

ECH₂OSTORM[®]



ECH₂OSTORM[®]
Venturi Aeration System
for Gorman-Rupp Pumps
& Pump Packages



The Pump People[®]

Gorman-Rupp's Ech₂oStorm[®]



VA2



VA3



VA4



VA6

What Is It And How Does It Work?

The Ech₂oStorm[®] is a static venturi aeration device installed in-line on the discharge side of a Gorman-Rupp centrifugal pump that introduces dissolved oxygen into the liquid being pumped. As the liquid moves through an internal nozzle, a drop in pressure is

created known as the Venturi Effect. The Venturi Effect creates a vacuum and ambient air is drawn into the body of the Ech₂oStorm. The air then mixes with the pumped liquid and is discharged, oxygenating the liquid.

Functions:

Adding oxygen to wastewater

Adding additional dissolved oxygen to aerobic bacteria allows organic compounds in wastewater to be broken down quickly, preventing it from becoming septic and odorous. The addition of dissolved oxygen allows these organic compounds to be converted into non-polluting compounds.

Reducing the size of organic solids

The Venturi Effect inside the Ech₂oStorm also causes rapid decompression of any pumped organic solids, allowing them to be dispersed throughout the wastewater. This environment promotes aerobic bacteria and accelerates organic solids reduction.

Degassing organic solids

The Ech₂oStorm explodes confined gas bubbles separating the solids, gases and grease found in most wastewater. This separation promotes the settling of solids and flotation of grease, greatly improving the operation of primary clarifiers in wastewater treatment plants and increasing the quality of primary effluent.

**When sold as a stand-alone product, the Ech₂oStorm[®] comes standard with a one-year warranty.*

System Benefits

With no moving parts, the Ech₂oStorm is an extremely reliable device, with only routine maintenance of the Gorman-Rupp pump required. Unlike other methods of aeration, the Ech₂oStorm is mounted on the bank of the basin, tank or lagoon allowing for easy maintenance and maneuvering of the system. The simplicity of the Ech₂oStorm, when paired with a Gorman-Rupp pump,

allows the entire system to be competitively priced compared to other aeration systems. When offered as part of a factory-designed, -assembled and -tested ReliaSource® packaged system, the Ech₂oStorm comes standard with a 60-month warranty* offering guaranteed reliable performance.

Wastewater Treatment For Municipal, Industrial And Agricultural

Maintaining sufficient dissolved oxygen content in wastewater is key in minimizing odors and corrosion. Odors and corrosion are usually caused by a lack of dissolved oxygen in the wet well of a lift station or collection system. The available oxygen in the environment is rapidly consumed by aerobic bacteria. As a result, wastewater becomes septic and produces corrosive and odorous sulfide gases.

Gorman-Rupp's Ech₂oStorm® can be installed in virtually any location throughout a treatment system, and often at a lower cost to other odor and corrosion control methods. Multiple installations throughout a system promote aerobic activity from start to finish.

When installed at the headworks of a treatment plant, the Ech₂oStorm adds oxygen to the influent, preconditioning the wastewater with dissolved oxygen, minimizing odors and corrosion throughout the remainder of the plant. Implementing an Ech₂oStorm system allows grease particles to quickly rise to the surface for skimming and solids to settle to the bottom, improving primary clarifier operation.

When local regulations require a specific dissolved oxygen content within the effluent leaving the plant, a pump and Ech₂oStorm can be installed at the tail end of treatment facility to ensure the discharged effluent is safe for the environment.

Gorman-Rupp's Ech₂oStorm is a valuable addition to pumps and pumping stations. It is a simple, economical solution that can be incorporated throughout the various processes of municipal wastewater treatment.

Utilizing the same municipal wastewater treatment principles, the Ech₂oStorm is a cost-effective solution for adding oxygen into liquids and wastewater in a variety of industrial and agricultural applications such as aerating landfill leachate and livestock wastewater lagoon systems. It can also be configured to operate in multiple pumping environments including: flooded suction, submerged discharge or surface discharge.

An alternative to floating surface aerators, the Ech₂oStorm® can be mounted on the bank of a lagoon providing easier access for maintenance and reducing safety hazards commonly associated with row boats.



