

Model Variation

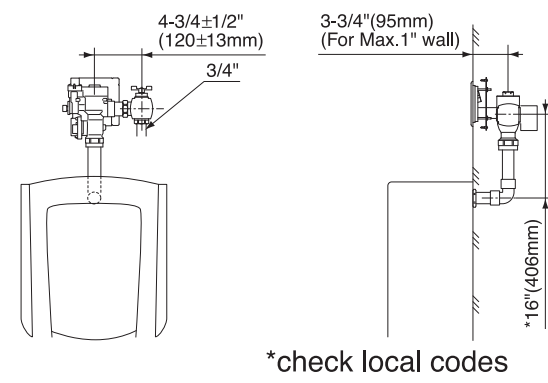
Toilet Flush Valve			
Water Supply	Top Spud	Back Spud Floor	Back Spud Wall
Figure			
1.6GPF (6LPF)	TET3GN32#SS	TET3GN33#SS	TET3GN31#SS
1.28GPF (4.8L)	TET3LN32#SS	TET3LN33#SS	TET3LN31#SS

Urinal Flush Valve	
Water Supply	Back Spud
Figure	
Flush pipe	3/4" O.D. / 1-1/4" O.D.
1.0GPF(3.8LPF)	TEU3GN11#SS / TEU3GN21#SS
0.5GPF(1.9LPF)	TEU3LN11#SS / TEU3LN21#SS
1/8GPF(0.47LPF)	TEU3UN11#SS

Specification

Model Number	TET3LN 32,33,31 #SS	TET3GN 32,33,31 #SS	TEU3LN 11,21#SS / TEU3UN11 #SS	TEU3GN 11,21#SS
Dimensions (cover)	4-3/4"(H) x 4-3/4"(W) (120mm x 120mm)			
Detection range	Within 31-1/2"(800mm) from the front of the flush valve			
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		3/4"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 0.5 gallon (1.9L)	Approx 0.5~1.0 gallon (1.9~3.8L)
	Required Min Flow rate: 23 gpm		Approx 1/8gpf (0.47L)	

For TEU3GN11#SS



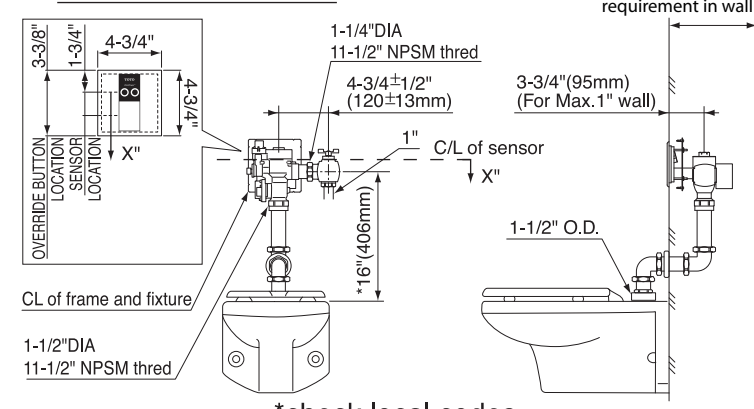
- Use care not to damage the surface of the infrared sensor.
- For Toilet Flush Valve**
The toilet sensor valve may not function if toilet seat and/or lid cover are left upright as it may block the sensor.
- For Urinal Flush Valve**
The automatic flush valve is designed to be used with a washout urinal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

Installation Precautions

A minimum 12" x 12" access panel, on either the facing or rear wall, or a walk-in service access is required for service and maintenance.

- Prior to Installation**
Prior to installing your TOTO automatic 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 unnecessary movement when operated by the user. Care shall be exercised when installing the device to prevent marring the exposed significant 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.

3. Toilet and Urinal Rough-in

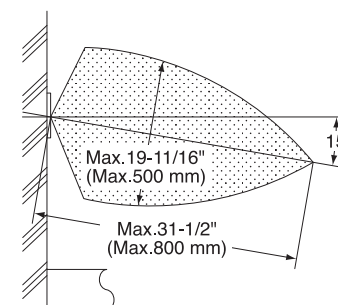


X", ± = At least 5" clearance from sensor to tip of toilet seat up position or to top of grab bar is required to avoid false detection.

