



Urinal Controls

Flushmatic - Awarded best environment product of Australia 2003

Urinal Controls



Urinal Control System with Twyford Spectrum bowls



Pearl downlighter urinal control



Flushmatic downlighter urinal control

Urinal Controls

The DVS urinal control range has been designed and developed over years of experience working in washrooms. The units are easy to install and extremely versatile in their operation.

Variable settings allow adjustable time delays between flushing, providing maximum efficiency and savings.

How They Work

DVS supply a range of urinal controls for individual or multiple station urinals. Optimum solutions are available to suit every application.

The Flushmatic urinal control is used for multiple station urinals and can be surface or ceiling mounted. This works by using a passive infrared (PIR) detector which detects movement within the 'sensing area', switching the unit into a timing mode.

After a pre-set time, the solenoid valve opens allowing water to flow into the cistern activating the flushing cycle.

The fill-time for the cistern can be customised by the user using the appropriate switches on the Flushmatic board. There is also a set of dip switches to adjust the time delay after activating the PIR.

The system's fast fill design helps eliminate scale problems associated with slow or drip fed systems.

An automatic 'janitorial' flush every 12 hours is also programmed into the unit, should the system not be used during that time.

The individual sensing urinal control systems are designed to detect individual users and only flushes when the user walks away.

DVS offer kits for single or double bowl requirements.

Flushmatic - Surface Mount

The standard Flushmatic is a wall or ceiling 'surface mounted' urinal control for multiple station urinals. See page 13 for full product features.



D114 Flushmatic surface mount

Flushmatic - Downlighter

The Flushmatic downlighter is a suspended ceiling urinal control for multiple station urinals. See page 11 for full product features.



D131 Flushmatic downlighter (standard downlighter size)

Pearl

The Pearl is a suspended ceiling urinal control for multiple station urinals. This unit is the size of a mini-downlighter and incorporates low battery indication. See page 11 for full product features.



D131/PEARL Pearl downlighter (small downlighter size)

Individual Control System

The individual operation urinal control system can be supplied for single or double station urinals. Standard sensor comes with 50mmø bezel. It flushes when the user walks away. See page 11 for full product features.



D107/2/U Urinal control system

Installing just 3 DVS urinal controls can save you enough water to fill an Olympic sized swimming pool in just 1 year!



Urinal Controls

Common Features

- Up to 80% savings on water costs
- Extremely reliable
- Low maintenance
- 2 year guarantee
- Low power consumption
- Solenoid valve included
- Includes power PSU or batteries
- Adjustable fill time (15 mins max)
- Adjustable delay time
- Janitorial flush (After 12 hours of non-use)
- Service contracts available

Typical Savings

Assuming 9 litre cistern and water/sewage rate £2.00/m³

	Unmanaged Cistern	Using Flushmatic
Flushes (per hour)	4	2
Hours (per day)	24	8
Operation days (per year)	365	253
m ³ (per year)	315	36
Cost (per year)	630	72
Typical Saving = £558		

Special Features - Pearl

- Occupancy detection and indication (indicated by a flashing green light)
- Battery low detection and indication (indicated by a flashing red and green light)
- Valve closed before battery failure (indicated by a flashing red light until total battery loss)
- Timed urinal flushing
- Valve open button
- Available in mains or battery

Special Features - Flushmatic - Surface Mount

- Battery low detection and indication (optional)
- Timed urinal flushing
- Valve open button
- Ceiling or wall mountable
- Available in mains or battery

Special Features - Flushmatic - Downlighter

- As above except fitting
- Flush ceiling mounted

Special Features - Urinal Control System

- Single or double station urinal flushing
- Only flushes when user walks away from urinal
- Mains power only

Case Study - Churston Ferrers Grammar School



In 2003 Churston Ferrers Grammar School was selected by DVS and OGBuying.solutions to provide a detailed case study with a well managed school to establish some guidelines on realistic cost effective savings. DVS have been reviewing the savings made since that time.

The year following the implementation of initial water saving initiatives saw a saving of 46%

A typical scenario DVS find is that it is not obvious for a non specialist to identify whether or not urinal controls are functioning properly. The implication of this is that a large percentage of urinal controls fitted by schools in the last 10 to 15 years are not operational. On this site DVS were only confident that 1 out of 7 was working correctly. DVS recommended fitting 6 new urinal controls and setting up a maintenance contract to ensure they continue to function correctly long term.

