



INSTALLATION INSTRUCTIONS for EXPOSED SABER and FLUSHBOY ULTRA FLUSH VALVES



Saber Water Closet
Flush Valve
for 1 1/2" Top Spud



Saber Urinal
Flush Valve
3/4" Top Spud



Flushboy Ultra
Water Closet
Flush Valve
for 1 1/2" Top Spud



Flushboy Ultra
Flush Valve
3/4" Top Spud

Prior to Installation

All Plumbing is to be installed in accordance with all applicable Codes and Regulations. Water Supply Lines must be sized to provide adequate flow rate (gpm / gallons per minute) to all fixtures. Drawings should be reviewed for compliance with ADA Guide lines. Particular attention should be paid to handle location and grab bar conflicts. To avoid damaging chrome during installation use flat-jawed wrench to tighten all coupling nuts.

Delany flush valves are designed to operate at water pressure between 20psi and 100psi. All plumbing fixtures require at least 20psi with most requiring higher pressure. Meeting the minimum pressure requirements of the fixture will automatically satisfy the minimum needs of the Delany valve installed. At pressures of 80psi and above, the use of pressure reducing valve in the supply line is recommended.

TOOLS REQUIRED FOR FLUSHMETER INSTALLATION:

- A) Straight Blade Screwdriver
- B) 3/4" Socket Wrench (For cover removal)
- C) 12-Point 1 1/2" Socket Wrench #748 (For main valve seat removal)
- D) Flat-jawed Adjustable Pipe Wrench All nuts and Flushboy Ultra cover.
(Recommended: E110 by Rigid) (Saber)
- E) Knife Blade

WARNING: Never use any tool with teeth

If your installation includes a supply line with a threaded iron pipe, skip ahead to step 2.

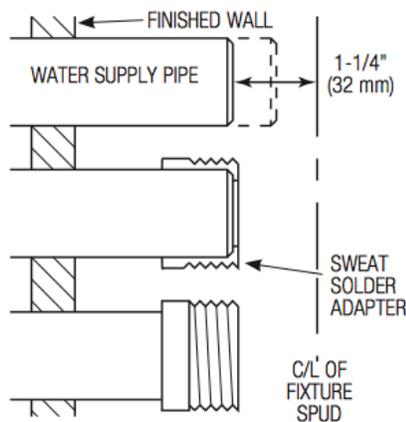
1) INSTALLATION of SWEAT ADAPTER: Fig 1

(Optional – Only Required for Supply Pipes without Male Threads)

- (A) Find Sweat Adapter Kit supplied in box.
- (B) Measure from the finished wall to the Center Line of the fixture spud.
- (C) Cut the Pipe 1 ¼" shorter than measured number.
- (D) Slide the Sweat Adapter until it hits the shoulder of the bushing and sweat solder to pipe.

NOTE: If an Iron Pipe Supply (IPS) is being used, stub out the Iron Pipe Nipple to the same measurement as used for the Sweat Adapter

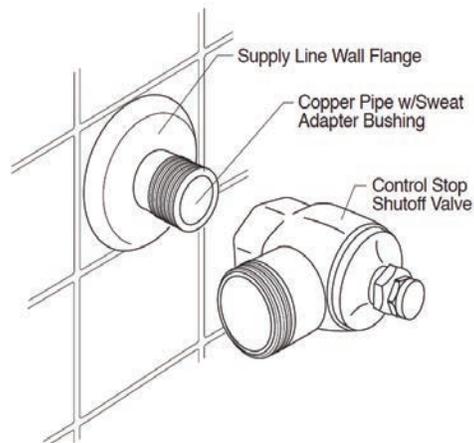
Fig 1



2) MOUNT the CONTROL STOP: Fig 2

- (A) Measure distance from finished wall to edge of first (1st) thread on Supply Pipe or Adapter.
- (B) Cut Cover Tube to this Measurement.
- (C) Slide Cover Tube over Supply Pipe.
- (D) Slide the Wall Flange over Cover Tube and up against the wall.
- (E) Screw the Control Stop onto end of the pipe until hand tight with E-110 Wrench.

