



By Jeffrey H. Roseman

Providing the right solution at a good value while maintaining profit margins

Value-Oriented Water Treatment

Giving customers value is what most retailers and wholesalers are doing during the economic slump. With rising costs for products and shipping, it is difficult to maintain sales and acquire profits. Cutting costs without cutting corners can be difficult as well. Sizing a water system and applying the correct treatment system can be a daunting task because salespeople must take into consideration that the customer wants the best possible water treatment at the lowest possible cost.

The problem lies in the fact that the wholesale cost is often more than the consumer wants to spend. Everyone wants the luxury car at the budget car price. In a tight, competitive and slow economy, how do water dealers keep their profit margins steady? Good salespeople and value sell products. Great service and reliable products give dealers repeat and word-of-mouth business.

There is a myriad of products on the market in the water treatment industry. Some perform superbly and others marginally, even when installed properly and designed correctly. Water treatment systems do not need to be done by trial and error. Proper water testing and math formulas provide the tools for setting the specifications of any water treatment design project.

Case Study

In a recent water treatment installation, a backwash iron filter was installed

before a softener. A four-stage reverse osmosis (RO) system was added to provide great-tasting drinking water. For most applications, this type of system would be overkill. But on this type of water and in order to provide the consumer with the water required for the end application, the treatment had to be custom designed accordingly.

A BIRM was used for the iron media, and because there was enough oxygen in the water, the system did not require aeration or an air vent (check with your supplier for specifics on adding oxygen for better performance of the BIRM media).

The next task was determining the cation and anion resins. The testing of the water revealed that there were hardness minerals of magnesium and calcium (cations), plus the iron. There were also some sulfates and tannins, which are anions. Using both types of media (cation and anion) helps remove

the contaminants and polish the water.

This type of treatment costs more because the anion resins are significantly more expensive to employ, but again, value is added to the system. As water treatment specialists, we are not just applying products, we are also providing solutions to water problems. By using this mixed media and a proprietary formula, we obtained the best possible solution for removing the contaminants.

The RO system removed the salt and other contaminants while reducing the total dissolved solids (TDS). The RO unit was mounted in the basement for easy filter replacement, making the unit easier to install and service. When mounting a water tank or tanks in the basement, be sure to use a larger-diameter tube in order to compensate for the increase in head pressure so the water at the RO tap is not reduced significantly.

Too often a system is designed wonderfully in theory, but the math and physics do not provide the desired results.

Because the house had been empty for several months in the slow economic housing market, the nuisance smell of iron-related bacteria (IRB) had reared its ugly head. Although this bacterium is not pathogenic, it is a nuisance because of the rotten egg smell it causes. To get rid of the IRB that caused the bad odor, the well was chlorinated.

There are many acceptable methods and products on the market that make



Top Left: Example of proper configuration of an iron filter with BIRM on right and a softener with a mixed bed of cation and anion exchange media on left.

Far Left: Pre-filter that was removed prior to treatment. These whole-house filters are not applied correctly in many instances, and this was one that was not maintained.

Left: The incoming water on the right was not filtered very well by the pre-filter, and bleed-through on the left shows that this water system design was a poor choice. Too many people in the household, too much laundry and too many dishes contributed to the premature failure of this system.

Right: A four-stage RO system mounted in mechanical room of basement. Be sure to use larger-diameter tubing to compensate for head pressure to faucet.

it easy for water treatment service personnel and even homeowners to chlorinate a well.

Offering the Right Solution

To provide the best possible solution for any water treatment problem, the sales and service technicians must work together on the solution. They must provide the best possible solution for the application, create a good value for the consumer and still leave a satisfactory profit margin. Many salespeople and dealers who get into the water treatment business fail because they do not consider all the math, physics and chemistry it takes to become successful.

There are several methods of obtaining proper training. One is working for a company that will provide training in sales or service work; another method is starting a company and doing everything by trial and error. The first method is more practical and less costly in achieving your goals; however, many dealers have become quite successful by jumping in and learning the trade first-hand.

The Water Quality Assn. also provides many training certifications and ethics courses to help the beginner as well as the seasoned water treatment professional receive the information and educational materials he or she needs to be successful in the industry.

Use the Correct Technology

The most important lesson to be learned, especially in the example above, is to apply the correct water treatment. Too often, salespeople apply the same cookie-cutter system for every customer. Test the water to determine the contaminants that need to be addressed and get specifics on how the end water is going to be used (i.e., industrial, commercial or residential).

All water is not created equal when it comes to different applications. Great-tasting RO water is needed for drinking, but ionized water with little to no TDS is required for electronic and pharmaceutical production. Make

sure the flow rate and water needed for each application are defined and designed correctly.

Take into consideration how many people live in the household. Make sure the washing machine and dishwasher are accounted for, and that all contaminants are adjusted when setting the valve for hardness (i.e., hardness, iron, manganese, etc.).

These all need to be considered when determining overall salt settings.

If all the math, physics and chemistry are accounted for when designing water treatment systems, consumers will purchase value-created systems and have their problems solved. Remember that it is not about selling products, but applying solutions. *wqp*

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