLEAN WITH CLEAR WATER. DRY WITH A SOFT COTTON FLANNEL CLOTH.

DO NOT: DO NOT CLEAN THE PRODUCT WITH SOAPS, ACID, POLISH, ABRASIVES, HARSH CLEANERS, OR A CLOTH WITH A COARSE SURFACE.



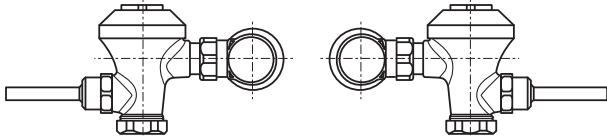
**!!! IMPORTANT !!!**  
**WHEN MOUNTED ON AN ADA ACCESSIBLE BOWL, THE ROUGH-IN TO THE SUPPLY INLET SHOULD BE NO HIGHER THAN 37-1/2" OR THE HANDLE WILL EXCEED MAXIMUM HEIGHT ALLOWANCES UNDER ADA GUIDELINES.**

## Roughing-in Dimensions Fig.1

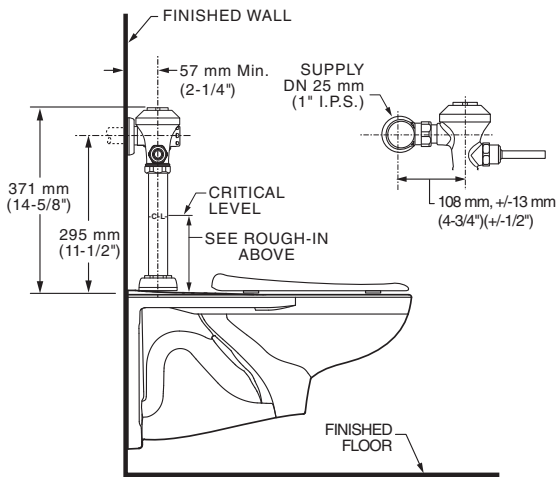


\*Note: The Critical Line (-C-L) on Vacuum Breaker must typically be 6" (152mm) minimum above fixture. Consult Codes for details.

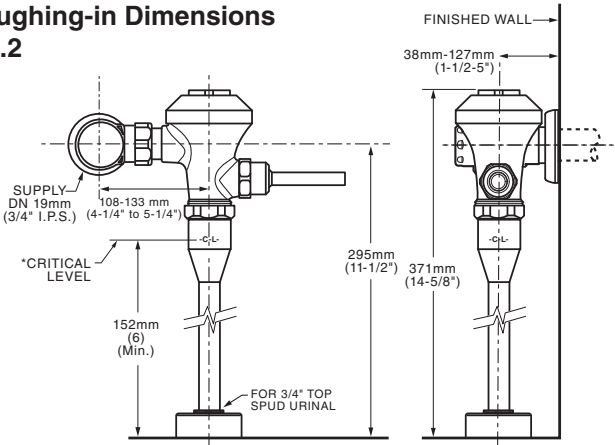
### Right or Left Hand Installation



### TYPICAL WATER CLOSET INSTALLATION: AFWALL™ TOILET SHOWN

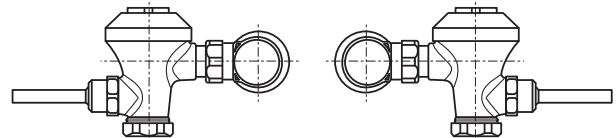


## Roughing-in Dimensions Fig.2

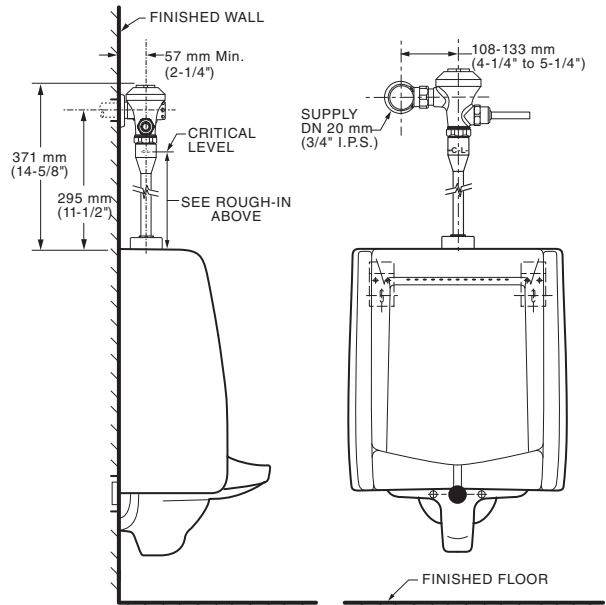


\*Note: The Critical Line (-C-L) on Vacuum Breaker must typically be 6" (152mm) minimum above fixture. Consult Codes for details.

