

propelair®

WATERLESS
solutions
BY ELEMENTAL

The Toilet Reinvented



<http://waterless.solutions>



The Toilet Reinvented

Propelair is a high-performance toilet and water-efficient solution, helping forward-thinking organisations save water, money and energy.



Save Water

Use 84% less water and 80% less energy on average



Save Money

Achieve quick payback – cut commercial water bills by up to 60%



Improve Hygiene

Experience unparalleled cleanliness – reduce the spread of germs by 95%



Revolutionary Design

Make maintenance efficient, quick and simple

Why reinvent the toilet?

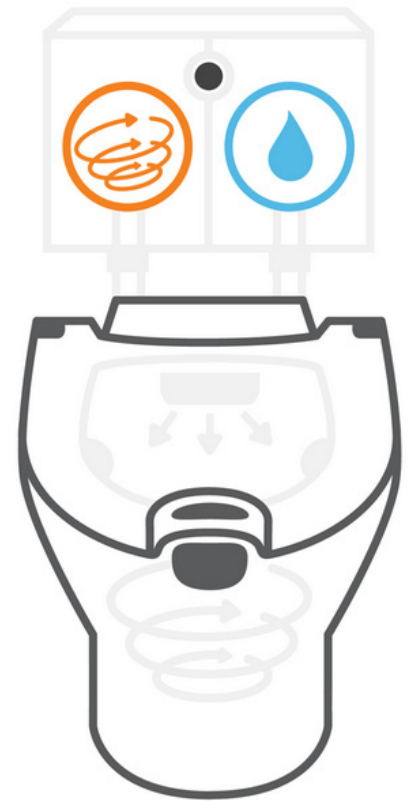
Despite the vital role it plays in effective sanitation, the toilet has not fundamentally changed since the late 1800s. With UK toilets averaging 9 litres per flush and accounting for up to 90% of commercial water use in buildings, it's easy to see why traditional toilet systems have become inefficient for modern use.

Previous efforts to reduce the amount of water used for toilet flushing have had performance and convenience implications and in the main, received poor reviews from users. Recognising the need for an alternative solution which uses less water and performs better inspired the development of Propelair.

How does it work?

Propelair is an entirely new type of technology using displaced air and water. The simplicity of combining these two elements produces a high-performance flush which only requires 1.5 litres of water.

- 1 Propelair has a two-section cistern; one for air and one for water.
- 2 Before flushing the lid is closed to form a seal.
- 3 When the flush button is pressed water enters the pan to wash it, followed by air from the unique patented pump. The air cannot escape due to the sealed lid. This pushes out the entire contents of the pan to give a powerful, reliable flush.
- 4 The remaining water refills the water trap.
- 5 The flush is completed in 3 seconds with the toilet ready to be re-flushed in around 20 seconds (subject to water supply pressure).



How Propelair differs from other technologies

1 Standard WC

Water flows from the cistern into the pan under gravity, carrying the waste out into the drain. As water volume reduces, so does available performance. Water regulations require all new WCs to have a maximum cistern capacity of 6 litres.

2 Dual-Flush/Low-Flush

Dual-flush: This uses the same flushing principle as standard WCs. Dual-flush cisterns are permitted if the method of operation is clear and the lesser flush is no more than two-thirds of the full flush.

Low-flush: Several companies now offer WCs with flush volumes of three litres, but they are based on existing technology and suffer from the same poor performance and contamination problems as dual-flush WCs.

3 Macerating

Instead of flushing with water flow and gravity, waste is shredded into slurry and electrically pumped through small-bore pipes to meet the main drain. This can be noisy and prone to blocking the shredder.

4 Pressure Assisted

These systems improve performance by using the pressure of the incoming refill water to compress an air store, which acts upon the next flush to boost water flow into the pan.

5 Vacuum

Requires the building to be fitted with a central vacuum drainage system which sucks waste out of toilets during flushing for onward disposal. They require little water to flush due to the power of the vacuum, but are energy intensive and cannot connect to existing drains.

6 Compressed Air

When the toilet is flushed, a trap door opens to allow the waste to drop into a second compartment, which a compressed airline is able to pressurise to force the contents through a small bore waste pipe.



Find out how much you could save at <http://waterless.solutions>



Save Water

Toilet flushing can account for up to 90% of water consumption in commercial buildings. Changing your toilets to a more efficient technology can really pay dividends when seeking to save water and energy.

Use 84% less water

Propelair uses only 1.5 litres per flush, a fraction compared to the UK average of 9 litres. Average flush volumes can be significantly higher than their cistern capacity due to double flushing, leakages and filling while still flushing.

Use 80% less carbon

Less energy is required for water and waste processing, meaning the toilet's carbon footprint is reduced by an average 80%.*

*Statistics based on a 9 litre average flush

Reduce leakages

Water is delivered through a siphon for a leak proof operation.

Benefits

Be Green

Improve your company's carbon footprint and environmental performance.

Global Recognition

Propelair reaches the highest performance rating under BREEAM's water efficiency guidelines.

Legislation

Propelair exceeds environmental planning legislation such as Part G of the Building Regulations and Code for Sustainable Homes.

Operational Efficiency

Using less water and energy boosts resource efficiency and building performance.

Environmental Care

Saving water demonstrates your company's commitment towards sustainability and the environment.

Be Forward Thinking


Show leadership in water efficiency.



Save Money

Water is becoming an ever more valuable and costly resource. Propelair is a quick, simple and economic solution to reducing water costs instantly.

 **Reduce water and sewage bills by up to 60%**

 **Achieve quick payback – can be less than one year**



Benefits

Save Money

Ease budgets with instant savings.

