



TrueSense Water Closet
Flush Valve
for 1/2" Back Spud

TrueSense Urinal
Flush Valve
3/4" Back Spud

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 sensor location and grab bar conflicts. To avoid damaging chrome during installation, only use a flat-jawed wrench to tighten all coupling nuts.

All electrical wiring should be installed in accordance with National & Local Codes and Regulations. Delany flush valves are designed to operate at water pressure between 20psi and 100psi. All plumbing fixtures requires at least 25psi with most requiring higher pressure. Meeting the minimum pressure requirements for the fixture will automatically satisfy the minimum needs of the Delany valve installed. At pressures of 80psi and above, the use of a pressure reducing valve should be installed in supply line is highly recommended.

Prior to Installation

Delany recommends that a Pre-installation meeting be held between the electrician and the plumbing contractor. The Delany Representative should organize this. At which the installation and location of the electrical boxes should be discussed in order to provide smooth communication on this critical point.

- Prior to installing the flush valve(s), the following items must be installed:
- One (1) 2-Gang electrical box (4" x 4" x 2-1/2" or 102mm x 102mm x 63.5mm) for water closet or urinal sensor
- Electrical receptical positioned within eighteen (18) feet of flush valve, so that a plug-in transformer versions can be installed in the receptical.

TOOLS REQUIRED FOR FLUSH VALVE 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 tools with teeth

What's in the Boxes

For each fixture there is one (1) box with the following:

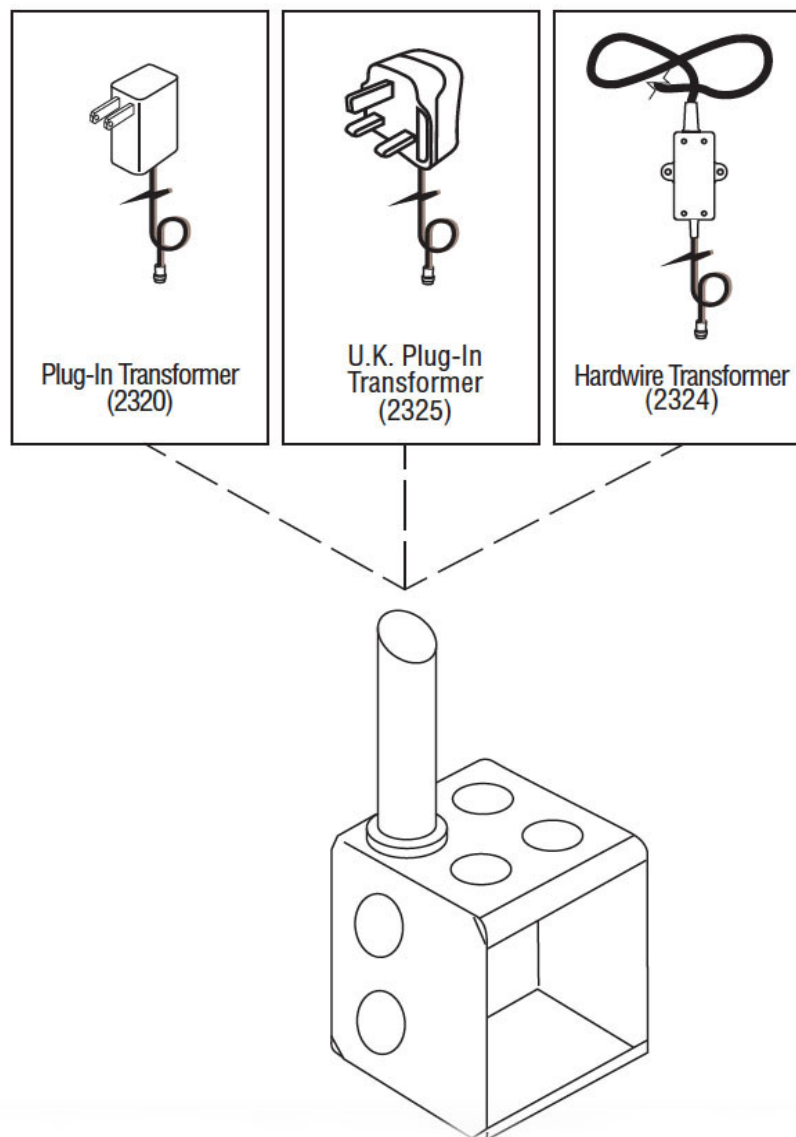
Sensor Wall Plate (Sensor and Override Switch mounted)
Flush Valve with Solenoid Valve Attached
Control Stop
Vacuum Breaker Tube
Elbow Flush Connection Tube
2-Way Splitter
Sweat Adaptor
Instruction Sheet

