

# BOWLE C

# Today's toilets are high-tech wonders that perform better than ever

BY ALICE LIAO



# ICERA

The Palermo II is a twopiece ADA-compliant
ultra-high-efficiency toilet
that flushes with 1.0 gallon of
water and has a MaP score of 1,000
grams. Features include a 3-inch flush
valve, a fully glazed 2 1/8-inch trapway,
and a 9-inch-by-7-inch water surface.
The WaterSense-certified toilet
comes in white or Balsa with a tank
lever and hardware in five metal
finishes. icerausa.com / CIRCLE 856

#### **DURAVIT**

The Vero Air collection now includes a wall-mounted washdown toilet with a contemporary rectangular design and a flush rate of 1.6 gallons. It uses rimless technology to optimize flushing performance with low water consumption and is available with WonderGliss, an optional surface coating on the bowl interior to repel dirt and lime scale. **duravit.us / CIRCLE 857** 



# GERBER

Avalanche Elite is a two-piece toilet with a semi-concealed trapway. Available in 1.6- or 1.28-gallons-per-flush models, it features a 3-inch flush valve and 2-inch fully glazed trapway. Two options are available: a 17-inchhigh model with an elongated or a round bowl, or a 16-inch-high standard model with an elongated bowl. gerberonline.com / CIRCLE 858



#### **AMERICAN STANDARD**

Town Square S is a two-piece 1.28-gallons-per-flush elongated toilet with a MaP score of 1,000 grams. It features PowerWash bowl-cleaning technology as well as EverClean, a permanent surface finish on the toilet bowl and tank that inhibits the growth of stain- and odor-causing bacteria, mold, and mildew.

americanstandard-us.com / CIRCLE 859



#### **TOTO USA**

Aquia IV one- and two-piece ultra-high-efficiency dual-flush toilets feature DynaMax Tornado Flush Technology, which ensures optimal waste removal with very low water consumption, the company says. A cyclonic rinsing action works in tandem with a nanotechnology glaze to repel dirt, debris, and mold. totousa.com / CIRCLE 860

Today's water-saving toilets clean up in more ways than one, delivering easier maintenance, hipper looks, and more functionality.

The challenge of flushing well while using less water has fueled toilet development since the 1992 Energy Policy Act slashed flow rates from 3.5 gallons per flush (gpf) to 1.6 gpf. While the federal mandate has held steady at 1.6 gpf, a growing number of states and municipalities have migrated to the more restrictive 1.28 gpf standard, among them California, Colorado, Georgia, Oregon, Texas, New York City, and parts of Florida. Programs that give consumers incentives to go even lower—1.0 gpf—are also popping up.

But whether legislation will follow suit is still anyone's guess. Already the move to reduce flush volumes has produced its share of casualties. A handful of manufacturers have exited the toilet business altogether, says John Curby, vice president of sales and marketing for manufacturer Icera. Others have retired models after failing to redesign them to meet the lower-flush standard.

Lowering the gallons per flush is one thing, but there's also the issue of drain-line carry. "If you talk to a plumbing contractor, they'll say anyone can flush stuff out of the toilet," says James Walsh, vice president of chinaware product management at LIXIL Americas, which includes the American Standard brand. "But it's a question of whether you can flush it down the drain lines to your sewer system or your septic system," he adds. Currently, toilets are required by code to flush 100 propylene balls a minimum of 40 feet, but some companies test for longer distances.

A study by the Plumbing Efficiency Research Coalition on drain-line carry in commercial applications determined that below 1 gpf, the ability to fully clear waste and paper through a 60-to-70-foot-long drain line becomes erratic, says William Strang, president of operations and e-commerce for Toto USA. While commercial buildings lack additional water sources—such as dishwashers, showers, and clothes washers-to help evacuate waste, the study's findings are generally instructive. "Conservation is only going to be as good as the ability of your infrastructure to withstand that water conservation effort," Strang notes.

Flush performance overall is improving. Scores resulting from Maximum Performance (MaP) testing—an independent testing program that scores toilets based on the number of grams of solid waste (soybean paste and toilet paper) a particular toilet can flush and completely remove from the fixture in a single flush—remain a reliable predictor of how well a toilet will flush. On average, MaP scores have more

#### **KOHLER**

ContinuousClean technology automatically dispenses detergent with each flush. The feature is offered on the Corbelle toilet, a two-piece, elongated 1.28-gallons-perflush model with a skirted trapway, a rimless design, and Revolution 360 swirl flushing. **kohler.com / CIRCLE 861** 





# **GEBERIT**

When paired with a compatible wall-hung toilet, the brand's in-wall 1.28-gallons-per-flush toilet system reduces water consumption by 20 percent compared with conventional toilets, the manufacturer says. WaterSense-compliant, the tank system is suitable for installation with 2x6 or 2x4 studs.

CIRCLE 862

than doubled—350 grams to 882 grams—since 2003. Moreover, high-efficiency products capable of eliminating 1,000 grams are increasingly plentiful.

Most manufacturers are turning to rimless bowl designs to address a common complaint of low-flow toilets: the bowl's susceptibility to staining. Instead of dispersing water through 50 or more rim holes, a focused jet rinses the bowl in a swirling motion, while a second starts the siphonic action to remove waste. Antimicrobial or hydrophobic coatings further repel dirt and debris.