With around 450 female staff and pupils, and WCs flushing 9 to 11 litres per flush, DVS recommended fitting electronic WC Flushvalves in the 15 busiest ladies toilets.

Whilst the WC Flushvalves would of course provide savings in the male WCs, the use was not so high and the payback period longer. DVS concluded that the design of the existing cisterns and pans would cater for one litre displacement bags without reducing efficiency of flushing. (DVS would advise however, that incorrect use of displacement bags can result in double flushing and greater water use so careful evaluation is required.)

Most of the taps were quite old push taps and not in very good condition. With the exception of one new, toilet block it was considered that taps should be upgraded as and when refurbishments were undertaken. In the new toilet block the push taps were poorly set, the water flow and run time were excessive. In phase 2 of work done, DVS changed these for water efficient self closing non-concussive taps.

Churston had good levels of hygiene, which were not compromised even though massive water savings were achieved.

The school has evening classes, a swimming pool and sports hall used by members of the public. The school has maintained high levels of hygiene and the water efficiency for the school has been improved from average to virtually best practice. This was achieved by just tackling the main areas where water could be saved.



Urinal Controls

Urinal Sleeves



Urinal Sleeve in-situ



Urinal Sleeve showing unique teardrop design



Urinals in-situ

Unpleasant Smells and Blockages

Gents toilets frequently have problems with unpleasant smells of urine and blocked flushpipes putting bowls out of use.

Conventional urinal blocks inside the bowl can add to the problem and increase the potential of blockages. Unfortunately these blocks only, attempt to mask the unpleasant smells and provide no real long-term solution.

Cure the Problem at Source

DVS has developed two powerful Urinal Sleeve solutions to help reduce smells and blockages and also save water.

The DVS Urinal Sleeve will help to prevent the problems which contribute to urinal odours. After the initial Urinal Sleeve outlet is installed the replacement sleeves simply drop into place.

The Urinal Sleeves lower body lines the waste outlet and trap just above the water level. This feature not only prevents leaking and staining from waste connections, but is also removed and discarded periodically as part of the refill, thus ensuring the lining is kept clean.

The most important feature of the Urinal Sleeve is housed within its cone shaped head. This contains a cleaner deodoriser block which both reduces Bio-film build up, reduces the odour and scale in the outlet and helps prevent blockages.

The teardrops on the side of the cone allow urine to pass onto the active ingredient, thus activating and transferring the cleaner deodoriser via the sleeve to the trap where they act on the urine preventing the foul odours. The block also contains a fragrance to provide an all round more pleasant environment.

Timed Urinal Control System

Although the biological version of the Urinal Sleeve is an effective waterless solution, a more effective result can be achieved by periodically flushing the urinals with clean water. This helps keep the urinal clean and also re-activate the block inside the head of the urinal sleeve.

DVS' solution for achieving periodical flushing is the 'Timed Urinal Control System'. This is a programmable control system that can be customised to achieve the number of flushes required.



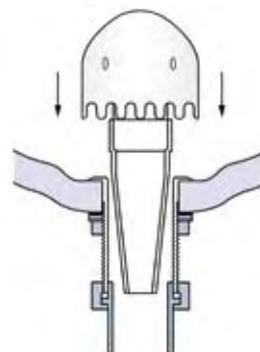
D122 Urinal Sleeve - Refill



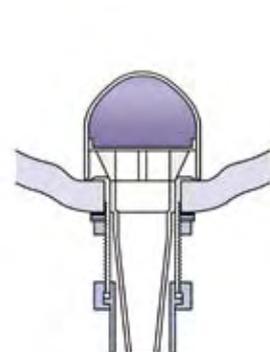
D121 Urinal Sleeve - Installation Kit



D120 Timed Urinal Control System



External view - Showing teardrops



Internal view - Showing block



Urinal Controls

Urinal Sleeves

Two Solutions

The Urinal Sleeve offers two types of solution, BioUrinal and ChemiUrinal, each doing similar jobs but aimed at different environments.

BioUrinal (D121/B)

The BioUrinal can be very effective in low to medium use areas subject to the following conditions. It needs to be established that the freshness will not be compromised to an unacceptable level by limiting flushing to one every two hours.

The enzymes feed on the uric salts and require two hours to multiply to be fully effective. In busy toilets, such as airports, motorways services and busy factory toilets it may be found that to keep the bowl fresh it is required to flush more often.

