



CUSTOMIZED HIGH EFFICIENCY FILTRATION SYSTEM

Industrial process water

Water reuse

Pre-RO

Rainwater polishing

Potable water



VORTISAND



FROM 0.45 MICRON

MOST INDUSTRIAL APPLICATIONS NEED HIGH QUALITY WATER

WITH FILTRATION DOWN TO SUB MICRON
VORTISAND® OFFERS THE BEST SOLUTION
 TO MEET THE EVER GROWING NEEDS OF
 INDUSTRIAL WATER TREATMENT



LEED Certified Building - Rainwater polishing,
 Montreal University (Pavillon Lassonde)



PLUS, VORTISAND® SYSTEMS HELP CUSTOMERS
 RECYCLE WATER, REDUCE COSTS AND OPTIMIZE
 WATER UTILIZATION ...

GIVE WATER A SECOND CHANCE! GET THE SOLIDS OUT!

TYPICAL USERS...

- LEED Certified Buildings
- Pharmaceutical Industry
- Chemical & Petro Chemical Industry
- Food and Beverage Industry
- Pulp & Paper Industry
- Textile Industry
- Electronic & Metal Industries
- Automobile Industry
- Cogeneration Plants
- Wastewater Treatment Plants
- Potable Water Treatment Plants



AND THEIR APPLICATIONS...

COMMERCIAL

- Rainwater polishing
- Water reuse for cooling water
- CT Water polishing

SIMPLE EFFICIENT OPERATING PRINCIPLE

Vortisand® filters have proven their efficiency for more than 25 years and are the result of many years of research and development. Today they provide filtration 10 to 20 times finer than that of sand filters now available on the market.

Designed for multiple particle size removal, their high performance is due to a unique concept which ingeniously combines centrifugal separation and surface filtration.

INDUSTRIAL WATER

- Process water
- Spray nozzle protection
- Condensate return
- Pre-filtration for RO/DI, ion exchange systems, activated carbon and softeners
- Removal of suspended solids, reducing or eliminating need for cartridges



Energy efficiency has resulted in reduced CO₂ emissions (650 tons per year)

WASTE WATER TREATMENT

- Post clarifier to reduce suspended solids (TSS reduction)
- Waste water reuse (wash water reuse, process)



DRINKING WATER

- Pre-treatment before disinfection and ultraviolet light sterilization
- TSS and turbidity reduction
- Iron & manganese removal
- Potable water filtration system
- Pre-treatment before RO, ultrafiltration or nanofiltration



CROSS FLOW FILTRATION + SAND... HOW DOES IT WORK?

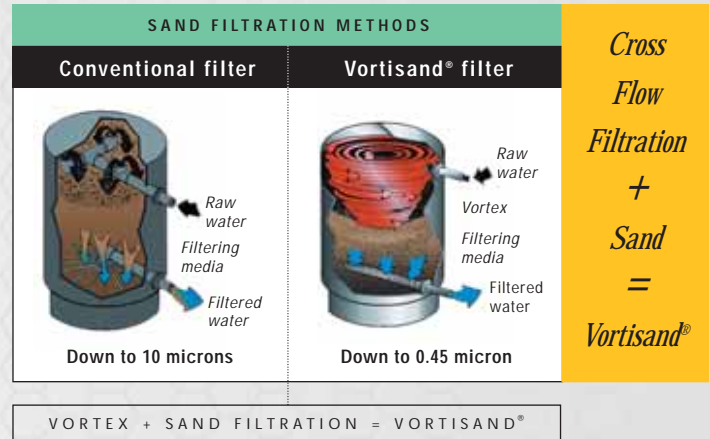
Vortisand® is the pioneer in combining centrifugal separation (Vortex effect) and sand filtration. In fact, it uses a tangential spin across the sand to keep dirt from building up in the unit. Using centrifugal force above the multi-layered media helps to remove the suspended solids and significantly increases the effective filter surface within the tank. The turbulence produces a sustained cleaning action that forces the suspended solids to accumulate on top of the media surface.

As a result, much finer sand can be used without clogging the media. The water, which is now largely free of impurities, is then filtered through the media and subsequently collected. Contaminants trapped above the sand are removed using an automatic backwash cycle which Vortisand® requires less water and a shorter operating time than traditional sand filters. This process contributes to longer run cycles and much finer filtration levels.

High-Efficiency Fully Automated Filters (Features)

Once installed, Vortisand® filters need no attention during backwash and rinse cycles, yet they provide outstanding advantages.

- ☞ Exceptionally efficient filtration with no clogging
- ☞ Filtration up to 20 gpm/sq.ft.
- ☞ Longer filtration cycle than conventional filters
- ☞ Filtration flows up to several thousand gpm
- ☞ Low backwash flow rate and volume of water
- ☞ Compact configuration for optimal space utilization



Vortisand® ... More Than A Conventional Filter

- ☞ Compact system design
- ☞ Designed for any flow rates – intermittent or continuous
- ☞ Easy to install in new or retrofit application
- ☞ Minimum maintenance requirement
- ☞ Low horsepower requirement on all filter pump selections
- ☞ Operational cost savings up to 75% compared to conventional down flow media filter
- ☞ Low backwash flow rates and duration (5 minutes)
- ☞ Customized systems
- ☞ Fully automatic system with adjustable interface settings
- ☞ Visual detection of all control operation with state-of-the-art Operator Interface Unit (OIU)



THE BEST SOLUTION FOR MEMBRANE PROTECTION

Vortisand® filtration systems are used where high quality process water is required, such as preceding RO, DI units and certain municipal applications for potable water.

OTHER APPLICATIONS OF VORTISAND®

- Cooling tower side-stream filtration
- Recreational pools and fountains
- Aquaculture (fish hatcheries)
- Seawater polishing



Pre snow gun water polishing at ski resort in Australia. Water supply from local storage dam.



Our filters are used widely by prestigious and environmentally concerned customers such as:



Abbott Laboratories
BP Exploration Inc.
Dallas Executive Airport
Embotelladoras Unidas S.A.
Falls Creek Ski Lifts Pty. Ltd.
International Extrusion
Meyer Tools
Novartis
Podolsky Mine

Square-D Company
Wyerhauser Canada
Wyeth Pharmaceutical Co.
Xcel Energy
North American Stainless
Tate & Lyle
Kimberly Clark
Port Neal Corp.

TYPICAL VORTISAND® SYSTEM INCLUDES:

- Stainless Steel 304, ASME certified vessel (316 available)
- Piping manifold assembly based upon applications
- Internally controlled clean water backwash (City or process filtered water)
- Automatic backwash controlled by microprocessor



Manufactured by Sonitec Inc., Vortisand® is available in a wide variety of models for constant or variable flow ranging from ten gpm to several thousand gpm. Pilot and/or rental units are available upon request. Sonitec Inc. also offers membrane separation technology (desalination, microfiltration, nanofiltration and reverse osmosis).

For additional information - contact our local agent:



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