Plastic Wall Plate Retainer (for WCs or for Urinals)
Transformer (Hardwire or Plug-in)
Four (4) Wall Plate Retainer Screws (4 per Retainer)
Polarity Converter for Override Button
Two (2) Wire nuts

For models #1842 & 1846: Wall Flange and Spud Nut and Flange for fixture

Installation of Conduits for Transformers Version

■ NOTE: 3/4" Conduit Recommended



Installation for 9V Plug-in or Hardwired Transformer

Lead Plug-in Transformer (#2320) from receptical positioned in a convenient location.

- Note: One Delany transformer can operate up to three (3) TrueSense equipped flush valves.
- Note: 18 ft wire lead supplied.
- Note: DO NOT plug in transformer to power source until the installation of the flush valves are complete.

Locate & attach Hardwired Transformer (#2324) in a convenient location behind wall with lag shields & screws provided.

- Note: One Delany transformer can operate up to three (3) TrueSense equipped flush valves.
- Note: 18 ft wire lead supplied.

Sensor/Solenoid Box Location

Note: Concealed closet and urinal models use only one (1) electrical box for each.

Please refer to rough-in drawings below locations. Electrical Box Locations are CRITICAL: Failure to properly position the electrical boxes to the plumbing rough-in will result in improper installation and could result in the improper performance. All tradesmen (i.e. plumbers, electricians, tile setters, etc.) who will be involved in the installation of a sensor activated flush valve must be familiar with the requirements of its installation or the manufacturer's warranty may be voided.

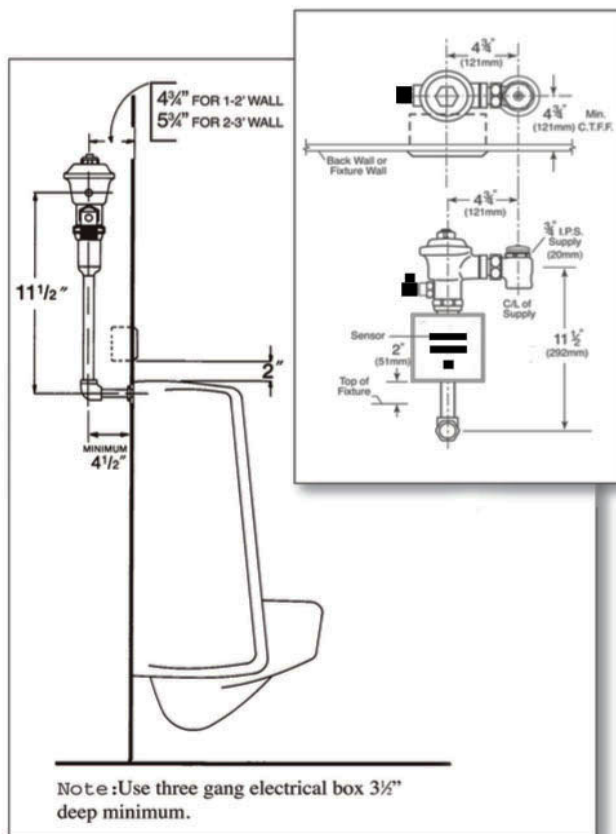
Note: For the location of the electrical box, please refer to the rough-in drawings.

