

water saving



WCs and urinals for water efficient washrooms

ES4 WC

Robust water saving WC with leak-free siphon flush technology

Ultra efficient 4 litre flush

Precision engineered pan
Designed to operate effectively with an ultra-low volume flush

Technical data

Cistern
Concealed styrene cistern

Pan
Swedish designed ceramic pan available in either back-to-wall floor standing pan or wall-hung pan

Flush type
Single/Duo siphon

Servicing
Thomas Dudley two-part siphon

Flush volume
4 litres (2.6 litre lower flush volume)

After flush volume
62%

Inlet
Delayed action valve HP/LP

Durability
Tested to 1 million cycles +

Seat
Pressalit white duraplastic with lid

Outlet
Standard 110 mm horizontal

Accessibility
Available as part of Doc M pack to BS 8300

CAD drawings, technical downloads, installation film & instructions available at: www.es4.org.uk



Summary

- 4 litre flush
- Leak-free siphon
- WRAS approved
- Dual flush option
- Doc M pack availability

Full WRAS approval

European Water Label
Average flushing volume:
2.95 litres

2.6 litre 'dual flush' option

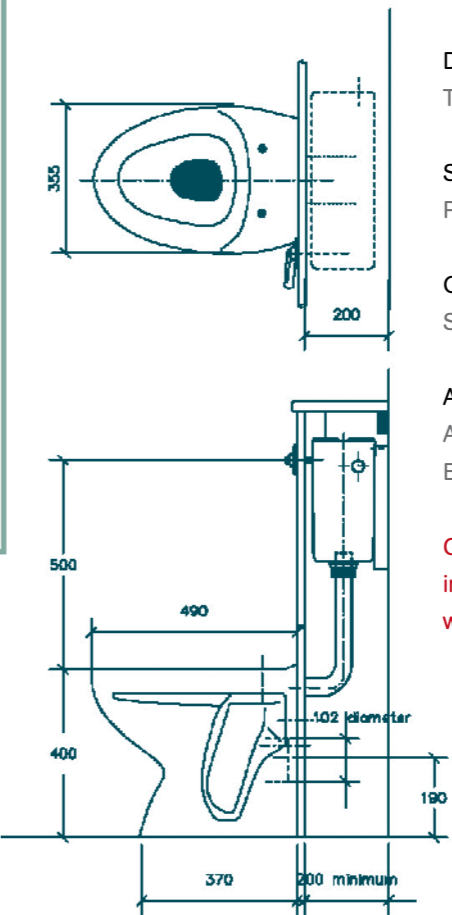
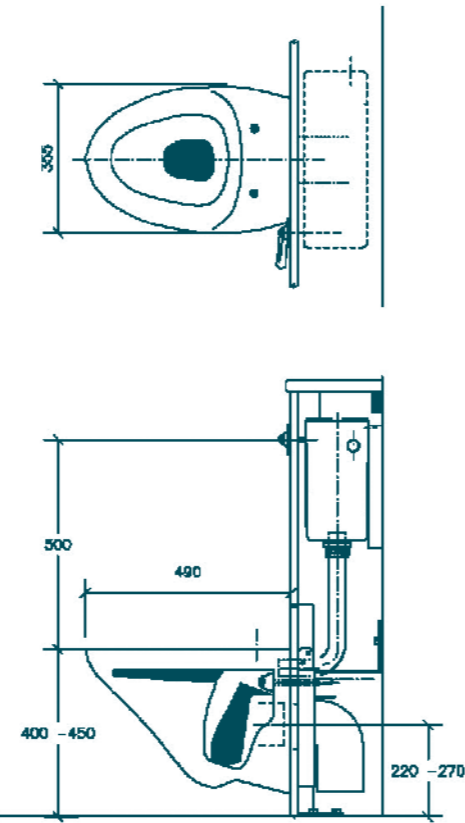
Good drain carry
Flush profile ensures early displacement of solids from the pan, followed by the larger part of the flush to ensure optimum drain clearance

Two-part easy-maintenance siphon
Tested to over 1 million flushes

Delayed action inlet valve
Ensures that no new water enters the cistern until the flush has finished



The **ES4** is the **ultimate 'fit and forget'** water efficient WC. Its robust leak-free siphon flushing mechanism and ergonomic design has been proven to offer **long term performance** in a wide variety of commercial washroom settings.



Ideal for:

- Transport hubs
- Service stations
- Leisure centres
- Public washrooms
- Educational buildings
- Visitor centres

Valve versus siphon flush

Most of the low flush toilets currently available on the UK market are dual-flush valves (which either use a button-press or sensor system). These can save water until the valves become faulty, when, unless rectified, they leak water continually down through the pan. A study of US water use estimated that, at any one time, 20% of toilets were leaking. The **ES4** WC is the answer to this problem, utilising a water-efficient siphon flush which **will never leak**.

