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FREE - ELECTRONIC
FLUSH VALVE FOR URINAL

INSTALLATION & MAINTENANCE guide



05.07

STERN ENGINEERING LTD.

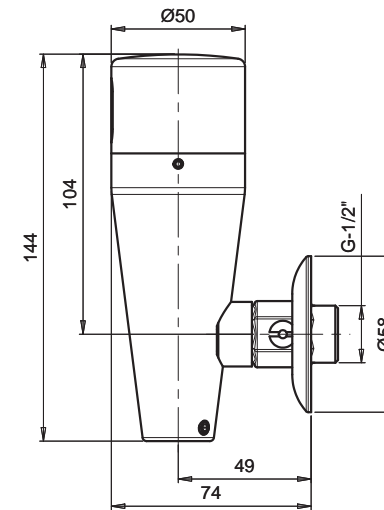
TROUBLE SHOOTING

Problem	Indicator	Cause	Solution
Valve does not flush:	1. Sensor flashes continuously when user's steps within the sensor's range. 2. Red light in the sensor does not flash when user's steps within the sensor's range.	Low battery.	Replace battery.
		1. Range is too short. 2. Range is too long. 3. Battery is completely used up.	Increase the range. Decrease the range. The battery must be replaced.
		4. Sensor is picking up reflections from mirror or other object.	Eliminate cause of reflection.
		3. Red light in the sensor flashes when user steps within the sensor's range.	1. Connectors between the electronic unit and solenoid are disconnected.
2. Debris or scale in solenoid.	Unscrew solenoid, pull out the plunger and the spring from solenoid. clean them with pressure or use scale remover material if needed.		
Valve does not shut off:	1. Sensor flashes when user's steps within the sensor's range. 2. Red light in the sensor does not flash when user's steps within the sensor's range.	3. The central orifice in the diaphragm is plugged or the diaphragm is torn.	Clean the orifice or replace diaphragm.
		4. The water supply pressure is higher than 8 bar.	Reduce the supply water pressure.
		Debris or scale in diaphragm or the diaphragm is torn.	Clean the orifice or replace diaphragm.
		1. Sensor is dirty or covered.	Clean or eliminate cause of interference.

TECHNICAL DATA



F R E E
Electronic flush valve for urinal



Power supply:

Recommended water pressure:

24 Hour automatic flush:

Sensor range:

Flushing time:

Prior use flush mode:

Internally mounted 9V battery

0.3-8.0 bar (4-116 PSI)

Maintains trap seal every 24 hours when not used.

55 cm Factory set. Adjustable.

6 secs. Factory set. Adjustable

Optional feature

M A I N T E N A N C E

Filter cleaning instructions

This flush valve is provided with a stainless steel filter preventing foreign particles to enter the lines. If the water flow has decreased, this may be because the filter is clogged. The filter can be cleaned as follows:

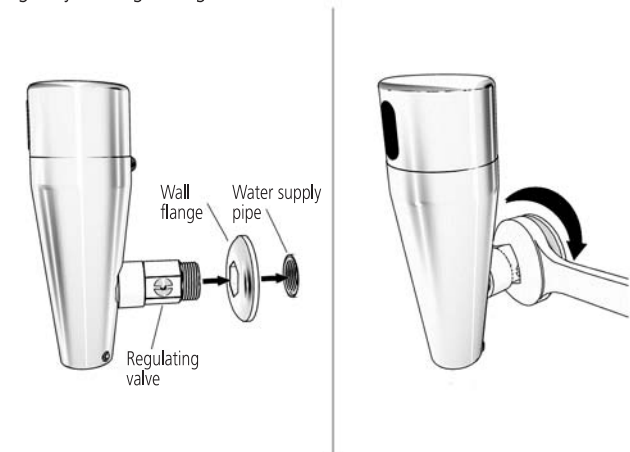
1. Turn off the regulating valve.
2. Disassemble the electronic flush valve from the regulating valve.
3. Remove the filter and wash it under running water.
4. Reassemble the filter.
5. Reassemble the electronic flush valve.
6. Turn on the regulating valve and adjust the flow capacity.
7. Make sure that there is no water leakage.

Care and cleaning of chrome and special finishes

DO NOT use steel wool or cleansing agents containing alcohol, acid, abrasives, or the like. Use of any prohibited cleaning or maintenance products or substances could damage the surface of the faucet. For surface cleaning of faucet use **ONLY** soap and water, then wipe dry with clean cloth or towel. When cleaning bathroom tile, the flush valve should be protected from any splattering of harsh cleansers.