Powered By Gorman-Rupp Pumps



Super T Series®

Size: 2" (50 mm) to 10" (250 mm)
Max Capacity: 3400 GPM (215 lps)
Max Head: 168' (51 m)
Max Solids: 3" (76 mm)



Ultra V Series®

Size: 3" (75 mm) to 6" (150 mm)
Max Capacity: 1904 GPM (120 lps)
Max Head: 168' (51 m)
Max Solids: 3" (76 mm)



Super U Series®

Size: 3" (75 mm) to 6" (150 mm)
Max Capacity: 1500 GPM (95 lps)
Max Head: 207' (63 m)
Max Solids: 1.25" (32 mm)



80 Series®

Size: 1.25" (32 mm) to 6" (150 mm)
Max Capacity: 1860 GPM (117 lps)
Max Head: 205' (63 m)
Max Solids: 1.9" (49 mm)



10 Series®

Size: 1.5" (38 mm) to 12" (300 mm)
Max Capacity: 6700 GPM (423 lps)
Max Head: 130' (40 m)
Max Solids: 3" (76 mm)



6500 Series®

Size: 3" (75 mm) to 16" (400 mm)
Max Capacity: 15400 GPM (972 lps)
Max Head: 530' (162 m)
Max Solids: 4" (102 mm)

Applications:

Municipal

- Wet Well Influent Aeration
- Lagoon Aeration
- Oxidation Ditch Aeration
- Drinking Water Conditioning
- Effluent Aeration/Polishing
- Odor & Corrosion Control
- Aerobic Sludge Digestion
- Lake Destratification
- Algae Control

Agricultural

- Animal Wastewater Aeration
- Lagoon Aeration
- Storage Pond Aeration

Industrial

- Fat, Oil & Grease Digestion
- Heavy Metal Separation
- Landfill Leachate
- Nitrate Neutralization
- Non-Chemical Corrosion Control
- Mine Water Treatment
- Algae Control