Dimension of Opening in Wall (H x W)
3-15/16"(99mm) x 3-15/16"(99mm)

■ Detection zone

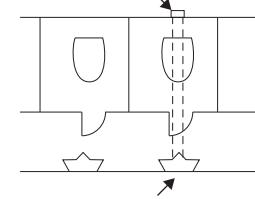
The detection zone is self-adjusting and is equipped with a 3-second flush delay after removal from the detection zone. (No flush delay for Urinal flush valve)
The detection zone may differ according to color of user's clothes.
When a user wears black clothes, the detection zone may become smaller and 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.

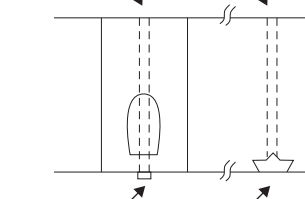
"AVOID" DO NOT place the Infrared sensor in front of a stainless steel wall or other highly reflective surface.

Infrared sensor of the automatic flush valve.



Infrared sensor of the another automatic flush valve.

Stainless steel wall or other highly reflective surface.



Infrared sensor of the automatic flush valve.

Installation

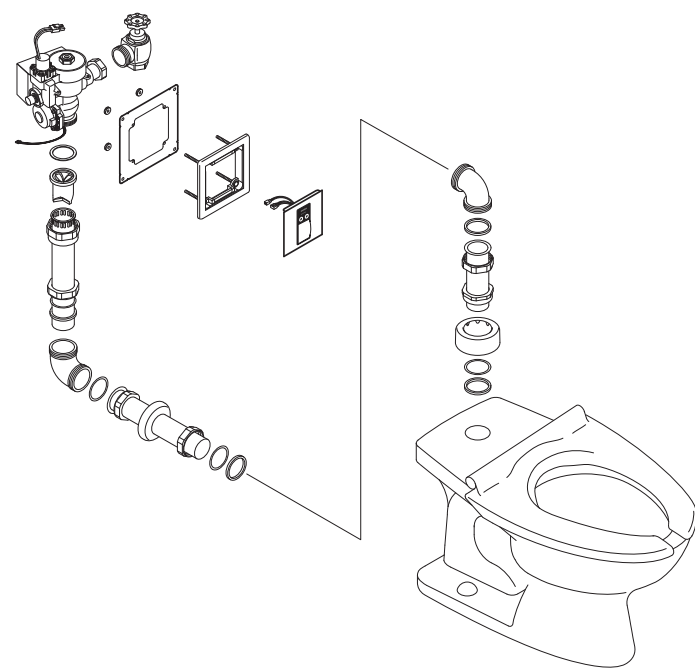
- Required tools**
Adjustable wrench, Phillips and slotted screwdrivers,
- Inspection**
Unpack the flush valve and carefully make sure the cover, main unit and all other parts are included and intact before starting installation of the product.

Item	Figure	Description	Q'ty
A		Main body (with a set of valve)	1
B		Front cover (with an infrared sensor)	1
C		Frame	1
D		Vacuum Breaker tube	1
E		Control stop	1
F		Back frame	1
G		Fixing nut	4
H		Connection wire	2

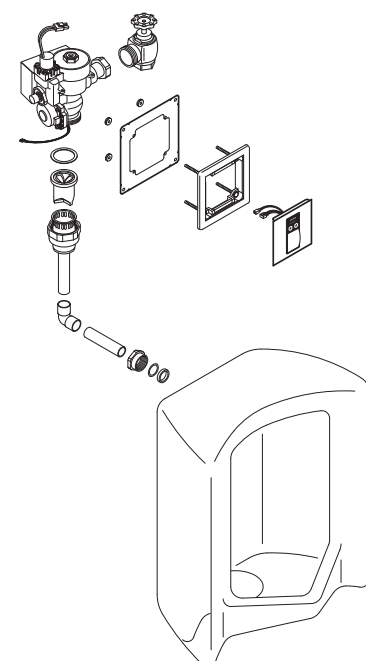
Item	Figure	Description	Q'ty
I		Tool	1
J		Notice Label	1
K		Installation Instruction (this manual)	1
L		TET3GN32#SS	Flush pipe
		TET3LN32#SS	
		TET3GN33#SS	
		TET3LN33#SS	
		TET3GN31#SS	Flush pipe
		TET3LN31#SS	
		TEU3GN21#SS	
		TEU3LN21#SS	
		TEU3GN11#SS	Flush pipe
		TEU3LN11#SS	Flush pipe
		TEU3UN11#SS	Flush pipe