The **ES4** may be a little more expensive initially but that cost is more than made up in for in maintenance savings and lifecycle costs.
Neil Phillips, Development Officer,
Cynon Taf Housing Group

Pan design options



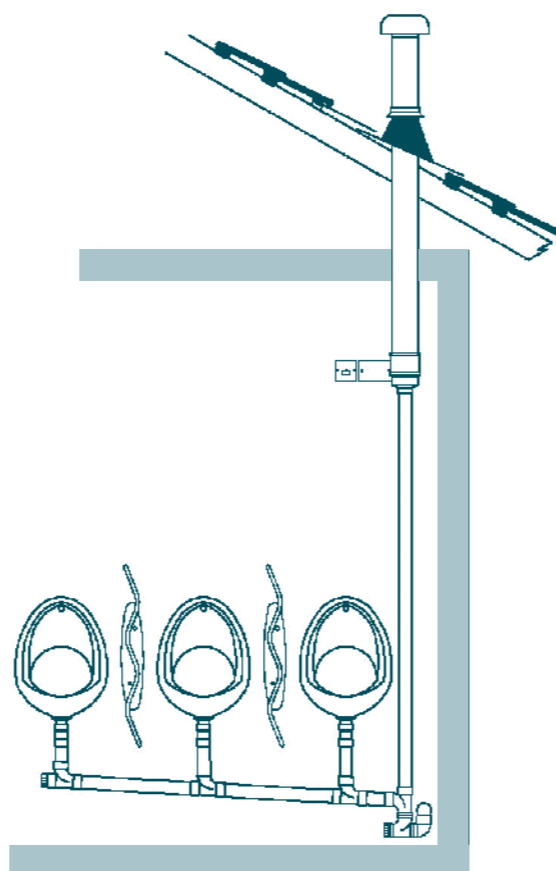


AIRFLUSH®

Summary

- Completely waterless
- No consumables
- Low energy fan
- Eliminates odour

The **AIRFLUSH** revolutionary waterless design requires **no expensive consumables** and **effectively eliminates urinal odour** issues. Tried and tested in the most demanding of washroom environments, the **AIRFLUSH** is ideal for sites with multiple urinal bowls, offering robust, minimal maintenance operation.



The most significant change since having the new urinals installed has been the removal of odours. I must admit, we had some initial concerns about installing waterless systems but we felt it was very important to reduce our environmental impact. Now they are installed, we have no regrets at all – as well as saving water we also stand to be making substantial cost savings and passengers are happier – so they have been a success all round.
Phil Burton, Mechanical & Electrical Officer,
Metro, Dewsbury bus station, West Yorkshire

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Cost savings

Conventional waterless urinals often require expensive (and environmentally questionable) consumables.
Conventional waterless urinal suite (3 bowls) = over £100/year (replacement cartridges/oils)
AIRFLUSH urinal suite (3 bowls) = £10/year (minimal electricity costs and factoring in replacement of fan every 5 years)

Complies with AECB Water Standards Best Practice

specification

Waterless consumable-free system that removes odour

Waterless system

No consumables (cartridges, oils etc) needed

Odourless in operation
Integral low watt fan creates negative pressure and a gentle flow of air down the urinal bowls, effectively removing odour

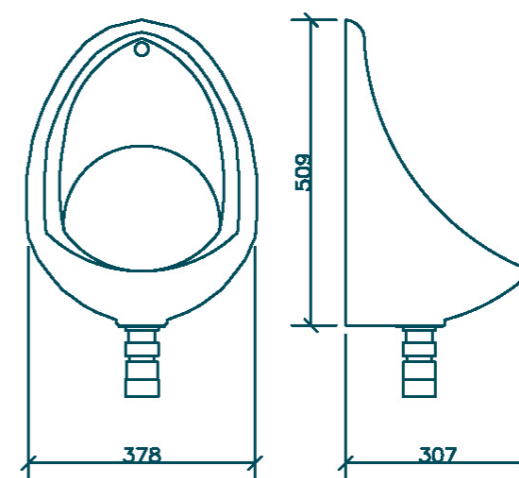
Single central trap
Minimises maintenance problems

Minimal vandalism, flooding & frost problems

Ceramic bowl



Carefully-designed waste pipes
Prevent scale build up and eliminates leaks



Technical data

Fan

3W dc. Housed in 110 mm x 50 mm reducer.
Low-watt in-line fan in the vent pipe runs constantly, causing just sufficient air flow at the bowls to remove all odour.
Fan life expectancy 5 years – replacement is simple and inexpensive.