Fig 2



3) "KWIKFIT" and "SLIPFIT" ADJUSTABLE CENTERS: Fig 3

Delany Saber and Flushboy Ultra Flush Valves can be shipped with the KwikFit or SlipFit Union Tailpiece pre-assembled.

SlipFit: Adjustable between 4 1/4" and 5 1/4" Centers.

- (A) Slide the SlipFit Union Tailpiece into Control Stop
(Note: To slide more easily you may need to moisten the "O" ring)
- (B) Slide the Valve until it lines up with the center line of Fixture Spud.
- (C) Loosely hand tighten the Union Coupling Nut to the Control Stop.

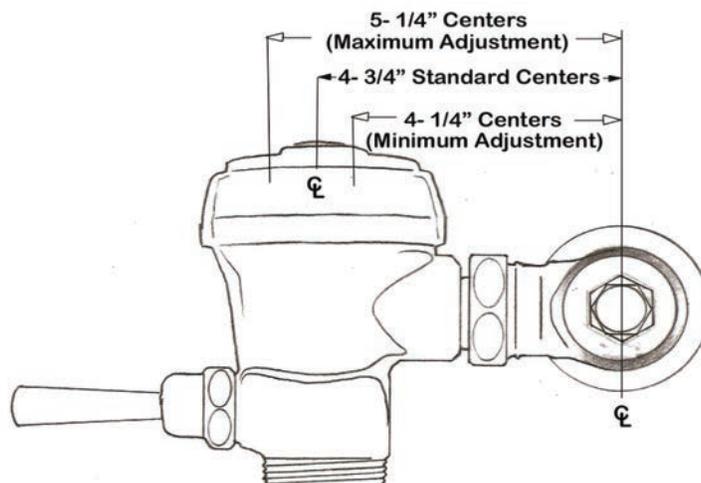
NOTE: If Centers are more than 5 1/4", you will need to order longer lengths of the #130. Variations are available that will increase the Centers in 1" increments up to a maximum of 8 1/4".

KwikFit: Adjustable between 4 1/2" and 5 1/2" Centers.

- (A) Loosen Clamping Nut.
- (B) Spin KwikFit Union Tail Piece in or out to position as desired.
- (C) Tighten the Clamping Nut to lock the valve at new centers.

NOTE: If Centers are more than 5 1/2", you will need to order longer lengths of the #64. Variations are available that will increase the Centers in 1" increments up to a maximum of 8 1/2".

Fig 3



1) INSTALLING the VACUUM BREAKER & SPUD FLANGES: Fig 4

- (A) Put Rubber Sleeve into flanged end of Flush Connection
- (B) Slide Cowl Nut up Flush Connection Tube.
- (C) Slide Spud Nut, Spud Flange, & then Washer on to the bottom of Flush Connection Tube.
- (D) Place Flush Connection Tube into Fixture Spud opening and tighten the Cowl Nut onto the bottom of the valve outlet.

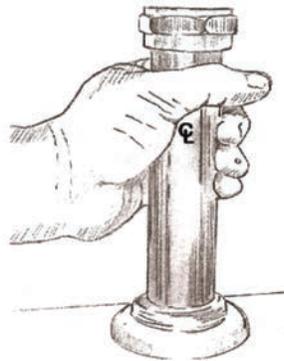
NOTE: TIGHTEN THE COWL NUT ONLY HAND TIGHT!

Cut flush connection 2" less than the measurement of the center line of the supply inlet to the top of the fixture.

- (F) Making sure Flush Connection Tube is vertical, tighten Union Coupling Nut fully to Control Stop with flat-jawed Adjustable wrench.
- (G) Finally, tighten fully Spud Nut to Spud of the Fixture.

Note: The "CL" Critical Level Line marked on the Flush Connection must be a MINIMUM of 6" above the top of the Fixture.

