

What Is *Your* Plumbing Fixture Thinking?

As a former field plumber, I can't help casting a critical eye on the plumbing fixture brand, type, style, installation, and fit and finish whenever I visit a public rest room. Recently I was in a rather modern hotel rest room complete with state-of-the-art plumbing fixture technology. I noticed one confused-looking fellow as he searched for a flushing mechanism on the urinal flush valve. He looked desperately for some kind of button, handle, or other device to get the thing to flush. He obviously had been well potty trained and wasn't going to abandon the urinal without flushing.

Also noticing the man's rising frustration, the gentleman at the urinal next to Mr. Confused said, "Just walk away."

"Walk away?" Mr. Confused asked.

"Yeah," was the reply. "It'll know when you walk away and flush itself."

"No kidding," said Mr. Confused.

After walking across the room to wash his hands, Mr. Confused immediately faced yet another problem: The lavatory faucet had no handles. He then was standing next to me at the bank of very posh, gleaming lavatories, staring at the bowl and faucet in front of him, not sure what to do next.

"Watch," I said to him. "Just do this." I held out my hands and demonstrated how the faucet turned on and off whenever I waved my hands in front of the electric eye.

He let out a long sigh and said, "When did all this stuff learn how to think?"

I thought to myself, *What a perfect way to put it: fixtures that think.*

When I ponder the plumbing trade, I think *ancient*. We can trace its roots all the way back to and beyond the first Roman civilizations. How many trades have a Latin term for their practitioners? According to Merriam-Webster, the word *plumber* comes from the Latin word *plumbarius*.

My company provides an Apprentice Training Program for new employees, and I serve as an instructor for the plumbing trade. I usually begin each new semester by stating a set of standard beliefs I have about the craft of plumbing. I start by telling my charges, "I believe that plumbers protect the health of the nation! I believe that every time you use a public drinking fountain without contracting botulism or some other waterborne disease, you should thank a plumber! I believe that every major advance in human civilization throughout recorded history can be traced to proper water use and sanitation! I also believe that most of the major plagues throughout history (i.e. bubonic or black) can be traced to the lack of proper water use and sanitation!" I then attempt to instruct the apprentices on the ancient art of plumbing.

To me, plumbing systems always have relied, for the most part, simply on physics to function properly. Use a time-honored set of rules for supply water and drainage piping and then let gravity do all the work. Vent the sanitary to protect the traps, and that's it. Nothing to it!

Plumbers are capable of plying their trade without electricity, air conditioning, building controls, or any of those newer, younger trades. I've always been very comfortable in these beliefs. Until now.

This morning I was trying to find a specification for a grease trap that could be tied electronically into the building controls of a project. This grease trap had to be remotely monitored and able to send a signal whenever it needed to be cleaned. For some time now, I've been specifying elevator sump pumps that can tell the difference between water and hydraulic oil and send an alarm if the wrong liquid enters the sump. If this keeps up, I can see myself looking to enroll in electronics courses and classes on building controls and low-voltage wiring just to keep abreast of the advances that are evolving in the plumbing trade.

Automatic flush valves and faucets, whether hard wired or infrared, have been in vogue for some time now. The time is coming when public rest rooms will be completely no-touch and use 100 percent recycled water. The press is on for the creation of new technology for water conservation and reuse. Obtaining Leadership in Energy and Environmental Design (LEED) points and credits is becoming more and more a part of everyday plumbing design. Waterless urinals, siphonic roof drainage, rainwater collection and control, and many more innovative, exciting ideas are transforming my ancient plumbing trade into cutting-edge technology. The plumbing system is getting smart. Will plumbing fixtures actually be able to think?

I'm fond of referring to oil/water separators and grease traps as "dumb boxes with baffles." A standard water closet is a self-siphoning fixture: It doesn't have to think. One pushes the lever, and the fixture does what water closets do. I've heard that water closets of the future will be able to sense whether a person has gone "number one" or "number two" and flush themselves accordingly. For all I know they already may be making those water closets somewhere.

As a design/build contractor, my company always is looking for unique ways to sell our designs to customers. The use of the word *smart* when referring to plumbing fixtures could be a neat way to present design concepts to owners. It may serve manufacturers well to create a line of "thinking" fixtures. Designers could offer smart plumbing systems that save water and reduce waste. I know of one pump manufacturer that already refers to its line of elevator sumps as "oil smart."

I'm going to add a new belief to the set that I stated earlier: I believe that the plumbing trade is the smartest trade because plumbing fixtures can be taught to think!

I'm sure that many more plumbing fixtures and appurtenances are out there that I haven't covered or even know about. Maybe we should make room in the plumbing code for a new special section: plumbing fixtures with brains. It's a thought. **PSD**



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