

Ideal for treating high-organic well water, the membranes are installed in five major facilities in Florida, including the Boca Raton plant. Rated at 151 400 m<sup>3</sup> (40 million gallons) per day, the company claims that this is the largest nanofiltration plant in the world.

Hydranautics' new ESPA-B element combines high boron rejection with energy-saving polyamide (ESPA) technology. According to the company, the ESPA-B element will be of interest to communities where boron levels are naturally high, or to manufacturers that are challenged by boron contamination issues.

It is rated at 32.6 m<sup>3</sup> (8600 gallons) per day of flow at 99.2% nominal salt rejection and 96% boron rejection. It is available in the same configuration as the ESNA1-LF2 element, and joins Hydranautics' full line of ESPA membranes that include the ESPA1, ESPA2, ESPA3, ESPA4 and the new ESPA2+ elements.

The ESPA-B is ideal for use with the company's new SWC5 membranes in the second pass in seawater and brackish water reverse osmosis plants that have stringent boron rejection requirements.

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## Study covers water reuse markets

**Research and Markets Ltd of Dublin, Ireland has published a study entitled *Water Reuse Markets 2005–2015: A Global Assessment & Forecast*.**

Over the next decade half the world's major industrial companies and one quarter of its major cities will consider water reuse. The combination of increased water scarcity, tougher environmental regulations and falling costs will create the conditions for explosive growth, predicts the company.

Based on original research, and hundreds of interviews with key practitioners, the study assesses the outlook for water reuse by both

utilities and industry. The report takes a close look at the countries and regions with existing water reuse projects, and forecasts future developments.

It provides answers to the key questions, such as: How big is the potential market? How fast will it grow? Which regions and sectors offer the best market opportunities? What technologies are used, and which companies are leading the way in this area?

The study brings together key national and regional data with analysis of the structural, political and financial issues that will shape the sector over the coming decade.

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## Koch receives NSF 61 certification

**Koch Membrane Systems Inc (KMS), a US-based developer and manufacturer of membrane filtration and separation products, reports that its nanofiltration (NF) and reverse osmosis (RO) elements have been certified to comply with the NSF/ANSI Standard 61.**

The certified NF elements include both TFC-S 'softening' and TFC-SR2 'selective rejection' membrane types. Both are effective in removing hardness, organics (*i.e.* disinfection by-product precursors) and color at low operating pressures, says the company.

The certified brackish water RO elements include the TFC-ULP, TFC-HR and TFC-XR membrane types. The TFC-ULP element is an 'ultra-low pressure', high-rejection membrane, making it attractive for municipal drinking water applications where high permeate quality and low pressure operation and the associated energy savings are primary considerations. The TFC-HR 'high rejection' membrane provides high salt rejection and fouling resistance compared with other low pressure RO membranes.

According to KMS, the TFC-XR membrane is an excellent choice for high purity water applications where high silica and total organic carbon removal are primary considerations, or in applications where high quality permeate is required from a high salinity brackish feed.

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## US demand grows for consumer purification

**Demand in the US for consumer water purification and air cleaning systems is projected to increase by 5.6% per year to \$1.6 billion in 2008, reveals a new study, *Consumer Water Purification & Air Cleaning Systems*, from Freedonia Group, an independent market research firm based in Cleveland, Ohio.**

Gains will be driven by consumer concerns about the quality of the air and water in the home, and greater awareness of the benefits of these systems, says the company. Existing owners of purification systems are continuing to upgrade to the more efficient and better performing equipment featured in higher value systems. The industry also creates a large market for replacement filters and membranes.

Water purification systems that feature conventional filtration media accounted for the majority of demand for water systems in 2003, with 81% of sales, says the report. Sales growth for this segment will be outpaced by demand for higher value reverse osmosis and distillation systems, albeit from a significantly smaller base. Gains will be fueled by their ability to process a broader range of contaminants compared with conventional filters.

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## IN BRIEF

### Website for FilmTec elements

US-based FilmTec Corporation, a subsidiary of the Dow Chemical Company, is introducing what it refers to as an Internet-based channel that covers its FilmTec elements. The site allows products to be purchased on-line using a credit card, and there are no minimum order requirements, says the company. The FilmTec membranes are shipped from the company's third-party order fulfillment center. Access to the site is currently limited to North American system builders (OEMs). Interested customers can gain access to the site by visiting [www.efilmtec.com](http://www.efilmtec.com)

### Millipore catalog on CD-ROM

US-based Millipore Corporation has announced the availability of its *2005 BioPharmaceutical Filtration and Separation Product Catalog* in CD-ROM format.

This disk includes detailed product information covering the company's filtration, chromatography and disposable manufacturing systems and products. It is possible to navigate the catalog by application, process step and product name, or perform a full-text search.

Applications range from cell culture clarification to final fill. Process steps include clarification, microfiltration, ultrafiltration, chromatography, viral clearance and sterile filtration.

### Hydranautics welcomes new leadership

Upen Bharwada and Randy Truby have joined the upper management team of US-based membrane technology company Hydranautics.

Bharwada joins Hydranautics as President and Chief Operating Officer, as well as Vice President of Nitto Americas, Hydranautics' parent company's US headquarters.

Hydranautics welcomes back Truby as VP of Global Marketing and Sales. He began working for Hydranautics in early 2002 as VP of Operations. He briefly served as a consultant to the company in 2004, but recently returned to head up marketing and sales.

Hydranautics was founded in 1963, and in 1987 became part of Nitto Denko Corporation in Osaka, Japan.