

## Why and How to Convert Urinals to Waterless

Converting urinals to waterless is not complicated and the results are usually excellent. Waterless urinals are generally trouble free, but only if they are properly implemented and maintained.

### Why Convert to Waterless?

Many thousands of urinals in the UK have been converted to operate without water, the majority of these since 2003. Waterless urinals are of increasing interest to energy and site managers because:-

- Water company standard water charges range from £1.37 and £4.26 per cubic metre. An "unregulated" urinal flushing every 10 minutes with 4.5 litres will therefore cost between £500 and £1,000 per year. Even with a properly calibrated electronic flush controller, the water charges can be £200 and there are additional maintenance costs.
- Converting to waterless guarantees continuous maximum savings. Alternative water reduction measures for urinals, including widespread implementation of sensor flush controllers, often increase the frequency of blockages and therefore expenditure on drain maintenance. As a consequence, after 9 months of use, installed flush controllers are often disabled or reset to high flush levels to reduce blockages and odours, and therefore water consumption begins to steadily increase.
- Flushing urinals usually accounts for more than 25% of the total water consumption of a building (for those that have urinals, of course)
- High use of clean water needlessly increases the carbon footprint of a building, due to the emissions generated during cleansing and transportation of the resource

Some people have had poor experience of waterless urinals and others are just against the concept. Of course, there are disadvantages in moving to waterless as well as benefits (see "[Pros and Cons](#)"). However, urinals converted to waterless are generally cost-efficient and trouble free, providing that the systems are [implemented correctly](#) and the simple [maintenance](#) tasks are adequately performed. As with any type of urinals, failure to maintain waterless urinals correctly will lead to problems. If there are significant doubts about being able to follow the simple procedures, '[low-flushing](#)' is probably a better option. [Click here for a comparison of waterless and low flushing methods.](#)

### How to Convert to Waterless

The steps to convert urinals to waterless are simple:

#### **1) Install Urinal Maintenance Device (UMD) into the Urinal Bowl**

The waste pipework should be clear of scale and debris before [Urinal Maintenance Devices](#) (UMDs) are installed. For example, when [Gentworks engineers](#) carry out installations, they mechanically clear the urinal pipework to ensure good drainage and, unless the urinal is a [Twyford Spectrum](#), install a customised waste outlet. The UMD cartridge (e.g. the [Aquafree](#) model) is then inserted to begin its work of dispensing microbes and other beneficial ingredients into the pipework. These combat the odours and build up of uric acid salts that would otherwise result from not flushing. Note that when the water is turned off, standing water in the cistern and water supply pipes may be considered a legionella risk so these are usually drained and capped - a standard procedure known as "[dead legging](#)". Alternatively, a weekly flush can be initiated using the "[Ultra Low Flush](#)" controller, therefore regularly purging the water from the supply pipes and cistern.



#### **2) Implement a weekly dosing regime - critical to success!**

Hair and other debris inevitably drop into the waste pipework and attract organic material that can cause blockages. To ensure against this, each urinal should be "dosed" weekly with approximately 1 litre of special chemical solution: 100ml of [Gentworks Bactericidal Cleaner](#) diluted with 900ml of warm water from the washroom tap. This will help break down the body fats and proteins that may collect and flush away hair and other debris. The chemical solution should be poured over and around the UMD and allowed to drain away.



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### 3) Implement a compatible cleaning regime

The microbes dispensed by the Urinal Maintenance Device (UMD) are living organisms and therefore are intolerant of cleaning products containing chlorine (e.g. bleach), strong acids or strong alkalis. It is satisfactory to use neutral cleaning products (pH=7) but most users of Gentworks UMDs, for convenience, use the same product as for cleaning the bowls, namely [Gentworks Bactericidal Cleaner](#). Microbiological cleaners including [Gentworks Bio-Blue](#), Zybax Odourmaster, Bio-Productions Blu-Away and Q-Bio Odourblaster also work well.



### 4) Change the Urinal Maintenance Device Cartridge Every 3 Months

[Standard UMD cartridges](#) that fit most urinal bowls should be changed every 3 months as the active ingredients deplete and degrade. Special UMD cartridges designed for [Twyford Spectrum](#) bowls may need to be changed more frequently. In many areas of the UK, [Gentworks offers a service](#) which includes the change of UMD cartridges and servicing of the urinal pipework, if required.

