



THORNE AND DERRICK UK – LEAK DETECTION
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public, commercial & hospitality facilities



Including offices, leisure centres,
public and industrial buildings



All of Cistermiser's products are suitable
for washrooms that provide services to
the general public.





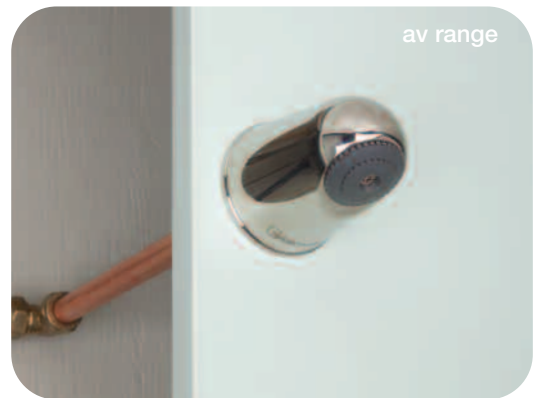
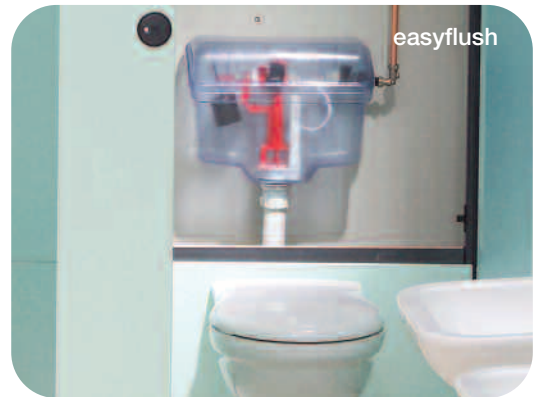
Our urinal cistern flushing products control water consumption in gents' washrooms. If hygiene is a concern, our infrared range provides no-touch control of all the washroom outlets (urinals, WCs and taps). The anti-vandal range provides a complete solution in washrooms where both accidental and deliberate acts of vandalism are prevalent. Our washroom control range accurately controls water as it enters the washroom therefore eliminating any form of wastage.

cistern flushing range

The hydraulic valve is an automatic urinal flush control valve. The valve uses a simple patented mechanism which prevents water waste by ensuring that the auto-flush cistern is only filled, and can only flush, when the washroom is used.

The infrared urinal flush control (IRC) valve automatically manages the supply of water to a urinal cistern. The PIR sensor detects movement and activates the solenoid valve only allowing water into a urinal cistern when the washroom is in use. This reduces water consumption and the 12 hour hygiene improves cleanliness.





infrared range

The **easyflush** 'wave' and 'walkaway' valves provide no touch flushing and filling of the WC. The 'wave' is operated by the user passing their hand in front of the sensor while the 'walkaway' is automatically activated when the user stands up or leaves the cubicle.

The **direct flush** valves provide intelligent automatic flushing of the individual urinal after use ensuring the highest level of hygiene from the minimum volume of water. The flush of water removes any waste immediately therefore eliminating the risk of undesirable odours.

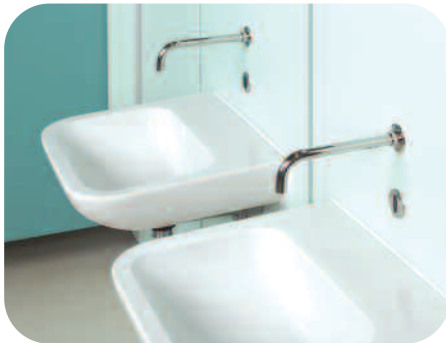
The **novaspout** is a no touch panel mounted basin spout. It is activated when a user's hands are presented to the infrared sensor which is positioned below the spout. The deck mounted **novatap** is also fully automatic. Periodic hygiene rinses reduce the risk of microbial contamination such as legionella.

anti-vandal range

Cistermiser's **av range** is easy to install and is designed to offer the highest possible levels of tamper-proof security and remote control while, at the same time, saving water and minimising running costs through the use of latching solenoids.

The user interface is a stainless steel encased piezo touch button which is fixed flush with the mounting surface. The basin spouts and shower heads are also made from stainless steel and they come with anti-rotation washers and pins. There is a range of specially contoured anti-ligature versions of the basin spouts and shower heads for use in locations where self-harm is a real concern.

