Why think about urinals?

Over half of ‘domestic’ water used in commercial premises can be due to urinals operating without flush controls.

A large number of water saving devices are available to businesses to reduce water use substantially. This leaflet provides guidance on what you need to consider and how to evaluate the best solution to meet your needs.

Don’t flush savings away!

Urinals often flush regardless of use, wasting a lot of water, especially out of hours. Typical uncontrolled flush of urinals is three times an hour, which with a 7.5 - 12 litre cistern will be using 197 - 315 m³ water/year.

In companies where the urinals operate without flush control, savings of over £3,800/year in water and sewerage costs can be achieved by installing passive infrared (PIR) sensors at a cost of around £350 - a payback of five weeks.

Reducing water use

In many cases, a reduction in water use can be achieved by installing a retrofit control device to the urinal system rather than allowing the urinal to flush uncontrolled 24 hours/day 365 days/year.

Key considerations:

- Correct installation is important - a poorly fitted device or control system may not reduce water use - in fact it may increase it!
- When considering retrofitting or refurbishing urinals, consult your supplier about their suitability for the specific application.
- Is the mechanism robust enough to provide a long-term solution?
- Some devices need to be maintained and serviced correctly, eg some will require batteries, cartridges or chemicals.
- Public perception is often a barrier - waterless urinals can be stylish, effective and odour free, if installed correctly.

Water Saving Devices

The table overleaf outlines advantages and disadvantages of some of the water saving devices currently available.

- Any fittings to the water main need to comply with the Water Supply (Water Fittings) Regulations 1999. For example, flush controls should now be fitted as standard on urinals in new commercial buildings.
- Are the products you are considering buying included on the Water Technology List (WTL)? The Enhanced Capital Allowance (ECA) Scheme enables businesses to claim 100% first year capital allowances on investments in urinal controls and can be found at http://www.eca-water.gov.uk/

1 Developed by Defra and HM Revenue & Customs in partnership with Envirowise

Based on 100 male staff working 260 days a year

Thank you to Dart Valley Systems Ltd for help with the photography.
### Reducing water use in washrooms: urinals

<table>
<thead>
<tr>
<th>Device/activity</th>
<th>Potential water savings</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual shut-off</td>
<td>Can reduce water use by over 75%(^2)</td>
<td>- Low-cost</td>
<td>- Only applicable if work hours are predictable&lt;br&gt;- Requires staff reliability</td>
</tr>
<tr>
<td>Timer and solenoid valve</td>
<td>Can reduce water use by over 75%(^2)</td>
<td>- Low-cost</td>
<td>- Only applicable if work hours are predictable</td>
</tr>
<tr>
<td>Pressure sensitive hydraulic valve / pressure reducing valve (PRV)</td>
<td>Can reduce water use by over 75%(^2)</td>
<td>- Retrofit&lt;br&gt;- Valve remains closed when pressure remains unchanged (ie when urinal is not being used)</td>
<td>- Flushing is related to occupancy of washrooms(^1) rather than use of urinal</td>
</tr>
<tr>
<td>Passive infrared (PIR) sensor</td>
<td>Can reduce water use by over 75%(^2)</td>
<td>- Cheap to install - around £120 and can be operated by battery (lifetime of 3-4 years) or mains electricity.</td>
<td>- Dispose of the battery as hazardous waste</td>
</tr>
<tr>
<td>Waterless urinals - retrofit</td>
<td>Can reduce water use by 90%(^3)</td>
<td>- Retrofit (£80 - £90 unit) &lt;br&gt;- Easy to install</td>
<td>- Specialised cleaning&lt;br&gt;- Replace barrier fluid every 1 to 2 weeks depending on use (costs around £20 - £45/urinal/year)&lt;br&gt;- Replace and dispose of pads every week, depending on use (costs around £30/urinal/year)&lt;br&gt;- Stick dissolves and needs to be replaced 3 to 4 times a year, depending on use</td>
</tr>
<tr>
<td>Siphonic trap</td>
<td>Can reduce water use by 90%(^4)</td>
<td>- No chemicals&lt;br&gt;- Single trap easy to clean&lt;br&gt;- Fan uses the same power as mains powered urinal controllers</td>
<td>- Not suitable as retrofit</td>
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<tr>
<td>Deodorising pad</td>
<td></td>
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<tr>
<td>Biological</td>
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<tr>
<td>Waterless urinals - airflush</td>
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</tbody>
</table>

\(^1\) Based on an office working 8-hr day, 260 days a year  
\(^2\) Can also be affected by changes in pressure resulting from use of other facilities supplied on the same water supply pipe  
\(^3\) Water may still be required for hygiene flushing or cleaning

### Further information

- Envirowise water pages [www.envirowise.gov.uk/water](http://www.envirowise.gov.uk/water). Use WaterNet ([www.envirowise.gov.uk/waternet](http://www.envirowise.gov.uk/waternet)) to identify the most relevant publications for your requirements. These could include the following: Cost-effective water saving devices and practices – for commercial sites (GG522) and Furniture manufacturer is sitting pretty on its water savings (CS597).