

EcoPower® Flush Valve

For the best results, be sure to read the following installation instructions and use the product only as described in this manual.



1 Variation & Specification

Toilet Flush Valve

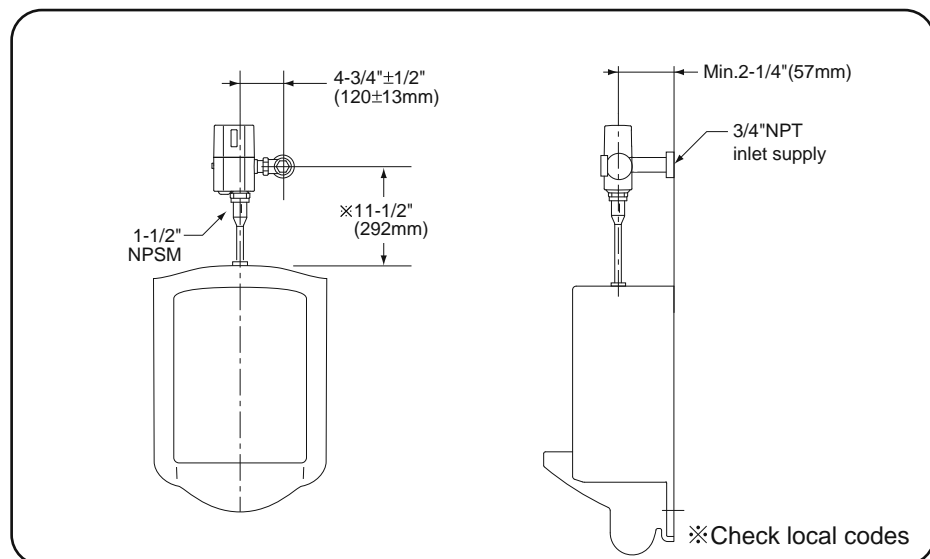
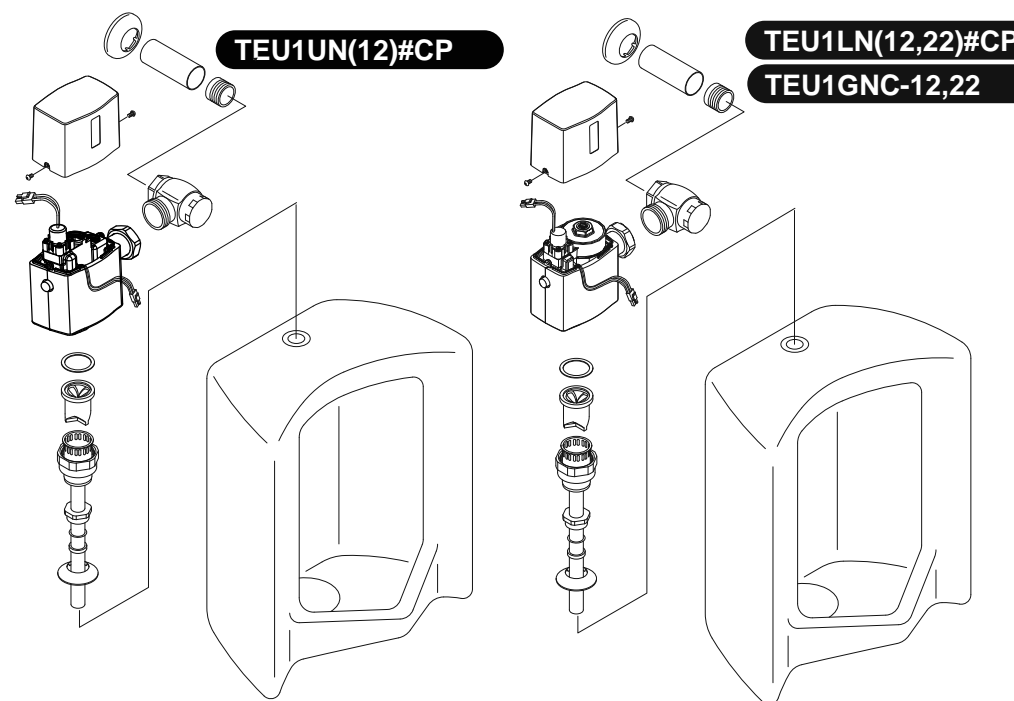
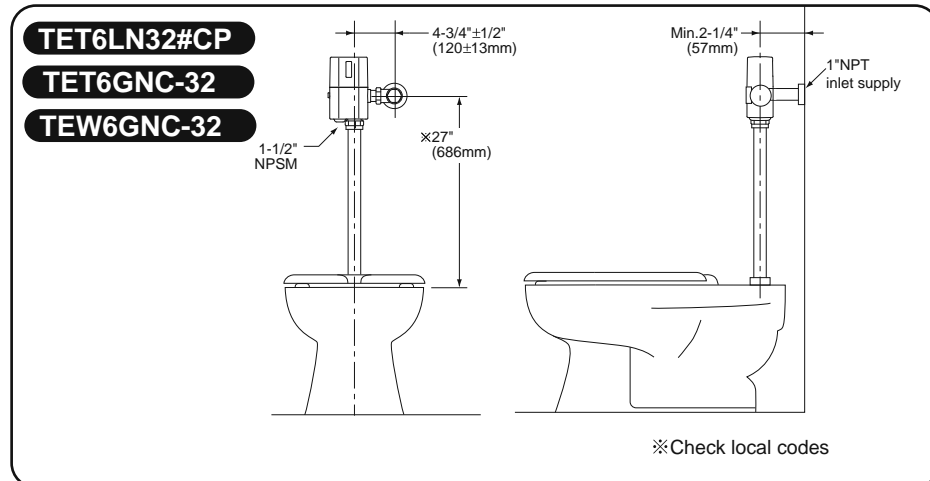
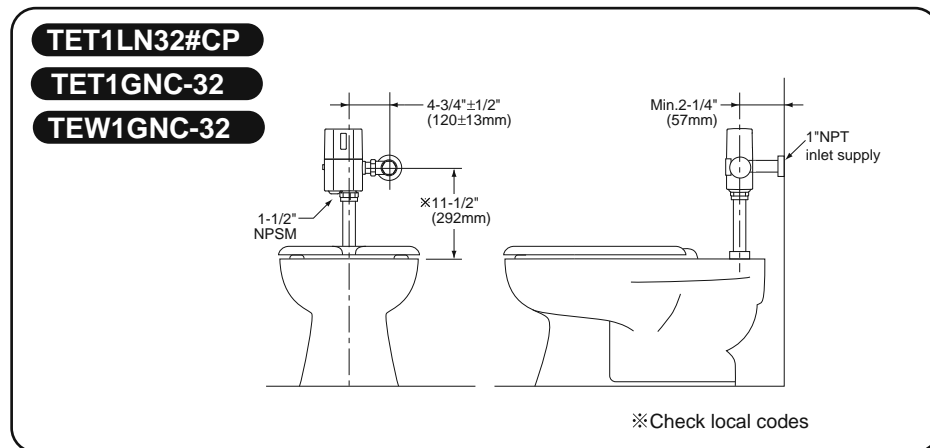
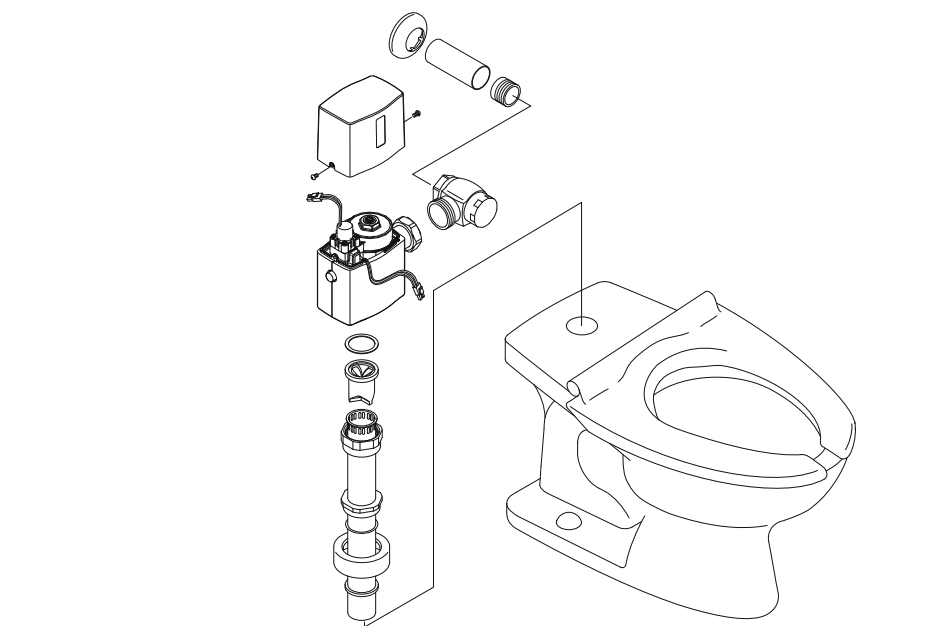
Figure			
Model number	TET1LN(32)#CP TET6LN(32)#CP	TET1GNC-32 TET6GNC-32	TEW1GNC-32 TEW6GNC-32
Dimension of Cover	7-3/4" (H) X 4-1/2" (W) X 3-1/8" (D) (198mm(H) X 115mm(W) X 80mm(D))		
Detection time	6 seconds or more		
Ambient temperature	32-104°F (0-40°C) Water temperature 34-104°F (1-40°C)		
Connection of the water supply pipe	1"NPT		
Supply water pressure	Minimum (Flowing) 35 PSI (241kPa)	15 PSI (103kPa)	
	Maximum	125 PSI (862kPa) *	
Shutoff pressure	7 PSI (48kPa)		
Discharge quantity per flush at 28 PSI (196kPa) (Factory set)	Approx. 1.28 gallon (4.8L)	Approx. 1.6 gallon (6L)	Approx. 3.5 gallon (13L)