The highly versatile **av range** also includes three styles of shower head, two styles of wall mounted basin spout, a WC cistern which includes a combined flush and fill valve for WC cisterns with the option of supply within a pre-configured cistern.



washroom control range

sensazone is an intelligent PIR sensor which controls the water flow to the washroom with solenoid valves. When **sensazone** detects a user entering the washroom it activates the solenoid valves to allow water to flow into the washroom. If no motion has been detected for a user configurable time of either 15 or 30 minutes, the valve will close the water supply to the area until further movement is detected.

If a washroom outlet is defective or tampered with, water from the mains or central supply can pass uncontrolled through the outlet valves such as taps or WCs. This waste of water can often pass undetected and cause considerable costs. As the **sensazone** controls the flow of water into the washroom area at the entry point, the water is prevented from passing uncontrolled through the damaged outlet, which eliminates the risk of water wastage or flooding during vacant periods.

The washroom control has been designed as a simple yet effective management system for controlling all primary services within the washroom. Occupancy is constantly monitored by up to 10 PIR sensors strategically placed throughout the washroom. This ensures that the washroom services remain active when facilities are required and remain inactive when they are not.

When someone enters the washroom all services controlled by the washroom control unit are activated; the hot and cold water solenoids open, lighting is switched on (if necessary), the extractor-fans start turning and the internal timers begin counting. Every service system in the washroom is set to run for a fixed time or 'service cycle' which is determined by the installer. The PIR sensor(s) will remain active while the washroom is occupied and send signals to the power and solenoids to remain on and open respectively.

When the washroom is vacated the PIR sensor signals are no longer sent, the timers are not re-started and the washroom control sends no further output signals so the washroom services complete their service cycles and shut down.

This automatic shut-down process eliminates the costs of unnecessary lighting and hot and cold water loss caused by open taps and leaking valves. It also significantly reduces the risk of damage and associated costs from floods or vandalism, whether deliberate or accidental.

case study – national exhibition centre, birmingham



background

One of the car park toilet blocks was not connected to mains sewerage but discharged into a large septic tank. The car park itself was only used during certain larger exhibitions and the toilets were only opened when the car park was operational. However, NEC management identified a disproportionately high volume of metered water consumption through this toilet block, coupled with regular bills for emptying the septic tank.

the project

Cistermiser quickly established that, in the gents' washroom there were no urinal flush controls and that uncontrolled auto-flush urinal cisterns were continuously filling and flushing. As there were a substantial number of urinals and cisterns in this particular block, the obvious option of fitting urinal flush controls would involve a number of units and a significant initial cost. Cistermiser offered their **washroom control** system, which triggers water services and electrical services on automatically when infrared sensors detect body movement within the washroom and switches those services off during periods of non-use.

the solution

A **washroom control** system, tailored to control the services in the toilet block, was retro-fitted quite simply and at lower cost than providing individual urinal flush controls. Strategically placed PIR sensors ensured that water and electrical services remained on only when the toilet block was in service.

The system also ensures that lighting is only switched on when ambient daylight is insufficient. The system not only brought the water volume usage down substantially, but also provided urinal flush control. There was an immediate and sustained reduction in the frequency of septic tank emptying and greatly reduced annual water bills. Electricity costs were also reduced and the task of switching lights on and off in a remote building on such a large site was also eliminated.

The success of this installation resulted in NEC selecting **washroom control** for installation in a considerable number of other toilets within the NEC complex.



Cistermiser products can help gain BREEAM points within the water section of the BREEAM buildings assessment:

| | av range | infrared products | washroom control |
|----------------|----------|-------------------|------------------|
| BREEAM retail | ✓ | ✓ | |
| BREEAM courts | ✓ | ✓ | ✓ |
| BREEAM offices | ✓ | ✓ | ✓ |

breeam retail

BREEAM Retail can assess new build or major refurbishment, post-construction, tenant fit-out, existing (occupied), management and operation.

breeam courts

BREEAM Courts can be used to assess and certify the environmental impacts of projects for the following types of courts: Crown, Criminal, County, Magistrates, Family, Youth, Combined Courts and Civil Justice Centres.

breeam offices

BREEAM Offices assessments can be carried out on both new and existing office buildings – non occupied or occupied, as follows: New build, Major refurbishment and Fit out. BREEAM Offices is also applicable to BREEAM Industrial with the exception of Hea 06 and Ene 4 in the working areas of the building, although office areas of an industrial building will be assessed under BREEAM offices

Please refer to our website www.cistermiser.co.uk/breeam for further information on the BREEAM categories and a more detailed explanation of how the credits are achieved.



infrared products

The Cistermiser IR Range can help a building design gain BREEAM credit ratings under the Water and Health & Wellbeing categories.

