WE CAN TOGETHER SAVE WATER
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Common Urinal Problems

Dealing with urinals problems can be very challenging, specially when unpleasant smells and blockages are out of control. Take control of your washrooms problems with Bio Natural Solutions range of urinal hygiene products. Our revolutionary technology reduces blockages, eliminates smells and improves washroom hygiene whilst protecting the environment, ensuring your staff and visitors have a positive view of your premises.

**High water usage**

A common urinal uses about 250,000L of water per year costing your business up to $700 per year.

**Unpleasant odours**

Urine residue is accumulated above and below the urinal bowl leading to bad smells that generate negative user experience.

**Poor hygiene**

Traditional cleaning products lack of power to keep urinals and washrooms completely fresh, clean and hygienic.

**Blockages and flooding**

Debris, uric acids, uric salt, organic matter and scale build up on the urinal waste trap, drain and pipework causing blockages, resulting in overflowing urinals that create poor impression on visitors.
1. **Reduce water usage**

Our products will save you up to 98% on your urinal water consumption.

2. **Retrofitting urinals**

Our range of retrofitting products for urinals contain ‘friendly’ bacteria that digest and eliminate uric salts and lime scale dissolving them completely. This eradicates the build up of these elements reducing maintenance costs and eliminating unpleasant smells.

3. **Biological cleaning regime**

Our microbial cleaner digests urine residue above the urinal bowl and surrounding areas eliminating any traces of unpleasant smell. More impressively the product cleans after application making cleaning tasks easier and saving you cleaning time.
What is a **Smart Flush™** Water Saving System?

The **Smart Flush™** Water Saving System is an innovative kit containing urinals retrofitting and flushing systems combined with revolutionary eco friendly cleaning products developed specifically for saving water in men’s urinals and solve common urinal problems.

With the Installation of The **Smart Flush™** Water Saving System, old and existing urinals are converted into in low flush, semi-waterless that will require less water to run.

The **Smart Flush™** Water Saving System consists of three components: Retrofitting devices, Flushing systems and Biological Cleaning Regimes.

**Flushing System:** A Smart Flush™ system is installed in order to control the water usage. This is an automated timer that can be programmed to flush the urinals according to your business specific needs. The Smart Flush system consists of a urinal timer, a solenoid valve that is plumbed up and a physical air gap that prevents contaminated water to affect potable water.

**Retrofitting:** A retrofitting device is installed or placed into the urinal. These units contain a water soluble Bio-Blocks that disinfects and deodorizes men’s urinals. These blocks are made with friendly bacteria that are released every time the urinal is flushed, digesting urine, uric salt and organic matter throughout the plumbing and preventing bad smells and blockages. **Bio Natural Solutions** offers there different retrofitting options: Green Sleeves Urinal Sanitisers, Wee On Urinal Screens or Bio Blitz urinal Blocks.

**Biological Cleaning Regime:** For this system to work as it best a Biological Cleaning product must be used to clean the urinals and surrounding areas. Our Bio Blitz Biological Cleaner is the best option as it boost and protects the friendly bacteria contained in our retrofitting devices. Any cross contamination with chemicals will kill the friendly bacteria in our products allowing for bad bacteria and organic matter to accumulate in the plumbing and water waste, generating bad smells, blockages and water pooling.
Why use Smart Flush™ Water Saving System?

Saving money, being sustainable and eco friendly presents challenges to most organisations. More and more facilities are looking at how to reduce water usage and carbon footprint whilst reducing costs.

The Smart Flush™ Water Saving Systems is an essential tool for modern and evolving businesses. It can help you protect the environment by eliminating urinal water waste and removing the need for harmful and hazardous chemicals.

The Smart Flush™ Water Saving Systems combines revolutionary eco-friendly cleaning products, retrofitting devices and highly flexible flush controls.

Our Water Saving Systems will help you save large amounts of water whilst improving the appearance of your urinals and washrooms in order to enhance the washroom experience of staff and visitors.

By installing our Water Saving Systems you will be converting your existing traditional urinals into low flush, semi-waterless urinals. Our Water Saving System reduces blockages that can cause over flowing and smelly urinals, ensuring your staff and visitors have a positive view of your business and premises.

With the installation of the Bio Natural Solutions Water Saving System, you will save an average of 98% of water per urinal every year. This equates to nearly 150,000L of drinking water saved per year per each urinal. At the same time, there are potential cost savings considering that commercial properties are charged discharge rates (sewage rates). Therefore, installing our Water Saving System will not only SAVE WATER, it also will save you so much MONEY and will help preserving the environment.

Key Benefits

- Eliminates unpleasant odours.
- Saves up to 98% water per urinal per year.
- Prevents blockages and urinal flooding.
- Improves hygiene.
- Eliminates the need for harmful chemicals.
- Helps you reach green building ratings.
- Systems usually pay themselves within a year.
- Australian made products.
- Complies with Australian Plumbing Standards/
Flushing Devices
The flushing system consists of a flushing controller, solenoid valves and physical air gaps.

Retrofitting Urinals
Whether your urinals are wall hug or trough urinals, any of our three retrofitting options can be used.

Biological Cleaning Regime
Keep urinals clean, fresh and hygienic whilst preventing blockages and unpleasant odours entering the washroom.

*The image above is an exemplification, and does not represent how the system will exactly look after installation.