Urinal Flush Valve

Figure			
Model number	TEU1LN(12,22)#CP	TEU1GNC-12,22	TEU1UN(12)#CP
Dimension of Cover	7-3/4" (H) X 4-1/2" (W) X 3-1/8" (D) (198mm(H) X 115mm(W) X 80mm(D))		
Detection time	6 seconds or more		
Ambient temperature	32-104°F (0-40°C) Water temperature 34-104°F (1-40°C)		
Connection of the water supply pipe	3/4"NPT		
Supply water pressure	Minimum required water pressure: 15 PSI (103kPa) (flowing) Maximum water pressure: 125 PSI (862kPa) *		
Shutoff pressure	7 PSI (48kPa)		
Discharge quantity per flush at 28 PSI (196kPa) (Factory set)	Approx. 0.5 gallon (1.9L)	Approx. 1.0 gallon (3.8L)	Approx. 0.125 gallon (0.47L)

*Water pressures over 80 psi are not recommended for most plumbing fixtures.

2 Set-up Drawing



3 Installation Precautions

- Prior to Installation**
Prior to installing your TOTO's EcoPower® Flush Valve, install the items listed below:
 - Closet fixture/Urinal fixture
 - Drain line
 - Water supply line
 The supply piping to these devices shall be securely anchored to the building structure to prevent the installed device from having unnecessary movement when operated by the user. Care shall be exercised when installing the device to prevent marring the exposed surface.

- Important**
All plumbing is to be installed in accordance with applicable codes and regulations. Water supply lines must be sized to provide an adequate volume of water for each fixture. Flush all waterlines prior to operation. The minimum pressure required to the valve is determined by the type of fixture selected. Consult fixture manufacturer for pressure requirement. Do not use toothed tools to install or service the valve.

