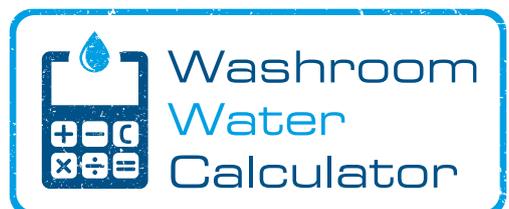


Urinal Flushing

Hydraulic Valve
Infrared Control (IRC) Valve
Direct Flush



Go to www.cisterniser.co.uk and see how much you could be saving

Hydraulic Valve

Urinal flush control valve

Reduces water consumption and washroom odours

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.

- Automatic urinal flush control
- Unique patented hydraulic mechanism – no electrical supply or batteries required
- Industry leader with half a million already installed
- ‘Fit and forget’ quality and reliability
- Hygiene flush option for periods of non-use
- Ensures compliance with the Water Regulations
- On DEFRA's ECA Water Technology List; purchase and installation are tax deductible

How it works

The Cistermiser Hydraulic Valve is installed on the supply pipe to the urinal cistern. The valve is activated by short-term pressure drops created by use of taps or WCs on the same supply.

The valve is normally closed; when it is activated it opens and water passes to the urinal cistern until the pressures on both sides of the valve are equalised. When the cistern is full, the auto-siphon will flush.



Product information

- The valve is installed on the supply pipe to the urinal cistern.
- The installer or user can adjust the time the valve remains open and therefore how long the cistern takes to fill and how much water is used. When the washroom is not being used the water supply pressure remains constant and the valve remains closed, preventing water passing into the cistern.
- The cistern can therefore only flush during periods when the washroom is in use, eliminating unnecessary water consumption and cost.

Hygiene cycle

In buildings where the washrooms are vacant for long periods, a hygiene cycle attachment is available to ensure a regular flush every 12 hours to prevent washroom odours.

The bypass screw should be set to permit a slow drip into the cistern to initiate a flush approximately every 12 hours. For correct operation it is essential that the siphon of the auto flushing cistern does not leak.



The Cistermiser Hydraulic Valve consists of three main elements, as shown left.

- ① Diaphragm operated valve which, when opened, allows water to pass to the urinal cistern.
- ② Hydraulic accumulator which, if fully charged, will maintain an equal supply-pressure on both sides of the diaphragm. When pressure on the inlet side is reduced, as other services are used, the pressure imbalance causes the valve (1) to open.
- ③ Adjuster (restrictor) screw which can be set during installation to determine the volume of water discharged into the cistern at each operation by altering the duration of the 'open' period.

Choosing the right valve for your application

Three models make up the range of Hydraulic Valves, each suited to a different range of water supply pressure. This table will help to specify the right model for your application.

Colour coded packaging	Model	Supply	Operating sensitivity
●	Standard Valve ...with Hygiene Flush	Mains water or tank-fed systems above 5m head	15% of supply pressure
●	Low Pressure Valve ...with Hygiene Flush	Tank-fed systems, 3m to 5m head	20% of supply pressure
●	High Sensitivity Low Pressure Valve	Tank-fed systems, 0.5m to 3m head	20% of supply pressure

Note: The user can control the amount of water allowed to pass through the valve each time it is activated; most users choose a range between 0.5 and 10 litres per flush.

Technical specification wording

The installer shall supply and install a urinal flushing device of the 'Cistermiser Hydraulic Valve' type on the supply pipe to the urinal cistern, as shown on the drawing.

The flushing control device shall be a mechanical, hydraulic device operated by changes in system pressure due to demand on connected water services within the washroom.

Standard Valve

The flushing control device shall be suitable for supply system pressures of between 0.5 and 6.0 bar (typically either mains water or tank-fed systems above 5m head).

Low Pressure Valve

The flushing control device shall be suitable for supply system pressures of between 0.3 and 0.5 bar (typically tank-fed systems between 3m and 5m head).

High Sensitivity Low Pressure Valve

The flushing control device shall be suitable for supply system pressures of between 0.05 and 0.3 bar (typically tank-fed systems between 0.5m and 3m head).