Flushing Devices
- Reduce water consumption by up to 98% per urinal.
- Save up to 150,000 litres of water per urinal per year.
- Reduce your water bill.
- Achieve savings of up to $500 per urinal per year.

Retrofitting Urinals
- Improve washroom hygiene and efficiency.
- Improve indoor air quality.
- Prevent pipe corrosion.
- Reduce solid waste.
- Our products contain bacteria that digest uric salt, preventing blockages.

Biological Cleaning
- Avoid the need for chemicals.
- Reduce cleaning time which improves cleaners productivity.
- Our products keep cleaning upon application.
- Biodegradable formulations.
- Free of toxic and hazardous chemicals.
1. **Flushing Devices:** Electricity and battery powered options available.

   **Smart Flush™ Urinal Flush Timer - TIM1871 (Electricity) TIM 1864 (Battery)**
   
   Smart Flush™ is an automated urinal flushing timer that has been developed specifically to reduce water consumption in urinals. The Smart Flush is the most flexible urinal timer on the market. It allows each day of the week to be programmed individually from 1 to 48 flushes per day and helps to save up to 98% on urinals water consumption.

2. **Retrofitting Urinals:** Designed to suit different applications and needs.

   **Green Sleeve™ Urinal Sanitiser - BIO0003 (White) BIO1611 (Chrome)**
   
   The Green Sleeve™ is a consumable retro-fitting device for urinals that locks in odours and prevents foreign matter entering the pipe work. The Green Sleeve™ deals with the common urinal problems by eliminating unpleasant smells, reducing blockages, improving hygiene, enhancing washroom appearance and reducing both operating and maintenance costs.

   **Wee On™ Urinal Screen - W01703**
   
   The Wee On™ Urinal Screen is a consumable, easy-to-fit, replaceable and low cost alternative suited to retro-fitting any type of urinals. The Wee On™ releases cultured bacteria that digest urine and organic waste.

   **Bio Blitz™ Urinal Blocks - BIO0089**
   
   The Bio Blitz™ Urinal Blocks are water soluble blocks used to disinfect and deodorise men’s urinals. These urinal blocks are made with natural and ‘friendly’ bacteria cultures that digest uric salt, scale and sludge. The Bio Blitz blocks contain natural citric fragrance that deodorise the urinal.

3. **Bio Natural Cleaning Regime:** Sizes available range from 1L to 20L.

   **Bio Blitz™ Biological Cleaner Concentrate - BI00157**
   
   Bio Blitz™ Biological Cleaner is a powerful concentrate which has been formulated with beneficial probiotics, making cleaning quicker, easier and more effective. Bio Blitz™ keeps working after you have finished wiping.

   Bio Blitz™ friendly bacteria digest organic matter such as urine, blood, soap scum, grease and fats by creating digestive enzymes that help bio-degrade complex compounds. Most impressively, the bacteria work upon application, meaning that long hours of cleaning are a thing of the past when you choose Biological Cleaner.
Smart Flush™ Hardware Installation

Hardware Installation

This section shows the typical installation of the Smart Flush™ for either Battery or Electricity operated units. Installing the hardware is the same whether you are installing it in a wall hung or trough urinal.

1. Find a suitable location to mount the Smart Flush™ unit.
2. The unit must be installed away from direct weather and in such a way that water can not follow the wires back to the controller.
3. Lift up the two mounting tabs and use two appropriate screws to mount the control box on the wall.
4. If using a AC timer, keep in mind that the power cable is 1.8 metre long and should be plugged directly into a general power outlet, not into an extension lead.
5. If using a DC timer, insert 8 x AA batteries. DO NOT MIX BATTERY TYPES.
6. Connect the cable to the valve output on the timer as shown below.

Wire Connection

**DC:** Wire the latching valve to the socket marked VALVE observing the polarity. Positive (+) connects to the right hand side. If the valve operates backwards, then the wiring polarity needs to be reversed.

**AC:** Wire the actuator valves to the sockets marked VALVE1, VALVE2. Maximum of 2 valves per socket. VALVE 1 will activate first for the flush period followed by VALVE 2. The AC timer will run up to 4 valves.

![Wire Connection Diagram](image)

Smart Flush™ power settings

**Smart Flush™ Electricity Operated: 240V - 24V AC**
At a power outage, all configurable items are retained and the clock will continue to run up to 14 days.

**Smart Flush™ Battery Operated: 6-12V DC**
It is powered by eight AA Alkaline batteries for a total power of 12VDC. The LCD display will turn off during normal operation to help conserve power.
Smart Flush™ controller settings

To select the settings menu, push the SELECT button. Press the UP & DOWN buttons to scroll to the option you wish to change. Press the SELECT button to select the sub-menu of the currently displayed menu.

The selectable items in the sub-menus will be flashing. To change these values use the UP & DOWN buttons to adjust any value. If the value is correct press SELECT to move to the next step. Once all settings have been set, you will return to the settings menu, press UP & DOWN buttons and scroll to EXIT and press SELECT to save your settings.

1. CLOCK: Set the day of the week and the time of day in a 24 Hour format. Note there is an am/pm indication to avoid incorrect settings.

