



THORNE AND DERRICK UK - LEAK DETECTION
 TEL: 0044 (0)191 490 1547 FAX: 0044 (0)191 477 5371
 TEL: 0044 (0)117 977 4647 FAX: 0044 (0)117 477 5582
 WWW.HEATTRACING.CO.UK
 WWW.THORNEANDDERRICK.CO.UK
 e-mail: northernsales@thorneandderrick.co.uk



education



automated solutions for school washrooms



Cistermiser recognises the demanding requirements of educational settings and has developed products to combat common problems within washrooms such as poor hygiene practices and water wastage caused by accidental and deliberate vandalism.





These are the minimum standards that the Department for Education would expect to be adopted in a 'Building Schools for the Future (BSF)' school:

- The taps should be wall mounted to avoid the dirt and germ build up that can occur around deck-mounted taps.
- Taps should be WRAS approved.
- The taps should be sensor operated and turn off automatically with less than one litre of use. This will help avoid the germ transfer that happens with more traditional touch operated mechanisms. It will also save water and minimise the risk of potential flooding.

Source: Standard specifications, layouts and dimensions

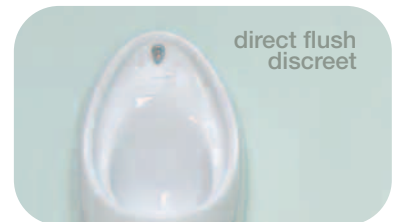
infrared taps

The **novaspout** is a no-touch infrared panel mounted basin outlet. It is activated when a user's hands are presented to the infrared sensor. The outlet is fully automated and is activated by the movement of the user's hands. Periodic hygiene rinses reduce the risk of microbial contamination such as legionella.

Cistermiser also make the **novatap** a deck mounted basin outlet for simple retrofit or where panel mounted is not an option.

The **novatap** and **novaspout** automatically switch off two seconds after the user's hands are moved away, eliminating the wasted water from excessive run-on as happens with percussion ("push") or traditional taps. The anti-vandal feature closes the taps after 60 seconds of continuous flow. This is helpful if, for example, chewing gum is placed over the sensor.





urinals in school washrooms

As highlighted by the Bog Standard campaign, the use of urinals in schools can be problematic for pubescent boys. Cistermiser recognises these issues and supports the need for individual partitioning and improved hygiene conditions at urinal bowls.

direct flush urinal flush valve

The **direct flush** provides a no-touch flush control to each urinal individually from the mains water supply.

The **direct flush** valves provide intelligent automatic flushing of each individual urinal after use, ensuring the highest level of hygiene from the minimum volume of water. The flush of water removes any waste immediately, eliminating the risk of undesirable smells. Each flush only uses 0.5 litres of water. The valves are especially effective in reducing water wastage in washrooms with low frequency usage.

easyflush wc flush valve

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 risk of smells associated with residue left in WCs when users forget or omit to flush is therefore eliminated.

The **easyflush** inlet float valve operates with a delayed action, which only allows the cistern to begin refilling after it has been completely emptied and the outlet valve has closed. **easyflush** also includes programmable part and full flushes, which allows the installer to minimise the amount of water required during each flush, but ensures sufficient water is provided.

sensazone

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.

case study – cathays high school, cardiff



location

Cathays High School is a mixed comprehensive school for 11 to 19 year olds serving the heart of Cardiff. As is the case with many progressive schools, Cathays High elects a School Council made up of elected representatives from all year groups. They meet to discuss and act upon ideas to improve the school. One wish passed on from all age groups was to seek a method of improving the flushing of toilets.

the project

Research into ways of remedying this problem led to consideration of Cistermiser's 'hands free' flushing system already in successful use in other schools and colleges.

Mr Gavin Bryant, the Schools Mechanical Advisory Officer for Cardiff County Council suggested that Cistermiser be invited to demonstrate the [easyflush](#) system and the company immediately sent a team to the school to review the problem first hand. The suggestion of using the Cistermiser [easyflush](#) system in the usual 'wave' mode, where the user simply passes a hand in front of the infrared sensor to activate a flush, was not considered wholly satisfactory.

It was felt that this could be easily ignored as with manual flushing, so the team went back to talk to Cistermiser's R & D Department which was already investigating other methods of flush activation.

the solution

The need was for a flush system that could be activated automatically without any effort on the part of the user. Cistermiser's solution was to adopt the [easyflush](#) system but with walkaway operation. Under this new mode of operation a flush is automatically triggered whenever a user gets up or walks away from the toilet. However it can also be activated by the user bringing their hand toward the sensor.

The IR sensors operate on a dual flush system, delivering a part flush if the user leaves within 40 seconds or a full flush if that period is exceeded. The 'walkaway' method is simple, hygienic and economical since it restricts water use to a minimum.

As a trial the Cistermiser Team fitted four of the cubicles used by the boys with [easyflush](#) valves with walkaway flush activation and it has certainly solved the problem highlighted by the students. The school was particularly pleased with the co-operation and personal service from Cistermiser from the initial contact to the project's completion. The [easyflush](#) toilets have now been in operation for nearly two years and have resulted in cleaner toilets and a more hygienic environment for the pupils.

BREEAM Education helps schools and further education colleges to set environmental targets for new and refurbished education buildings.

It also serves as a useful tool for designers by demonstrating the environmental performance of their designs. Assessments can be carried out at the design stage and verified post construction for primary and secondary schools and further education colleges including the following:

- New schools
- Major refurbishment projects
- Extensions

The development of BREEAM Education was driven by the sustainable development action plan, which called for both new build and refurbishment projects to achieve no less than a BREEAM 'VERY GOOD' rating.

infrared products

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

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.

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.

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.

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.

washroom control

The Cistermiser **washroom control range** helps building designs gain BREEAM credit ratings under three 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	<ul style="list-style-type: none"> The system controls proximity shut off of the water supply to the urinals and WCs.
	sensazone	<ul style="list-style-type: none"> The unit can also provide proximity shut off for the hot and rain/grey water supply.

Other BREEAM compatible products

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



THORNE AND DERRICK UK – LEAK DETECTION
TEL: 0044 (0)191 490 1547 FAX: 0044 (0)191 477 5371
TEL: 0044 (0)117 977 4647 FAX: 0044 (0)117 477 5582
WWW.HEATTRACING.CO.UK
WWW.THORNEANDDERRICK.CO.UK
e-mail: northernsales@thorneandderrick.co.uk

...ding Berkshire RG5 3AN
...niser.co.uk