



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



Pulsar Urinal
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 the 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 25psi 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 highly recommended.

TOOLS REQUIRED FOR FLUSHMETER INSTALLATION:

- A) Straight Blade Screwdriver
- B) 12-Point 1 1/2" Socket Wrench #748 (For main valve seat removal)
- C) Flat-jawed Adjustable Pipe Wrench.
(Recommended: E110 by Rigid)

WARNING: Never use any tool with teeth

WARNING: Never spray cleaners directly onto the electronic head, use a damp cloth to wipe down all parts of the flush valve.

1) INSTALLATION of SWEAT ADAPTER: Fig 1

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

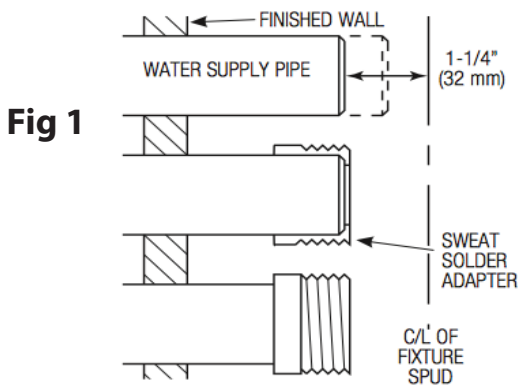
(Optional – Only Required for Supply Pipes without Male Threads)

- (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.

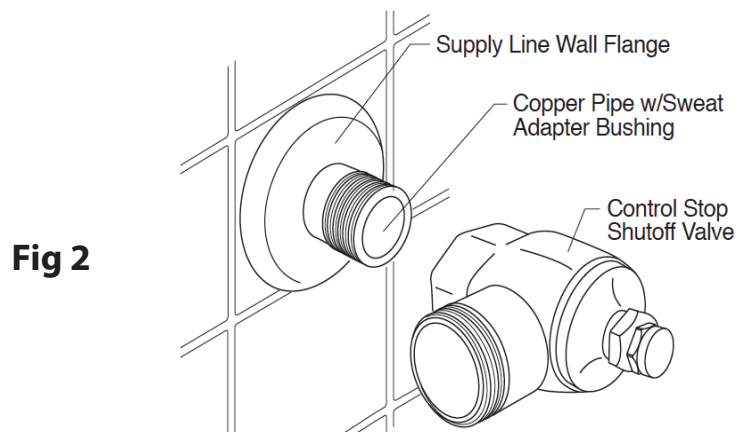
- (A) Measure distance from finished wall to edge of first (1st) thread on Supply Pipe or Adapter.
- (B) Cut Cover Tube to this measurement.
- (C) Slide Cover Tube over Supply Pipe.
- (D) Slide the Wall Flange over Cover Tube and up against the wall.
- (E) Screw the Control Stop onto end of the pipe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

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



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 then tighten with Ridgid E-110 Wrench.



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

Delany Pulsar Flush Valves can be shipped with either the KwikFit or SlipFit Union Tailpiece pre-assembled.

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

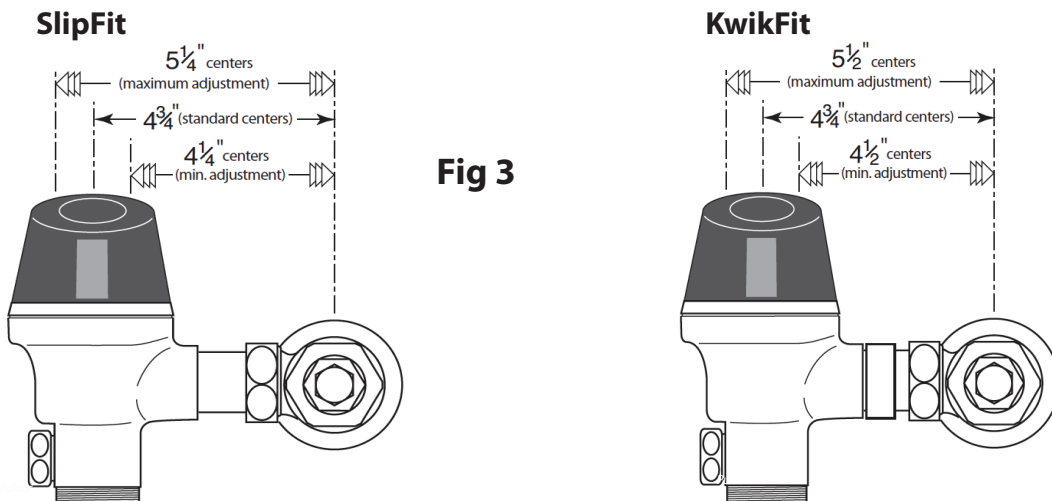
- (A) Slide the SlipFit Union Tailpiece into Control Stop
(Note: To slide more easily you may need to moisten the "O" ring)
- (B) Slide the Valve until it lines up with the center line of Fixture Spud.
- (C) Loosely hand tighten the Union Coupling Nut to the Control Stop.