The above flushing control device shall be as manufactured by: Cistermiser Limited, Unit 1, Woodley Park Estate, 59 – 69 Reading Road, Woodley, Reading, RG5 3AN Tel: 0118 969 1611

Product codes

Standard Hydraulic Valve:	STD
Standard Hydraulic Valve with Hygiene Flush:	STDIF
Low Pressure Hydraulic Valve:	LP
Low Pressure Hydraulic Valve with Hygiene Flush:	LPIF
High Sensitivity Low Pressure Valve:	HSLP

Infrared Control (IRC) Valve

Cistern-flushing urinal valve with motion-sensing infrared

Reduces water consumption by up to 80%



IRC Valve

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, allowing water into a urinal cistern.

- Ensures compliance with the Water Regulations
- Can be concealed to reduce the risk of vandalism
- Battery or mains powered (no external transformer required). IRC can use batteries as back-up power to mains supply if required.
- Pipe, wall or ceiling mounted sensor: surface mounted or recessed
- On DEFRA's Water Technology List; purchase and installation are tax deductible
- Visible LED status indicator and low battery alert

How it works

The Infrared Urinal Flush Control (IRC) consists of a solenoid valve and the sensor module.

When the IRC detects movement in the washroom, a pulse from the sensor opens the normally-closed solenoid valve and water flows to the cistern; at the same time the sensor is switched off.

After 25 minutes the power is restored to the sensor and, as long as no movement is detected for 5 minutes, the solenoid valve closes, shutting off the water supply to the cistern.

Product information

- The solenoid assembly is plumbed in on the water supply to the urinal cistern. The connection to the infrared sensor is made either by directly mounting the sensor module on to the solenoid or by using the 'floating socket' supplied for a remote mounting. If mounted remotely, the sensor module may be:
 - Surface mounted using a standard pattress box.
 - Recessed into a suspended ceiling using the 'ceiling mounting kit' (CMK), supplied with the IRC as standard.
- If the sensor detects no occupancy in 12 hours it will automatically open the valve for 30 minutes to allow one flush of the cistern to rinse the urinals and pipework.
- The sequence is designed to maximise battery life, giving approximately 3 years' life from one good quality set of batteries.
- The flow rate of the water into the cistern is adjustable to maximise water economy. Generally this should be set so that the cistern flushes once every time the valve is opened. i.e. every 30 minutes during occupation.

Reducing water wastage and costs

Urinals often flush regardless of use, wasting a lot of water, especially out of hours. Installing a Cistermiser IRC valve can save on average 129,600 litres of water per year and reduce costs by up to £409 per urinal bowl.

	Uncontrolled urinal	IRC
Litres per flush	4.5	4.5
Flushes per hour	4	2
Hours per day	24	12
Days per year	365	260
Water usage per year (ltrs)	157,680	28,080
Water saving per year (ltrs)	-	129,600
Water usage per year (m ³)	157.68	28.08
Water costs per m ³ * (£)	3.16	3.16
Annual water cost (£)	498.27	88.73
Annual water cost saving (£)	-	409.54

*Based on an average UK domestic water cost of £3.16 per m³, combined supply and sewerage (Dec 2014)

Installation options

PIR sensor unit

Contained within a white moulded ABS case designed to fit directly on to the solenoid valve assembly or a standard 3.25" x 3.25" (83mm x 83mm) pattress box for surface mounting. At the back there is access to the battery compartment or terminals for a 230V mains power supply to the integral and in-built transformer and the 6V DC output to the solenoid.

dimensions	85 x 85 x 63.5mm (W x H x D) including the sensor lens
range	approx 3.5m field of view, 138° horizontal, 125° vertical
solenoid voltage	6V DC nominal 54µA, peak 750mA, for 50ms
mains supply	220V – 240V 50hz 20mA
battery supply	4 x 1.5V Alkaline Type LR6 – Cap. 2700mAh
solenoid valve	6V latching valve, UK WRAS approved. One valve per sensor.
water supply	0.1-6 bar (For >6 bar a pressure reducing pressure valve is required). Integral, adjustable flow regulator.

pressure litres per min	max flow litres per min	min flow
6 bar	2.7	0.03
2 bar	1.6	0.01
2 bar	3.0	0.05
0.1 bar	0.9	no flow

Technical specification wording

- The installer shall supply and install a urinal flushing device of the 'Cistermiser IRC' type on the supply pipe to the urinal cistern, as shown on the drawing.
- The flushing control device shall consist of a PIR sensor with a control unit and a solenoid valve with integral flow regulator and interchangeable valve seat.
- The flushing control device should have a hygiene flush function for periods of low use.
- The flushing control device shall be suitable for supply system pressures of between 0.1 and 6.0 bar.
- The flushing control device shall be suitable for connection to either 230V, 50Hz single phase supply with battery back-up, or powered by 4 x 1.5v alkaline batteries of type LR6.
- The flushing control device shall have provision to be mounted directly on the pipework or remotely using either the flush mounting kit supplied or a standard electrical pattress box.

