When Two Plus Two Does Not Equal Four

Clearly, it is to the advantage of water improvement professionals to source quality products at a low price. To this end, many find it difficult to choose between quality, value or affordability. This is true in almost every walk of life. We must make intelligent choices with respect to the quality of a product based on the utility for a particular application. Let's embark on a short journey to discover the best choice for under-the-counter point-of-use (POU) drinking water systems.

By Jerry Horner

With almost any product, the ultimate purpose must be considered when deciding what quality parameters are appropriate. Take a trip to your local discount store, and you may find a full-suspension, 24-speed mountain bike for less than $200. Thinking it might be better to check a local bike shop in case they might have a better deal, you walk in, in search of a better value. In utter shock, you find that a middle-range mountain bike is $2,500. This disparity is a result of many factors, and only an evaluation of the intended use will provide the correct course of action. This same pricing pattern, though not quite as severe, can be found in the POU drinking systems market.

Determining the Weaknesses

It is not uncommon for dealers to assemble their own drinking water systems. Specifically, residential filtration and reverse osmosis systems are relatively easy to assemble from basic components. The key for the assembling small dealer or large OEM is to identify potential weak links.

There are aesthetic weaknesses to a system that may result in poor long-term appearance. The original finish may not last as long on a cheap faucet, but this should not cause a significant problem. This deterioration is inherent in most low-cost systems and may be an acceptable trade-off for the end user.

Highly dependent on use patterns and influent water conditions, cartridges with relatively low capacity ratings may be adequate. We can compare this to the purchase of an automobile. To save money, we may compromise on the quality of the stereo system, but braking performance and other safety features will be scrutinized more carefully.

Choose wisely, because the drinking system you install will likely be in place for at least five years. Contrary to popular belief, your liability is not limited to the length of the warranty but rather can extend for as long as the equipment remains installed. Because of the multi-tiered progression involved, damage claims can become very complicated because the OEM, dealer, installer and end-user will all point fingers at each other.

Preventing Future Problems

Mitigate these instances by working to prevent problems before they occur. Start by carefully selecting systems that are consistently and professionally assembled with quality components. A third-party certification like the Water Quality Association Gold Seal or National Sanitation Foundation certification should add credence to quality claims. Testing includes cycle, pressure and performance parameters. Obtaining these certifications requires a great deal of time, effort, expense and quality control by the manufacturer. These factors, along with annual audits and pride in the maintenance of the certification, will increase the likelihood of a quality system.

The installation and subsequent leak from a drinking system—sometimes costing less than $100—can damage flooring and cabinets and result in exasperating mold issues. Insurance claims can quickly climb into the tens of thousands of dollars. You would have to sell a lot of systems to make up for just one incident that, in most cases, can be prevented. Win or lose, insurance claims will cost you time and money, so avoid them by taking proactive action.

Installation How-To's

Today's systems typically use a quick-connect fitting to make the tubing connections. When applied properly, these fittings are generally very reliable. While there are many quality quick-connect fittings available on the market, you may want to avoid new or untested brands. In any case, try to use the same brand throughout the system, as incompatibility of one brand to another may result in a failure.

Carefully select any plastic female pipe-thread fittings, because these tend to develop cracks, especially when overtightened or installed with an excessive amount of Teflon tape. Make sure your tubing is top quality and compatible with the fittings being used. Tubing should be secured in a manner that does not put pressure on the fittings. Tubing that runs haphazardly throughout a kitchen cabinet is more likely to be disturbed or damaged.

Why saving money today increases the risk of failures tomorrow

Install systems out of the end user's path of destruction. This can include the stacking of household items on, around or tangled within a drinking water system. Keeping the system out of harm's way can be extremely important with regard to limiting leak issues.

As humans age, we simply begin to wear out. The same goes for drinking water systems. Age leads to an increased risk of failure, so replace systems as they approach their expected life span. Many would disagree in both directions, but a five- to 10-year life expectancy is what I would ascribe to most POU drinking water systems.

Systems that use a manifold to limit the number of connections under the sink have been around for a long time. Installing the system in a garage or utility room will also limit the number of under-sink water connections. Enclosed cabinet-style systems often have fewer water connection points. Limiting the number of connections and quantity of tubing under the sink helps lower the probability of a leak. However, going back to our weakest-link problem, it only takes one failure to result in a tremendous amount of damage.

Filter housings are far less costly today than they were even 20 years ago, but quality is the issue. Saving a few dollars today at the greatly increased risk of future problems is simply not a good decision.

Molding filter housings is a very precise process, requiring extreme quality control care. Stick with a brand that has a history of excellent performance from a respected manufacturer. You will rue the day you save six dollars on a system and face a $20,000 water damage claim.

Never Settle on Being Settled

You completed your homework and picked a quality system that you trust. Everything right down to the shipping box is designed to promote long-term peace of mind and operation. The systems have been working well for years and you have grown complacent because you have not suffered any significant damage claims. Get out of the "if it ain't broke don't fix it" malaise. Look for ways to improve on your current product. For example, are you trying to save a few dollars by using a cheaper system for rental accounts? It is just as important to use quality equipment and discard older units in rental accounts.

Improve and intensify your maintenance schedules. Regular, careful service will help identify and rectify potential problems in advance of a failure. With each service, replace not only the cartridges but also all seals and o-rings. Inexpensive and often the cause of performance problems, the auto shut-off valve, check valve and flow restrictor also need regular service. Carefully check all connections, tubing and potential leak points. Consider adding a pressure regulator device to all installations.

While not foolproof, low-cost water detection devices that shut off the water flow to the system at the first sign of a leak are readily available. Your systems have enemies that include the quality of the product, age-related factors, the caliber of the installation and the quirky, inattentive end user.

Even the best made system on earth can suffer a failure, so prepare in advance to limit your exposure to costly water damage claims. By adding more weapons to your arsenal, you will combat the many forces that operate against your water system. *wqp*

About the Author

Jerry Horner, CWS-VI, CI, is vice president of sales and technical support for Topway Global, Inc. He can be reached at 714.255.7999, or by e-mail at jerry@tgipure.com.

LearnMore! For more information related to this article, visit the web at www.wqpmag.com/lm.cfm/wq110701

For more information on this subject, write in 1011 on the reader service card.