- Note: The use of RACO #696 for 2-gang box or equivalent is recommended.
- Note: The use of RACO Plaster Ring #768 (Only used if necessary)
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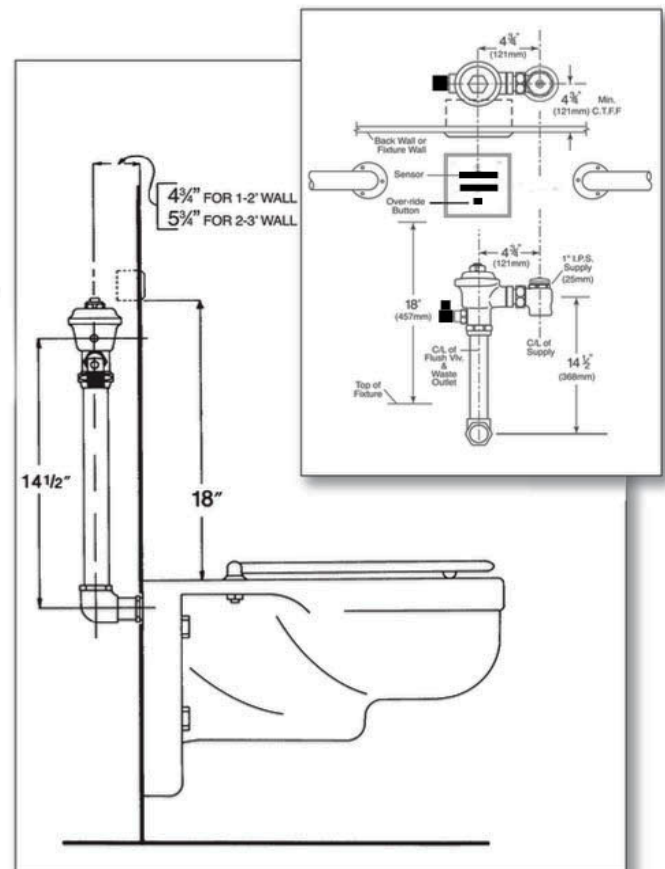
Once the 2-gang box is located properly and installed, position the Plaster Ring (if needed) with screw holes on the top and bottom of the box. Screw Plastic Retainer onto 2-gang box.

Break tiles to allow screw holes in plaster to show

1871 URINAL ROUGH-IN DRAWING



1834 CLOSET ROUGH-IN DRAWING



INSTALLING the VACUUM BREAKER & FLUSH ELBOW CONNECTION: Fig 4

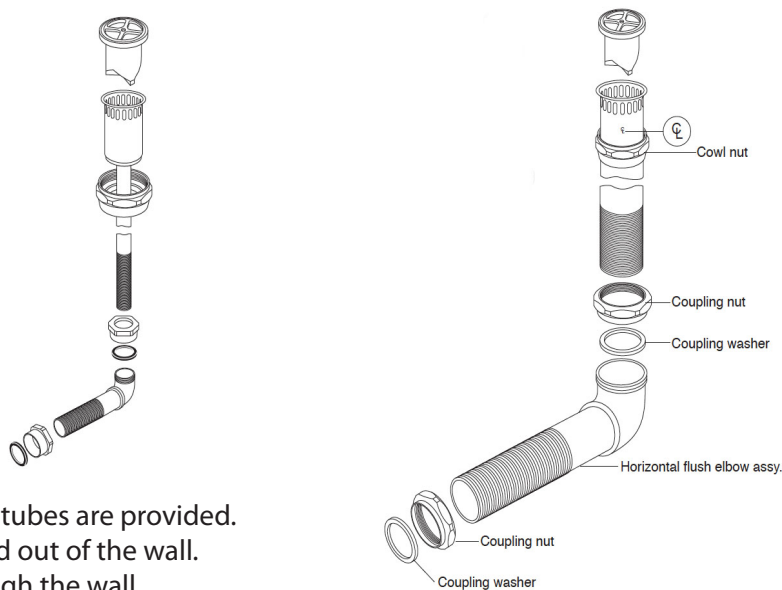
- (A) Slide Elbow Connection Tube into Fixture Spud opening and attach with Nut and Washer provided.
This step may done before the fixture is even attached to the wall.
- (B) Slide Flush Connection Tube into Elbow Connection Tube
- (C) Secure firmly with Coupling Nut and Washer found on Elbow.
- (D) Find Rubber Sleeve pre-installed in flanged end of Flush Connection Tube.
- (E) Find Cowl Nut positioned at top of Flush Connection Tube.
- (F) Remove all packing material, screw into bottom of flush valve with Cowl Nut.

NOTE: TIGHTEN THE COWL NUT ONLY HAND TIGHT!

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

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



NOTE: For U1842 models, two (2) chrome elbow tubes are provided.