The above flushing device shall be as manufactured by: Cistermiser Limited, Unit 1, Woodley Park Estate, 59 – 69 Reading Road, Woodley, Reading, RG5 3AN
Tel: 0118 969 1611

Product codes

Infrared Urinal Flush Control Valve:

IRC2

Direct Flush

Mains-flushing urinal valve with infrared activation

The cost effective solution to maximise urinal hygiene and water economy

- Designed for urinals flushing directly from the mains cold water supply
- No cistern required
- Only flushes urinal bowl after use
- Vandal-resistant – valve totally concealed
- Hygiene flush for periods of non-use
- Adjustable flush duration and range
- Discreet and Accessible fitting options
- Mains and battery powered options included
- Ensures compliance with Water Regulations
- BREEAM Wat 01 compatible product
- On DEFRA's ECA Water Technology List; purchase and installation are tax deductible



Direct Flush Discreet

Direct Flush is an infrared sensor controlled urinal valve

The Direct Flush automatically flushes the individual urinal after use, ensuring the highest level of hygiene from the minimum volume of water. Direct Flush removes the need for the auto-flush cistern and associated plumbing used in traditional urinal installations, which flush all urinals intermittently even if they have not all been used.

How it works

The Direct Flush infrared sensor detects the user at the urinal bowl and flushes 2 seconds after the user departs. The LED flashes green every 3 seconds whilst a user is detected.

If a user is detected whilst the water is flushing, the flush is automatically arrested to prevent splashing and wastage. During the flush, the LED flashes green once a second.

The flush duration is adjustable which ensures that only the minimum amount of water necessary is used.

If there has been no use of the urinal for 12 hours, the direct flush automatically runs a hygiene flush to prevent odours and the build up of uric acid in the pipework.



Direct Flush Discreet

Product information

- Direct Flush includes an integral DC pipe interrupter (air gap), enabling the installer to connect it directly to the mains water supply. This provides fluid category 5 back-siphonage protection, without the need for any additional backflow prevention or check valves.
- Direct Flush can be powered by either mains electricity via the DC transformer or batteries; both options are included as standard. When batteries are fitted the Direct Flush provides a low battery warning indicator.
- A mains power supply unit (PSUC) which powers up to 20 Direct Flush urinal valves is also available. Only 1 fused spur is required when using this product.
- Additional customised washroom settings are obtainable via a hand held remote control Infrared Configuration Unit (ICU) which is available as an optional extra. The remote controller enables rapid automatic range configuration to the specific washroom dimensions, deactivation of the hygiene flush function and, where a siphonic trap has been fitted, activation of the trap refill function.



Direct Flush Accessible

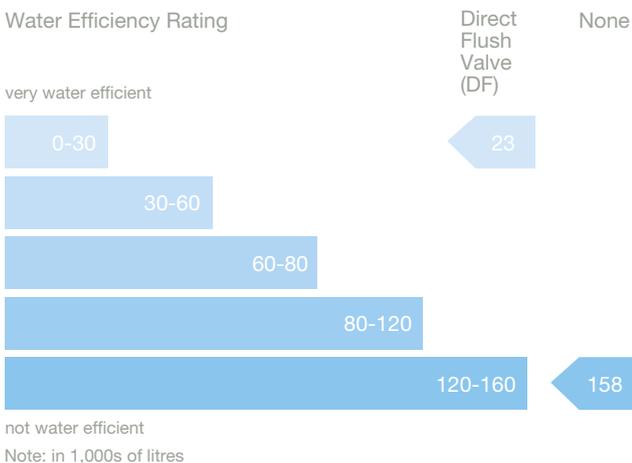


Direct Flush Valve internals

Reducing water wastage and costs, ensuring hygiene

Uncontrolled urinals may flush constantly regardless of use, wasting thousands of litres of water per year and costing hundreds of pounds per year.

The Direct Flush is activated after every use of the urinal but flushes as little as 0.5 litre at a time. Cistermiser has calculated savings of 134,000 litres and up to £312 per year where a Direct Flush has been installed.