Normally scale and bio films with bad odours build up on the lining of the inlet trap. The biological treatment reduces these build-ups plus the sleeve is replaced periodically as part of the refill.

The biological cleaner deodoriser is fitted into the cone. The teardrops on the side of the cone allow urine to pass onto the block, thus activating the enzymes and transferring the enzymes via the sleeve to the trap where they feed and multiply.

Only biological cleaners should be used with BioUrinal sleeves as conventional cleaners kill the enzymes.

The BioUrinal sleeve is recommended when there is a requirement to save the maximum amount of water, and limited washing of the bowl is acceptable, and if the use is low to medium.

The BioUrinal sleeve will generally require replacing every 3 months.

ChemiUrinal (D121/C)

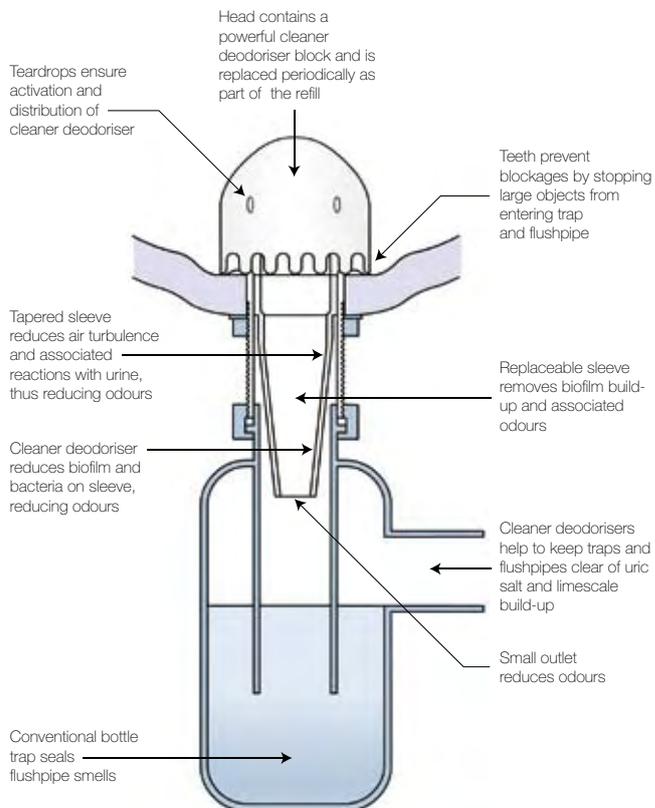
The ChemiUrinal sleeve achieves a very similar effect to the BioUrinal sleeve. The cleaner deodoriser is a well proven chemical formula designed to reduce uric salt and scale build up in the trap and flush pipes and kills malodours.

DVS consider there to be a number of advantages of the chemical cleaner deodoriser solution. The product is effective no matter how often the urinal bowl is flushed and is therefore beneficial in busy toilet areas as well as low to medium use toilets.

The product can be utilised with existing flushing systems to help reduce smells and keep pipes clear.

The ChemiUrinal sleeve can also be used in conjunction with conventional cleaners. Therefore if there is a serious risk of cleaners not always using biological cleaners the ChemiUrinal sleeve will resolve this issue.

Replacement times will depend on frequency of flushing and levels of use.



Where BioUrinal or ChemiUrinal Sleeves Could be Considered

If biological sleeves work in your environment the BioUrinal sleeve provides you with a cost effective solution. This guide gives an indication of Urinal Sleeve and water flush control selection. DVS will be pleased to advise and assist with trials.

Type of environment	Heavy periods of use	Low to medium use	Continual heavy use	Recommended type of controller		
				PIR	Set time	Ind
Office facilities		•			•	
Factories	•				•	
Motorway services			•			•
Airports			•			•
Schools	•				•	

BioUrinal
 ChemiUrinal

These colours indicate that this is the best Urinal Sleeve option for that particular environment.