### Right or Left Hand Installation

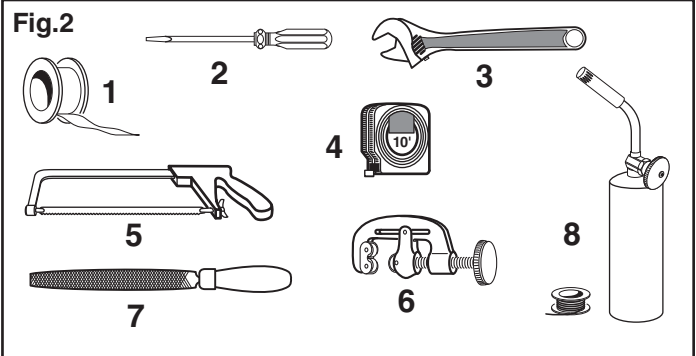


### TYPICAL URINAL INSTALLATION: WASHBROOK URINAL SHOWN



## RECOMMENDED TOOLS; Fig. 2

1. Teflon Tape
2. Flat Blade Screwdriver (For adjusting Supply Stop)
3. Adjustable Wrench
4. Tape Measure
5. Hacksaw
6. Tubing Cutter
7. File

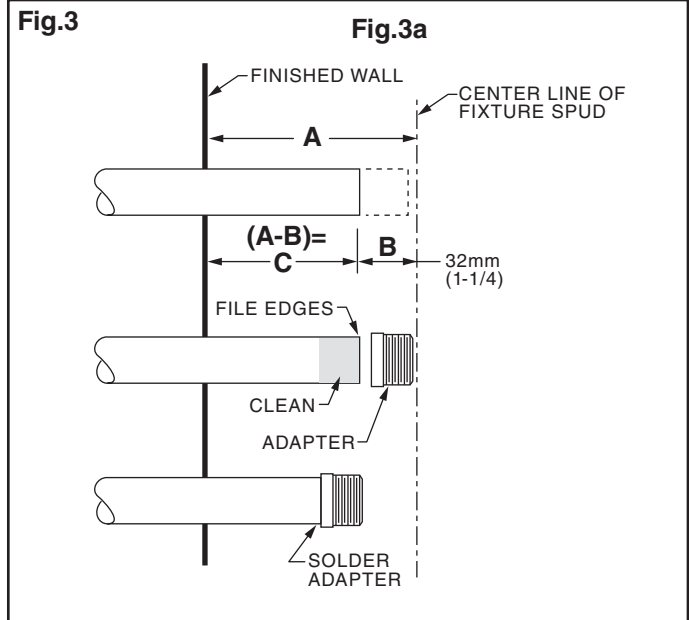


## 1 INSTALL SWEAT SOLDER ADAPTER; Fig. 3

**CAUTION** Turn off hot and cold water supplies before beginning.

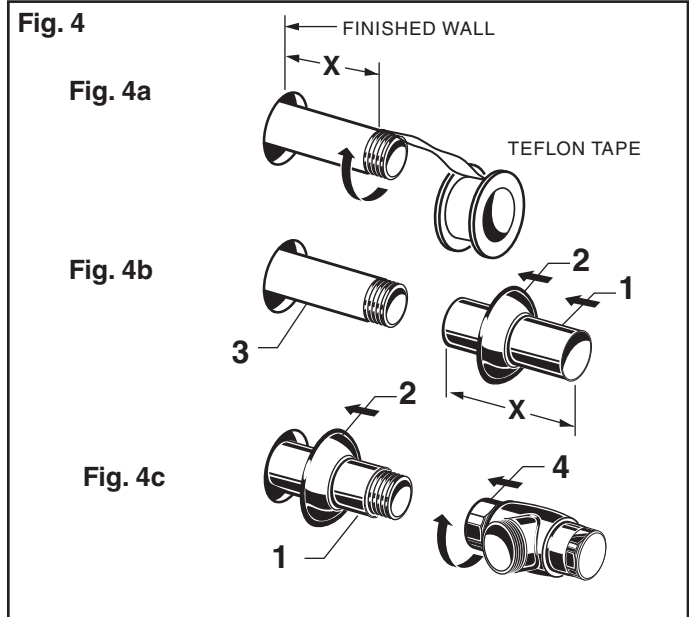
**Note:** Install Optional Sweat Solder Adapter (Supplied) for copper pipe supply line. Fig. 3.