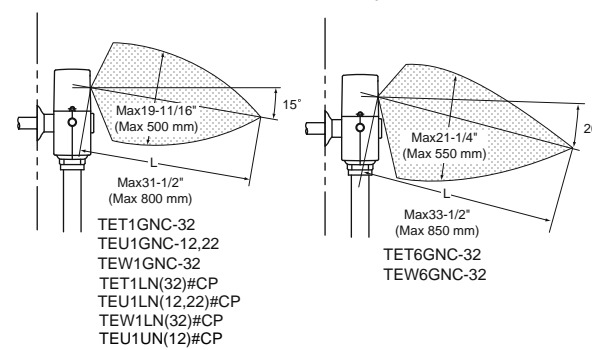
Note

Be sure to install TOTO's EcoPower® Flush Valve so that the control stop is situated no more than 11-1/2" (292mm) above the top of the bowl or the urinal. Refer to local codes for special requirements. Except for TET6GNC, TEW6GNC and TET6LN#CP, make sure that the control stop is installed 27" above the top of the bowl for proper valve function.

- Use care not to damage the surface of the infrared sensor.
- For Toilet Flush Valve**
The toilet sensor valve may not function if toilet seat and/or lid cover are left upright as it may block the sensor.
- For Urinal Flush Valve**
The Urinal Flush Valve is designed to be used with a washout urinal for optimum performance. However, a siphon jet urinal may also be substituted. Blowout urinals are not recommended.
- The detection range of the infrared sensor is shown in the figure above. Do not install a handrail or any other object within the detection zone of the sensor, as any object blocking the sensor may cause the valve to malfunction. Additionally, to avoid the possibility of valve malfunction, do not install the flush valve in a location where the sensor faces a mirror, stainless steel wall, other highly reflective surface or another infrared sensor.

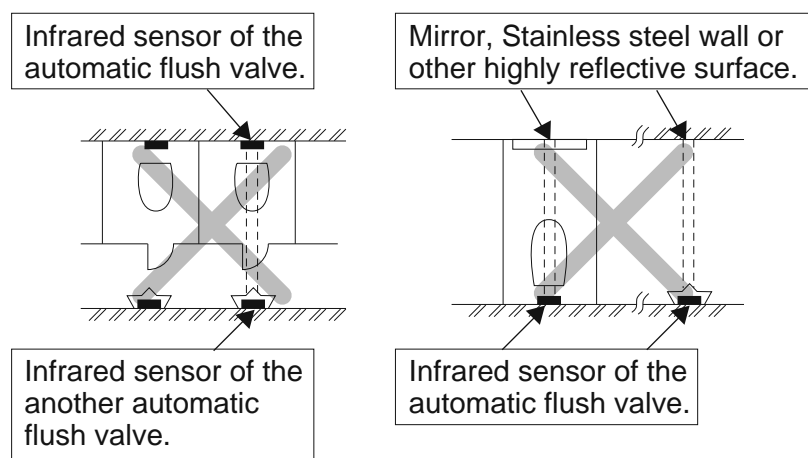
Detection zone

The detection zone is self-adjusting and is equipped with a 3-second flush delay. (No flush delay for Urinal flush valve) The detection zone may differ according to the color of the user's clothes. When a user wears black clothes, the detection zone may become smaller and the valve may not flush.



"AVOID"
DO NOT place the Infrared sensor of one urinal so that it is in line with the sensor of another automatic flush valve sensor.

"AVOID"
DO NOT place the Infrared sensor in front of a mirror, stainless steel wall, or other highly reflective surface.



4 Components

- Required tools
Adjustable wrench, Phillips and slotted screwdrivers.
- Inspection
Unpack the flush valve and carefully make sure the cover, main unit and all other parts are included and intact before starting installation of the product.