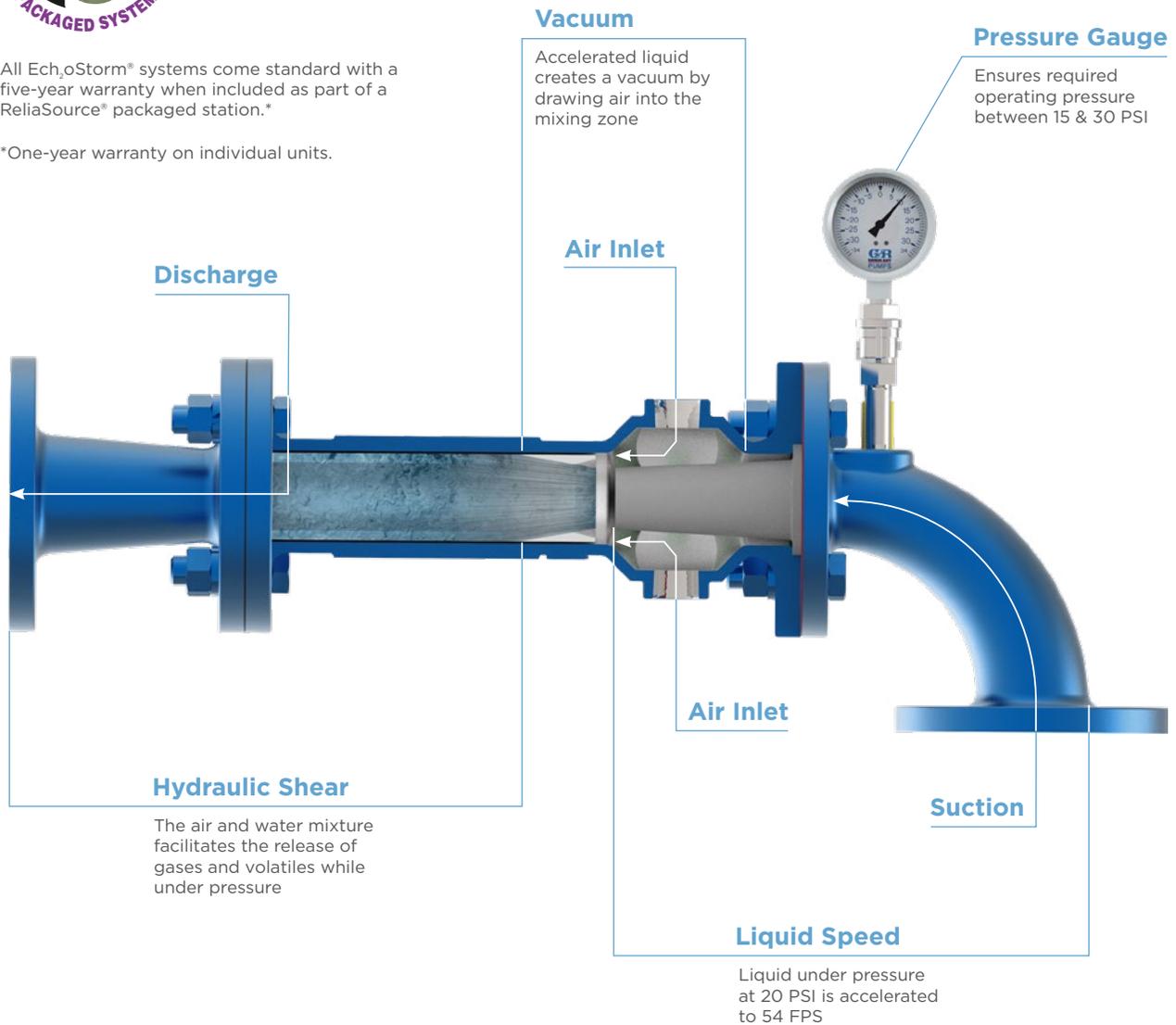
Gorman-Rupp's Ech₂oStorm®

A Simple And Versatile Design



All Ech₂oStorm® systems come standard with a five-year warranty when included as part of a ReliaSource® packaged station.*

*One-year warranty on individual units.



Product Specifications

Model	Size	Flow	Operating Pressure	Max Available Oxygen*
VA2**	2" (50 mm)	50-150 GPM (189-568 lpm)	14-30 psi (.96-2 bar)	82 lbs./day (37 kg/day)
VA3	3" (75 mm)	180-350 GPM (681-1325 lpm)	14-30 psi (.96-2 bar)	253 lbs./day (115 kg/day)
VA4	4" (100 mm)	400-650 GPM (1514-2461 lpm)	14-30 psi (.96-2 bar)	359 lbs./day (163 kg/day)
VA6	6" (150 mm)	800-1300 GPM (3028-4921 lpm)	14-30 psi (.96-2 bar)	857 lbs./day (390 kg/day)

*Note: performance may vary based on pumping conditions

**An optional elbow flange is available

After Sale Support

Gorman-Rupp products stand the test of time due to our quality manufacturing processes, rigorous product testing and extensive after sale support.

Product Support

Every pump manufactured by Gorman-Rupp is supported with reference information. Pump operation and maintenance manuals (including parts lists), specification data sheets, performance curves and outline drawings in PDF and CAD formats are available on our website or through your distributor for every pump.

Warranty

The warranties on Gorman-Rupp products are some of the best in the industry. Gorman-Rupp has you covered with warranties up to 60 months.

Education & Safety

Gorman-Rupp is committed to remaining at the forefront of the industry with technology and safety. Training videos, demos and

in-person training sessions created for our distributors and end-users help to keep everyone up to date on the latest safety tips and pump maintenance.

Parts

When you need a replacement part, you'll have it fast. Gorman-Rupp is fully committed to keeping your equipment running long after installation and ensuring your pump or lift station continues to meet your requirements year after year. We sell parts through our network of distributors. Find a distributor in your area for assistance.

Service

Should your pump or lift station require service, our worldwide network of factory-trained distributors are ready to quickly respond. Our distributors have the expertise to support you and your pump or lift station long after installation.

Manufacturing Facilities

Gorman-Rupp USA
Mansfield, Ohio, USA

Gorman-Rupp Canada
St. Thomas, Ontario, Canada

Gorman-Rupp Europe
Waardenburg, Netherlands
Namur, Belgium

Gorman-Rupp Africa
Cape Town, South Africa
Durban, South Africa
Johannesburg, South Africa (Headquarters)

Distribution Center

Grand Prairie, Texas, USA

Engineering and manufacturing superiority has been the hallmark of Gorman-Rupp since our inception in 1933. Today we bring our products to life in some of the most efficient, modern and state-of-the-art manufacturing facilities in the world. Gorman-Rupp has a selection of nearly 3,000 pump models, and our world-class team of distributors has worked closely with thousands of end users around the world. We have the proven expertise and the resources to specify, manufacture, test and service your pump, and to ensure reliable performance for the long haul.

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