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 Instructions: 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".



3) FLUSHING OF SUPPLY LINES

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 Chrome Cover of the last valve in the branch line.
- (C) Lift out diaphragm assembly, remove all parts from diaphragm, place diaphragm back in valve body, replace chrome cover.
- (D) Remove Main Valve Seat with 12-Point 1-1/2" socket wrench.
- (E) Replace Chrome Cover Plate and tighten.
- (F) Open Control Stop completely.
- (G) Once water is clear, shut off Control Stop and return Main Valve Seat and Diaphragm Assembly to valve body.
- (H) With Flush Valve Reassembled, open Control Stop.

4) INSTALLING AND ADJUSTING ELECTRONICS: Fig 4 Fig 5

If Adjustments are needed, loosen set screws (4, 5, 6, & 7) from the chrome cover plate (8) and remove the electronic housing cover. Make sure the solenoid clip (9) to the electronic housing clip (10) are connected and place housing (11) back into the groove of the chrome cover plate (8). Rotate the electronic housing so that the window faces the user.

Remove the protective tape from the electronic housing window, which is positioned in front. After ten (11) seconds step, away from the sensor and the valve should flush.

RANGE ADJUSTMENT:

The Pulsar's sensor range is pre-set by the factory depending on whether the unit is for a W.C. or a Urinal

MEASUREMENT OF PULSAR RANGE IN FIELD:

To test the range setting, stand as close as possible in front of the fixture. Then very slowly move straight back. The moment that the flush cycle begins, stop. This is distance outward from the unit that the sensor is set for.

Caution: Adjust carefully as over-adjustment can damage the Range Adjustment Dial.
 Note: Complete range of sensor is less than one full turn of the Range Adjustment Dial. It is the dial that is white in color and smaller of the two. The other switch is red in color and larger.

TO MAKE RANGE ADJUSTMENTS:

Make sure the Pulsar unit has a good battery

- 1) Loosen four (4) set screws. Remove Pulsar head and disconnect the solenoid from the battery. **Fig 4**
- 2) Hold the head upside down in your hand with the Pulsar window facing out (away from your body).
- 3) The dial has a cross inside with a longer leg that the screwdriver provided fits into.
- 4) Using the face of a clock, we will make reference to dial's position as though it were the face of the clock.
- 5) The zero setting is at the 8 o'clock position and the max position is at the 5 o'clock position.
- 6) The factory pre-set for a urinal is at 11 o'clock. For a WC, it is 3 o'clock.
- 7) To shorten the range, turn the dial position Counter clockwise.
- 8) To lengthen the range, turn the dial position Clockwise.



NOTE: Never increase the range past the 3 o'clock.

- 9) Position head on valve and go through the measurement procedure until satisfied with sensor length.