Item	Figure	Description	Q'ty
A		Valve Body assembly	1
B		Top cover assembly	1
C		Screw	2
D		Back-up battery Pack	1
E		Tool (Allen wrench)	1
F		Toilet Flush Valve	1
G		Notice Label	1
H		Owner's Manual	1
I		Installation Manual (this manual)	1

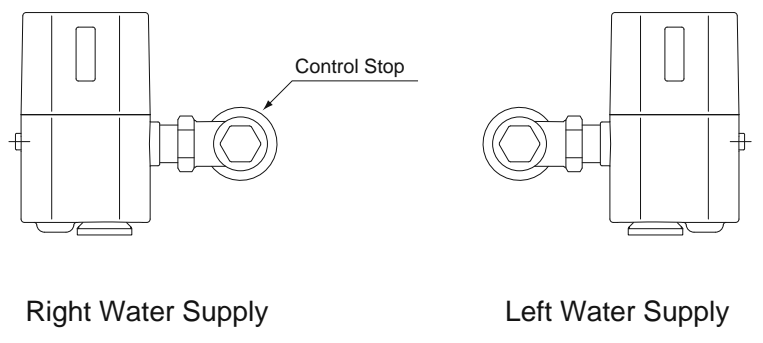
For TET1GNC-32, TEW1GNC-32, TET6GNC-32, TEW6GNC-32, TEU1GNC-12, 22, TET1LN32#CP, TET6LN32#CP, TEU1LN(12, 22) #CP AND TEU1UN(12)#CP

I		Vacuum breaker tube (with spud joint)	1
J		Control stop	1
K		Sweat solder kit (Escutcheon, covering tube, adapter)	1

5 Installation Procedure

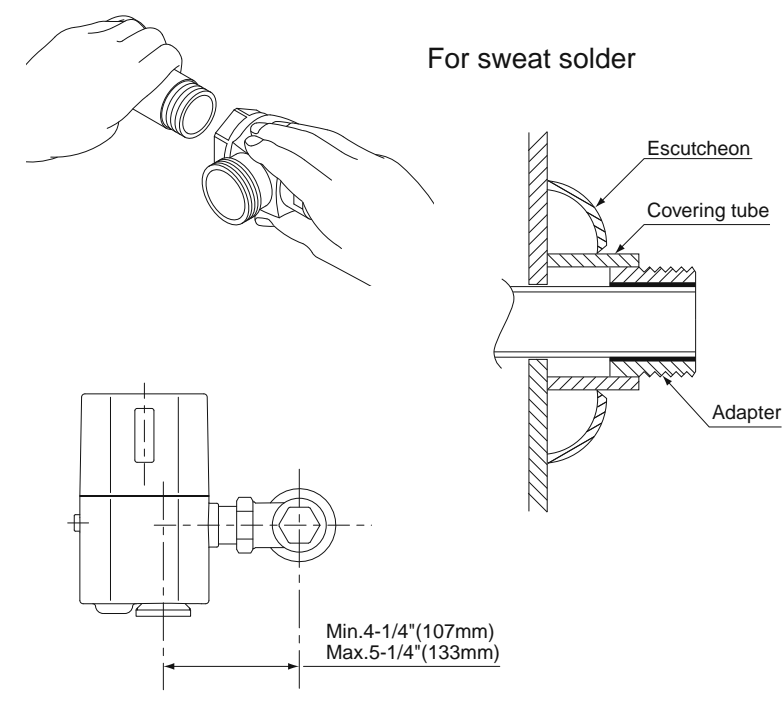
Note

1. For left water supply, attach the sensor top cover in the opposite direction so that the sensor will be at the front.
2. For retrofit installation, remove the old flush valve after shutting off the control stop.



