



Environmental Efficiency Solutions For Water Consumption

The Background

There are growing concerns throughout the international community that current water demand and waste management practices are unsustainable.

Media pressure has meant that Governments have to address the global impact this has on the environment and actively develop strategies to incorporate sound environmental policies. Many administrations are therefore providing incentives for the efficient use of water through discounted tariffs, grants for low usage systems and low waste water systems. This addresses the concerns of their electorate and simultaneously makes significant budget savings by not commissioning costly treatment plants and water transportation systems.

Businesses have also recognised that it has become increasingly important to be able to benchmark their operations, in order to be able to build sustainable relationships of trust with financial investors, the local community, customers and staff.

The Opportunity

- 👍 To incorporate green policies to maximise operational efficiency with subsequent cost savings.
- 👍 To promote and embrace a 'green policy' as a unique selling point to an increasingly environmentally conscious population.
- 👍 Demonstrate a proactive approach to Environmental Issues.
- 👍 To be able to publicly report measured and controlled environmental information.



Your Benefits

- ✓ Significant reductions in water consumption and waste water generation, as existing toilets account for around 33% of consumption.
- ✓ Installations are self funding through reduced operating costs.
- ✓ Tap (faucet) controls automatically shut-off water supply after use to preventing water wastage.
- ✓ Waterless urinals with an oil barrier seal save up to 65,000-litres of water per urinal per year.
- ✓ Automated proof of benchmarking statistics.
- ✓ Automated proof of regulatory health and hygiene requirements.

REMS Solution

Displaced Air Toilets are a new and innovative development (Patents pending) answering the concerns of previous systems while retaining the benefits.

- ✓ Low water use – air pressure allows the toilet to flush using only 1.5 litres of water.
- ✓ High flushing performance.
- ✓ Simple installation - can be connected to conventional gravity waste pipes for easy retrofit.
- ✓ Convenience of conventional gravity flush toilets.
- ✓ Better flushing performance than existing gravity flush toilets.
- ✓ Comply with installation regulations form conventional gravity toilets.
- ✓ No ancillary equipment.



- ✓ Installation costs low with a short payback period.
- ✓ Low flushing noise comparable to a conventional gravity flush toilet.
- ✓ Flushing mechanism manual or electrically operated.
- ✓ User convenience from the automatic operation of toilet flush.
- ✓ Low power requirement of the air-displacement flushing unit.
- ✓ Drainage flow improved.
- ✓ Management and benchmarking system incorporated.

REMS Solution Plus

Additional Operational and Environment Efficiency can be gained by the effective monitoring and control of the refrigerators, freezers, cold rooms, stock control system, air conditioning, secure door access or CCTV, battery back-up and generator systems plus individual room temperature, humidity, fire, gas and flood sensors.

The REMS Solutions Plus can be used to monitor and report on the water, gas and electricity consumption permitting accurate billing or cross charging from a common source whilst achieving the economies of scale possible with single source supplies.

REMS Solution Plus can be extended to deliver environmental best practices.

The provision of interactive TV, Video, Radio and Internet services to each and every room without rewiring can also be included.

The REMS International solution can Monitor, Control and Manage all of the components regardless of manufacturer.

The Guild of Travel and Tourism approve REMS 25x8 Solutions and Advisory Services.



Alternative Systems

Gravity Flush Toilets

- ✓ Good flushing performance.
- ✓ Convenience of use.
- ✗ Water-intensive up to 13-litres per flush.
- ✗ Not conducive to sustainable water usage.

Low Flush Toilets

- ✓ Mandatory maximum flushing capacity of 6-litres in industrialised countries.
- ✓ Flap/flush-valve water delivery mechanism delivers better flushing performance than the siphon delivery system.
- ✓ Siphon system is leak-proof.
- ✗ Undetected leaks in an estimated 20% of flap valve account for an average water loss of 75,000-litres for each toilet per annum.
- ✗ Poor flushing performance, results in double or triple flushes required to clear waste.



Vacuum Toilets

- ✓ Regulatory bodies grant installation dispensations to achieve water savings.
- ✓ Good flushing performance
- ✓ Low water use.
- ✓ Water consumption depends on the power of the vacuum that is being generated by the system, but is generally below 1.5-litres per flush.
- ✓ Several toilets can be connected to a single vacuum-generating unit.
- ✗ Discharge valve instead of a water trap seal makes them non-compliant with many installation regulations.
- ✗ Equipment failure lends the toilets inoperative.
- ✗ Very expensive to install - high capital costs.
- ✗ High on-going maintenance costs.
- ✗ High noise levels - 82dBa rising to 95dBa as vacuum power increases.
- ✗ Energy intensive.