

Propelair High-Performance Toilet

What is it?

Designed and manufactured in the UK, the Propelair high-performance toilet uses a patented displaced air technology to produce a powerful, reliable flush which requires just 1.5 litres of water compared to the UK 9-litre average.

Why has it been chosen for this category?



Propelair's unique air-based operating principle reduces WC water consumption by an average 84% while ensuring superior performance. As less energy is used for water and waste processing the toilet's carbon footprint is also reduced by an average 80%. Propelair also delivers a package of performance and hygiene benefits, including reducing the spread of aerosolised germs by 95%. It can easily be installed onto existing drainage systems so is suitable for retrofits and refurbishments as well as new developments. Propelair's unprecedented water saving offers economic payback too, with a reduction in commercial water bills of up to 60%, so

that it pays for itself in between one and three years depending on usage and local water rates.

Customers already benefiting from Propelair's technology include The Royal Bank of Scotland, McDonalds, Thames Water, London School of Economics and a number of local authorities. London Borough of Redbridge replaced all 61 toilets in their 13-storey Lynton House office block in Ilford earlier this year. Data before and after installation is as follows:

Period	Consumption M³	Headcount	Use per person p.a.	Toilets
6 months in 2013	2,298	650	7.1 M ³	Existing
6 months in 2014	2,874	779	7.7M ³	Existing
6 months in 2015	2,286	940	4.1M ³	Propelair for 4 months

As can be seen, despite staff numbers increasing by 45% since 2013, installation of the Propelair toilets for just 2/3 of the last 6 month period has reduced water consumption by 42% per person and restored the 2013 water footprint in the process, with 3,384M³ of water now being saved per year and 1.2 tonnes of CO₂, with further savings expected over the next full 6 month period.

Application of the product

Propelair's current model is targeted primarily at the commercial washroom market where high usage can lead to fast payback. It incorporates a concealed cistern, so is less suited to a domestic market where close coupled versions are more common, however a model will be available for domestic use in the near future.

Propelair's simple plug-and-play connectivity allows it to be easily retrofitted to existing drainage systems using 4inch (110mm) bore pipes as a like-for-like replacement for conventional toilets. Alternatively Propelair can connect onto 2inch (50mm) small bore flexible pipes, which the air flush can push the waste through without a gradient (unlike conventional toilets which rely on a fall in the plumbing network). This means that the toilets can be installed virtually anywhere.

Installation and user manuals supplied separately.

How much does it cost?

The cost of a single Propelair unit is £675 + VAT, with an additional installation cost of approximately £175 per unit. The toilet is designed to be maintenance free for life (WRAS has independently tested the toilet to 200,000 cycles, which is equivalent to 27 flushes a day for 20 years). An electrical supply is required (battery or mains version), although the cost of this is minimal with 1000 Propelair flushes costing approximately 4p on a standard tariff, which represents 1/1000th of the potential water saving.

Date of launch in UK

Propelair was launched in mid-2013, initially in the B2B market where we believe the biggest early impact can be achieved.

Regulations

Propelair reaches the highest performance rating under BREEAM's water efficiency guidelines. It also exceeds environmental planning legislation such as Part G of the Building Regulations and Code for Sustainable Homes. The toilets provide a huge opportunity for commercial property owners, who are under increased regulatory pressure to lower their carbon footprint.

Approvals

Propelair is manufactured to ISO 9001 and AS 9100 standards. Other current UK and international product approvals include:

1. WRAS (Water Regulations Advisory Scheme) – independently assessed and approved product.
2. BSI Kitemark – internationally recognised symbol of quality and safety, offering true value to consumers, businesses and procurement practices.
3. CE-marked for EU sales – mandatory conformity marking for certain products sold within the European Economic Area since 1985, also for products sold outside EEA that are manufactured in, or designed to be sold in, the EEA;
4. Water Technology List – approved products mean businesses save money investing in technology to reduce water use and improve water quality, with accelerated tax relief through the Enhanced Capital Allowance Scheme. Propelair's commercial customers can claim back 100% of first-year capital allowances instead of 25%.
5. WaterMark – certification of product compliance with Plumbing Code of Australia and relevant standards on quality including health and safety, and warrant of fitness for purpose.
6. Waterwise – 'Checkmark' approval by leading authority on water efficiency in UK and Europe.