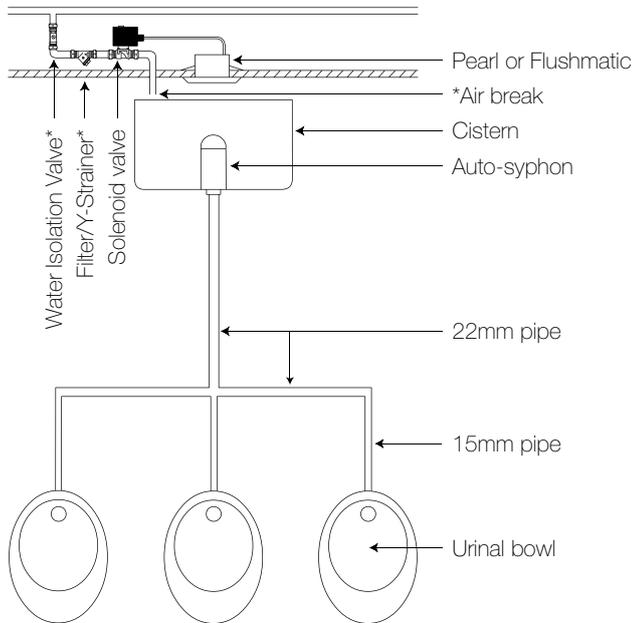
Urinal Controls

Typical Installations

Not to scale

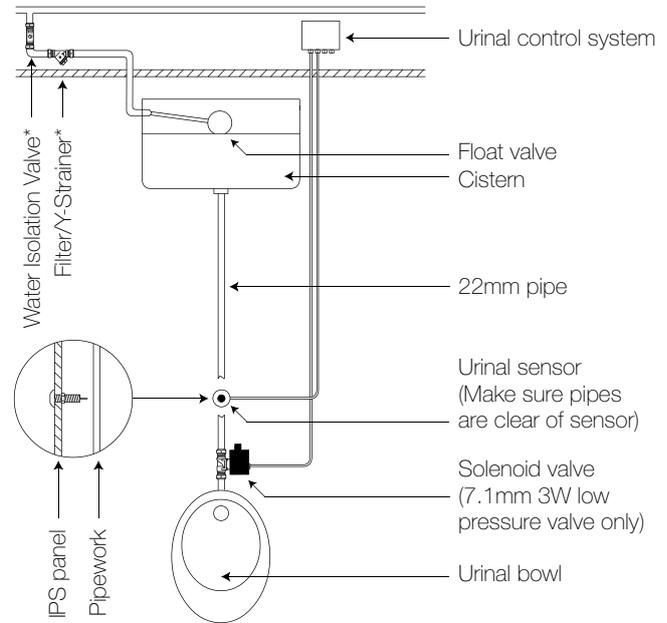
Standard Setup for Urinal Flushing - Using cistern

Multiple bowl setup - Pearl or Flushmatic



Single bowl setup - Urinal Control System

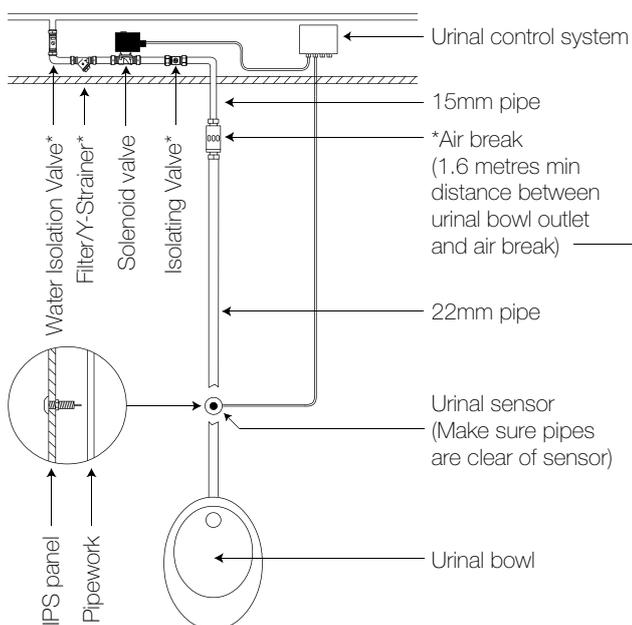
Low pressure setup (requires D107/2/U/1STN/LP kit)