2. PROG: Set the program number for the required flush cycles. A different program can be set for each day.

<table>
<thead>
<tr>
<th>SMART FLUSH™ AC UNIT</th>
<th>SMART FLUSH™ DC UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROG 1. = 1pm</td>
<td>PROG 1. = 1pm</td>
</tr>
<tr>
<td>PROG 2. = 7am,7pm</td>
<td>PROG 2. = 7am,7pm</td>
</tr>
<tr>
<td>PROG 3. = 7am,2pm,9pm</td>
<td>PROG 3. = 7am,2pm,9pm</td>
</tr>
<tr>
<td>PROG 4. = 7am,11am,3pm,7pm</td>
<td>PROG 4. = 7am,11am,3pm,7pm</td>
</tr>
<tr>
<td>PROG 5. = 7am,11am,3pm,7pm,11pm</td>
<td>PROG 5. = 7am,11am,3pm,7pm,11pm</td>
</tr>
<tr>
<td>PROG 6. = 7am,10am,1pm,4pm,7pm,10pm</td>
<td>PROG 6. = 7am,10am,1pm,4pm,7pm,10pm</td>
</tr>
<tr>
<td>PROG 7. = 0am, 6am,9am,12pm,3pm,6pm,9pm</td>
<td>PROG 7. = 0am, 6am,9am,12pm,3pm,6pm,9pm</td>
</tr>
<tr>
<td>PROG 8. = 3/6/9/11am, 2/5/8/11pm</td>
<td>PROG 8. = 3/6/9/11am, 2/5/8/11pm</td>
</tr>
<tr>
<td>PROG 9. = 0/2/4/9am, 12/2/4/6/8/10pm</td>
<td>PROG 9. = 0/2/4/9am, 12/2/4/6/8/10pm</td>
</tr>
<tr>
<td>PROG 10 = PUB/BAR 0/1/2/3/5/9am, 1/3/5/6/7/8/9/10/11pm</td>
<td>PROG 10 = PUB/BAR 0/1/2/3/5/9am, 1/3/5/6/7/8/9/10/11pm</td>
</tr>
<tr>
<td>PROG 11 = SCHOOLS 1/8/9/10/11am, 12/1/2/3/4/6pm</td>
<td>PROG 11 = SCHOOLS 1/8/9/10/11am, 12/1/2/3/4/6pm</td>
</tr>
<tr>
<td>PROG 12 = OFFICES 1/8/9/11am,1/3/5/6/7pm</td>
<td>PROG 12 = OFFICES 1/8/9/11am,1/3/5/6/7pm</td>
</tr>
<tr>
<td>PROG 13 = CINEMAS 1/8am, 1/3/5/7/9/11pm</td>
<td>PROG 13 = CINEMAS 1/8am, 1/3/5/7/9/11pm</td>
</tr>
<tr>
<td>PROG 14 = SHOPS 1/8/9/11am, 1/3/5/6/8pm</td>
<td>PROG 14 = SHOPS 1/8/9/11am, 1/3/5/6/8pm</td>
</tr>
<tr>
<td>PROG 15 = EVERY HALF-HOUR</td>
<td>PROG 15 = EVERY HALF-HOUR</td>
</tr>
<tr>
<td>PROG 16 = EVERY HOUR</td>
<td>PROG 16 = EVERY HOUR</td>
</tr>
<tr>
<td>PROG 17 = EVERY 2 HOURS</td>
<td>PROG 17 = EVERY 2 HOURS</td>
</tr>
<tr>
<td>PROG 18 = EVERY 3 HOURS</td>
<td>PROG 18 = EVERY 3 HOURS</td>
</tr>
<tr>
<td>PROG 19 = EVERY 30 MINS FROM 7AM TO 7PM</td>
<td>PROG 19 = EVERY 30 MINS FROM 7AM TO 7PM</td>
</tr>
<tr>
<td>PROG 20 = EVERY HOUR FROM 7AM TO 7PM</td>
<td>PROG 20 = EVERY HOUR FROM 7AM TO 7PM</td>
</tr>
<tr>
<td>PROG 21 = EVERY 2 HOURS FROM 7AM TO 7PM</td>
<td>PROG 21 = EVERY 2 HOURS FROM 7AM TO 7PM</td>
</tr>
<tr>
<td>PROG 22 = EVERY 3 HOURS FROM 6AM TO 9PM</td>
<td>PROG 22 = EVERY 3 HOURS FROM 6AM TO 9PM</td>
</tr>
</tbody>
</table>

3. FLUSH: Set the flush duration in seconds from 1sec to 90sec. This is the number of seconds the valve will remain open for flushing.

4. HELP: Displays the programs table one line at a time. To skip a line hold the UP or DOWN button.

5. EXIT: When EXIT is selected push SELECT to store all settings. The controller will then enter automatic operation.

Note: If any of the menu items are left unattended for 4 minutes the controller will time-out and automatically save all settings and return to automatic operation.

TEST FUNCTION / MANUAL FLUSH

To test the valve wiring, hold both UP & DOWN buttons simultaneously and the valve will open. The valve will remain open until the buttons are released.
Solenoid Valve Installation

Flush Flow Rates/Volume

In some circumstances there may be the need for additional components to be used or extra procedures to be followed to make sure the Solenoid Valves can be installed correctly.

