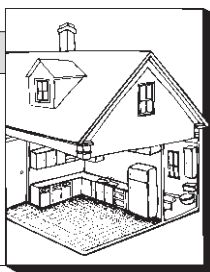


Mixer Valves: More Than On/Off

by Lynn Comeskey



Style and polish are typically what sell tub and shower mixer valves; those are things the customer can see and touch. But some homeowners are also beginning to ask questions about other factors—durability, repairability, safety, and convenience. It pays to know enough to answer these questions, and it can often result in your clients choosing a fixture that benefits you and your plumber as well.

All That Glitters

The number of designs available is mind boggling. In April, I attended the National Kitchen and Bath Industry Show sponsored by the NKBA (National Kitchen & Bath Association) in Chicago; I had no idea there were so many ways to get water into a shower or bath. Many of the products were high end, although there were lots of lower priced knock-offs and less glitzy standards on display as well. Because of the amount of design duplication, your clients are likely to have a number of manufacturers to choose from once they've narrowed down the field to a particular style.

There's no explaining taste when it comes to choosing faucets, but there are some practical aspects to the finish that your clients should be told about. In my area, at least, homeowners still seem to prefer the look of polished brass.

Those familiar with its disadvantages—plumbers, contractors, and more recently, designers—are recommending good old, polished chrome or gold when yellow color is absolutely necessary.

There is no getting around the fact that polished brass tarnishes and just isn't practical unless your clients can afford to keep someone around to do the polishing. Most manufacturers provide a lacquered finish to protect the polished brass from tarnishing; but, generally the protection is fleeting at best. Baldwin's Epic and Artistic Brass do offer five year warranties on their finishes, but prices being what they are, clients generally look for more years than that from fixtures.

Valve Basics

The main purpose of the mixer is to control the flow of water—not very profound but important. The control is ultimately exercised by either a valve stem with a compression washer or some type of “washerless” cartridge. While the former approach is continually being redesigned, there is some kind of material somewhere in the valve that is subjected to continuous compressions and these do wear out. If the washers are not replaced within a reasonable length of time, continuous wear between the rotating stem and the seat can cause irreparable damage.

More recent designs involve a floating washer system that makes these fixtures more durable. The cartridges typically involve rotating ceramic or plastic discs with holes that line up to allow the water to flow. Some cartridges operate on a quarter turn, others on a half turn. The half-turn variety tend to give better water flow. Seals and O-rings are

designed in at strategic places to prevent leaks. The ceramic discs, while generally more expensive, will last a good deal longer than the plastic because they are much harder. This durability is reflected in the warranties of these products: for instance, American Standard offers a ten-year warranty, and Valley gives a lifetime no-leak warranty on their ceramic cartridge faucets.

Looking Ahead to Repair

Although clients continue to be taken with European fixtures and fittings, the plumbers we work with still aren't very comfortable with them. At \$50 to \$65 an hour, they don't feel good about charging the general contractor or client to learn how to install, or worse yet, repair a valve. However, that's often the case given the wide differences in engineering and the general lack of repair manuals and parts catalogs for many foreign makes. Clients don't realize when they get all excited about *Brand X* imported mixer in the show room, that they're looking at greater trouble and expense down the road. With one or two notable exceptions, these mixers won't be easy to identify a few years (and possibly a few homeowners) later which makes it real tough to find parts. And even after the plumber has identified the brand, there's no guarantee they'll be available without considerable delay in ordering.

A way to save on possible future repairs involves one of the best-kept secrets of tub/shower mixers: the *integral* or *service stop*. These are small screw-adjusted mini-valves on each side of the mixer which restrict the flow of water into it. Their primary purpose is to make repairs to the main valve possible without having to turn off the water supply to the house. They are almost always used in multi-unit buildings where turning off the water is a real nuisance. The additional cost of \$10 or so can be saved the first time the mixer valve requires repair. Although most wholesalers don't typically stock the mixer with the integral stop for residential sales, it's definitely worth asking for.

Pressure Balancing

Two other well-kept secrets (or at least not well understood) are the *pressure balanced valve* and the *temperature control valve*. These products are spearheading a slowly building trend among homeowners: concern with safety. (I was surprised to learn that it only takes three seconds for 140°F water to produce a third-degree burn.)

The pressure-balanced mixing valve was developed over 50 years ago. It maintains a preselected tub/shower temperature by continually “balancing” the hot and cold water pressure when demands are made elsewhere in the plumbing system. So your client is less likely to have the shower flow heat up 10° or 20° because someone is flushing a toilet “upstream” on the supply network—the most common reason for changes in temperature at the showerhead. However, it does *not* work when the temperature of the incoming water supply changes.