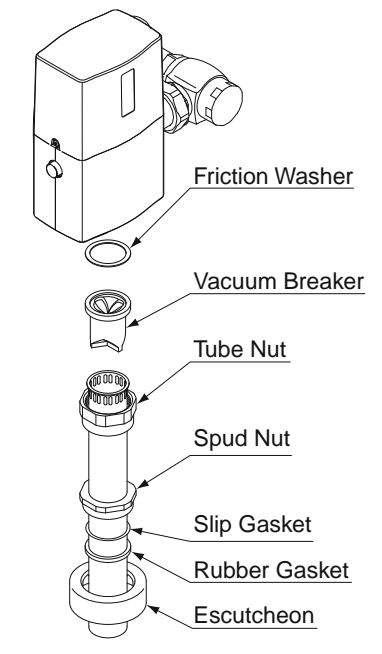
Step 1 (For New Installation)

Install the control stop using a proper size escutcheon and sweat solder adapter kit if applicable. Thread sealing compounds should be used on male NPT threads only. The distance from center of the control stop to center of the flush valve should fall within 4-1/4" to 5-1/4" (107mm to 133mm).



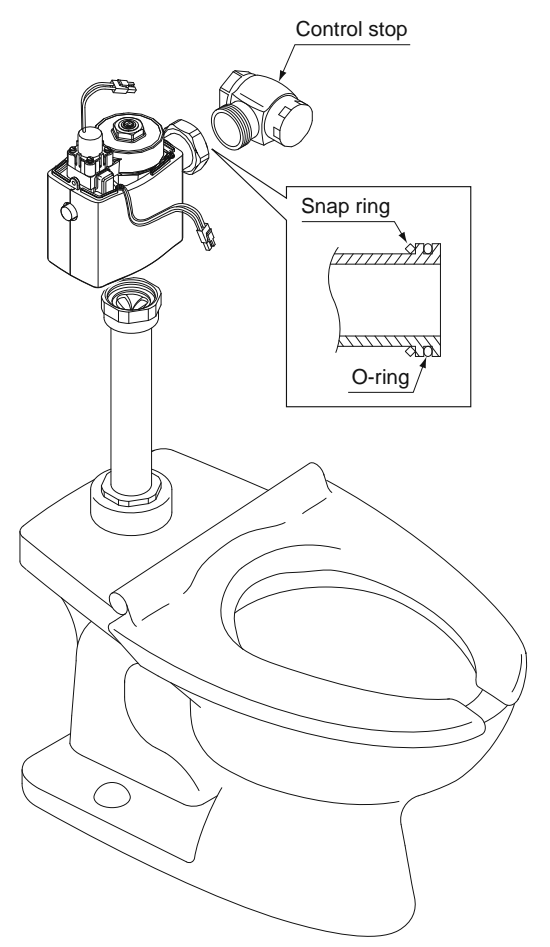
Step 2

Determine the length of vacuum breaker tube to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to the proper length. Assemble the spud nut assembly to the fixture spud. Hand tighten spud nut to fixture.