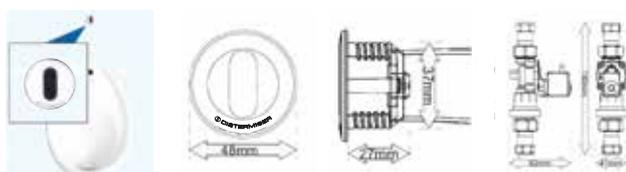
	Uncontrolled urinal	Direct Flush 7.5 ltrs per hour	Direct Flush 10 ltrs per hour
Litres per flush	4.5	0.5	0.5
Flushes per hour	4	15	20
Hours per day	24	12	12
Days per year	365	260	260
Water usage per year (ltrs)	157,680	23,400	31,200
Water saving per year (ltrs)	0	134,280	126,480
Water costs per m ³ * (£)	3.16	3.16	3.16
Annual water cost (£)	498.26	73.94	98.59
Annual water cost saving (£)	0	424.32	399.67

*Based on an average UK domestic water cost of £3.16 per m³, combined supply and sewerage (Dec 2014)

Installation options

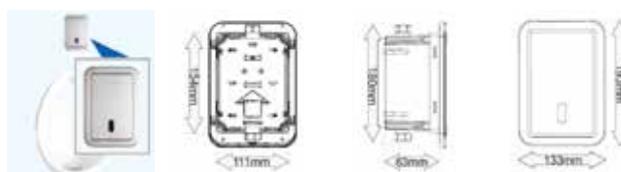
Direct Flush Discreet infrared sensor

The Direct Flush Discreet unit is an alternative installation option where rear access can be gained to the wall cavity for servicing and inspection. The valve is mounted on to the pipework behind the panel or wall together with either the mains supply unit or batteries, while the unobtrusive infrared sensor is installed directly above the urinal bowl.



Direct Flush Accessible infrared sensor

The Direct Flush Accessible incorporates the valve and the power options as well as the sensor in a single compact box housing. It can be installed on to either a concealed structural wall / frame or on to the exposed wall panel. It is ideal where access cannot be gained to the wall cavity. The sensor plate can be removed to enable servicing of the valve or battery replacement (if battery powered) in the installed position without the need to remove the panel.



Technical specification wording

Direct Flush Discreet

The installer shall supply and install a urinal flushing device of the Cistermiser DFD type for concealed installation where service access is provided externally. A Cistermiser DFD is to be fitted to each individual urinal.

The flushing control device is to consist of a PIR sensor remotely mounted above the urinal and controlling a solenoid valve with an integral DC pipe interrupter to comply with Water Regulations.

Direct Flush Accessible

The installer shall supply and install a urinal flushing device of the Cistermiser DFA type for installation where service access is not provided. A Cistermiser DFA is to be fitted to each individual urinal.

The flushing control device is to consist of a PIR sensor controlling a solenoid valve with an integral DC pipe interrupter to comply with water regulations. The sensor, valve and integral power supply are to be contained within a mounting unit with removable face plate to allow service access once installed. The unit is to be mounted above the urinal so that the removable face plate is flush with the finished wall surface.

Direct Flush Discreet & Direct Flush Accessible

The flushing control device is to be fully configurable for flush time and duration, sensing distance and flush arrest, and is to be programmable either manually or by use of the ICU (remote control) where supplied. The unit should also have a programmable periodic hygiene flush function for periods of low use and a cleaner's function to conserve water during routine cleaning and maintenance.

The flushing control device is to be suitable for connection to either 230v 50Hz AC single phase supply or from 4 x 1.5v alkaline batteries of type LR6. For multiple product installations the device is to have the option of being installed with a common power supply unit (PSUC) capable of powering several units from one 230v fused spur.

The unit should be the Cistermiser Direct Flush as manufactured by: Cistermiser Limited, Unit 1, Woodley Park Estate, 59 – 69 Reading Road, Woodley, Reading, RG5 3AN Tel: 0118 969 1611

Product codes

Direct Flush Discreet:	DFD
Direct Flush Accessible:	DFA

Cistermiser is a subsidiary
of Davidson Holdings Ltd.



Delayed action float valves
& water storage control

Salamander Pumps 

Pumped shower systems
& water pumps

Talon

Pipe clips, collars, fixing
plugs & cover profiles



Thermostatic fire
control valves

PENDOCK

Washroom cubicle
systems, panel profiles,
casings and covers

CISTERMISER

Cistermiser Limited

Unit 1, Woodley Park Estate, 59-69 Reading Road,
Woodley, Reading, Berkshire RG5 3AN
t: +44 (0) 118 969 1611 f: +44 (0) 118 944 1426
e: sales@cistermiser.co.uk www.cistermiser.co.uk



Made in
BRITAIN