Direct Urinal Flushing Setup - Using mains water

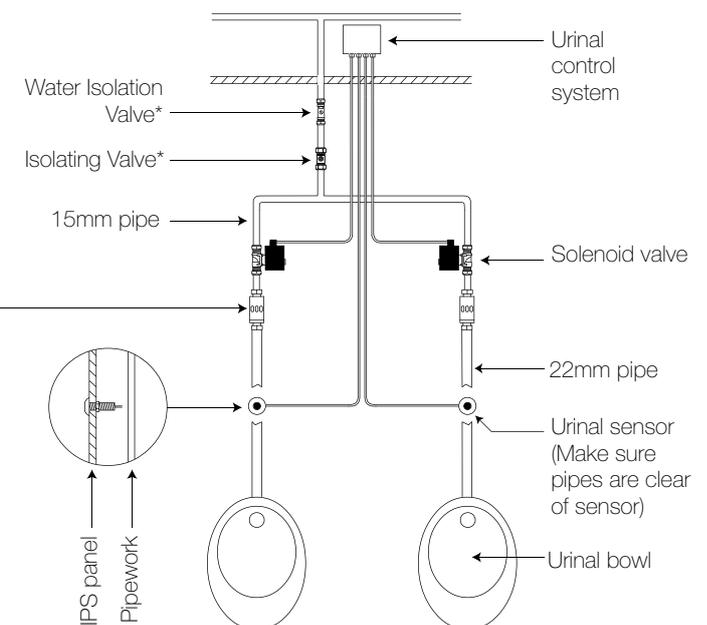
Single bowl setup - Urinal Control System

Note: Not all installations suit direct flushing. Seek advice or refer to website for further info.



Multiple bowl setup - Urinal Control System

Note: Not all installations suit direct flushing. Seek advice or refer to website for further info.



*Not supplied. Can be ordered separately from DVS.

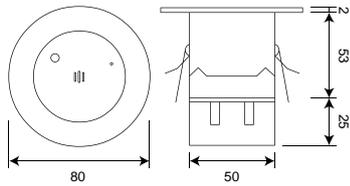


Urinal Controls

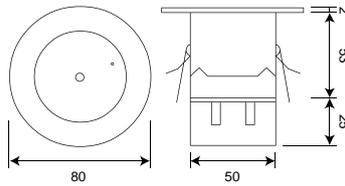
Dimensions

Not to scale

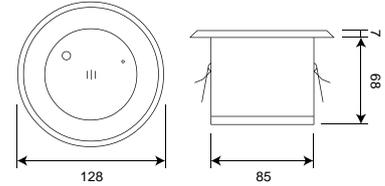
Urinal Controls



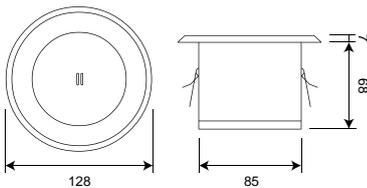
D131/PEARL
Pearl downlighter



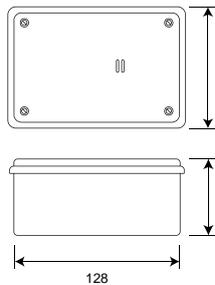
D131/PEARL/SOLO
Pearl Solo downlighter



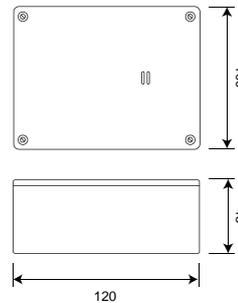
D131/PEARL/RETRO
Pearl Retro-Fit downlighter