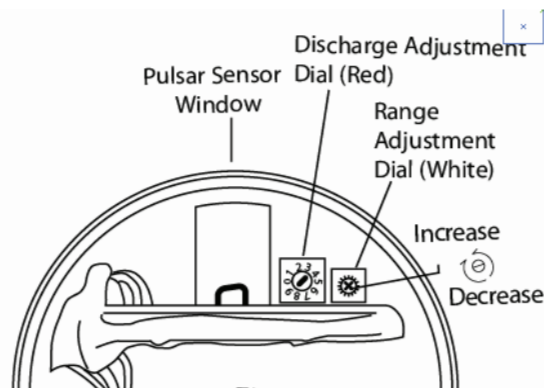
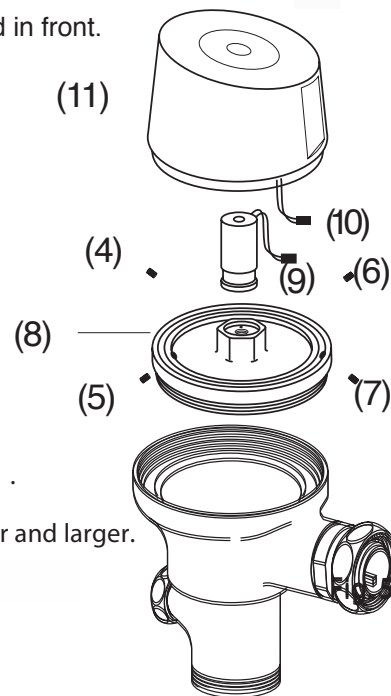


Fig 5

6) TO MAKE FLUSH CYCLE ADJUSTMENTS:

The Discharge Adjustment Dial is located in the electronic housing, see Fig. 4. The discharge or “gpf” is factory pre-set for whatever was ordered. For the Single Flush units, it will be set on switch setting #4. For Dual Flush Units it will be set on switch setting #5. If a little more discharge is deemed necessary then use the next higher switch setting. #4 to #5 or #5 to #6. The #4 is always the starting setting. Each higher switch setting is 10% more discharge than the previous. For a shorter flush cycle, use a lower setting. Each higher switch setting is 10% less discharge than the previous.

Switch Settings:	Switch No.	GPF Delivery	Switch No.	GPF Delivery
	No.0	10% less than No. 1	No.5	10% more than No. 4
	No.1	10% less than No. 2	No.6	10% more than No. 5
	No.2	10% less than No. 3	No.7	10% more than No. 6
	No.3	10% less than No. 4	No.8	10% more than No. 7
	No.4	Specified gpf	No.9	10% more than No. 8

* gpf = Gallons Per Flush

7) LOW PRESSURE INSTALLATIONS

- (A) Remove Pulsar Unit, Remove the Chrome Cover.
 - (B) Remove Diaphragm Assembly.
 - (C) Remove Choke Ring, located inside Renewable Main Valve Seat.
 - (D) Moving to a higher switch setting is also recommended if necessary.
- Note: Make sure all valves being installed on Water Closets have a white Seat.
(And all 3/4" Supply Urinal Valves have a grey colored Seat).

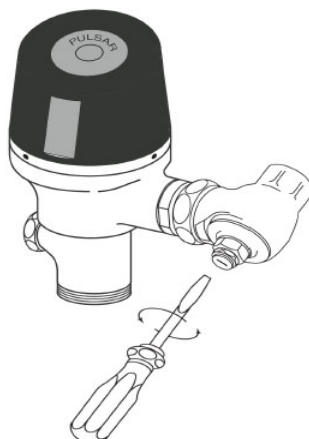
NOTE: If the flow is still inadequate, we recommend a simple test to see if syphonic action is possible at all.

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.

8) SETTING THE VALVES for MINIMUM FLUSHING NOISE: Fig 6

- (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 pushing the override button.
 - (C) 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.
 - (D) Once adjustments to the Control Stop and the flow into the valve have been made, replace and tighten the cover cap.

Fig 6



IMPORTANT Cleaning and Maintenance Tips

■ The life of any electronic product is greatly enhanced by the proper care. ■

The Pulsar is equipped with a lithium battery. The Pulsar has a built-in warning signal when the battery strength is getting weak and dying. A green LED light will flash begin flashing from the sensor window, indicating the battery has approximately 5,000 flushes remaining.

Proper cleaning is a must. 1) The Pulsar head must NEVER be hit with a spray wash. 2) Harsh cleaning chemicals must NEVER be applied to the surface. 3) Use only a damp cloth or rag to wipe the Pulsar head clean.

Never over tighten the set-screws of the Pulsar head.

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

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.