1. Measure the distance (A) from the finished wall to the center of the inlet spud on the fixture.
2. Cut the supply pipe 1-1/4" (A-B=C) shorter than the measurement taken in Step 1. File any rough edges off the end of the supply pipe.
3. Clean the end of the supply pipe. Push the threaded Adapter on until it is seated against the internal stop. Sweat the Adapter to the pipe.



## 2 INSTALL COVER TUBE, WALL ESCUTCHEON and SUPPLY STOP; Fig. 4

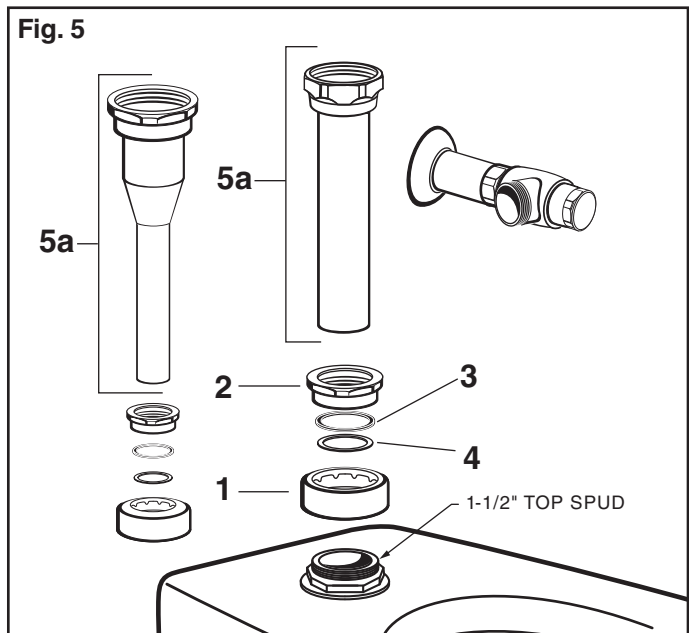
1. Measure from finished wall to first thread of Adapter or threaded supply pipe (dimension "X"). Cut COVER TUBE (1) to length (X). Apply Teflon Tape to the threaded end of the Adapter or supply pipe. Fig. 4a.
2. Push the COVER TUBE (1) into the WALL ESCUTCHEON (2). Slide both onto the SUPPLY PIPE (3). Fig. 4b.
3. Push the COVER TUBE (1) in to expose the threads of the supply pipe. Fig. 4c. With a wrench thread the SUPPLY STOP (4) onto the SUPPLY PIPE (3). Align and tighten. Fig. 4c.
4. Pull COVER TUBE (1) against SUPPLY STOP (4) and push WALL ESCUTCHEON (2) against finished wall.



## 3 INSTALL VACUUM BREAKER TUBE; Fig. 5

1. Place the SPUD FLANGE (1) over the spud on the Fixture.
2. Place FRICTION WASHER (3) and SEAL WASHER (4) inside SPUD COUPLING NUT (2) and thread onto Spud. Do not tighten fully.
3. Insert the VACUUM BREAKER TUBE (5) or (5a) into the SPUD COUPLING NUT (2) and push it down.

**Note:** If cutting VACUUM BREAKER TUBE (5) to size, note that Critical Line (C/L) on Vacuum Breaker must typically be 6" (152mm) above fixture. Consult Code for details.