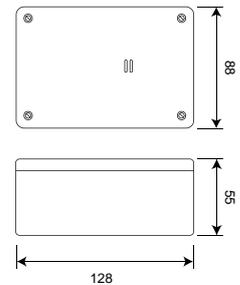
D131
Flushmatic downlighter



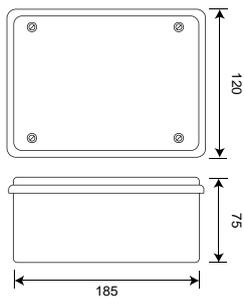
D114 - D135
Flushmatic - Grey



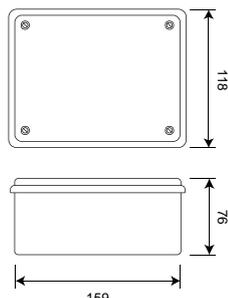
D117 - D117/135
Flushmatic - White



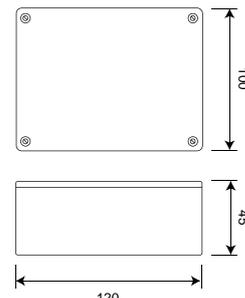
D116 - D116/135
Flushmatic - S/Steel



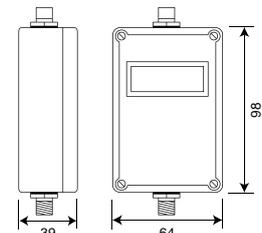
D107/2/U/C
2 Channel Tap Control Box



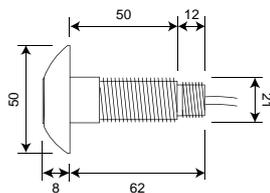
D107/2/U
Urinal control system



D120
Timed Urinal Control System



D081
People counter



D102/URINAL
Infrared urinal sensor
with 50mm Bezel

Cable length: 3m
Fixing: 1/2" BSP
Fixing for extension: 3/8" BSP
(22mm clearance drill hole)

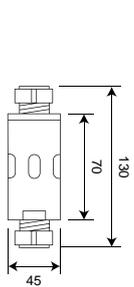


Urinal Controls

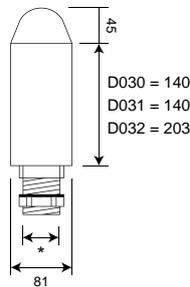
Dimensions

Not to scale

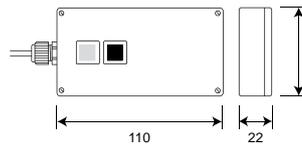
Accessories



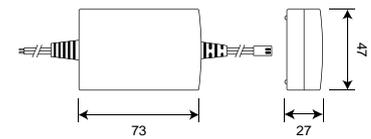
D027/15/22
Air break (back flow preventer)
Inlet: 15mm Inlet
Outlet: 22mm Inlet



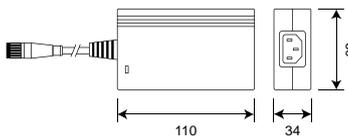
*D030 = 1" BSP
*D031 = 1 1/4" BSP
*D032 = 1 1/2" BSP
Auto-syphon



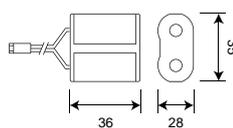
D150
Valve latch
Cable length: Approx 250mm



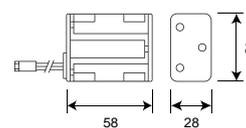
D222/FMM
Flushmatic/Pearl PSU - 6v
Mains cable length: Approx 2m
Low voltage cable length: Approx 1m



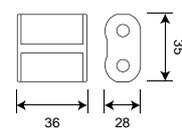
D233
Pig sensor PSU - 9v
Mains cable length: Approx 2m
Low voltage cable length: Approx 1.5m



D058
Flushmatic battery pack - 6v



D059
Flushmatic battery pack for low indicator model - 9v



D057
Pearl battery pack - 6v

Specifications

	Pearl	Pearl Solo	Flushmatic Downlighter	Flushmatic Surface Mount	Urinal Control System
Sensor dimensions (Face):	80(h) x 80(w) x 2(d)	80(h) x 80(w) x 2(d)	128(h) x 128(w) x 7(d)	-	See page 17
Sensor dimensions (Body):	50(h) x 50(w) x 80(d)	50(h) x 50(w) x 80(d)	85(h) x 85(w) x 68(d)	See page 17	16(h) x 16(w) x 58(d)
Control box dimensions:	-	-	-	-	118(h) x 159(w) x 76(d)
Sensor weight with battery:	108g	108g	212g	190g	-
Sensor weight without battery:	66g	66g	170g	148g	96g
Control box weight without battery:	-	-	-	-	670g
Electrical supply:	6v DC mains or battery	6v DC mains	6v DC mains or battery	6v DC mains or battery	240v AC mains
Recommended solenoid cable: *not supplied	0.5mm round 2 core cable*	0.5mm round 2 core cable*	0.5mm round 2 core cable*	0.5mm round 2 core cable*	0.5mm round 2 core cable (supplied)
Sensor fixing:	64mmø clearance drill hole in suspended ceiling	64mmø clearance drill hole in suspended ceiling	100mmø clearance drill hole in suspended ceiling	Screw fix	3/8" BSP (17mm clearance drill hole)
Control box fixing:	-	-	-	-	Screw fix
Sensor material:	IP55 rated heat resistant polymer	IP55 rated heat resistant polymer	Flame resistant powder coated aluminium	IP55 rated heat resistant polymer	-
Sensor type:	Passive infrared	Passive infrared	Passive infrared	Passive infrared	Direct acting infrared
Control box material:	-	-	-	-	IP56 rated ABS
Sensor finish:	White	White	Grey or white	Grey, white, or s/steel	Polished or brushed
Fill-times:	Up to 15 minutes	Up to 15 minutes	Up to 15 minutes	Up to 15 minutes	Up to 15 seconds
Pressure (standard):	0.5 - 8 BAR	0.5 - 8 BAR	0.5 - 8 BAR	0.5 - 8 BAR	0.5 - 8 BAR