Measurable Results

Savings can be accurately measured over time, helping your business to anticipate incoming costs and plan for future budgets.

Tangible Results

See instant cost reductions with lower water bills.

Boost Building Efficiency

Boost building performance and reduce operational costs.

Financial Support

Free Toilets

We understand limited budgets can mean it is not always easy to implement water and energy saving initiatives. We offer a "free toilet" finance option whereby the cost of the toilet is paid for by the water savings, helping organisations to benefit from Propelair instantly.

If you would like more information regarding this, please get in touch.

Water Technology List

Reduce your organisation's investment costs and payback periods by claiming 100% of the cost of Propelair in the first tax year. Propelair is an approved water efficient product allowing organisations to benefit from the Enhanced Capital Allowance Scheme.



Improve Hygiene

Propelair is one of the most hygienic systems available, creating a cleaner toilet environment for customers, clients, patients and staff. This can make a positive impact on their health, well-being and productivity.

Avoid The "Sneeze Effect"

Flushing a conventional toilet creates a "sneeze effect" spraying bacteria, viruses, and moisture into the air. These airborne aerosols can travel up to eight feet away from the toilet itself contaminating the surrounding washroom surfaces and getting drawn into ventilation systems to travel throughout the building.

Harmful bacteria can survive up to 24 hours on washroom surfaces making it a perfect breeding ground for viruses and germs to spread. With Propelair, this unhygienic "sneeze effect" is avoided.



Eradicate Aerosol Germs

Propelair reduces aerosolised germs by 95%. The germs are trapped inside Propelair's unique closable lid, and then efficiently removed with its powerful air flush, creating a more hygienic and healthier washroom environment for users.

Reducing
95% of
aerosols

Total Contaminant Removal

Conventional toilets can leave 6% of previous users' contaminants behind after flushing, which can become airborne during subsequent flushes. Propelair removes 99.9% of contaminants, ensuring less risk of cross-contamination.

Benefits

Promote Health

Promote health and well-being of staff, customers and visitors by reducing the risk of infection.

Productivity

Lower the potential impact on organisational productivity and associated costs.

Commercial Sense

Improving washroom sanitation is advantageous for company image as the condition of toilet facilities can be perceived as a reflection of business practice as a whole.



Improved Design

Propelair's design is a significant step change compared to conventional toilets, with better performance, quicker flush and a simple maintenance process.

1 High Performance

Combining 1.5 litres of water and displaced air technology creates a powerful, high-performance flush which easily removes all waste with one flush.

2 Reduce Queuing Time

Propelair quickly refills in just 20-30 seconds compared to conventional systems which can take up to 2-3 minutes. An efficient flush saves time and reduces queues, especially during periods of high usage.



3 Maintenance Made Easy

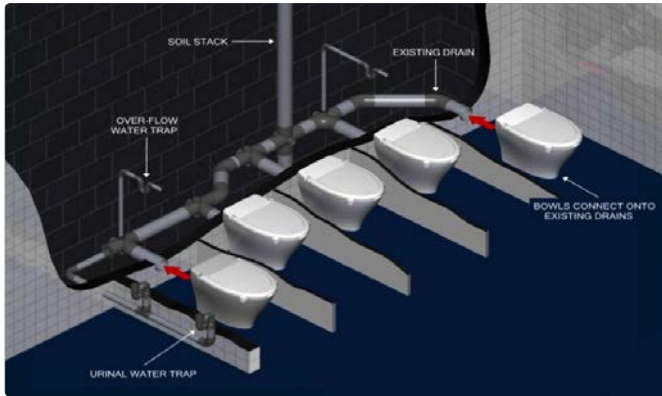
Propelair's rimless pan and side hinges make previously hard-to-clean areas easily accessible, ensuring a thorough cleaning process can be carried out.



Installation and Drainage

Propelair can be installed onto existing drainage systems for the following applications:

- ✓ New developments
- ✓ Refurbishments
- ✓ Retrofit
- ✓ Portable



1 Conventional method

Easily retrofitted to existing drainage systems using 4inch (110mm) bore pipes.

Propelair can be installed as a like-for-like replacement for conventional toilets on vented gravity drainage systems, and the low-pressure flush has been proven not to disturb the water traps of adjacent toilets.



2 Revolutionary method

Alternatively, Propelair can connect onto 2inch/50mm small bore flexible pipes.

Propelair can connect to existing drains using a 2 inch / 50mm flexible waste pipe, which the air flush can push the waste through without a gradient, unlike conventional toilets which rely on a fall in the plumbing network.

Benefits to your business

Restroom positioning freedom

Toilets can be installed virtually anywhere, working within your design plans.

Eliminates expensive drain alteration costs

If repositioning of the toilet was required.

Space saving

Small bore pipes use significantly less space than conventional drainage pipes.

Add toilets

Without having to extend the existing drainage system.

Manufacturing

Designed and manufactured in the UK, Propelair conforms to the prestigious BSI Kitemark, WRAS and ISO9001 manufacturing standards, each recognised globally for their excellence in safety and quality.

Why We Chose British Manufacturing?

- ✓ Quality and traceability
- ✓ Reduced carbon footprint in supply chain
- ✓ Quick after-sales support capability
- ✓ Highly skilled specialised workforce
- ✓ Efficient lead times
- ✓ Localised support and knowledge of industry requirements

“There’s quality and consistency in UK Manufacturing and that’s what you need when you’re working with ceramic products. There’s still a lot of skill in the UK and we draw deeply on that base”.

Garry Moore, CEO