- (A) Pass chrome elbow tube through and out of the wall.
- (B) Slide Flange onto tube coming through the wall.
- (C) Slide exposed chrome tube into second chrome elbow with chrome tube coming down.
- (D) Slide spud nut and flange onto chrome tube down off chrome elbow.
- (E) Slide this second chrome elbow with chrome tube into the spud opening of exposed fixture.
- (F) Secure Spud Nut to fixture with Flange.
- (G) Slide Flush Connection Tube into Elbow Connection Tube
- (H) Secure firmly with Coupling Nut and Washer found on Elbow.
- (I) Find Rubber Sleeve pre-installed in flanged end of Flush Connection Tube.
- (J) Find Cowl Nut positioned at top of Flush Connection Tube.
- (K) Remove all packing material, slide into bottom of flush valve and secure with Cowl Nut.

NOTE: For U1846 models, one (1) chrome elbow tube is provided.

- (A) Pass chrome elbow tube through the wall and slide Wall Flange onto tube.
- (B) Slide Spud Nut and Flange for fixture onto tube and secure directly into exposed back spud of floor mounted fixture.

*** Follow Steps G through K of U1842 instructions above. ***

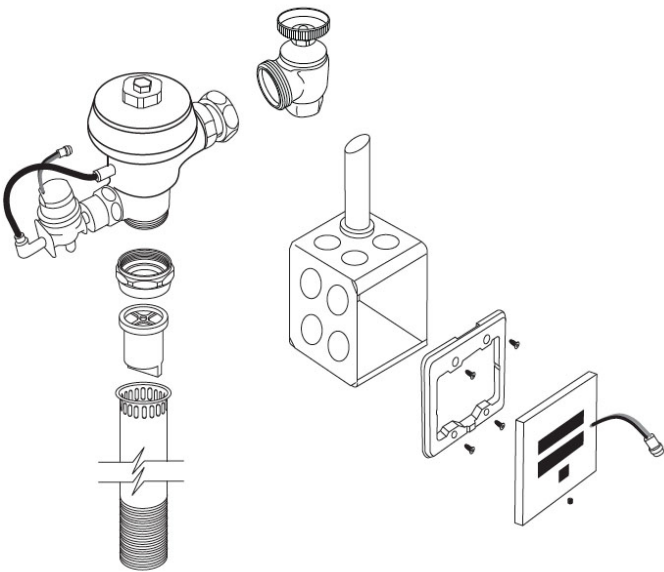
Installation of Water Closet or Urinal Sensor & Solenoid

**** Refer to Wiring Diagram on Page 6 ****

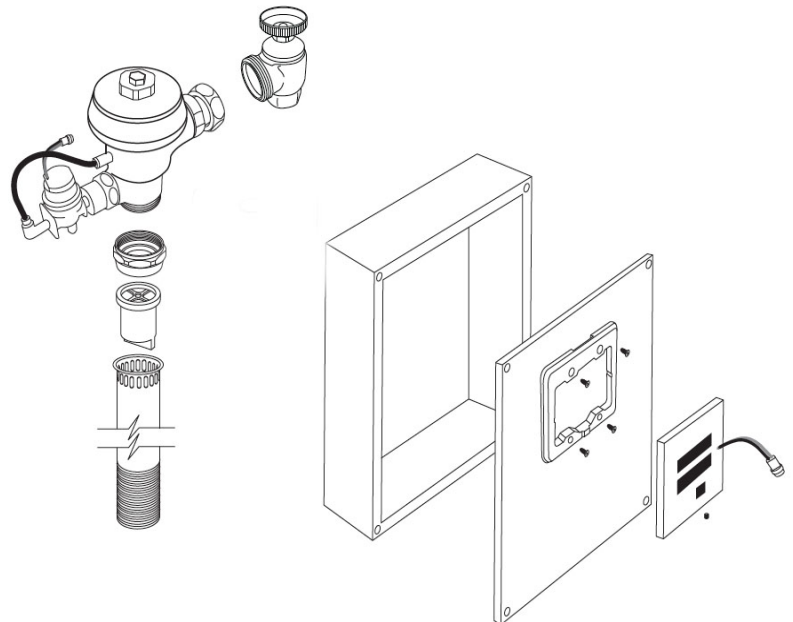
- (1) Make sure Plastic Wall Plate Retainer (#2311) is screwed onto the 2-gang box and is flush to finished face of wall.
- (2) Run transformer wire lead down through a conduit that leads into a hole into 2-gang box for the sensor.
- (3) **Connect power to the 2-way splitter:** Find 2-way splitter (Part# 2310) and connect the wires labeled "B" of splitter and Transformer wire lead. This will provide power to both the Polarity Converter Box ("PCB", #2306) and the Sensor (#2301).
- (4) Hook Sensor Wall Plate (#2300) to Wall Plate Retainer (#2311)