## 4 INSTALL FLUSH VALVE; Fig. 6a & 6b

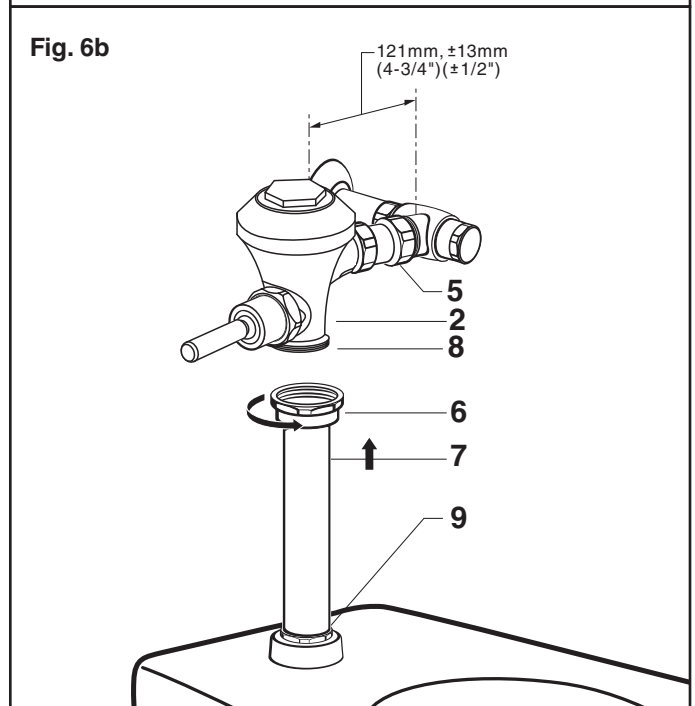
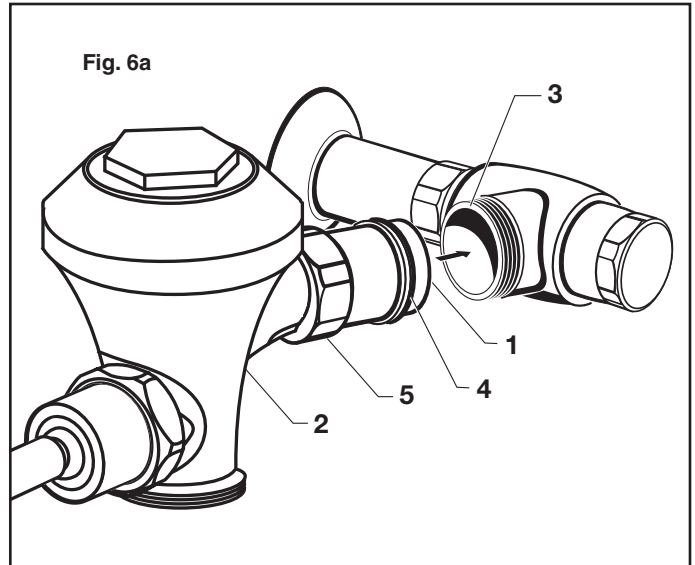
1. As shown in **Fig. 6a**, insert the TAILPIECE (1) on the FLUSH VALVE (2) into the SUPPLY STOP (3). Lubricate the INLET FLANGE O-RING (4) with water if necessary. Lightly tighten COUPLING NUT (5). **Fig. 6a.**

**Important: Do not use lubricants (other than water) or any type of thread sealing paste or tape**

2. Align the FLUSH VALVE (2) (**Fig. 6b**) directly above the VACUUM BREAKER (7) and VACUUM BREAKER COUPLING NUT (6).

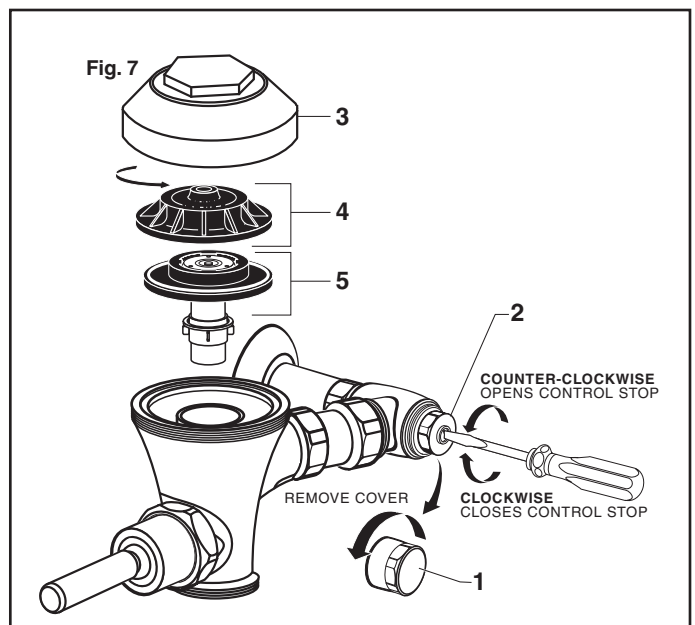
**Note: There is a  $\pm 13$  mm, ( $\pm 1/2$ " ) tolerance for the 121 mm (4-3/4") dimension Fig. 6b.**

3. Pull the VACUUM BREAKER COUPLING NUT (6) up to meet the threaded FLUSH VALVE CONNECTION (8) and hand tighten. Align all components of the flush valve assembly. **Fig. 6b.**
4. Lightly tighten the COUPLING NUT (5) connection first, then the VACUUM BREAKER COUPLING NUT (6) and finally the SPUD COUPLING NUT (9). Once aligned correctly, use a wrench to tighten couplings to make water tight connections. **Fig. 6b.**



