

VORTISAND[®]

HIGH-EFFICIENCY FILTRATION SYSTEM

DOWN TO 0.45 MICRON



- Industrial process water
- Tertiary treatment
- Water reuse
- Pre-membrane system
- Potable water



MOST INDUSTRIAL APPLICATIONS NEED ULTRA-PURE WATER

WITH FILTRATION DOWN TO NOMINAL 0.45 MICRON
VORTISAND® OFFERS THE BEST SOLUTION TO MEET THE
EVER GROWING NEEDS OF INDUSTRIAL WATER TREATMENT

TYPICAL USERS...

- Pharmaceutical Industry
- Chemical & Petro Chemical Industry
- Food and Beverage Industry
- Pulp & Paper Industry
- Laboratories
- Textile Industry
- Commercial Laundries
- Electronic & Metal Industries
- Automobile Industry
- Cogeneration Plants
- Wastewater Treatment Plants
- Potable Water Treatment Plants

PLUS, VORTISAND® SYSTEMS
HELP INDUSTRIAL CUSTOMERS
RECYCLE WATER TO REDUCE
COSTS AND ENHANCE WATER
UTILIZATION...

AND THEIR APPLICATIONS...



INDUSTRIAL WATER

- Process water
- Wash water
- Spray nozzle protection
- Pre-treatment before metal recovery system
- Removal of suspended heavy metals
- Welding water treatment
- Pre-filtration for RO/DI, ion exchange systems, activated carbon and softeners
- Silt Density Index (SDI) reduction
- Removal of suspended solids, reducing or eliminating need for cartridges
- Removal of turbidity and suspended solids
- Dilution water
- Cooling water *



Rolland Paper Products

WASTE WATER TREATMENT

- Tertiary treatment after clarification to reduce suspended solids (TSS reduction)
- Waste water reuse for irrigation purposes
- Waste water reuse for process water purposes



Pre RO
Systems,
5000 GPM



POTABLE WATER

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



Portable water
purification systems
shipped overseas



SIMPLE EFFICIENT OPERATING PRINCIPLE

Vortisand® filters have proven themselves for more than 25 years and are the result of many years of research and development, which today provides filtration 10 to 20 times finer than that of sand filters now available on the market. Designed for nominal 0.45, 2.0, 5.0 and 10 micron(s) filtration, their high performance is due to a unique concept which ingeniously combines centrifugal separation and surface filtration.

(* Please refer to the specific Cooling Water brochure available upon request

HERE'S HOW IT WORKS

Centrifugal force creates a vortex effect in the raw water above the filtering media (sand) helping to remove suspended solids. It significantly increases the effective filter surface within the tank. The turbulence causes a sustained cleaning action which forces the suspended particles to accumulate on the inside walls of the tank; therefore, much finer sand can be used without any clogging problems. The water, now largely free of impurities, is

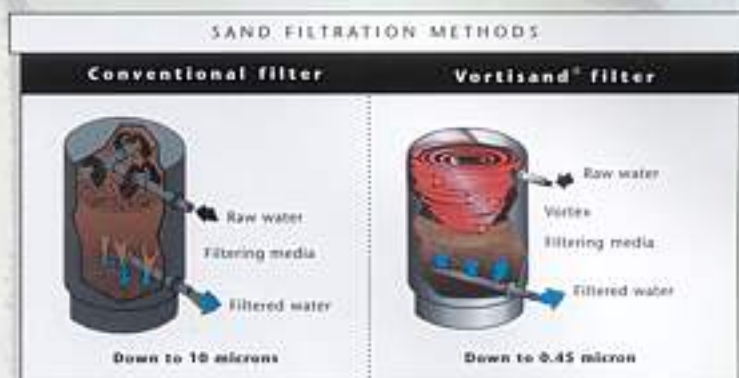
filtered through the media and highly polished for a variety of purposes. The advantage of the Vortisand[®], is that the majority of the contaminants remain suspended above and on the filter bed until the system needs to be backwashed requiring less water and a shorter operating time than with conventional sand filter systems. The process therefore allows longer cycles and much finer filtration levels. Backwash frequency depends on material loading, thus high solids loading will require more frequent backwashing.

VORTISAND[®] FOR NOMINAL 0.45, 2.0 AND 5.0 MICRON(S) FILTRATION VARIABLE AND CONSTANT FLOW SYSTEMS
A DESIGN FLEXIBILITY TO FIT YOUR CRITERIA
Variable flow filtration systems are used when filtration demand is intermittent or variable

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. (4 times greater than conventional filters).
- 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.



VORTEX + SAND FILTRATION = VORTISAND[®]



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:

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

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

- Abbott Laboratories
- Aqua Enwrotech
- Baxter Dialysis
- Bexar Metropolitan
- Bridgestone/Firestone
- Coljugos Bogota
- Donohue Inc.
- Ethanol 2000
- Farmers Cheese
- Filmtex Corp.
- Florida Power Corp.
- Ford Motor Company
- General Motors
- Harlingen Waterworks Systems
- Kraft Inc.
- Meyer Tools
- Moonlight Mushrooms
- Musi Pulp Mill
- Northwest Steel & Wire
- Novartis
- Original Juice Co.
- Ostram Sylvania
- Pfizer Inc.
- Pratt & Whitney
- Rolland Paper Products

TYPICAL VORTISAND® SYSTEM INCLUDES:

- Stainless Steel 304, ASME certified vessel (316 available)
- Piping manifold assembly based upon applications
- Clean water backwash connection with flow controller
- Automatic backwash controlled by microprocessor

VORTISAND®

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

For additional information - contact our local agent:



Quality assurance

US OFFICE

85 Sargeant St.
P.O. Box 6141
Holyoke, MA
01041-6141

Tel: (413) 532-6089
Fax: (413) 534-5893

Sonitec Inc.

Email: sonitec@vortisand.com

www.vortisand.com

1-888-876-9655

CANADIAN INTERNATIONAL OFFICE

4020 Bois-Franc
St-Laurent, Quebec
Canada H4S 1A7

Tel: (514) 335-2200
Fax: (514) 335-2295