

The EPIC Centre achieves major savings after only 12 months of operation

The EPIC Centre, constructed in 1974 and affiliated to the Montreal Heart Institute (MHI), seeks to prove the benefits of exercise for the cardiovascular system. Today it is endowed with the best physical conditioning equipment and technology to evaluate its 4,000 members and develop their physical fitness. Over forty employees work in the two-story building, which has over 100,000 ft² total floor area.



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Twinned with the Clinique de l'Orangerie in Strasbourg, France in 2001, the EPIC Centre offers fitness classes and programs all year round. The Centre has numerous infrastructures, including a 5-lane pool with a 130,000-gallon capacity.

Use of the pool is divided among various aquatic activities (aquafitness classes, free swim, etc.). About 200 swimmers use the pool every day.

The problem

The pool water was filtered for many years by conventional sand filters with manual washing and rinsing (15-20 micron filtration). Gradual rusting of the tanks required their replacement after 18 years of operation.

The filtration system is a pool's most important component. Efficient filtering ensures crystal clear water and swimmer comfort.

The solution

The EPIC Centre's managers considered the purchase of NSF approved Vortisand® filters for finer 2-micron water filtration. A proven technology,

Vortisand® filters with completely automated backwash and rinse cycles a very high removal rate of very fine particles in suspension. By choosing Vortisand®, the EPIC Centre was assured of a high-quality, high-efficiency product.

The Vortisand® filter's many advantages favoured its acquisition. They include construction of stainless steel 316 tanks for a longer life cycle, 19.35 gpm/ft² fast filtration speed, complete micro-processor-controlled automation of operations and lower backwash water consumption.

Because of the low water flow required for backwashing, Vortisand® uses aqueduct water for counter-current backwashing and pool water for rinsing. This results in an appreciable saving of pool water, energy (related to pool water heating) and chemicals.

The EPIC Centre adopted a Vortisand® filter model ASW5-30-SP, 475 gpm and put it into service in July 2002.

Advantages

The Vortisand® filter's 2 micron filtration is much finer than the previous filters, which operated at 20 microns and the water quality is now crystal clear.

Savings achieved

A total saving of \$10,390 has been achieved after only 12 months of operation, representing a 2 year Return On Investment based on a conventional filter price difference.

ENERGY \$ 1,234 saving resulting from the lower electrical consumption necessary to heat the pool make-up water. Because of the low water flow



required for backwashing, the Vortisand® filter allows use of municipal water instead of pool water, so that a smaller volume of water requires heating. This results in an appreciable energy saving (related to pool water heating). Saving of 24,683 Kw/hr in 12 months.

CHEMICALS – \$ 2,915 saving. Chemicals are essentially used to maintain clear water and prevent the formation of infections, diseases and germs. The Vortisand® filter's superior performance means that water requires about 50% less chemicals. With a net reduction of solids in suspension, it is no longer necessary to use algicide and coagulant (Sea Clear).

MAINTENANCE – \$ 6,240 saving. In addition to offering superior filtration performance, the low operating cost of the Vortisand® filter gives it an undeniable competitive advantage. Less frequent operations and automation of the system directly affect system maintenance costs.

Backwash and rinse cycles are performed automatically, without supervision, not counting the elimination of certain operations related to the measured addition of chemicals (algicide and coagulant). ■



SPECIFICATIONS MODEL ASW5-30-SP

- **Filtration flow:** 475 gpm
- **Vessels:** 5 vessels 30" diameter stainless steel 316, 125 psi ASME, Sec.III, Div. I.
- **Control Panel:** Nema 12 with microprocessor (PLC) and Operator Interface Unit (OIU) including differential pressure switch, stager and backwash counter.