BREEAM category

cistermiser product

performance

easyflush WC valve

- Standard 6 litre full flush with an adjustable part flush giving an effective flush volume of 4.5 litres.
- Provides a linked flush and fill function of fittings. (delayed action inlet valve operation).
- Full flush adjustable to 4 litres with a subsequent reduction in part flush giving an effective flush volume of 3 litres.

Wat 1

Where evidence provided demonstrates that the specification includes taps, urinals, WCs and showers that consume less potable water in use than standard specifications for the same type of fittings.

direct flush
(Discreet and Accessible)
urinal control valve

- Each flush uses less than 0.5 litres.
- Flush arrest function to reduce water consumption further during periods of high use.
- Programmable for flush duration, sensing range and has a hygiene rinse function.
- Cleaner's function.

novatap and novaspout
basin outlets

- Regulated flow of either 5 litres or 3.5 litres per minute.
- Programmable run-on.

Hea 12

Where hot and cold water systems have been designed or actions taken to minimise risks of microbial contamination.

novatap and novaspout
basin outlets

- Used with Thermostatic Mixing Valves, the periodic hygiene rinse function prevents the warm, mixed water from stagnating.
- Reduces the risk of microbial contamination such as legionella.

washroom control

The Cistermiser **washroom control range** helps building designs gain BREEAM credit ratings under four distinct categories as well as providing additional washroom management functions.

| BREEAM category | cistermiser product | performance |
|---|-------------------------------|--|
| Hea 6 Where evidence provided demonstrates that, in all relevant building areas, lighting is appropriately zoned and occupant controllable with the option for commonly required lighting settings to be selected quickly and easily. | washroom control | <ul style="list-style-type: none"> Controls the lighting in the washroom zone so that lights are on only when users are present. Lighting is automatically switched on when a user is detected. |
| Ene 4 Where energy efficient external luminaires are fitted and all light fittings are controlled for the presence of daylight. | washroom control | <ul style="list-style-type: none"> A daylight sensor is fitted within the unit to provide switching only when the level of natural lighting is insufficient. |
| Wat 4 Where evidence is provided to demonstrate that proximity detection shut off is provided to the water supply to all toilet areas. | washroom control sensazone | <ul style="list-style-type: none"> The system controls proximity shut off of the water supply to the urinals and WCs. The unit can also provide proximity shut off for the hot and rain/grey water supply. |

av range

The Cistermiser **av range** can help a building design achieve specific BREEAM credits under the Water and Health & Wellbeing categories whilst providing a robust anti-vandal, anti-ligature water control package for high risk and hard use environments.

| BREEAM category | cistermiser product | performance |
|--|--|--|
| Wat 1 Where evidence provided demonstrates that the specification includes taps, urinals, WCs and showers that consume less potable water in use than standard specifications for the same type of fittings. | av range control of easyflush WC valve | <ul style="list-style-type: none"> Standard 6 litre full flush with an adjustable part flush giving an effective flush volume of 4.5 litres. Full flush adjustable to 4 litres with a subsequent reduction in part flush giving an effective flush volume of 3 litres. |
| | av range control of direct flush urinal control valve | <ul style="list-style-type: none"> Each flush uses less than 0.5 litres Flush arrest function to reduce water consumption further during periods of high use. |
| | av basin outlets and showers | <ul style="list-style-type: none"> Programmable flush duration Hygiene rinse function. Cleaner's function. Basin outlet flow control set at 2.2 litres per minute. Shower outlet flow control set at 1.7 litres per minute. |
| Hea 12 Where hot and cold water systems have been designed or actions taken to minimise risks of microbial contamination. | av basin outlets and showers | <ul style="list-style-type: none"> Used with Thermostatic Mixing Valves, the periodic hygiene rinse function prevents the warm, mixed water from stagnating. Reduces the risk of microbial contamination such as legionella. |





Cisterniser
water management at its best

Cisterniser



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