

# DISPENSING Overview of designs and applications faucets

By Gary M. Strunak

here is a wide range of water treatment options in the world today. From very basic and crude applications used in developing countries to ornate and sophisticated water systems on million-dollar yachts, dispensing faucets are part of the water treatment package.

## **Basic Models**

Volunteer groups around the world are currently working in developing countries to help provide drinkable water. These volunteers collect 5 gal. containers that have been discarded after their original use (often storing condiments). The containers are sanitized and shipped to countries such as Haiti. Once there, they are used to provide local people with drinkable water.

This is done by placing one container (with a hole in the bottom) over another container (with a hole in the top) and a charcoal filter in between. Water from the local source (lake, river, etc.) is poured into the top container. After the water goes through the charcoal filter to the lower container - it is safe to drink. Installed on the lower container is an inexpensive plastic faucet made of FDA grade material.

The faucet serves two purposes in this application. First, it allows for dispensing water even while the filtering is taking place. Second, it avoids the need to pour the good water out of the container, so that waste is avoided. Because this type of work is being done on a shoe-string budget, the faucet

used is inexpensive and basic.

This same, basic faucet model is used on decorative ceramic water dispensers. Fivegallon water bottles are placed on the ceramic crocks that have a "hand painted" appearance to them. A glass of good water is now available any time in the house, dorm room or office. Today's mini versions are placed right on desks or bookshelves.

### **Features**

Home and commercial water coolers usually include plastic, FDA grade faucets. Depending on the style or the cooler, some of the spigots will start to become more decorative, featuring fancy handles or chrome finishes.

For safety concerns special handles are usually used where very hot water is being dispensed. The purpose is to avoid possible injury if the hot water handle is accidentally bumped.

On the other end of the spectrum, "cup trip" handles are also available on cooler faucets. These allow for one-hand operation and are very useful to elderly and disabled people.

# **Ornate Models**

In the last several years school systems have started to experience changes in drinking water standards. Some public school systems have initiated plans to replace their old drinking fountains with newer models. These new units are required to utilize leadfree "bubblers," or projector head faucets.

These types of lead-free faucets offer a solution to lead problems in older drinking water equipment often found in restaurants, hotels, parks, schools, hospitals, etc.

Faucets used on RO units and similar water treatment systems get much more substantial and decorative. Almost all of these faucets are made of metal such as lead-free brass or stainless steel. In basic units, chrome finishes with black plastic handles are the standard. Air-gap and non air-gap units and a pressure rate in the 120-psi range is common.

These water treatment systems can get very fancy and require faucets in a wide variety of styles and finishes, such as polished brass satin, almond, black, white, parchment, etc. The basic requirements must still be met, lead-free, 120 psi, etc., but the appearance should be sleek, attractive and contemporary with ergometric handles, required in today's high-end kitchens.

### High-end Models

Perhaps the most decorative and attractive faucets available are used on sinks and water treatment systems for the home, yacht, recreational vehicle, etc. Cost is not a factor here. Function and appearance are the primary issues. This is where the ceramic disc style faucets are used.

Ceramic disc faucets meet all of the FDA and NSF requirements and standards needed, and are lead-free. They can be as decorative as required and are available in a variety



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of finishes to fulfill virtually any customer demand. These are used on very high-end, upscale kitchen installations.

Ceramic disc technology has been growing steadily in the point-of-use (POU) industry since the mid-1960's. The appeal of the design is the smoothness of operation and the durability. A ceramic disc does not wear out like rubber gaskets, so repair is rarely necessary.

### **Standards**

The materials used in all units, from basic to high-end, must meet requirements, such as FDA-grade materials and NSF listing on all models, up to meeting the requirements of ANSI/NSF Standard 61 on POU faucets used in homes and offices.

# Conclusion

Needless to say, faucets have started out from the most inexpensive, basic plastic water taps designs and progressed up to much more expensive, appearance-driven products. The range of water dispensing needs and methods is remarkable. The recent tsunami tragedy is a reminder of how important drinkable water can be and how some very basic systems (a simple charcoal filter) can save lives. From there the sky is the limit. wqp

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