**** Note: Do Not Secure the Wall Plate at this time. ****

- (5) **Connect flush valve to Control Stop and Flush Connection:** Push flush valve tailpiece into Control Stop and position over Flush Connection. Tighten Cowl Nut from Flush Connection and Nut on Control Stop
- (6) **Connect PCB (#2306) to solenoid on valve (#2317)** by connecting wires labeled "D" of PCB and solenoid (#2317).
- (7) Secure Wall Plate (#2300) onto 2-gang box for sensor with allen wrench provided

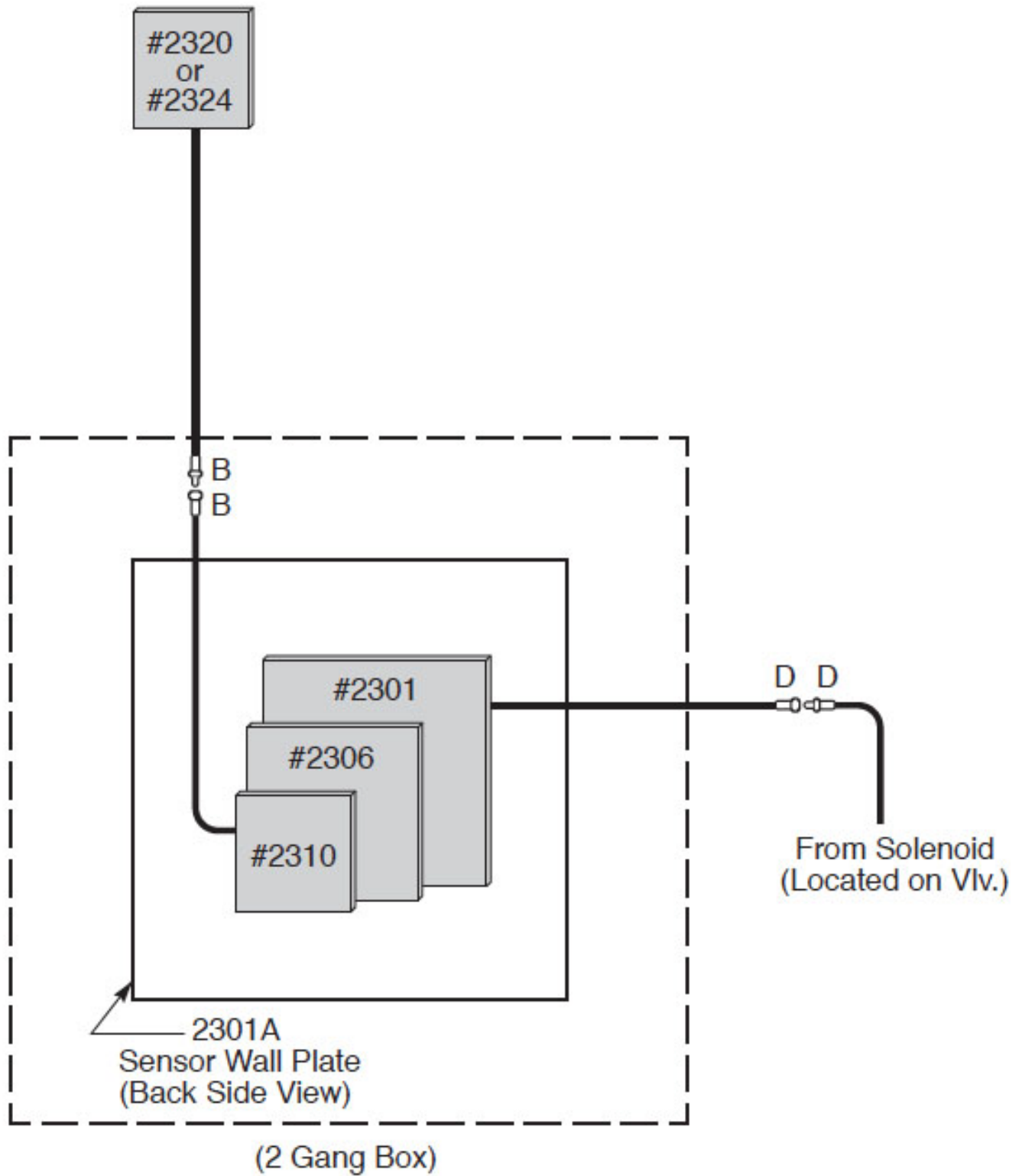


Concealed Valve with Pipe Chase



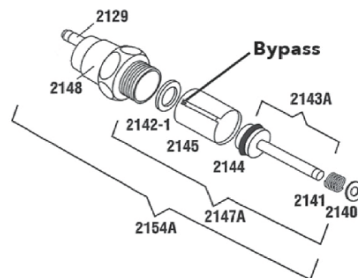
Concealed with Access Panel

Wiring Diagram



How to use Piston Nut Fitting

- (A) To release tube from fitting, push colored (black or red) plastic collar in and pull
- (B) To connect tube to fitting, push tube into fitting. Note: make sure you feel it go all the way to the home and give it a slight tug to be sure.
- Note: Make sure when cutting the tube that it is always square as a non-squared edge will leak



Flushing Supply Lines

Remove Diaphragm Assembly (Fig 6)

Fig 6



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.

- (A) Replace Diaphragm alone to seal cover as you flush lines for best seal, and replace cover.
- (B) Open Control Stop completely.
- (C) Once flushing is complete, close Control Stop.
- (D) Open Cover and replace Main Valve Seat and the Diaphragm Assembly.
- (E) Screw Cover back on tightly.

Power and Start-Up Mode