**High inlet pressure**
The solenoid valves are designed to work from 10 to 300kpa. However, when the water pressure is higher than 300kpa, it is recommended to install a pressure limiting valve, specially when using a DC solenoid valve. Some inline flow control valves can be modified to produce a flow rate appropriate to a normal flush volume. Normally adjusting the time the solenoid is operating will be sufficient to overcome any issues.

**Low inlet pressure**
The solenoid valve requires more than 10kpa to be able to close properly. Low pressure will not allow enough water to pass through the solenoid to saturate the existing flush pipe and spreader bars/rosettes. In this case ring for technical support.

**Recommended water flow per urinal**
In order to achieve a good flushing please follow the indication below. These estimates are based on water pressure between 50Kpi and 300Kpi. Please **DO NOT** over flush.

<table>
<thead>
<tr>
<th>Type</th>
<th>Urinal Size</th>
<th>Average Flush</th>
<th>Average Flushing Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single / Wall Urinal</td>
<td>600mm</td>
<td>1.5L - 2.5L per flush</td>
<td>5 - 10 Sec.</td>
</tr>
<tr>
<td>Twin / Two Bertha</td>
<td>1200mm</td>
<td>3.0L - 5.0L per flush</td>
<td>10 - 20 Sec.</td>
</tr>
<tr>
<td>Three/ Three Bertha</td>
<td>1800mm</td>
<td>4.5L - 7.5L per flush</td>
<td>15 - 30 Sec.</td>
</tr>
<tr>
<td>Large / Four Bertha</td>
<td>2400mm</td>
<td>6.0L - 10.0L per flush</td>
<td>20 - 40 Sec.</td>
</tr>
<tr>
<td>Extra Large/ Five Bertha</td>
<td>&gt;3000mm</td>
<td>7.5L - 12.5L per flush</td>
<td>25 - 50 Sec.</td>
</tr>
</tbody>
</table>

**Non level troughs**
This creates an issue with urinal pooling in the bottom of the trough. This will have always been a problem and generally will not go away with the Green Sleeve installation. Unless the plumber is able to modify the outlet, we recommend that a full urinal replacement may be the only way to correct the problem.

**IMPORTANT – READ BEFORE INSTALLATION**

- **This product must be installed by a licensed plumber.**
- All local Occupational Health and Safety procedures must be followed.
- Warrant claims will be dependent on the system being installed correctly.
- Installations must comply with all relevant water, plumbing and building regulations.
- Installation manual must be fully understood to achieve the best results. If not clear please contact your distributor or project management for clarification.
- Confirm details with the site contact/customer. Check toilet access and any other issues that may arise from turning off the water supply and confirm with the site contact before starting work.
- Check that all components for the system have been included.
- Please make sure any other components needed for the installation such as threaded rises, self sealing flex hose or adaptors are available before commencing installation.
- Urinals and surrounding areas must be deeply cleaned prior installation
- Confirm that water does not pool in the urinal. If it does, installations may not be appropriate.
Connecting a Single Solenoid Valve

The solenoid valves are designed to work from 10kpa to 300kpa. A single solenoid valve can be installed in wall urinals or singe bertha/through urinals.

1. Make sure you have the correct solenoid valve for your AC/DC timer.
2. Adjust the solenoid to the pipe work following the arrow mark. Make sure the water inflow comes into the solenoid by following the sign.
3. Connect the other end of the cable to the solenoid valve as shown in the pictures below and make sure the solenoid is connected to the correct AC/DC out on the timer.
4. When connecting to a cut water mains piping, make sure no filings are left behind as it can cause the valve to remain open.

- Installing an incorrect solenoid valve to the timer may cause damages in the hole system affecting its performance.
- Cables are polarity sensitive for the DC timer. RED must go (+) / BLACK must go (-).
- If the water pressure is higher than 300kpa a pressure limiting valve should be installed to avoid issues when the battery is low or flat.

Connecting Multiple Solenoid Valves

If multiple solenoid valves are required in the system you must use an AC Smart Flush™, which can run up to 4 solenoid valves. Follow the instructions for the solenoid valve installation and add extra cable as well as spade and piggyback connectors for the new solenoids.

Follow the instructions to connect a solenoid valve on the previous page and then follow the next instructions:

1. Cut and stripe the cable so the wire is exposed on both ends.
2. Place the spade connectors at both ends and crimp the wire connectors together.
3. On other cable place the piggyback connectors and crimp the wire and connectors together.
4. Insert the piggy back connectors onto the solenoid valve.
5. Connect one end of the cable with the spade connectors onto the piggyback connectors, then the other end onto the extra solenoid valve.
6. Repeat steps above to connect more solenoids.
External Cistern Notes

- Fit solenoid and timer as high in the cistern as possible allowing for lid to be fitted. This will distance the unit from any possible splashing.
- Fit elbow directly above outlet so that piping descends into sparge outlet. This will optimise flow across the urinal face.
- Ensure that the input pressure does not exceed the capabilities of the output pipe.
- Adjust timer and input flow for correct flush ensuring water does not back up into air gap.
- Check operation of the solenoid by running a timer test sequence (see timer instructions).

CAUTION

Ensure water form solenoid descends directly over sparge outlet to maximise pressure into the urinal spreader and prevent potential splash-back onto the timer. Alternatively, the valve can be mounted over the input using an easy hooker flexi pipe connect to the physical air gap. It is very important to test flow by activating the timer self test mode to confirm input pressure does not overwhelm sparge pipe. Please see timer instructions for self test mode.