Exploded View

For TET3GN32#SS

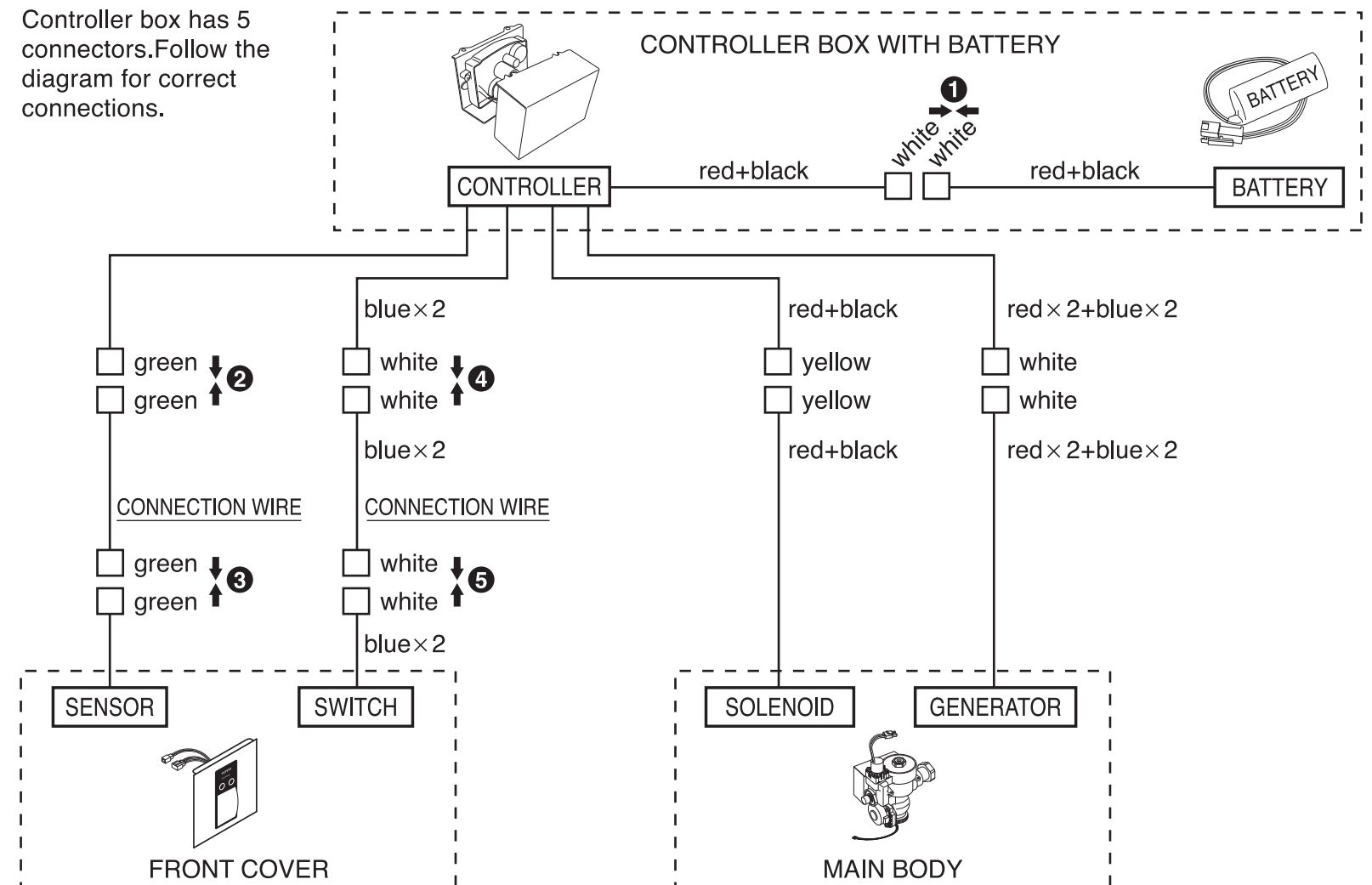


For TEU3GN31#SS



Wiring

Controller box has 5 connectors. Follow the diagram for correct connections.