NOTE: IT IS RECOMMENDED THAT ALL ELECTRONIC CONNECTIONS BE TESTED WITH THE WATER SUPPLY OFF.

Sensor Test and Range Procedure

Note: The range of the sensor is factory set for 23". This should then extend out to the inside of the front of the bowl. This is the recommended setting for a Women's Water Closet and for Men's Urinals. It is recommended that the optimum length for a Men's Water Closet be 30" - 31" (or about 5" - 6" beyond the front of the bowl)

- (1) Stand three (3) feet (or 36") away or further from the sensor .
- (2) Slowly approach sensor.
- (3) A red LED indicator light will blink once. This is indicating the current length of the sensor range

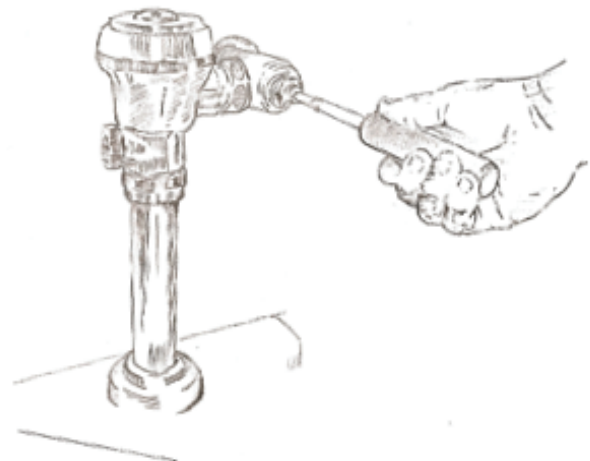
Procedure to Shorten or Lengthen Sensor Range

- (1) Point Remote at lower of two (2) sensor windows, roughly 6" - 8" away.
Note: Remote must be in a direct line with the sensor window.
- (2) Hold down "Range" button for a full 1 - 2 seconds. The indicator light will begin to blink rapidly.
- (3) With Remote still in direct contact with sensor, press either the "-" sign to shorten the range or "+" sign to lengthen the range.
- (4) Repeat Sensor Range Test Procedure allowing valve to fully flush by being in front of it for at least eleven (11) seconds and waiting six (6) for flush cycle to initiate.

Note: If the indicator light stops blinking while changing the range, that means you are either at the shortest range (23") or the longest (31"), depending of which direction you were changing the range.

