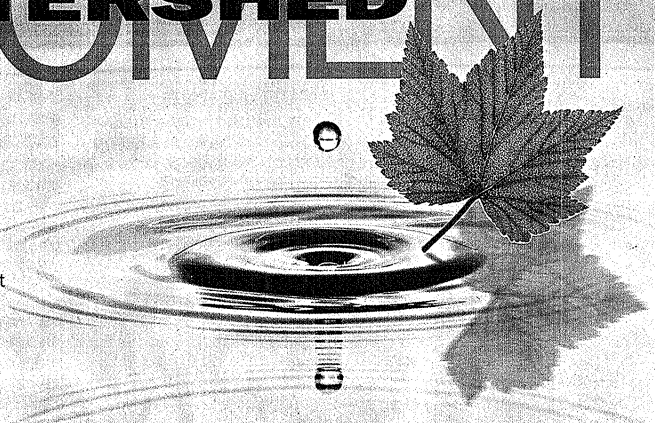


MOMENT WATERSHED



The government's changing approach to water projects marks a turning point for Veolia Water's regional operations

Nature's call

Water-free urinal technology could be the answer to China's resource conservation woes

■ ZHANG LU

Considering the Chinese Government's significant efforts to conserve natural resources in recent years, it should come as a surprise to most people that up to 5 per cent of the country's fresh water supplies are used simply to wash away urine.

Things are changing, however — at least in the men's room. A new flush-free, waterless urinal has been quietly replacing the traditional version everywhere from elementary school bathrooms in California to public washrooms in India's famous Taj Mahal.

This new product has also been introduced to the Chinese market by Falcon Waterfree Technologies, which now leads the market, along with Germany's Duravit and US firm Waterless Co.

Los Angeles-based Falcon started its waterless urinal business in China over a year ago.

"The National Development and Reform Commission (NDRC) and other local institutions have said that water conservation is a key issue in China," says Dittmar Gorges, Falcon's executive vice president.

A recent annual report by the Ministry of Water Resources shows that China's total volume of water resources decreased by 12.9 per cent from a year ago to 2.4 trillion stere in 2004. Figures for 2005 are currently unavailable.

Over the last five years, more than 22 million Chinese residents in 300 cities have experienced water shortages. Annual industrial losses due to water shortages now stand at 200 billion yuan (US\$24.69 billion).

The government has responded to these grave concerns by promoting the development of a water-efficient society.

"The use of water-free urinals will contribute to the country's water conservation efforts, and should bring other economic and environmental benefits as well," says Gorges, who

is the inventor of Falcon's water-free technologies.

Gorges says Falcon's products look the same as ordinary urinals. The main difference is a cartridge installed at the base. A unique lighter-than-water sealant liquid in this cartridge allows urine to immediately pass through and flow down the drain. It also features an airtight barrier between the drain and the washroom floor to prevent odours. Uric residue is collected in the cartridge, eliminating the need to manually flush with water.

Traditional urinals use 150,000 litres of water a year on average. Falcon's market data suggests there are 18 million urinals throughout China, and annual sales of new facilities are in the neighbourhood of 300,000 units per year.

"If we replaced just 10 per cent of the country's urinals with water-free versions — the savings are almost unimaginable," says Gorges.

Operational costs of Falcon water-free urinals are also lower than traditional models, especially in places such as Beijing, where water and sewage disposal costs are comparatively expensive.

The purchasing prices of water-free urinals and regular models are similar, however. Cartridges for water-free urinals only need to be replaced periodically, and are generally effective for up to 7,000 uses.

Cartridges sell for around 160 yuan (US\$19.7) each, so customers stand to save as much as 1,800 yuan (US\$222) per urinal a year. Unlike traditional urinals, the water-free system does not require frequent mechanical maintenance.

The savings are obvious for public washrooms that are heavily used. A Falcon study of the toilets in Beijing International Airport's Terminal II showed that if all the urinals were replaced by water-free models, the airport could save approximately 700,000 yuan (US\$86,420) a year in operating costs, Gorges says.

The company has installed water-free urinals on a trial basis in locations

throughout Beijing, such as the airport, the NDRC building, and Tian'anmen Square.

Gorges says that wider use of water-free urinals will also help reduce investments in waste water treatment projects. These urinals are also more hygienic than ordinary models, because bacteria can flourish in water. Tests for Falcon's trial project by the Shanghai Institute for Design & Research in Environmental Engineering have shown that there is five times less bacteria on the surface of non-flush urinals than on traditional models.

"I am confident that this will take off in China," says Gorges, but adds that widespread acceptance will take time.

Falcon has installed approximately 120,000 water-free urinals worldwide since 2000, but Gorges says Falcon has come up with a unique approach to the Chinese market.

In the initial phase, the company will try to convince potential customers through trial projects. Only after these have been completed will the company move on to the next level.

Past experience in the Philippines shows that business will likely take off once the company has established a number of key customers throughout the country. Fast food chains such as McDonald's and Jollibee use Falcon water-free urinals in their outlets throughout the Philippines, and have even been eager to show the public they care about the environment. This is the kind of word-of-mouth publicity that Falcon wants to develop.

Gorges says convincing its current customers is half the battle.

"We would like to see market penetration of 5 per cent by 2008, and we are very much focused on the Chinese market," he says.

The company has identified local production as key to its future business growth in China. It can now produce 1.2 million cartridges a year on the mainland, and it has co-operated with established local porcelain manufacturers such as American Standard, INAX and HCG to help produce its urinals.