Typical Concorde Urinal Cistern

Align & connect Physical Air Gap

Make sure the physical Air Gap is installed facing up.

To prevent contaminated water to flow back into the potable water supply pipe and avoid water contamination as required by Australian Plumbing Standards, an air gap must to installed in the direct drain line piping.

Typical in wall cistern installation before installation of solenoid valve

Connect all thread tubbing to inlet pipe via stop tap
Smart Flush™ Key Switch Installation

The Smart Flush™ has two modes of operation; Automatic and SW/PIR mode.

Automatic Mode:
Automatic flushing occurs depending on the program selected for each day of the week.

SW/PIR (Holiday Mode or Manual Flush mode):
This mode is activated by a key switch (optional extra part No. TIM2212). When set to ‘ON’ the controller will only flush once per day (Holiday Mode). Turning the Key switch ‘ON’ and ‘OFF’ will tell the timer to perform a manual flush.

The SW/PIR is specially formulated to manually operate the Smart Flush™ for maintenance or cleaning purposes. Installation of the switch is very easy; simply mount the switch on the wall in an accessible place and follow the steps below:

1. Remove the connector placed into ‘switch’
2. Connect the timer switch into the ‘switch’ slot.
3. Turn the key to ‘manual’ to flush.

Flat Battery Warning

After the valve is turned off, the battery voltage is tested. If this voltage is found to be too low for a reliable operation, the Smart Flush control will Stop Flushing! The LCD screen will show “change batteries” and there will be a beep while this message is shown. This message will appear every hour or when any of the buttons are pushed.

To clear the low battery warning, replace the batteries and check the re-set the clock. It is recommended to replace the batteries every year.

Smart Flush™ Warranty

This range of product is covered by a limited 1 year warranty against faulty workmanship or component failure from the date of installation. A faulty unit should be returned in the first instance to the dealer from which the unit was purchased.

Damage to the unit due to misuse, power surges, lightning strikes or installation that is not in accordance with the manufacturer's instruction will void the warranty.

“WATER DAMAGE WILL NOT BE COVERED UNDER WARRANTY”

Warranty does not cover:

- Removal or replacement of controller from its installation
- Travel costs to or from installation site
- The return of the controller to the manufacturer
- Any damage caused by water in the controller box
- Any damage caused by flooding

If the power cord is damaged, do not use the controller; return the unit to the supplier for repair.
**Green Sleeve™ and Waste Adapter Installation**

The Green Sleeve can be installed in most wall hung and trough urinals. Because every urinal is different, a suitable waste adapter must be installed. The waste adapter allows the Green Sleeve™ to fit perfectly onto the urinal whilst sealing smells and preventing foreign matter entering the pipeline. This allows the Green Sleeve to work to its full potential.

**The Problem**

- Odour
  - The Green Sleeve™ blocks in odours. Its special formulation of bacteria breaks down uric salt and urine eliminating smells.

- Hygiene
  - The Green Sleeve™ increases hygiene by reducing places where harmful germs can be harboured.

- Blockages
  - The bacteria in the Green Sleeve™ will prevent uric sludge and limescale build up in the waste system reducing urinal blockages.

**The Solution**

Confirm that the water table can be seen before installing the waste adaptor. Do not proceed with the installation if the water table cannot be seen and contact your local distributor for install options. Deep clean prior installation.

Do not force plastic collar into urinals as this may distort the centre hole and make the Green Sleeve hard to inset. If collar is hard to fit, shape with file or knife before installing. If using sanitary silicon, allow to dry for 8 hours before use to avoid changes in colour of the product.

The BNS Green Sleeve™ is a Water Mark product.

**Water Mark Licence No. ATS 5200.040 WKMLN 60077**
How to identify the type of urinal installed

Most wall hung urinals have a 50mm waste outlet whereas most trough urinals have a 100mm water outlets. However, there are many different urinal brands with different waste outlet diameters and shapes. This is why Bio Natural Solutions has developed different kinds of waste adapters tailored to suit different types of urinals.

First of all, the type of urinal must be identified so that the correct waste adapter is installed. If the type of urinal cannot be identified, measure the diameter of the waste outlet with a caliper, ruler or measuring tape as shown below.

Once the diameter has been found, check it against our range of available waste adapters. We currently stock waste adapters from 50mm to 125mm.

Most Common Wall Hung Urinals and Respective Waste adapters

Below there is a visual guide to the most common urinals and their respective waste adapter.
Installing the Green Sleeve™ in Trough Urinals

1. Remove any rubbish from the urinal and wipe the surrounding surface with Bio Blitz™ Biological Cleaner.
2. Select and install carefully the appropriate Waste Adapter without forcing it. Trim edge if required.
3. If possible use sanitary silicon to avoid the waste adaptor to be loosen.
4. Insert the Green Sleeve™ into the waste adaptor hole and make sure the Green Sleeve reaches the water table.
5. Green Sleeve™ placed on the urinal.