Urinal Controls

Price Guide

Urinal Control Kits

Profile - Not to scale	Code	Description	Price (RRP)	DS	
	D114	Flushmatic surface mount kit in Grey - Battery	£152.00	A	
	D117	Flushmatic surface mount kit in White - Battery	£152.00	A	
	D116	Flushmatic surface mount kit in S/Steel - Battery	£190.00	A	
	D124	Flushmatic surface mount kit in Grey - Mains	£180.00	A	
	D127	Flushmatic surface mount kit in White - Mains	£180.00	A	
	D126	Flushmatic surface mount kit in S/Steel - Mains	£218.00	A	
	D137	Replacement fuse for Flushmatic - TR5 (T)1.6A	£2.00	A	
	D135	Flushmatic surface mount kit with battery low indicator in Grey - Battery	£170.00	A	
	D117/135	Flushmatic surface mount kit with battery low indicator in White - Battery	£170.00	A	
	D116/135	Flushmatic surface mount kit with battery low indicator in S/Steel - Battery	£208.00	A	
	D137	Replacement fuse for Flushmatic - TR5 (T)1.6A	£2.00	A	
	D145	Replacement box for Flushmatic surface mount in Grey	£23.00	A	
	D144	Replacement box for Flushmatic surface mount in White	£23.00	A	
	D145/SS	Replacement box for Flushmatic surface mount in S/Steel	£63.00	A	
	D131	Flushmatic downlighter kit for suspended ceilings in White - Battery	£173.00	A	
	D135/A	Flushmatic downlighter kit with battery low indicator in White - Battery	£191.00	A	
	D132	Flushmatic downlighter kit for suspended ceilings in White - Mains	£201.00	A	
	D129	Replacement canister for Flushmatic downlighter in White	£45.00	A	
	D137	Replacement fuse for Flushmatic - TR5 (T)1.6A	£2.00	A	
	D131/PEARL	Pearl downlighter kit for suspended ceilings in White - Battery	£152.00	A	
	D132/PEARL	Pearl downlighter kit for suspended ceilings in White - Mains	£180.00	A	
	D132/PEARL/SOLO	Pearl Solo downlighter kit for suspended ceilings in White - Mains	£210.00	A	
	D132/PEARL/FUSE	Replacement fuse for Pearl - TR5 (T)1.25A	£2.00	A	
	D131/PEARL/RETRO	Pearl Retro-fit downlighter kit for suspended ceilings in White - Battery	£192.00	A	
	D132/PEARL/RETRO	Pearl Retro-fit downlighter kit for suspended ceilings in White - Mains	£220.00	A	
	D132/PEARL/SOLO/RETRO	Pearl Solo Retro-fit downlighter kit for suspended ceilings in White - Mains	£250.00	A	
	D132/PEARL/FUSE	Replacement fuse for Pearl - TR5 (T)1.25A	£2.00	A	
		<i>Notes: The Retro-fit canister is the same size as the Flushmatic downlighter so will fit into any existing Flushmatic holes in the event of an upgrade.</i>			
	D107/2/U/1STN	Urinal control system - 1 station kit - Infrared sensor with 50mmø bezel	£190.00	A	
	D107/2/U/2STN	Urinal control system - 2 station kit - Infrared sensors with 50mmø bezels	£265.00	A	
	D107/2/U/1STN/LP	Urinal control system - 1 station LOW PRESSURE kit - Inc low pressure 7.1mm valve	£201.00	A	
	D107/2/U/2STN/LP	Urinal control system - 2 station LOW PRESSURE kit - Inc low pressure 7.1mm valves	£287.00	A	
	D107/2/U	Urinal control system for 1 or 2 urinals (control box only)	£115.00	A	
	D184	Plastic valve (12v DC) with 3m cable and spade connectors	£26.00	A	
	D107/2/FUSE1	Urinal control system fuse - Primary - 20mm Glass 240V (T)100mA	£0.50	A	
	D107/2/FUSE2	Urinal control system fuse - Secondary - TR5 (F)500mA	£2.00	A	
			<i>Notes: Kits include control box, power supply, sensor, 50mmø bezel and solenoid valve with 3m cable and spade connectors. Standard infrared sensor bezel is brushed. Requires minimum pressure of 0.5 BAR. Must be used with 3W 12V DC NC solenoids.</i>		
		D102/UR	Infrared urinal sensor (price excludes bezel) - Cable length 3m	£49.00	A
D102/UR/50		50mmø chrome bezel for urinal control system sensor	£5.50	A	
D102/UR/50/STST		50mmø stainless steel bezel for urinal control system sensor (standard)	£8.00	A	
		Longer cable lengths come at an additional cost	£17.00	A	
	D102/AV/EXT/150	Sensor thread extension for 100mm wall thickness	£10.00	A	
	D102/AV/EXT/200	Sensor thread extension for 150mm wall thickness	£12.00	A	
	D102/AV/EXT/300	Sensor thread extension for 250mm wall thickness	£18.00	A	
	D081	People counter PIR (battery operated)	£192.00	A	
		<i>Notes: This unit counts and displays the number of times a washroom is entered to help determine usage of washrooms.</i>			