Fig 4

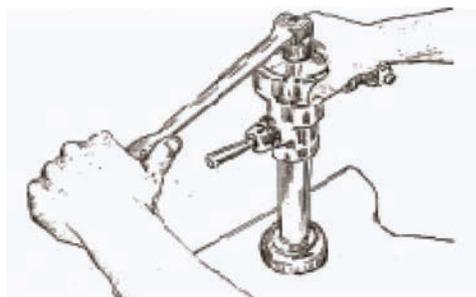


5) FLUSH DEBRIS from SUPPLY LINES: Fig 5,6 & 7

Once all of your separate Flush Valves have been connected to all of the fixtures and before finishing the construction project, it is highly recommended that all the supply lines be flushed of all dirt and debris that may have fallen in during the process of the construction.

- (A) Make sure proper Water Pressure is available
- (B) With Control Stop shut off, open the Cover of the last valve in the branch line.
- (C) To open Saber Cover, remove the Cove Cap with a blade knife and use a $\frac{3}{4}$ " Socket Wrench to unscrew the Cover (Fig 5)
- (D) To remove Flushboy Ultra cover use a flat jawed wrench.

Fig 5



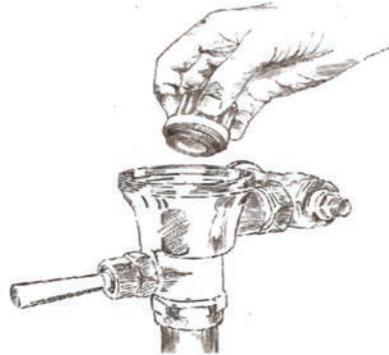
D) Remove Diaphragm Assembly (Fig 6)

Fig 6



E) Remove the Renewable Main Valve Seat using Delany #748, 12-point 1 ½" Socket Wrench. (Fig 7)

Fig 7



NOTE: This is to provide maximum cleaning of the system that no other manufacturer provides.

- (F) Replace Diaphragm alone to seal cover as you flush lines for best seal, and replace cover
- (G) Open Control Stop completely
- (H) Once flushing is complete, close Control Stop
- (I) Open Cover and replace Main Valve Seat and the Diaphragm Assembly
- (J) Screw Cover back on tightly.
- (K) Wet "O" ring of Cover Cap and push all the way into place.

Note: For extremely high pressure situations, the quieted flush now may not provide enough water to properly remove the waste. At this point the Delany Upper Chamber Regulating Screw in the Cover can be used to increase ever so slightly the volume of the flush in order take the waste away at the lowest possible noise level. To locate the Upper Chamber Regulating Screw, remove the Cover Cap and engage the screw with a straight bladed screwdriver.

7) SETTING UPPER CHAMBER REGULATING SCREW: Fig 9

True in the Field WATER SAVINGS

All Delany valves are preset at the factory for the flushing volumes of (3.5gpf, 1.6gpf, 1.28gpf, etc.) All volume settings are based upon a Control Stop open to its maximum position. These volumes should match fixtures designated for the same Gallons per Flush. Conditions in the field vary widely depending on the quality of the water closets, piping design and age, flow rates from floor to floor and numerous other factors.

A) Under ideal conditions, you may find that the Water Closet will perform perfectly using less than the designed GPF. To determine if this is the case, turn the Upper Chamber Regulating Screw down slightly (an 1/8th of a turn) and if the flush is satisfactory, you can leave it or try for a further reduction.

B) Under less than ideal conditions, you may find that there is not enough water to evacuate the fixture because of various field conditions. A small counterclockwise turn will allow a slight adjustment to fix the problem. The valve did not need to be opened or rings removed causing significant increase in water volume to fix a minor problem.

NOTE: To find Upper Chamber Regulating Screw, open Cover Cap with a knife blade and find screw head inside of hex. When replacing Cover Cap remember to wet "O" ring first and push all the way into place. Flush once not twice.

Fig 9



8) LOW PRESSURE INSTALLATIONS

- (A) Remove Cover Cap with a knife blade and with $\frac{3}{4}$ " socket wrench, remove the Cover.
- (B) Remove Diaphragm Assembly.
- (C) Remove Choke Ring, located inside Renewable Main Valve Seat.
- (D) Make sure all Valves being installed on Water Closets have a White Seat.
(Delany uses a grey colored Seat for all $\frac{3}{4}$ " Supply Urinal Valves).

