

## **Extreme Water Filtering – Consider High-Flow Systems to Save Costs and Reduce Waste**

*By Robert LeConche , President of Shelco Filters*

In an era when everything is done to the extreme – from sports, to home makeovers, to weather predictions – it should come as no surprise that the world of water filtering has joined the crowd. “Extreme” filtering, so to speak, is achieved through the use of high-flow cartridge systems – smaller designs that are able to handle much higher water volumes and pressures at lower costs and with less maintenance.

In general, one single high-flow cartridge can take the place of several standard 2 ½-inch diameter cartridges. For example, a 20-inch high-flow cartridge (handling up to 175 GPM) can replace up to 35 cartridges sized 10-inches by 2-inches OD. This means municipalities and water companies will have far fewer cartridges to purchase, store, change out, and dispose – good news for the accounting department and for the landfill. Fewer cartridges also means less time and labor will be required for each change-out.

High-flow cartridges require much smaller housings – which tend to be less expensive to purchase and maintain. The reduced housing size calls for a smaller, less expensive envelope, so skid builders will require less material for the framework. The smaller size obviously equates to less skid space – thereby freeing up valuable real estate for more efficient uses. These cartridges typically handle a wide range of micron ratings that will replace (and outperform) other cartridges or bags. Absolute micron retention is achieved with these systems through the use of a positive cartridge seal (similar to conventional cartridges). In essence, users are able to do more with less – without reducing performance quality by any measure.

Doing more with less is a perennial goal for utilities and manufacturers trying to control costs, reduce down time, and eliminate as much waste as possible. Oftentimes these goals are achieved through advances in technology and innovation. In fact, innovation and technology were the main focus of a roundtable discussion held last year with the U.S. Water Alliance, the Water and Wastewater Equipment Manufacturers Association, policy makers, regulators, manufacturers, and other industry leaders. During the discussion, two interesting barriers to innovation were mentioned as major concerns: procurement methods that focus on short-term gains instead of long-term savings, and “Buy American” legislation. When considering the use of innovative high-flow cartridges in a filtration system, both of these concerns are addressed: cost savings are immediate (as well as long-term), and filtration housings, cartridges, and filters are being manufactured in the United States. This is clearly one forward-thinking step that water companies can take without hesitation to begin reaping business and environmental benefits necessary to the performance of today’s water industry.

While making the move to high-flow systems may not seem “extreme,” utilities and water producers will need to design or upgrade their water filtrations systems to properly handle high-flow housings and cartridges. When that time comes, these organizations should work closely with the cartridge manufacturer to ensure that their housings and cartridges are set up to work to their exact specifications and standards. Housings are made with different materials and have varying design options (connection sizes, duplexing, multiple fittings, etc.) that allow for precision solutions to be configured. Through careful consultation, water companies can create the most beneficial design that achieves maximum results.

Currently, high-flow systems are being adopted by water systems builders, municipal water suppliers, food and beverage producers, and in chemical and machine tool coolant applications throughout the world. This is an affordable, quality solution that saves cost, labor and operational space – and that

reduces the number of filters that ultimately end up in the waste stream. That is extreme filtering at its best.

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