...continued on next page



Urinal Controls

Price Guide

Battery Operated Individual Controller (use 6v latching valves)

Profile - Not to scale	Code	Description	Price (RRP)	DS
	D107/2/U/C	2 Channel Urinal Control Box	£110.00	A
	D107/2/12.7MM	6v DC ASCO Solenoid valve 12.7mm orifice - 0.5-10 BAR - 15mm	£43.00	A
	D107/2/6.7MM	6v DC ASCO Solenoid valve 6.7mm orifice - 0-0.7 BAR - 15mm	£37.00	A
		<i>Sensors as shown on previous page</i>		

Urinal Sleeves and Cleaners

Profile - Not to scale	Code	Description	Price (RRP)	DS	
	D121/B/1	BioUrinal Sleeve installation kit - Biological - 1 1/4" BSP	£16.00	A	
	D121/B/2	BioUrinal Sleeve installation kit - Biological - 1 1/2" BSP	£16.00	A	
	D122/B	BioUrinal Sleeve refill - Biological	£13.00	A	
	D121/C/1	ChemUrinal Sleeve installation kit - Chemical - 1 1/4" BSP	£16.00	A	
	D121/C/2	ChemUrinal Sleeve installation kit - Chemical - 1 1/2" BSP	£16.00	A	
	D122/C	ChemUrinal Sleeve refill - Chemical	£13.00	A	
	D120	Timed urinal control system (Includes solenoid valve) - Battery	£105.00	A	
	D120/M	Timed urinal control system (Includes solenoid valve) - Mains	£133.00	A	
			<i>Notes: Please be sure to choose the correct BSP kit. Only Biological cleaners should be used with BioUrinal sleeves as conventional cleaners kill the enzymes.</i>		

Accessories

Profile - Not to scale	Code	Description	Price (RRP)	DS
	D058	Battery pack for Flushmatic urinal controls (with tails) - 6v	£14.00	A
	D057	Battery pack for Pearl and overseas Flushmatic urinal controls (without tails) - 6v	£8.00	A
	D059	Battery pack for Pig sensor and Flushmatic with battery low indicator (6 pack with tails) - 9v	£12.00	A
	D222/FMM	Power supply for Pearl and Flushmatic urinal controls - 6v	£32.00	A
	D223	Power supply for Pig sensor urinal control (for Up to 3 Pig Sensors) - 9v	£42.00	A
	D119	Flushmatic printed circuit board	£95.00	A
	D150	Valve latch <i>Notes: Enables manual operation of solenoid valve without requiring urinal control. Useful for testing or commissioning purposes.</i>	£50.00	A
	D027/15/22	Air break (back flow preventer) 15mm/22mm - Prevents backflow to water supply	£30.00	A
	D030	Auto-Syphon for urinal cisterns - 5 1/2" x 1" BSP	£13.00	A
	D031	Auto-Syphon for urinal cisterns - 5 1/2" x 1 1/4" BSP	£13.00	A
	D032	Auto-Syphon for urinal cisterns - 8" x 1 1/2" BSP	£15.00	A



Urinal control system sensors above Twyford Spectrum bowls and Bushboard modules.