

**Customer:** Confidential

**Description of Business:** Food Processing

**Situation/Problem:** A major food processing plant located in Winnipeg, Manitoba Canada contacted one of AXEON's customers with a problem they were experiencing with their existing commercial reverse osmosis system. Their current system was several years old and was utilizing outdated membrane technology, which required the system to operate at pressures above 250 psi. The systems production was at an acceptable level during the summer and fall months; however during winter and spring the feed water temperatures would drop to almost freezing temperatures. This occurrence would decrease the reverse osmosis product water output by almost half and in turn it would affect the manufacturer's potential for product output, costing the plant thousands of dollars of lost revenue per day.

**Solution:** This common scenario presented an opportunity for AXEON Engineers to design a system with the ability to meet the production requirements, while lowering the energy requirements. The solution was the AXEON R1-6140 Commercial Reverse Osmosis System. The AXEON R1-6140 Tap Water Reverse Osmosis System was fitted with AXEON's HF5-4040 Ultra Low Energy Membranes. AXEON's HF5-Series Membranes are the industry's lowest operating membranes with a nominal operating pressure of only 80 psi and a production rate up to 2,500 GPD with a 98.5% salt rejection rate. This in turn allows the operator a wider range in pressure to compensate for loss of flow due to cold water temperatures. With the new AXEON R1-6140 Tap Water Reverse Osmosis System installed and fitted with the AXEON HF5-4040 Membranes, the customer was able to continue manufacturing all year round and increase their pure water output during their busy season, while lowering their energy requirements.

**Equipment Installed:**

- AXEON R1-6140 (9000 GPD) Tap Water Commercial Reverse Osmosis System – engineered for low energy, high efficiency operation
- AXEON HF5-4040 Membrane Elements – utilizing the industry's leading film technology

**The Results/Customer Benefits:**

- AXEON R1-Series systems offer reliability, dependability and quality. These systems are engineered with the installer and operator in mind, featuring self monitoring controls and brand name components.
- AXEON HF5 Membranes are ideal for tap and brackish water applications and offer higher efficiency levels, thus reducing energy costs by up to 23% or offering increased system production.
- Increased manufacturing and lower energy requirements estimated a savings of \$47,000.00 per year.

**AXEON Advantages:**

AXEON is an innovative leader in the manufacturing of reverse osmosis systems, membranes, housings, chemicals and components. For over two decades, AXEON has manufactured all of its products in the U.S.A. and to the highest quality standards. Please contact AXEON to learn more about AXEON R1-Series Reverse Osmosis Systems or AXEON HF5-Series Membrane Elements at 800-320-4074 or visit us online at [www.axonwater.com](http://www.axonwater.com).