Installing the Green Sleeve™ in Wall Hung Urinals

1. Remove any rubbish from the urinal and wipe the surrounding surface with Bio Blitz™ Biological Cleaner.
2. Select and install carefully the appropriate Waste Adapter without forcing it. Trim edge if required.
3. If possible use sanitary silicon to avoid the waste adaptor to be loosen.
4. Insert the Green Sleeve™ into the waste adaptor hole and make sure the Green Sleeve reaches the water table.
5. Green Sleeve™ placed on the urinal.
Installing a extension hose for the Green Sleeve™

The Green Sleeve™ should reach the water table as illustrated on the left. When the Green Sleeve™ does not reach the water table, an extension hose should be adapted. Cut away view of typical trap with extension pipe fitted to reach table.

Installing the Green Sleeve™ with extension in trough Urinals

Attach the extension hose to the Green Sleeve™ and place it into the waste outlet. The Green Sleeve™ should fit easily into the waste adaptor. Do not distort by forcing it into waste outlet. The Green Sleeve™ should sit slightly below the urinal base and should be completely sealed around circumference.

Green Sleeve™ Replacement and Maintenance

The Green Sleeve™ is a consumable item that needs to be replaced when its green block has been dissolved. When the Green Sleeve has been installed for the first time, it is best to monitor every month to establish a usage pattern. The Green Sleeve requires daily maintenance so it can work to its full potential.

1 CLEAN - Remove any waste from the urinal bowl and check that the urinal is in normal working condition. Perform daily.

2 REMOVE - Carefully remove the sleeve vertically making sure you do not knock off the black extension pipe.

3 SPRAY & FLUSH - Spray the urinal surface and surrounds with Bio Blitz Biological Cleaner and allow to air dry. Scrub the urinal face, floors and walls if required.

4 INSPECT - Check that there is a green block under the sleeve cap. If not, the Green Sleeve™ requires replacing. If there is still a green block under the cap, there is not need to replace yet.

5 REPLACE or RE-INSERT - Insert a new or the existing Green Sleeve™ into the waste outlet by pressing down firmly.

6 COMPLETED - Once the sleeve has been inserted into the waste outlet, give the urinal a final spray of the Bio Blitz™ Biological Cleaner and allow to air dry.
**Bio Blitz™ Biological Cleaner Dilution Guide & Applications**

**Bio Blitz™ Biological Cleaner** is a powerful concentrate which has been formulated with beneficial probiotics, making cleaning quicker, easier and more effective. The product keeps working after you have finished wiping.

Its cultured bacteria decompose organic matter such as urine, blood, soap scum, grease and fats by creating digestive enzymes that help bio-degrade complex compounds. Most impressively, the bacteria work upon application, meaning that long hours of cleaning are a thing of the past when you choose **Bio Blitz™**.

### Concentrated Formula

The **Bio Blitz™** concentrate formulation carry environmental benefits producing a smaller carbon footprint due to the use of less plastic and other packaging materials per product unit, require less fuel consumption during shipping, and contain less materials for disposal.

Additionally this is a biodegradable product that does not have a dangerous goods classification and or pose risk in terms of materials handling and transport.

This unique product can be diluted up to 1:50 which gives the product greater flexibility and makes it more economic. Different cleaning applications require different dilution rates for the friendly bacteria to clean to their full potential.

The following table is intended as a guide to help you choose the right dilution rate for different cleaning applications and to help you achieve higher savings.

### SHAKE WELL BEFORE DILUTING

<table>
<thead>
<tr>
<th>Application</th>
<th>Uses</th>
<th>250mL</th>
<th>500mL</th>
<th>1Litre</th>
<th>5Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEAVY 1:1</strong></td>
<td>Stubborn problems</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Plumbing Maintenance</td>
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<tr>
<td></td>
<td>Liquid Drains</td>
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<td></td>
<td>Grease Traps</td>
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<td></td>
<td>Sinks</td>
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<td></td>
<td>Laundries</td>
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<tr>
<td></td>
<td>Ovens &amp; BBQ</td>
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<tr>
<td></td>
<td>Wheelie Bins</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Rubbish Bins</td>
<td>125mL</td>
<td>250mL</td>
<td>500mL</td>
<td>2.5 Litres of Biological &amp; fill with water</td>
</tr>
<tr>
<td><strong>MED 10:1</strong></td>
<td>Everyday cleaning</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Urinals (inc Stainless</td>
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<td></td>
<td>Steel)</td>
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<tr>
<td></td>
<td>Waterless Urinals</td>
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<td></td>
<td>Toilets</td>
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<tr>
<td></td>
<td>Baths</td>
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<td>Showers</td>
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<td>Bench tops</td>
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<tr>
<td></td>
<td>Wall tiles</td>
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<tr>
<td></td>
<td>Washrooms</td>
<td></td>
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<tr>
<td></td>
<td>Bathrooms</td>
<td>25mL</td>
<td>50mL</td>
<td>100mL</td>
<td>500mL</td>
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<tr>
<td></td>
<td></td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
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<tr>
<td><strong>LIGHT 20:1</strong></td>
<td>Mopping floors</td>
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<tr>
<td></td>
<td>Spray &amp; Wipe</td>
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<tr>
<td></td>
<td>Vanities</td>
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<tr>
<td></td>
<td>Mopping Floors</td>
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<tr>
<td></td>
<td>Exercise Equipment</td>
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<td></td>
<td></td>
<td>15mL</td>
<td>25mL</td>
<td>50mL</td>
<td>250mL</td>
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<td></td>
<td></td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
</tr>
<tr>
<td><strong>SUPER-LIGHT 50:1</strong></td>
<td>glass cleaning</td>
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<tr>
<td></td>
<td>Glass-Mirrors</td>
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<td></td>
<td>Mopping Floors</td>
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<td></td>
<td></td>
<td>10mL</td>
<td>12mL</td>
<td>25mL</td>
<td>125mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
<td>fill with water</td>
</tr>
</tbody>
</table>