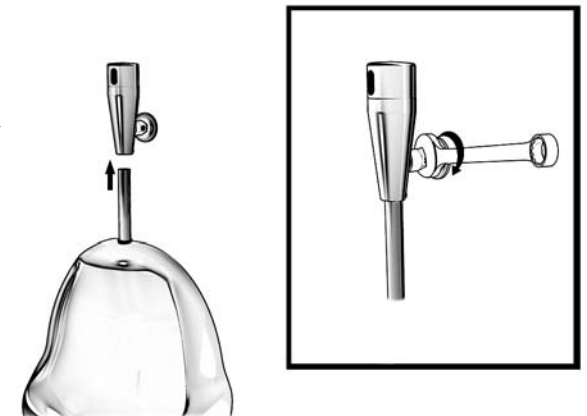
I N S T A L L A T I O N

- 1) Shut off water supply. Mount the flush valve to the wall by connecting the regulating valve to the water supply pipe in the wall. Place the wall flange between the regulating valve inlet and the finished wall.
- 2) Tighten the unit by turning only the regulating valve.



- 3) Connect the flush valve outlet to the pipe leading to the urinal's inlet.
- 4) Turn on the water supply and check for leaks.
- 5) Adjust the flow capacity by turning the regulating valve.

- 6) If the range is unsatisfactory, refer to the section entitled "Range adjustment"



RANGE ADJUSTMENT

The sensor range is the range an object can be away from the sensor in order to activate the flush valve. The sensor is factory preset. If necessary, it can be adjusted as follows:

Adjusting the sensor range:

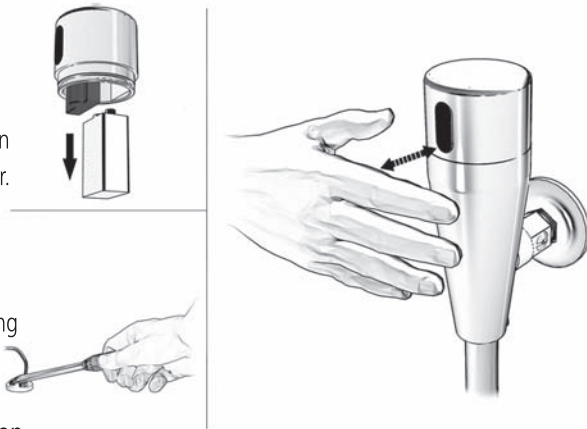
1. Disconnect the battery from the sensor.
2. Make a short circuit between the (+) and the (-) of the sensor.

You can use a screw driver or another conductor material to make this short circuit.

Alternatively, after disconnecting the power supply, activate the sensor three or four times.

Do not make a short circuit on the power supply or on the sensor when the power supply is connected to the sensor.

3. Reconnect the power supply to the sensor.
4. To enter into the adjusting mode, put your hand in front of the sensor at a distance of 2"(5cm) to 4"(10cm) within 5 seconds after the reconnection of the power supply.
Note: If you will not put your hand in front of the sensor after connecting the power supply, the sensor will not enter into adjusting mode and the previous setting will return.
5. When the sensor enters into adjusting mode and your hand is in front of the sensor, a slow flashing of the red light at the front of the sensor will occur.
6. Keep your hand in front of the sensor until the slow flashing changes into quick flashing. At this point move your hand to the required distance from the sensor and wait until the red light will stop flashing.
7. When the red light has turned off, your sensor has been adjusted to the required distance.
8. Check the distance you have set and if it is not satisfactory, repeat steps 1-6.



RANGE ADJUSTMENT / BATTERY REPLACEMENT INSTRUCTIONS

Adjusting the sensor with a remote control - optional:

In order to adjust the sensor with a remote control you hold the remote control straight in front of the sensor at a distance of about 4"(10cm). Choose the function you want to adjust by pressing once on one of the function buttons. After pressing once on a specific function button, a quick flashing of the red light at the front of the sensor will occur. At this stage, you can change the adjustment by pressing the (+) or (-) buttons, every push will increase or decrease one level.

Range: Press + to increase the detection range and - to decrease the detection range of the sensor. **The remote control can also be used to adjust:**

Flow Time: Press + to increase the flushing time and - to decrease it.

Delay In: Changes the time the water will start flowing when the user will come within the sensor range. Press + to increase it and - to decrease.