Pressure balancing valves are also prone to clogging, and if they stick, it is most likely to be in the hot or cold position, not in between. They can employ either sliding steel pistons or a diaphragm; the piston is the more reliable mechanism.

Temperature Balancing

The temperature control mixer is even more sophisticated. These mixers typically incorporate a pressure balancing control and a thermo element. Depending on the manufacturer, the homeowner sets the mixer by choosing a specific water temperature, a numerical marking, or a color sequence on the faceplate of the mixer trim. There is usually an internally set limit or some

ing and after through a series of sensors.

Another product—it's really more of a concept—that is hoping to change the way our clients bathe is the “custom shower system.” It's promoted by Grohe among others. The idea is to combine a mixer or two, and a combination of shower heads, “body sprays,” and “personal” hand showers. Grohe offers a mixer with 3/4-inch inlet ports for the water needed for multiple heads, but some prefer two mixers to be able to control the heads individually.

After four years of drought here in California, home of mindless hedonism, the immediate future of this concept is in question. However, the idea of having your entire body covered with warm water instead of just one side is very

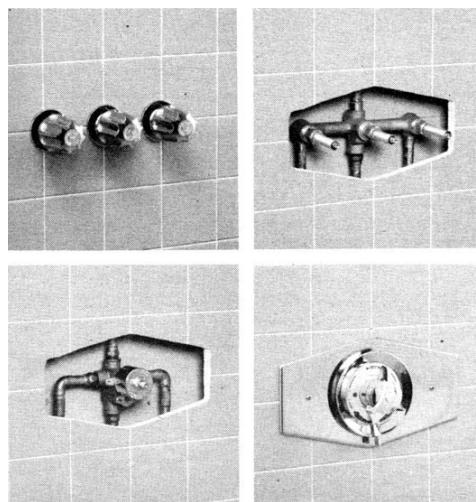


Figure 1. Symmons's pressure-balance mixer replaces standard valves in an existing shower. Pressure-balance mixers keep the hot and cold water flows constant despite pressure fluctuations, but cannot adjust for changes in supply temperature.

type of exposed limit “switch” to keep the owner from inadvertently dialing a dangerously high temperature.

The experience we've had with these mixers has been limited, and “mixed.” We installed a Dornbracht temperature control mixer a couple of years ago only to hear from the homeowner that it wasn't at all accurate. When our plumber couldn't fix it, we had to turn to the our local rep, but we had to wait weeks for the replacement cartridge. Sound familiar? It's not just one company. On a more positive note, I am very impressed with the Friedrich Grohe *Grohmix* thermostat/pressure balance valve, and their local parts stocking.

Pressure balance mixers cost about 25% more than the same mixer without this function. Two companies whose names come up a lot when pressure balance mixers are mentioned is Symmons (see Figure 1) and Powers.

A temperature control mixer costs considerably more; double or triple the price of a pressure balance mixer. Installation is no different than for a regular mixer except that you need to be even more careful about clearing sediment out of the supply lines before installing because they clog so easily.

Hot...and Cold Products

One item that is beginning to get a lot of attention is the “UltraValve” by Memry Plumbing Products Corporation (see Figure 2). It's a mixer valve and a microprocessor on a printed circuit board, with a control panel that has an on/off button, increase and decrease temperature buttons, and a digital read-out of the temperature dialed. The gadget homeowner will want one, but whether they will catch on is hard to say.

Kohler has a new product built into some of their tubs along these lines. It's an auto fill system that controls the water temperature in the tub during fill-

appealing. It also promotes the idea of more than one person showering at a time—a concept that may have a chance. On a simpler level, it appears as if hand-held showers are catching on. They are very practical and flexible for showering and bathing, and are also a big help in cleaning the tub or shower.

And finally, some hot new products that have gone cold: American Standard offers the ceramic electromix mixer which has a solar-powered, digital read-out that gives the temperature of the water as it passes through the valve. They are still available, but the company has stopped manufacturing them; there wasn't enough of a market.

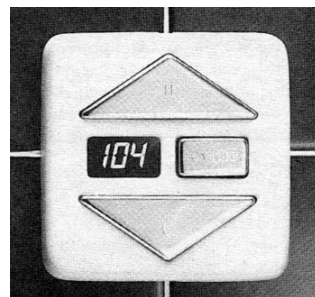


Figure 2. Memry Plumbing Products' UltraValve uses integrated circuits to electrically control the valves for constant delivery temperature. The control panel can be mounted either inside or outside the shower.

Not long ago Grohe was offering the Relexor, a \$1,200 wall-mounted unit with water-powered rotating brushes to provide a massage. Again, an interesting product, but not enough interest to warrant continued manufacture. ■

Lynn Comeskey is a remodeling contractor who specializes in kitchens and baths. His firm, Mac & Lou Construction, is based in Mountain View, Calif.