## 5 FLUSH OUT SUPPLY LINES Fig. 7

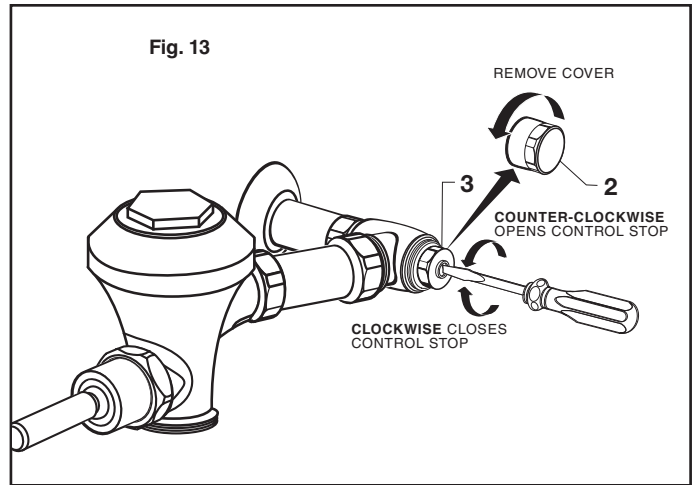
1. Make sure supply stop is closed. Remove COVER (1) from SUPPLY STOP (2). With a flat blade screwdriver close CONTROL STOP (2).
2. Remove FLUSH VALVE CAP (3 & 4). Pull out DIAPHRAGM ASSEMBLY (5). Replace FLUSH VALVE CAP (3 & 4) and tighten.
3. With a flat blade screwdriver open SUPPLY STOP (2) to flush line of any debris or sediment.
4. Close SUPPLY STOP (2). Remove FLUSH VALVE CAP (3 & 4). Replace DIAPHRAGM ASSEMBLY (5). Replace FLUSH VALVE CAP (3 & 4) and tighten



## 6 ADJUST SUPPLY STOP; Fig. 13

**IMPORTANT:** To avoid overflowing, the SUPPLY STOP (3) must never be opened to the point where the flow from the valve exceeds the flow capacity of the fixture. Valve is designed to provide stated flush volume with a 25 gpm flow rate for toilet and 10 gpm flow rate for urinal.

1. Remove COVER (2) from SUPPLY STOP (3). Turn on water supply 1/4 turn to 1/2 turn (CCW) and test for leaks.  
**Note:** Unit may flush for approximately 5 to 10 sec. when water is first turned on.
2. Push down on HANDLE (4) to initiate flush.
3. Adjust SUPPLY STOP (3) after each flush until the stated flush volume is achieved, no splashing occurs and the fixture is properly cleansed.
4. When adjustment is complete, reinstall COVER (2) and tighten to ensure vandal-resistance.

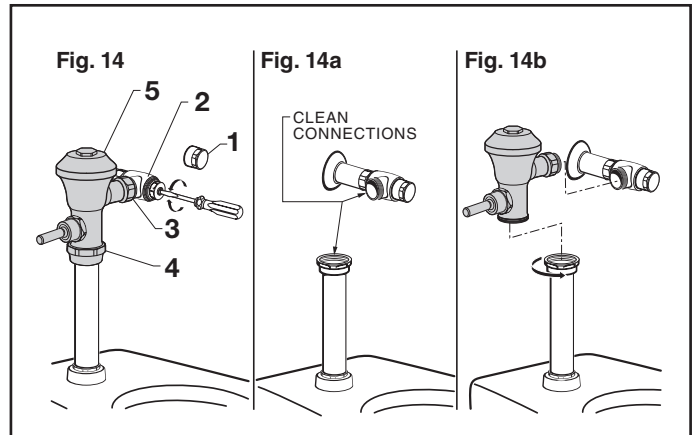


## 7 HOW TO RETROFIT OUR VALVE; Fig. 14

Replaces Industry Standard Manual and Electronic Valves)

**Note:** In most Retrofits the wall escutcheon, supply stop, cover tube and vacuum breaker do not have to be replaced. If these items do need replacement they must be purchased separately or order the complete flush valve assembly from American Standard.

1. Remove COVER (1) from SUPPLY STOP (2) if installed. Fig. 14.
2. Turn water supply off. Fig. 14.
3. Unthread COUPLING NUT (3) and VACUUM BREAKER COUPLING NUT (4). Remove FLUSH VALVE (5). Fig. 14a.
4. Clean all threaded connections before installing the new flush valve. Fig. 14a.
5. Refer to Sections 4, 5 and 6 to complete the retrofit installation. Fig. 14b.



## 8 LEFT OR RIGHT HAND INSTALLATION; Fig. 15

1. The FLUSH VALVE can be installed either as a right or left hand installation.
2. Orientate the FLUSH VALVE as shown in Fig. 13 to desired position for a left or right hand installation.