More brands are now also producing self-cleaning toilets with battery-powered compartments that secrete detergent either on demand or with each flush. Kohler's ContinuousClean uses an in-tank reservoir that feeds water and detergent directly into the bowl, preventing the latter from coming into contact with the tank trim and potentially damaging it, says Katie Stevens, a senior project manager at Kohler and Sterling. American Standard's ActiClean works on demand, while its VorMax Plus system dispenses cleaning fluid with every flush.

Skirted toilets are having their moment, thanks to their easy-to-wipe exterior and streamlined style. Installation, however, does require more time and consideration. Alternatively, toilets with concealed trapways also save on elbow grease and cost less.

# **Being Smart**

Though still a small percentage of the market, sales of intelligent toilets and toilet seats are surging. According to Chuck Wheelock, founder of Wheelock Design Associates, in Old Greenwich, Conn., the former has become a status symbol among his well-heeled clients, who "wax poetic" about features such as the warm-water wash, oscillating spray, self-cleaning wand, and heated seat. Bidet seats are increasingly affordable, with manually operated versions available for less than \$100 and electric models ranging from \$300 for basic bidet functions to \$700 and higher for the works.

Intelligent toilets and toilet seats can help seniors to age in place, but Curby notes that salespeople often don't make that case. They also often lack firsthand knowledge. In showrooms that install them or whose sales associates have tried them at home, sales skyrocket, he says.

Wall-hung toilets, too, account for a small fraction of the market, but some homeowners are seeing their appeal. Wheelock's clients are installing them in their New York apartments to save space and even in his-and-hers toilet rooms for their modern look and minimal upkeep.

And what of aesthetics? Think simple, geometric designs that work in contemporary, transitional, and even modern rustic settings. Homeowners want matching finishes on faucets, trip levers, and even standpipes, says Nina Green, president and principal designer at NGD Interiors, in Churchville, Pa., and they're also relocating lever handles or customizing them with decorative designs.

No doubt, water conservation will continue to fuel toilet innovation. Expect more intelligent offerings and perhaps even models designed for graywater use.

# Introductions



#### **TECNOGAS SUPERIORE**

NEXT, a new line of 24-inch stainless steel appliances, consists of four products: a gas range, cooktop, and two range hoods. The range hood shown here features black glass, analog controls, and baffle filters.

superiore.us / CIRCLE 863

#### **MANSFIELD PLUMBING**

The new Vanquish toilet features out-of-the-way, side-mounted hinges and a glazed surface that

makes cleaning easy. The toilet uses 1.6 gallons of water per flush but directs twice as much water around the bowl as other low-flow toilets, the company says. It also features a SmartHeight bowl and an improved flush valve.

mansfieldplumbing.com / CIRCLE 864

# ATLAS HOMEWARES

The Bradbury collection walks the line

between modern and vintage design, drawing inspiration from retro architecture while offering minimalist lines and an industrial vibe. Products include a round 11/4-inch knob,

3-inch cup pull, and bar pulls ranging from 31/4 inches to 12 inches.

atlastothetrade.com / CIRCLE 865

# **WETSTYLE**

The Wave tub measures less than 58 inches long, enabling it to fit in standard bathrooms measuring 5 by 8 feet. The freestanding model invokes the movement of the ocean and its high back is designed for user comfort. Made from the company's soy and mineral stone composite, Wetmar BiO, it's available in True High Gloss or a matte white finish. wetstyle.ca / CIRCLE 866



# WOOD-MODE

The custom cabinet manufacturer partnered with Docking Drawer to develop two new charging and powering outlets. The charging outlet includes both AC outlets and USB ports and has an output of 3 amps, while the powering outlet can power up to two small appliances at a time with an output of 20 amps. The slim design allows the hardware to fit behind an industrystandard drawer depth, the company says. wood-mode.com / CIRCLE 867



#### ILVE

The Pro Series range offers a removable griddle, high-Btu brass burners, triple-pane glass doors, and a built-in warming drawer. Options include a 36-inch model in a single- or double-oven configuration, and 40-inch and 48-inch double ovens. Ranges are available in stainless steel or Matte Graphite (shown).

ilveappliances.com / CIRCLE 868



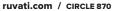
#### INFINITY DRAIN

The manufacturer has redesigned its clamping floor drain into a more compact size, making it easier to install a linear drain against the shower wall. The 3 ¼-inch size also eliminates the need for flooring material between the drain and the wall tile. Available in cast iron, PVC, and ABS.

infinitydrain.com / CIRCLE 869

#### **RUVATI**

Handcrafted in Italy, Fiamma fireclay sinks are heated to 2,900° F in a process that makes the material resistant to chips, cracks, and scratches, the company says. The sink measures 30 inches by 20 inches and has a 10-inch-deep bowl. The reversible bowl provides the choice of a smooth or fluted front. It comes in six colors, including Coastal Shabby Chic (shown).





#### **ROOM & BOARD**

The manufacturer has introduced new bathroom vanities in four of its most popular collections. The Adrian vanity, shown here, features a solid-wood body with a louvered detail. Available in 26-, 36-, and 72-inch widths; multiple sink and countertop configurations; and three wood species, including ash with a charcoal stain (shown).  ${\bf roomandboard.com}$  / CIRCLE 872



# PIONEER INDUSTRIES

The Olympia i2 single-handle pull-down kitchen faucet delivers the popular look of a professional-style prerinse faucet at an affordable price. It features 360-degree swivel, a 7 5%-inch reach, and a dual-spray setting. Available in chrome and PVD brushed nickel. pioneerind.com

CIRCLE 871