**NOTE:** When filling spray bottles, it is recommended by pouring the suggested amount of the Bio Blitz™ Biological Cleaner Concentrate in the bottle and then slowly fill with clean cold water. **Hint:** Use the ‘Fill Levels’ on the left for measurement.
Bio Blitz™ Biological Cleaning Regime Cleaning Instructions

By following the Dos and Don’ts below, you will remove the need to use harsh chemical cleaners as the Bio Blitz™ Biological Cleaner Concentrate is safe to use, biodegradable and environmentally friendly. Using Bio Blitz™ will keep your everything smelling and looking fresh and clean.

**DO**

- **DO** carry out regular preventative maintenance on the urinals and plumbing.
- **DO** use Bio Blitz Biological Cleaner Concentrate **ONLY** when cleaning urinals and surrounding areas.
- **DO** shake the bottle **well before use**, making sure you mix the biological cleaner with cold water. Using hot water will harm the good bacteria in the cleaner.
- **DO** remove all foreign matter from the urinal.
- **DO** replace the mop head with a new one when starting to use the product for the first time.
- **DO** use microfiber cloths and mop heads for best streak free results.
- **DO** limit flushing frequency to 4-6 times per day to get longer lasting retrofitting products.
- **DO** spray the floor around the urinal and toilet base with each clean.

**Spray and Wipe (daily)** - mix 10ml to a 1Litre trigger spray bottle with cold water.

**Mopping floors** - mix 50ml to each 10Litre capacity of the mop bucket with cold water.

- **DO** store Bio Natural Solutions products in their supplied containers away from heat and direct sunlight.

**DO NOT**

- **DO NOT** mix/use any other chemical cleaners like bleach, acids or disinfectants. This will kill the Bacteria in the Green Sleeve reducing its effectiveness.
- **DO NOT** **over dilute with water** – doing so will reduce its effectiveness.
- **DO NOT** use **hot water** – doing so will harm the active ‘good’ bacteria.
- **DO NOT** **over flush the urinals** – doing so will consume the urinal block much faster!
- **DO NOT** pour the mop bucket water or other contaminated water down the urinal.

**Note:** It is **recommended to replace** the mop head with a new one when initially starting to use the product. As the old mop head may have traces of other chemical cleaners used (bleach, acids or disinfectants) and can kill the biological bacteria found in the cleaner reducing it’s effectiveness.

The Biological Cleaner is a non-hazardous cleaning product that does not pose any exposure risk. No adverse health effects are expected when using it. Bio Natural Solutions strongly recommends to use the product in accordance to the MSDS and avoid overexposure.

**First Aid Measures**

**Caution: keep out of reach of children**

*Immunocompromised individuals should avoid contact with this product.*

If in contact with **eyes**, rinse thoroughly with water. **Skin**, rinse with soap and water. If **swallowed**, do not induce vomiting or give anything by mouth, seek immediate medical advice or contact the Poisson info centre: **Aus 13 11 26.**
Smart Flush™ Water Saving System Kits

Water Saving Starter Kit

Replace chemical cleaners and chemical sanitisers whilst saving large amounts of water.

<table>
<thead>
<tr>
<th>Kit Code</th>
<th>Kit Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT2267</td>
<td>Wee On™ Urinal Screen Starter Kit</td>
<td>1 x Wee On Urinal Screen 1 x 1L Biological Cleaner Conc. 1 x 1L Empty spray bottle 1 x 125mL Wee Off™ 1 x MSDS 1 x Cleaning Instructions</td>
</tr>
<tr>
<td>KIT0164</td>
<td>Bio Blitz™ Urinal Blocks Starter Kit</td>
<td>1 x Bio Blitz Urinal Blocks Tubx10 1 x 1L Biological Cleaner Conc. 1 x 1L Empty spray bottle 1 x 125mL Wee Off™ 1 x MSDS 1 x Cleaning Instructions</td>
</tr>
<tr>
<td>KIT2250</td>
<td>Green Sleeve™ Urinal Sanitiser Starter Kit</td>
<td>1 x Green Sleeve Urinal Sanitiser 1 x Waste Adapter (50mm - 100mm) 1 x 1L Biological Cleaner Conc. 1 x 1L Empty spray bottle 1 x 100mL Cream Cleaner 1 x 125mL Wee Off™ 1 x MSDS 1 x Cleaning Instructions</td>
</tr>
</tbody>
</table>

Battery Powered Water Saving System Kits

Turn existing urinals into semi-waterless urinals and become part of the green and blue revolution. The Battery Powered kit is ideal when there is no easy access to power sources. The DC Smart Flush is powered by 8 AA batteries and runs is ideal for Single urinals.