Bowl

Ceramic bowl(s) combined with AF kit.
The absence of trap under the urinal bowl allows urine to drain away quickly, minimising potentially leaky joints and seals.

Branch discharge

50 mm solvent weld to fall of 1:18
Allows rapid run-off of the urine.

Waste

The system has just one running trap.
To prevent build up of sludge this should be flushed out once a week with a litre of water poured down a bowl. If a hand wash basin can discharge to the branch, this will keep the trap flushed. An existing soil pipe can be used for drainage.

Vent

Vent termination: To BS 5572
The AIRFLUSH requires a dedicated vent. The terminal, which has an anti-downdraught cowl, should be at least 900 mm above any openable point on the building which is within 3 metres.

Kit comprises:

Fan, fan transformer, trap, anti-downdraught cowl, instructions.

CAD drawings, technical downloads, installation film & instructions available at: www.airflush.co.uk

Water savings

Uncontrolled urinal flushing can easily account for most of the water used in public and commercial buildings. **Waterless urinals** can save over 6000 litres water/bowl/year.

Tried & tested

Our range of **simple** and **hassle-free** water saving solutions have been installed everywhere from transport hubs to schools, supermarkets to visitor centres.

The initial cost of purchase of the water saving products has been **more than paid back** by savings in water and maintenance bills within the first year of installation. Helen Schofield, Manager Huddersfield Bus Station

Transport hubs – non-stop savings

Metro has made dramatic water and cost savings as a result of water-saving refurbishments undertaken at Dewsbury, Halifax and Huddersfield bus stations, using Green Building Store's water-saving ES4 WCs & Airflush urinals.

Huddersfield bus station is the busiest in West Yorkshire, with over 33,000 people passing through every day. Water consumption at Huddersfield dropped by 38%, resulting in cost savings of £7.5K in the first year since installation of the water-saving products (£6.5K through water saving and £1K in

washroom maintenance savings) Huddersfield Bus Station Manager Helen Schofield added: *"The initial cost of purchase of the water-saving products has been more than paid back by savings in water and maintenance bills within the first year of installation. As well as saving money and time, we have eliminated the washroom maintenance problems we were encountering. I would definitely recommend them to other bus station managers and passenger transport executives and hope that more bus stations follow Metro's example."*



Visitor centres – enhancing the experience

Our water saving washroom range has a proven track record at sports & leisure centre and visitor toilet blocks. ES4 WCs are even recommended in the Best Practice Guide for Visitor Toilets that has been developed for **National Trust** properties

Education – top marks

Green Building Store's water-saving products have been installed in schools, colleges & educational buildings throughout the UK.

At **St Leonard's School** in Hastings, the installation of ES4 WCs, as part of an independent Environment Agency study, resulted in a 38%

reduction in flushing volumes (when replacing 9 litre WCs). The study also found that the performance of the toilets was exemplary, with a much decreased need for maintenance.

To download the report, go to: www.greenbuildingstore.co.uk/es4report.pdf



Retail & commercial – it adds up

John Lewis
Waitrose
Property Services

Our water saving products have been installed in retail outlets, offices and factories throughout the UK. The **AIRFLUSH**® system is also supplied to **John Lewis** & **Waitrose Property Services**.



See the full list of case studies at: www.greenbuildingstore.co.uk

innovations for sustainable building

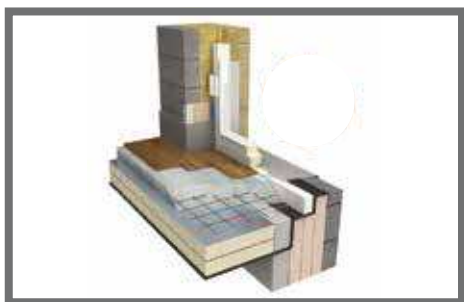
call our
water saving
department
on
01484 463334

email us at:
water@greenbuildingstore.co.uk

FREE Passivhaus resources

Online resources on our Passivhaus newbuild and EnePHit retrofit projects are available in the **FREE RESOURCES** section of our website:

www.greenbuildingstore.co.uk



Other environmental construction products from Green Building Store

High performance windows & doors

We supply a wide range of triple glazed timber windows and doors for **Passivhaus** and low energy projects, with whole window U values as low as $U_w: 0.68 \text{ W/m}^2\text{K}$.

Insulation & airtightness

Help minimise thermal bridging and maximise airtightness on your project with our specialist insulation and airtightness products.

MVHR

Mechanical ventilation with heat recovery (MVHR) ensures high air quality whilst conserving energy in buildings by recovering heat from extracted air and transferring it to the incoming air. Green Building Store is widely recognised as one of the leading technical experts in the UK on MVHR systems for Passivhaus and low energy projects.



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