Simply the Best

AquaMotion's Aqua-Flash is recognized as 'most innovative plumbing product'.

BY KYLE MILNAMOW
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Each year at the AHR Expo, companies show off innovative and original products in categories such as: building automation; cooling; green building; heating; indoor air quality; plumbing; refrigeration; software; tools and instruments; and ventilation. Each category produces a winner, selected by a panel of third-party ASHRAE member judges, who base their votes on innovative design, creativity, application, value and market impact.

This year's winner in the plumbing category was AquaMotion's Aqua-Flash Recirculation System, which provides hot water comfort to all faucets. It can save up to 15,000 gallons of water from being dumped down the drain every year for a family of five. The system helps save on utility and sewer costs, and helps reduce the water shortage.

To learn more about the Aqua-Flash, we talked to Hans Kuster, president of AquaMotion, and learned about the features that users can benefit from when using the product.

Kyle Milnamow (KM): In your own words, what makes the Aqua-Flash Recirculation System the most innovative plumbing product on the market?

Hans Kuster (HK): The design features ease of installation. You only need a wrench and 10 minutes under the sink. The Aqua-Flash valve does not require batteries or power. It features a 3/8-inch compression nut that threads onto the hot angle stop; one hose threads onto the bypass outlet and connects to the 3/4-inch tee, which threads onto the cold-water angle stop. The sink hoses thread directly onto the valve and tee. This simple process saves on labor cost and installation time, which contributes to value and market impact.

Our valve also has an all metal design using lead-free bronze and stainless steel. We calibrate the special alloy coil to deliver constant hot water while bypassing a minimal amount of tempered water to the cold side. The valve closes when hot water is drawn. Our water passage is more than double the typical .080-inch, which helps prevent plugging up due to calcium build-up and provides a longer life. Because of this design feature, we do not need screens that can easily plug up.

Another reason why this product is unique is that it can be used with tankless heaters. The pump installs below the tankless in the hot line. We provide a 1/4-inch bypass connection in the pump housing to connect to the cold side to keep the tankless in a ready state at all times. This is more efficient and less costly than installing a small hot water tank.

Hans Kuster, AquaMotion president

Aqua-Flash is easy to install and its cartridge can be disassembled and flushed to remove mineral deposits. All moving parts are contained within the cartridge so the pump can be rebuilt in the field rather than replaced.

KM: How long has AquaMotion spent designing the system?

HK: Four years ago, we designed an under-sink system that won an AHR 2015 award; a proven system that installs under the sink and uses the cold-water supply line as a return. It does require power for the pump.

We invented the Aqua-Flash to have a system that does not require power under the sink. The project started about three and half years ago. This now gives us a complete line of recirculation systems for any application, all designed and built in the U.S.

KM: On the AquaMotion website, the Green ECO-cartridge is described as the heart of the circulator. What makes this cartridge so important?

HK: All the moving parts in a water-lubricated pump are contained in the stainless cartridge. I wanted to design a pump that was green, recyclable, sustainable and cost-effective. Our cartridge is the only one that can be pulled apart, flushed and reinstalled.

KM: How is the ability to replace the cartridge an advantage in hard water areas?

HK: Calcium build up can happen in hard water areas. A very large Florida contractor told me that in their very hard water areas, stainless pumps do not last more than two to three years; he now buys AquaMotion pumps. By being able to flush at no cost or replace the cartridge gives the pump another full life for about 83 percent less cost than what competitors charge for their non-repairable cartridge. For a stain-

less pump that costs hundreds of dollars, it is a good solution. That is what I call sustainability.

KM: How long does the flushable cartridge extend the life of pumps?

HK: We design our pumps for a minimum 10-year life and a minimum of 250,000 cycles. Since the cartridge contains all moving parts, you replace it, and you have a new pump. Normal life expectancy is 10 to 20 years under normal system conditions.

KM: There are many design features that make this product stand out. Which one stands out to you?

HK: We design our motors to be more energy efficient, use less power to do more, and thereby save the user on electricity cost for the next 10 to 20 years. We clad all our rotors in corrosion resistant stainless steel, for cast-iron and stainless pumps. This requires only one SKU for the cartridge for stainless, bronze, and cast iron pumps, while competitors use carbon steel rotors, not protected, or simply run their rotors in plastic. No comparison in quality.

Our conventional AM7 heating pump costs only $16 to $18 a year in electricity costs at $ .12 per KW. Most wholesalers or contractors are not fully aware of the savings their customers can achieve with this product. Our stainless recirculation pumps use as little as .26 amps. The reason for our efficiency is based on the experience of our staff with a combined 100 years in pump design. Our pumps and recirculation system designs are unique and state-of-the-art.

"Our secret to success is listening to our customers and helping them with product ideas that enhance their market position. We brand name our products with special features and designs for OEM customers who have a strong market presence."

— Hans Kuster, president of AquaMotion

KM: Will there be any changes to the system that you can discuss?

HK: We will continue to work on product improvements and extensions. We are planning on introducing other new products at AHR.

KM: What does receiving the AHR Innovation Award mean to AquaMotion, and how will that impact future product lines?

HK: We will get a lot of publicity and hopefully more wholesale and OEM customers. It also proves that as a small company, we can design more innovative products than the market leaders. It will force the industry to improve their products.

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Visit the award-winning Aqua-Flash and new AquaMotion products at this year's AHR Expo, in Chicago, at booth 6816, on Jan. 22-24.

Visit www.aquamotionhvac.com.

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