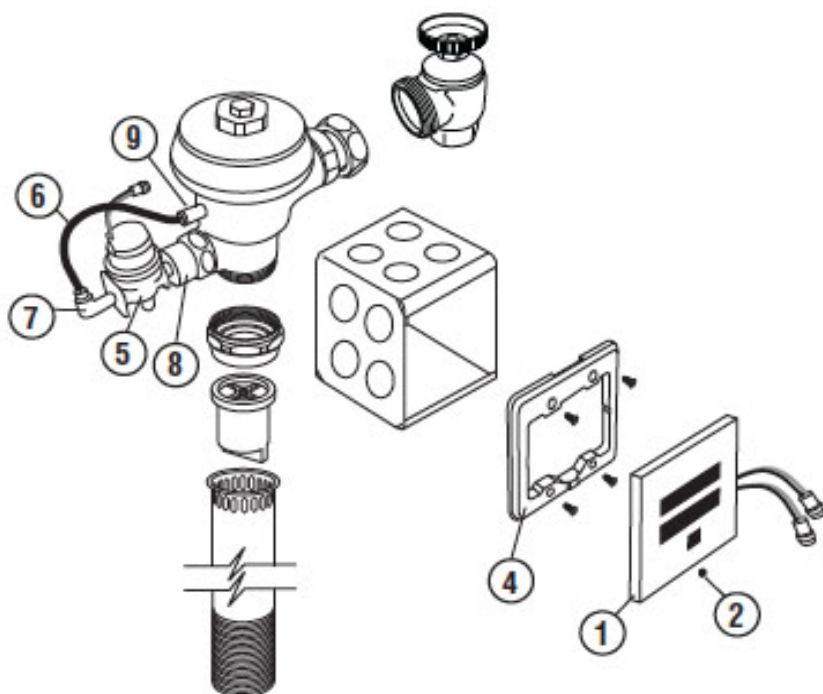
Setting The Valves for Minimum Flushing Noise

- (1) 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.
- (2) Activate the flush valve by standing or sitting for 10 seconds, or by pushing the override pushbutton.
- (3) 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.
- (4) Once adjustments to the Control Stop and the flow into the valve have been made, repalce and tighten the cover cap.



TrueSense Genuine Renewal Parts

for concealed water closet and urinal valves

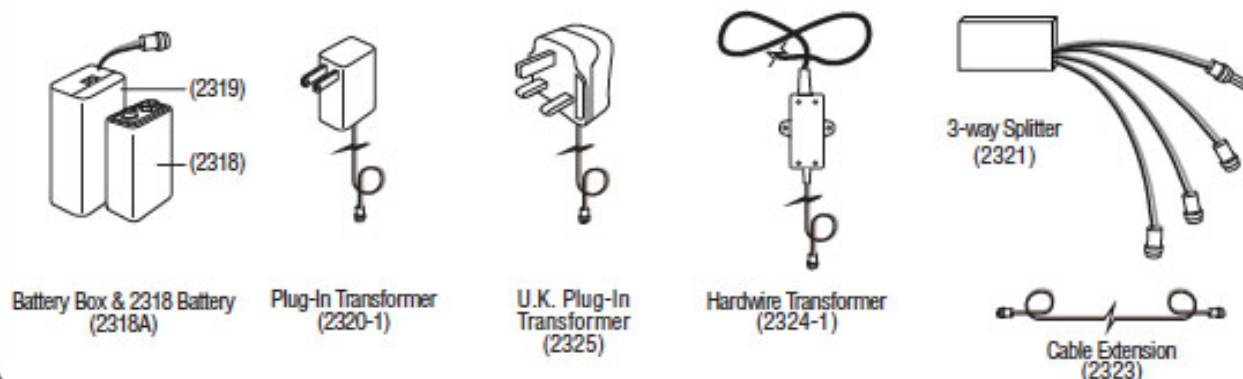


	Part No.	Description
1	2301A	Sensor Wall Plate (w/Polarity converter, 2-Way Splitter & O-R Switch w/ set screw
2	2303	Set Screw for sensor & flush vlv. wall plates
3	2308	Wire Nuts (not shown)
4	2311A	Mounting Bracket for sensor wall plate w/ screws
5	2328A	Solenoid Valve w/ fittings for concealed valves
6	2134	Red nylon tubing (5")
7	2181	Push-to-Connect Angle Fitting (Red Collar)
8	2156-1-RB	Piston Nut
9	2130	Push-to-Connect Straight Fitting (Red Collar)

Power Supply

2310	2-Way Power Splitter
2318	Battery (9V)
2318A	Battery Box & 2318 Battery
2320-1	Plug-in Transformer
2321	3-Way Power Splitter
2323	Male x Female Cable for multiple valve power split (3' in length)
2324-3	Hardwire Transformer
2325	UK Plug-in Transformer
SF1555	Remote Control

Power Supplies



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