<table>
<thead>
<tr>
<th>Kit Code</th>
<th>Kit Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT0355</td>
<td>Wee On™ Urinal Screen DC Water Saving System</td>
<td>1 x DC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 6 x Wee On Urinal Screens</td>
</tr>
<tr>
<td>KIT0324</td>
<td>Bio Blitz™ Urinal Blocks DC Water Saving System</td>
<td>1 x DC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 1 x Bio Blitz Urinal Blocks Tubx50</td>
</tr>
<tr>
<td>KIT0317</td>
<td>Green Sleeve™ Urinal Sanitiser DC Water Saving System</td>
<td>1 x DC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 2 x Green Sleeves 2 x Waste Adapters (50mm - 100mm)</td>
</tr>
</tbody>
</table>

Electricity Powered Water Saving System Kits

Turn existing urinals into semi-waterless urinals and become part of the green and blue revolution. With one Electricity Powered Kit you can run up to four urinals. The Smart flush is highly flexible and can be programmed to flush urinals up to 48 times a day.

<table>
<thead>
<tr>
<th>Kit Code</th>
<th>Kit Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIT0362</td>
<td>Wee On™ Urinal Screen AC Water Saving System</td>
<td>1 x AC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 6 x Wee On Urinal Screens</td>
</tr>
<tr>
<td>KIT0348</td>
<td>Bio Blitz™ Urinal Blocks AC Water Saving System</td>
<td>1 x AC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 1 x Bio Blitz Urinal Blocks Tubx50</td>
</tr>
<tr>
<td>KIT0331</td>
<td>Green Sleeve™ Urinal Sanitiser AC Water Saving System</td>
<td>1 x AC Smart Flush Urinal Timer 1 x 1/2' AC Solenoid valve 1 x Physical Air Gap 1 x 5L Biological Cleaner Conc. 1 x 1L Spray trigger bottle 1 x Installation Manual 1 x Laminated wall signs 2 x Green Sleeves 2 x Waste Adapters (50mm - 100mm)</td>
</tr>
</tbody>
</table>
# Smart Flush™ Water Saving System Troubleshooting

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLUSHING</strong>&lt;br&gt;The urinals are constantly flushing&lt;br&gt;The urinals are not flushing&lt;br&gt;The flushing frequency is not correct</td>
<td>• Check to make sure the solenoid is not stuck, open or closed.</td>
</tr>
<tr>
<td></td>
<td>• Check the operation on the timer by operating the self test mode. If this does not work, replace the battery (for DC timer).</td>
</tr>
<tr>
<td></td>
<td>• Check the timer program cycle is set to the correct program. If not, select the correct one.</td>
</tr>
<tr>
<td></td>
<td>• Check to make sure timers day/date settings are correct.</td>
</tr>
<tr>
<td></td>
<td>• Reduce the flushing time.</td>
</tr>
<tr>
<td></td>
<td>• Reduce water pressure.</td>
</tr>
<tr>
<td><strong>ODOURS</strong>&lt;br&gt;There is an unpleasant odour coming from the urinal / washroom</td>
<td>• The Green Sleeve™ may have expired. Remove the Green Sleeve from the outlet and check the level of biological material remaining.</td>
</tr>
<tr>
<td></td>
<td>• The Green Sleeve™ may not be contacting the water table in the urinal. An extension tube should have been fitted if necessary but this may have not been refitted.</td>
</tr>
<tr>
<td></td>
<td>• Check the type of cleaning products used. Ensure that Biological Cleaner is being used in regular cleaning procedure. Chemical products will kill the bacteria in the Green Sleeve™.</td>
</tr>
<tr>
<td></td>
<td>• Flushing too often. This dilutes the amount of friendly bacteria that break down the Uric Acid. Adjust the timer so that flushing frequency is correct for your installation.</td>
</tr>
<tr>
<td></td>
<td>• No Flushing. The bacteria needs moisture to perform. If not flushing the bacteria will not work.</td>
</tr>
<tr>
<td></td>
<td>• Clean floors and walls around the urinals with Biological Cleaner in order to remove urine waste.</td>
</tr>
<tr>
<td><strong>BLOCKAGES</strong>&lt;br&gt;Urinals back up when flushed or used</td>
<td>• If the pipework was not cleaned up before installation, it should be cleaned.</td>
</tr>
<tr>
<td><strong>TIMER IN DC MODE</strong>&lt;br&gt;UP &amp; DOWN buttons do not work</td>
<td>• The timer is in sleep mode. Press select to start the timer.</td>
</tr>
<tr>
<td>Battery life lasts short periods of time</td>
<td>• The flushing frequency is too high. Try reducing the flushing frequency.</td>
</tr>
<tr>
<td>The solenoid valve does not open / close</td>
<td>• Check the cables on the solenoid valve and timer to make sure they have not been crossed over (reversed polarity).</td>
</tr>
<tr>
<td></td>
<td>• Check that the solenoid valve is connected in the correct output for the valve.</td>
</tr>
<tr>
<td><strong>TIMER IN AC MODE</strong>&lt;br&gt;The timer does not turn on</td>
<td>• Check to make sure the power is switched on and that the power adapter is inserted fully.</td>
</tr>
<tr>
<td></td>
<td>• Make sure the power adapter is wired correctly into the timer AC input terminal.</td>
</tr>
<tr>
<td><strong>WARRANTY</strong>&lt;br&gt;Water Damage will not be covered under warranty.</td>
<td>The Smart Flush™ is covered by a limited 1 year warranty against component failure or faulty workmanship from the date of installation. Refer to Instructions in the box for further information.</td>
</tr>
</tbody>
</table>