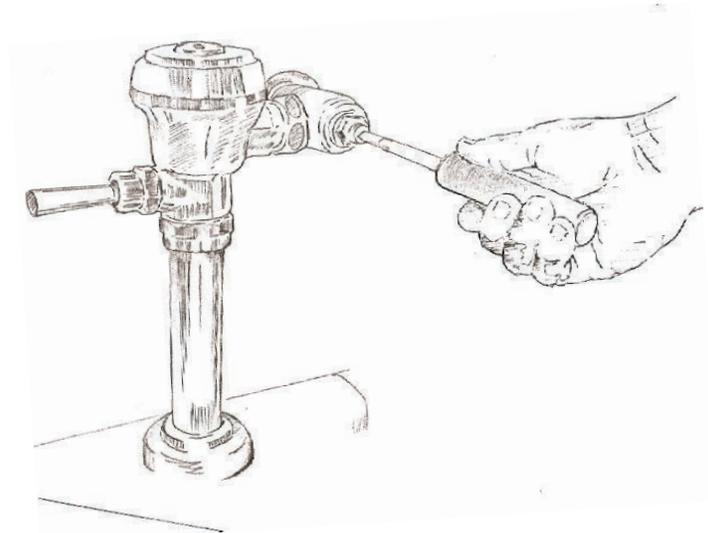
NOTE: If the flow is still inadequate, we recommend a simple test to see if syphonic action is possible at all.

1. Shut off Control Stop; 2. Remove the Diaphragm Assembly; 3. Re-install the diaphragm only;
4. Replace Cover;
5. Open Control Stop (You have now turned the valve into a simple elbow.) If syphonic action is still not possible then the water pressure is too low, and must be increased.

STEP 6) SETTING THE VALVES for MINIMUS FLUSHING NOISE: Fig 7

- (A) Open the Control Stop to MAXIMUM open position. Note: The valve may run/flush for approximately 5 to 10 seconds when the water is first turned on before shutting itself down.
- (B) Activate the flush valve by pulling the handle down.
- (B) While the water is running, slowly close the Control Stop. Depending on the inlet water pressure at any given fixture there is a setting at which the flush will be quieted. Also make sure that no splashing is occurring.
- (C) Once adjustments to the Control Stop and the flow into the valve have been made, repalce and tighten the cover cap.

Fig 7



NOTE: For SmartHandle Variations (i.e. Dual Flush)

Please note: Delany Products' SmartHandle is preassembled on the valve and therefore comes out of the box ready to install. For valves ordered with 1.28 GPF, that the discharge difference between the up and down stroke of the handle averages over 20%. The recommended operating pressure range for the SmartHandle on a 1.28 GPF valve is 20 psi to 75 psi. Also note, that for all valves with the SmartHandle variation, an Instructional Wall Plate is packaged separately from each valve.

IMPORTANT NOTES: 1) State and Local mandated codes require that the static pressure in a given building not exceed 80 psi. It is also good plumbing practice to not exceed 80 psi in order to extend the life of all plumbing products installed. 2) In order to extend the life of the chrome finish on your flush valves never use harsh or abrasive chemicals to clean them. Use only mild soap and water applied with a soft cloth. 3) Do not use Pipe Dope or other sealants on any valve threads or couplings except for the Control Stop inlet threads. 4) Never open the Control Stop to a position where the water you are supplying is more than the Fixture can handle. A valve failure may cause the fixture to overflow.

Limited Warranty

Delany Products warrants all its products to be made of first class material, free from any defects. Each product will perform the service for which it is intended to in a thoroughly reliable and efficient manner as long as the product is properly installed and maintained for a period of one year from the date of purchase. During this said mentioned one year period Delany Products will either repair or replace any part or parts which are proven to be defective, only when the material is returned to Delany Products for inspection. This will be the only remedy available under this warranty policy. No claims will be allowed for labor, transportation or any other incidental costs. This warranty is only extended to the persons or organizations that purchased the material from a Delany Products distributor. For further assistance with any installation please call your local Delany Representative or Delany Products' Customer Service at 1-888-566-7784