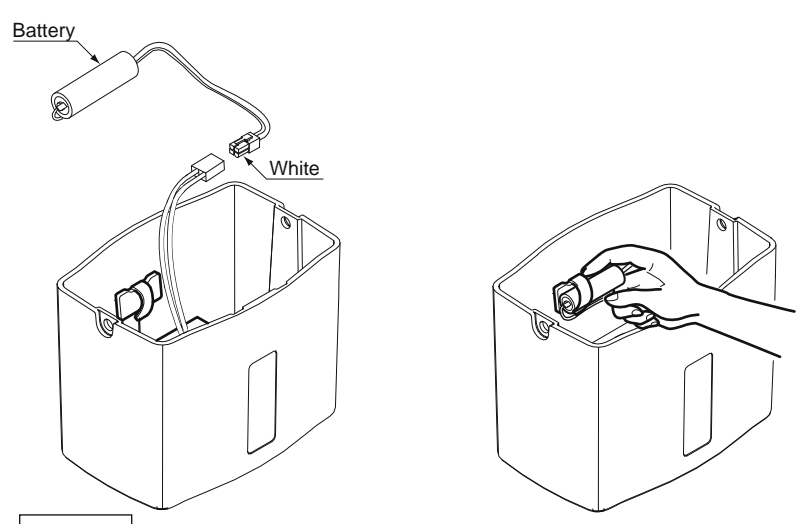
Step 3

Prior to inserting the flush valve tailpiece into the control stop, be certain that the O-ring is in the groove at the end of the tailpiece, the locking nut and the snap ring are located as shown. Connect the flush valve with the control stop and the vacuum breaker tube. Care should be taken not to damage the O-ring when inserting the tailpiece into the control stop. If lubrication is needed, wetting the O-ring with water will be sufficient. Align the flush valve and securely tighten fixture spud nut, vacuum breaker tube nut and locking nut with a wrench.



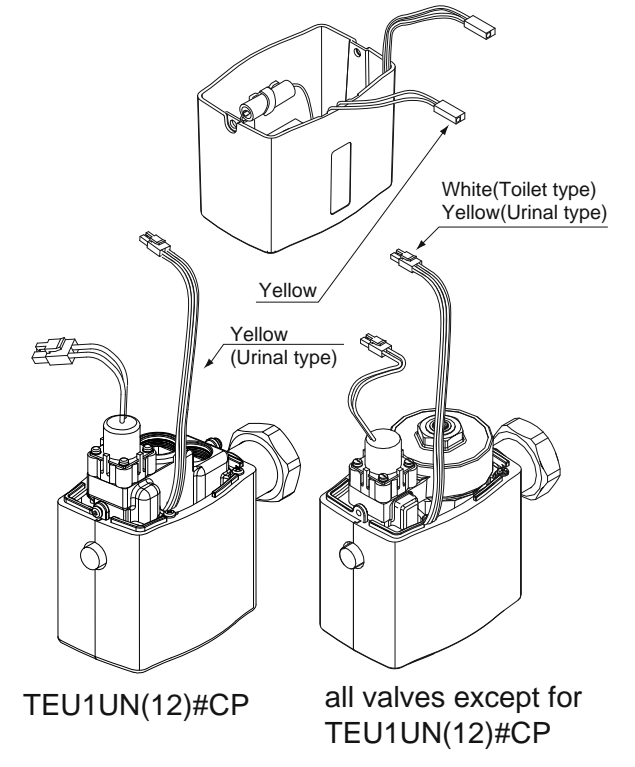
Step 4

Connect the connector of the battery with that of the controller and set it at the proper position as shown below.



Step 5

Connect the connectors of solenoid valve and generator with those of controller.

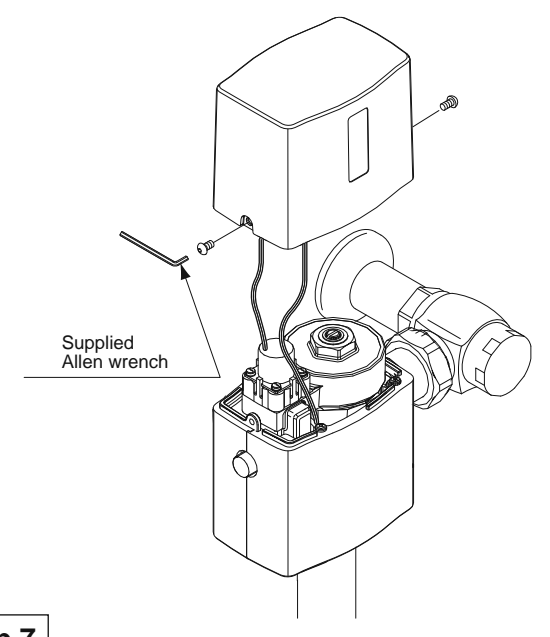


6 Test Run

1. Make sure the control stop is open.
2. Sit on the toilet seat. (for Toilet flush valve)
Stand within two feet from the front of the flush valve. (for Urinal flush valve)
3. Stay there for 6 seconds or more and then leave the toilet seat or the urinal. The valve will automatically flush.
4. Press the manual flushing button and make sure the valve flushes properly and the sensor red light is on for 2 seconds.
5. Recheck all the pipe connections for water leaks. If the flush valve is not operating properly following the test run consult the Troubleshooting section of the Owner's Manual.

