

irc valve

infrared urinal flush control valve



reduces water consumption
by up to 80%

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
- Mains or battery powered option in the same box: no external transformer required
- Pipe, wall or ceiling mounted sensor: surface mounted or recessed
- On DEFRA's Water Technology List; purchase and installation are tax deductible

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.

product description

- 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 onto 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 'flush mounting kit' (FMK), 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 pipe work.
- 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.
- The solenoid is supplied with an interchangeable valve seat which is used to increase the flow to the cistern on low pressure supplies.

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 £302.51 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 (£)	2.33	2.33
Annual water cost (£)	367.94	65.43
Annual water cost saving (£)	-	302.51



installation options

remote sensor installation



on the pipe sensor installation



PIR sensor unit

Contained within a white moulded ABS case designed to fit directly onto 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 240V 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 pressure	0.1-6 bar (for >6 bar a reducing valve is required). Integral, adjustable flow regulator and interchangeable valve seat

valve insert orifice insert	pressure	max flow litres per min	min flow litres per min
1.5mm	6 bar	2.7	0.03
1.5mm	2 bar	1.6	0.01
3.0mm	2 bar	3.0	0.05
3.0mm	0.1 bar	0.9	no flow

NB 3.0mm orifice should only be fitted when fed from a tank below 5m head.

specification wording

- The mechanical contractor 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 c/w 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, 50 Hz single phase supply or 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
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product code

Infrared Urinal Flush Control Valve:

IRC2