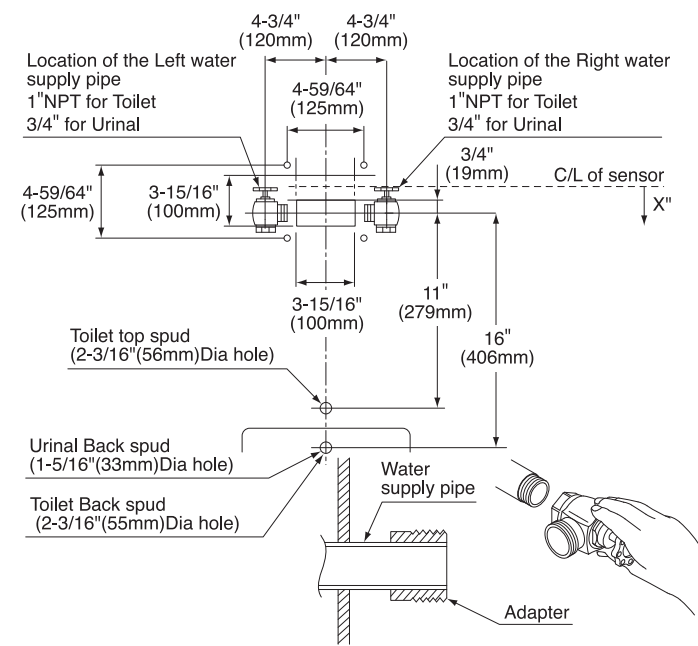


Installation Procedure

WARNING: To minimize the risk of electrical shock and fire hazard, be sure to turn off and lock out breaker for power line before starting the installation.

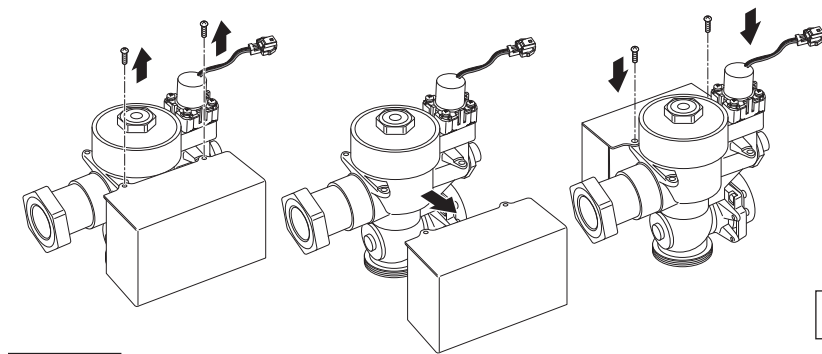
Step 1

Determine the location of the water supply pipe and attach the control stop to the pipe. Thereafter bore a flush pipe guide hole in the wall. Slide a thread solder adapter on the water supply pipe if applicable. Thread sealing compounds should be used on the male NPT threads only.



X, ‡ =At least 5" clearance from sensor to tip of toilet seat up position or to top of grab bar is required to avoid false detection. For toilet installation

For the left water supply. Attach the controller box in the opposition direction so that the control box will be back.

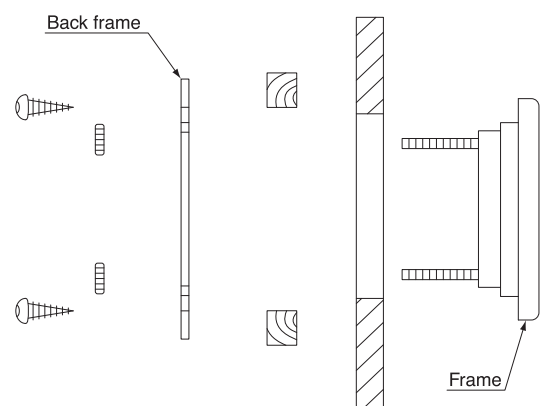


Step 2

Secure back frame to the wall with four screws. (To be prepared on the site) Then attach the frame to the back frame with nuts.