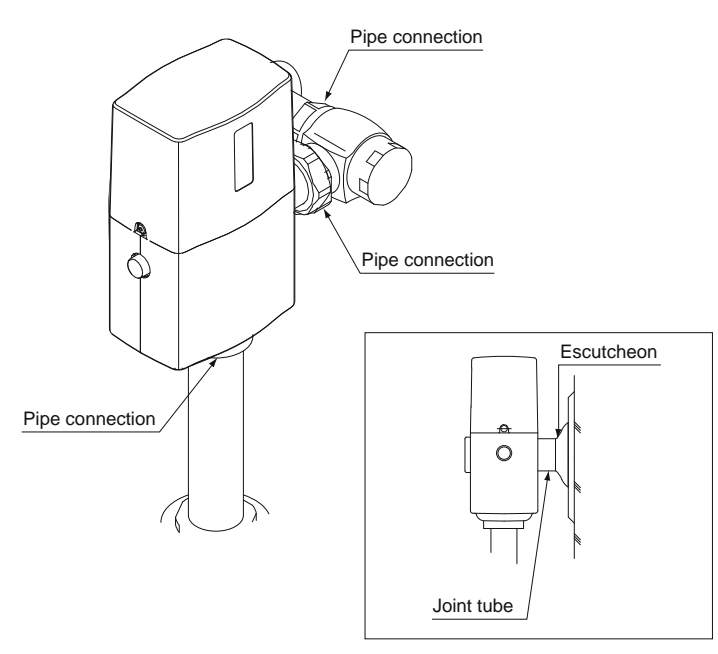
Step 6

Fasten the sensor top cover on body cover with the supplied screws (use supplied allen wrench).



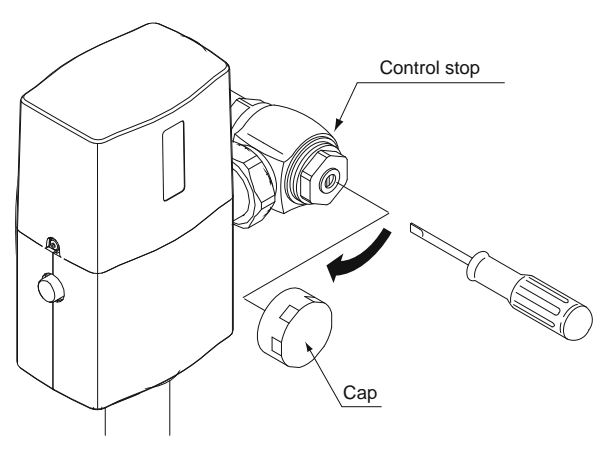
Step 7

Before the supply water is turned on, be sure all water leaks are eliminated by tightening all the pipe connections. If for any reason it becomes necessary to remove the control stop, be certain the water is shut off at the main supply valve.



Step 8

The flush valves are preset for fixture volume as marked on the valve carton. The valve does not require adjustment for variation in water pressure within its operating range. To set the flush valve for proper operation, open the control stop completely by using the adjusting screw and flush the flush valve several times. Gradually adjust the control stop closed, using the adjusting screw, so that the rate of water flow into the fixture is not excessive, yet is sufficient to adequately evacuate the waste. The cap for the control stop should be placed after final adjustments have been made. Tighten the cap firmly with a wrench.



7 Note to the installer

After the flush valve unit has been installed correctly, please explain to your customer how to use it and tell them to observe the following instructions.

1. Do not put any object in front of the sensor window which could obstruct the sensor, causing it to malfunction.
2. For troubleshooting, consult the Owner's Manual.

If you lack the necessary skills required or have difficulty following the directions for installation, maintenance, repairs, troubleshooting or adjustments, of the product, do not proceed without help from a qualified person to assist you in performing any of these functions.