



**PENTAIR INTRODUCES NEW HYBRID DI SYSTEM WITH  
CROSSCHARGE TECHNOLOGY**

**New electronic water purifier combines benefits of RO system and a water softener  
without using salt**

**AMSTERDAM, Netherlands — November 1, 2011** — Pentair, Inc. (NYSE: PNR), a global leader in water treatment solutions, today unveiled its new Hybrid Deionization (Hybrid DI) system with Pentair's CrossCharge technology, the first electronic water purification system that is practical for residential applications. Hybrid DI systems using CrossCharge technology will be the first to offer consumers the benefits of a reverse osmosis (RO) system and those of a water softener without requiring salt.

The CrossCharge technology within Pentair's Hybrid DI system was developed through a partnership with the Dutch firm Voltea. The company has licensed the technology exclusively to Pentair in residential and light commercial applications for point-of-entry products. The new technology uses capacitive electrodes to remove hardness and purify water without employing salt. The core of the system is Voltea's patented "stack" configuration of electrodes combined with ion-selective membranes. The treatment sequence begins with the purification step. This occurs as untreated water flows through the cell where ions are drawn through the membranes and absorbed in the charged electrodes, producing high quality treated water. The electrodes automatically regenerate when the system reverses its polarity. This drives the ions out of the electrodes and flushes them from the stack. The polarity is then reset to normal to start purification again. To see an animated illustration of the system, [click here](#).

The state-of-the-art CrossCharge technology within this Hybrid DI system is driven by a Pentair developed, advanced micro-controller using an array of sensors to monitor and manage all system and water quality parameters in real time. The technology continuously assesses the inlet and treated water quality, controls the power supplied to the stack, and adjusts operating cycles and system flows to continuously optimize performance. The controller includes self-diagnostics and auto clean cycles. It also features a full-color touch screen user interface with animated “User” displays that are intuitive for the everyday user/homeowner and interactive “Technical” screens for system maintenance providers.

“Our business is providing clean, safe water for all and we strive to manufacture products that are kind to the environment. Our Hybrid DI system achieves just that,” said Alok Maskara, president of Pentair’s Residential Filtration business. “Since it treats water without salt, there is no net increase in discharged total dissolved solids. It also produces 90 percent less waste water than a conventional whole house reverse osmosis system.” When asked about the term “Hybrid DI”, Maskara responded, “we call it a ‘hybrid’ DI system because it combines the functionality of an RO system with that of a water softener, but without using salt. It is the first system to offer that combination and the first to purify water without salt. It’s also much more efficient than conventional RO systems and, since it uses no salt, it’s very environmentally friendly.”

Perhaps most significantly, consumers using Pentair’s Hybrid DI system will be able to enjoy great tasting, bottled-quality water throughout the entire home, a benefit not offered by any currently existing product.

Pentair’s vice president for technology, Phil Rolchigo, hailed the product’s launch as an important milestone for the global corporation. “Being first to market with this innovative technology is an excellent illustration of Pentair’s ongoing leadership position in the water treatment industry,” he said. “Our CrossCharge technology is convenient, green and delivers clearly appreciable consumer benefits.”

Pentair's Hybrid DI system with CrossCharge technology inside is expected to become available in consumer products in 2012.

#### **ABOUT PENTAIR INC.**

Pentair ([www.pentair.com](http://www.pentair.com)) is a global diversified industrial company headquartered in Minneapolis, Minnesota. Its Water Group is a global leader in providing innovative products and systems used worldwide in the movement, treatment, storage and enjoyment of water. Pentair's Technical Products Group is a leader in the global enclosures and thermal management markets, designing and manufacturing thermal management products and standard, modified, and custom enclosures that protect sensitive electronics and the people that use them. With 2010 revenues of \$3.0 billion, Pentair employs over 15,000 people worldwide.

#### **ABOUT PENTAIR RESIDENTIAL FILTRATION, LLC.**

Pentair Residential Filtration ([www.pentairaqua.com](http://www.pentairaqua.com)), a division of Pentair, Inc., provides clean, safe and aesthetically-pleasing water to residences through long-standing partnerships around the world, leveraging innovative, environmentally focused and energy-saving technologies. Its distribution partners have access to the industry's widest range of high quality products available to meet all global residential water market needs. Under strong brands and product names such as GE, Homespring by GE, Everpure<sup>®</sup>, PENTEK<sup>®</sup>, Fleck<sup>®</sup>, Autotrol<sup>®</sup>, WellMate<sup>®</sup>, AquaMatic<sup>®</sup>, Structural<sup>®</sup>, American Plumber<sup>®</sup> and OMNIFilter<sup>®</sup>, Pentair Residential Filtration offers a broad product portfolio ranging from filter housings, filter cartridges, drinking water systems, softeners, pressure vessels and control valves, so that partners can carry the best products to meet all residential water needs.

#### **ABOUT VOLTEA**

Voltea commercializes Capacitive Deionization (CapDI) in a number of applications including industrial water re-use and residential water softening. CapDI is the world's most efficient system to desalinate brackish water. Voltea's CapDI systems are based on a single technology platform, which allows for variable salt removal, and is scalable across water volumes ranging from a few milliliters per minute to hundreds of cubic meters per hour. This flexibility means CapDI can be used in a wide array of applications, from residential white goods to large industrial cooling towers.

Voltea's technology has been recognized by numerous awards including best new technology award at the Global Water Summit, most creative company in Europe by CNBC , The Artemis Top 50 of water technology companies and the 2011 Global Cleantech 100.

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