Note

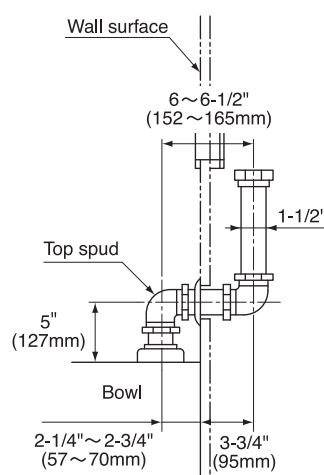
Wall thickness must be 5/8"(16mm) minimum and 1-5/8"(41mm)maximum. If your wall thickness is less than 5/8"(16mm), please attach wooden frame behind the wall.



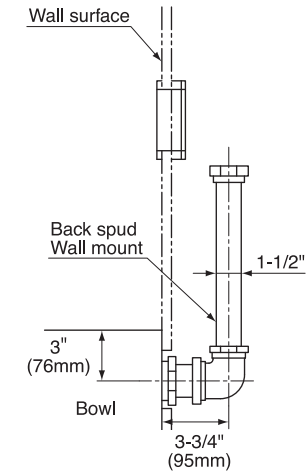
Step 3

Pass the flush pipe and the vacuum breaker through the hole bored in Step 1 and then mount them on the bowl. Cut the vacuum breaker tube, if required, to the proper length.

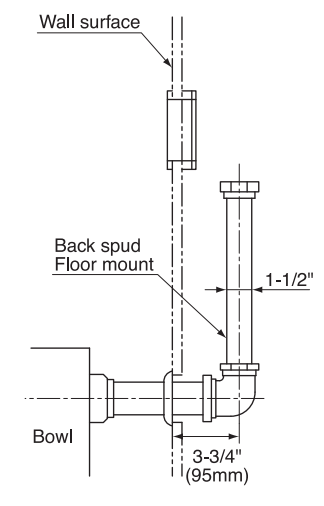
For TET3GN32#SS
TET3LN32#SS



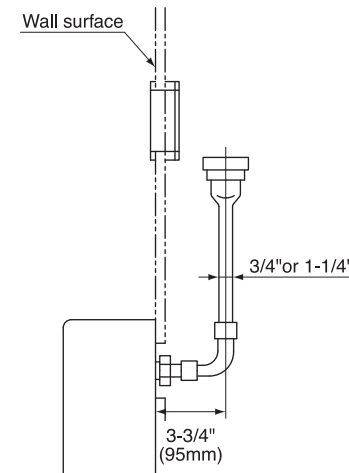
For TET3GN31#SS
TET3LN31#SS



For TET3GN33#SS
TET3LN33#SS

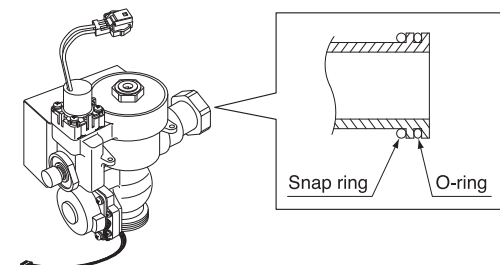


For TEU3GN11,21#SS
TEU3LN11,21#SS
TEU3UN11#SS



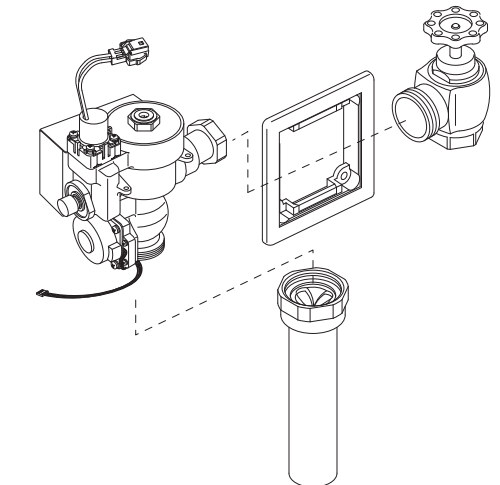
Step 4

Make sure that the O-ring fits in the groove at the end of the flush valve tailpiece. 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.



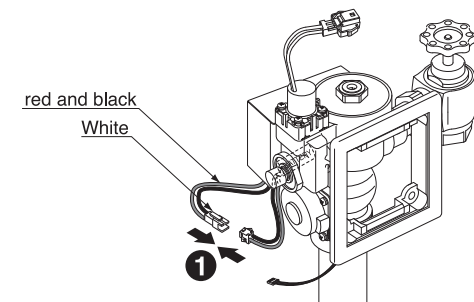
Step 5

Connect the flush valve with the control stop and vacuum breaker tube. Tighten the coupling nut with a wrench to prevent a water leak.



