



Advances in toilet technology pump up potential for water savings

*Another great article from The Rooms Chronicle, the #1 journal for hotel rooms management! ***Important notice: This article may not be reproduced without permission of the publisher or the author.*** College of Hospitality and Tourism Management, Niagara University, P.O. Box 2036, Niagara University, NY 14109-2036. Phone: 866-Read TRC. E-mail: editor@roomschronicle.com*

Notice: The ideas, opinions, recommendations, and interpretations presented herein are those of the author(s). The College of Hospitality and Tourism Management, Niagara University/The Rooms Chronicle assume no responsibility for the validity of claims in items reported.

If your idea of a water-saving toilet is 3.5 gallons per flush (gpf), it is time to pull yourself out of the 1980's. Since 1994, it has been a requirement in the United States for new toilets to be installed with at least 1.6 gpf tanks. With today's high-efficiency models, it is possible to use as little as 1.28 gpf or even less per flush.

High-efficiency toilets (HETs) can save thousands of gallons of water per guestroom over a year's time, reducing expenses and preserving valuable natural resources. That is good news for hoteliers, especially those with hotels in the Southwest where water rates are higher. No matter where you are, HETs make sense.

HETs, including dual-flush models, have been used for years in places like Australia. In the United States, however, they are relatively new to the lodging industry. Numerous companies now sell HETs and experts with doctorates in engineering have been spending hours upon hours trying to design tanks, fixtures and bowls that are as efficient as possible.

What about a toilet makes it an HET? According to Phil Schrieber, a Senior Sales Engineer with Kohler Co. in Kohler, WI, it is one that uses at least 20 percent less water than a 1.6 gpf model and that effectively removes 350 grams of waste with that lower amount of water (1.28 gpf).

Two ways to save water

A dual-flush toilet offers two flush options: one for liquid waste (0.8 gpf) and one for solid waste (1.6 gpf). According to Brisbane, Australia-based Caroma USA Inc., which has distributors throughout North America, dual-flush toilets can save up to 40 percent of the water used by 1.6 gpf units.

Gravity-fed HETs can be very effective at removing large amounts of waste but other technologies are also available to ensure that a hotel engineer's nightmare does not happen—a clogged toilet. Pressure-assist toilets use air pressure to help remove waste and some toilet models employ electric pumps to ensure a clean flush. Skeptics still uncertain about the effectiveness of HETs should talk to the experts.

"Technology has changed a lot over the past few years," says Kohler's Schrieber. "We can take a toilet at 1.28 gpf and get it to flush better than a 3.5 gpf." Whereas pressure-assist toilets once were unreasonably loud as they flushed, they now are almost as quiet as gravity-fed models. "It is hard to tell the difference," Schrieber says.

To ensure the effectiveness of HETs, bowl designs have changed and flush valves are larger than they once were. Greater amounts of water flow faster to eliminate the waste.

Toilet traps made larger

Derek Kirkpatrick, North America Manager for Caroma USA, whose company specializes in dual-flush toilets, says larger trap configurations help to eliminate clog possibilities. "With our gravity-fed toilets, it is virtually impossible to plug them," Kirkpatrick says.

Pictured below: The FloWise™ high-efficiency toilet from American Standard uses 1.07 gpf and bears the Environmental Protection Agency's new WaterSense label. The company also offers an elongated model HET that is rated at 1.28 gpf.



Pete DeMarco, Director of Compliance Engineering for American Standard, Piscataway, NJ, says one of the first questions a hotelier should ask a vendor is, “How do I know these toilets are going to perform clog free and complaint free?”

HETs come in one-piece or two-piece styles and can range in price from \$100 to into the thousands of dollars. Hoteliers should ask vendors or their local utility companies about rebate programs. Up to \$400 per toilet is available in some areas—California, for example. If you are unsure about switching over to HETs, install one as a test in a guestroom bathroom or public restroom facility.

American Standard’s DeMarco says HETs have gotten just about as efficient as they can get. “We are certainly to the point of diminishing returns,” he says. “Any other reductions beyond 1.28 gpf will have to go hand in hand with plumbing line advancements.”

Where to purchase HETs

Here are just a few companies to consider when shopping for high-efficiency toilets:

American Standard—The FloWise™ from American Standard uses 1.28 gpf and bears the Environmental Protection Agency’s new WaterSense label. According to the company, “FloWise can deliver high-efficiency, virtually clog-free performance on a regular gravity-fed toilet because it uses American Standard’s Champion 4 flushing technology. Champion 4 toilets have a funnel-shaped piston-action Accelerator flush valve that forces the water to accelerate as it enters the bowl.”

Caroma USA—The Caravelle One Piece Washdown features a 1.6/0.8 dual-flush tank with two-button activation. The Caravelle is suitable for domestic and light commercial applications. Caroma USA also offers elongated and wall hung models.

Kohler—The Cimarron Comfort Height 1.28 gpf toilet with Class Five EcoSmart technology can save up to 3,200 gallons of water annually. Kohler also offers many other models, including the Stanton, a dual-flush toilet produced by Sterling, a brand of Kohler. Kohler’s pressure-assist toilets utilize Sloan Valve Co.’s Flushmate technology.

Also be sure to check out Eljer Inc., Toto USA Inc., Briggs Plumbing Products Inc., Gerber, Flushmate, and Zurn Plumbing Products. ✧

(Glenn Hasek is the publisher and editor of Green Lodging News™, the lodging industry’s leading environmental news source. To sign up to receive the weekly Green Lodging News newsletter, go to www.greenlodgingnews.com. Glenn Hasek can be reached at: editor@greenlodgingnews.com)