Delay Out: Changes the time of water flow after the user leaves the urinal. Press + to increase it and - to decrease.

On/Off: Pressing this function button will prevent the solenoid from opening for 1 minute. To cancel this function press the on/off button again.

Reset: This function allows to come back to all the factory settings. Press the Reset button and without releasing it, press one time the + button.



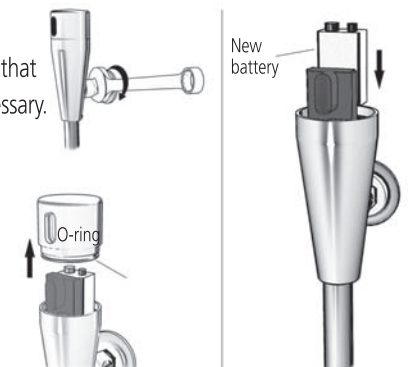
Battery replacement instructions

When the battery weakens, the red indicator light will blink at a constant rate when the user's hands come within the sensor's range. The battery must be replaced within two weeks.

1. Turn off the regulating valve.
2. Release the screw of the electronic cap and carefully pull it out.
3. Replace the used battery with a new 9V battery (Lithium battery is recommended).
4. Before reassembling the electronic cap, make sure that the external O-ring is not damaged. Replace it if necessary.
5. Connect the solenoid valve's connector to the connector of the electronic unit.
6. Reassemble the electronic cap.

Attention: The interior of the flush valve and the cover plate with the electronic cap must be fully dry before reassembling the parts.

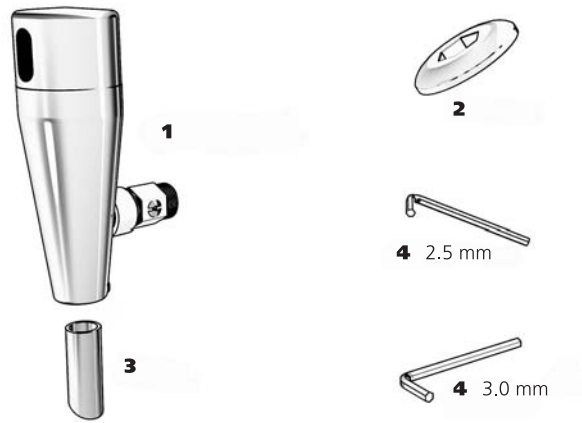
7. Tighten the screw.



PACK CONTENTS / PRE-INSTALLATION INFORMATION

Familiarize yourself with the part names and confirm that the parts are included.

1. 1x Flush valve body and regulating valve
2. 1x Wall flange
3. 1x Pipe
4. 2x Allen keys



Check contents

Separate all parts from packaging and check each part with the "Pack contents" section.

Pay attention to the different models variations.

Make sure all parts are accounted for before discarding any packaging material.

If any parts are missing, do not attempt to install your Free electronic flush valve until you obtain the missing parts.

Warnings

Do not install the flush valve facing a mirror or any other electronic system operated by an infra-red sensor.

To prevent reflection problems, it is recommended to keep a minimum distance of 1.50 meters between the flush valve and other objects.

Preparation for installation

Flush water supply lines thoroughly before installing the faucet. Do not allow dirt, Teflon tape or metal particles to enter the faucet.

Shut off water supply.

Important

All plumbing is to be installed in accordance with applicable codes and regulations.

S P A R E P A R T S

Spare Parts List

- | | |
|-------------------------|------------------|
| 1. Sensor kit | Cat.No. 07220016 |
| 2. Solenoid valve kit | Cat.No. 07230003 |
| 3. Seals and screws kit | Cat.No. 07210031 |
| 4. Diaphragm | Cat.No. 04500001 |

Optional accessories

- | | |
|-------------------|------------------|
| 5. Remote control | Cat.No. 07100001 |
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W A R R A N T Y

L I M I T E D W A R R A N T Y

This product is covered by a limited warranty of two years from date of purchase.

During this period, STERN undertakes, at its option, to repair or replace any faults caused by defective materials or manufacturer defaults that may arise (see Stern Warranty).

The guarantee does not cover faults or damage caused by incorrect installation and/or maintenance, wear and tear, battery, or water composition. This includes, but is not limited to the following:

- Incorrect installation, inversions of supply pipes.
- Pressures or temperatures exceeding recommended limits.
- Improper manipulation, tampering, bad or lapsed maintenance.
- Foreign bodies, dirt or scale introduced by the water supply.