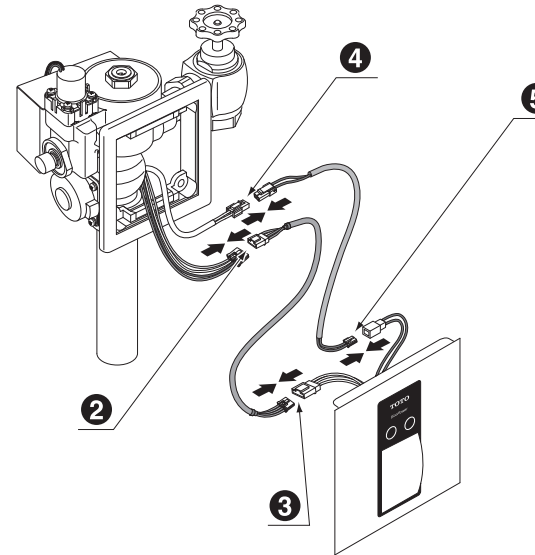
Step 6

Connect the connector of the battery with the controller.



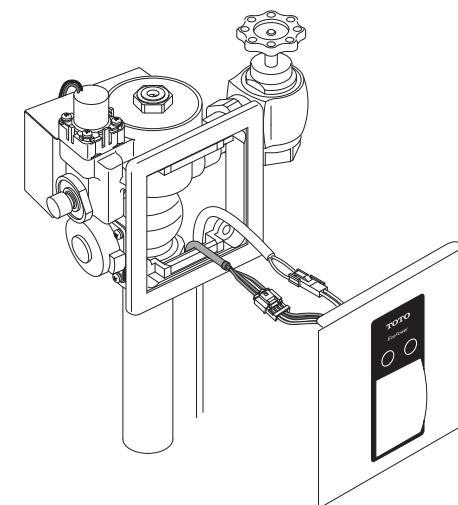
Step 7

Connect the infrared sensor with the controller by using the connection wire. (2, 3) Connect the switch with the controller by using the connection wire. (4, 5)



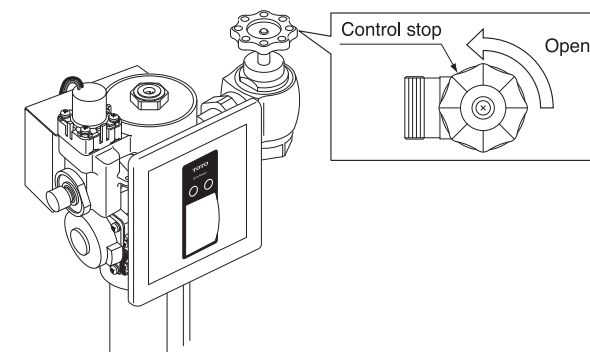
Step 8

Place the front cover on the frame carefully so that any cord might not be caught between the front cover and the frame.



Step 9

Open the control stop. Make sure no water leaks. Failure to correct all water leaks prior to use may increase the risk of electrical shock, fire hazard or damage to the product.



To set the flush valve for proper operation, open the control stop completely and flush several times. Flush volume is already factory pre set. Consistent flush volume can be observed as long as supply water pressure and flow rate requirements mentioned earlier are met.

Slight adjustment of the control stop should be made if excessive flush volume, which is because of very high water pressure and flow rate, is noticed.

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 leave the toilet seat or the urinal. The valve will automatically flush.
4. Press the manual flushing switch and make sure the valve flushes properly.
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.

Note to the installer

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

1. Do not put any object in front of the sensor window which could obstruct the sensor, causing the flush valve 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 adjustment, of the product, do not proceed without help from a qualified person to assist you in performing any of these functions.

Adjustment

1. Adjustment of the flow rate
Adjust the flow rate by turning the screw/handle of the control stop. Turn the screw/handle to the right to decrease the flow rate and turn it to the left to increase.
2. Adjustment of the detection range
The detection range of the infrared sensor does not need to be adjusted because it has been factory-preset.