



## PRODUCT OVERVIEW

# AB JET AERATION DIFFUSER SYSTEM

The **GWT AB Jet Aeration Diffuser** is a cutting edge solution specifically designed to reduce power consumption, O&M costs and enhance uniform mixing. This innovative diffuser system offers exceptional performance, efficiency, and durability, delivering numerous benefits for wastewater treatment applications.

**Here are the key benefits and advantages of the GWT AB Jet Aeration Diffuser System:**



### Superior Oxygen Transfer Efficiency

The GWT AB Jet Aeration Diffusion System utilizes advanced jet aeration technology, ensuring superior oxygen transfer efficiency in wastewater treatment. The high-velocity jet streams generated by the diffusers efficiently disperse fine micro bubbles throughout the basin, maximizing oxygen transfer rates and promoting effective biological treatment processes.



### Energy Savings

With its optimized design and efficient bubble generation, the GWT AB Jet Aeration Diffuser significantly reduces energy consumption in wastewater treatment facilities. This typical energy savings is up to 45% versus disc aeration diffuser systems with near zero pressure loss. The tiny micro bubbles created by the diffusers have a larger interfacial area, leading to improved oxygen transfer efficiency and reduced energy requirements for aeration.



### Enhanced Mixing and Circulation

The high-velocity jet streams generated by the diffusers facilitate effective mixing and circulation, keeping grit and other solids in suspension and reducing deposition within the aeration basin. This ensures uniform distribution of dissolved oxygen, nutrients, and microorganisms, promoting enhanced biological treatment. OPEX costs are reduced through the reduction of solids sludge production in dead zones or stagnant areas.



### Reduction of Odor and Volatile Compounds

The AB Jet Aeration Diffuser helps mitigate odors and volatile organic compounds (VOCs) associated with wastewater treatment. The intense mixing and aeration action of the diffusers enhance the removal of odor-causing compounds, improving the overall air quality and minimizing nuisance odors in the surrounding areas.



### Durable and Corrosion-Resistant Construction

The diffuser system is constructed using high-quality materials, such as corrosion-resistant stainless steel with durable nylon internals, ensuring long-lasting performance even in harsh wastewater environments. The GWT jet diffusers have a typical useful life up to 15 years. They are designed to withstand chemical exposure, mechanical stress, and fouling, reducing maintenance requirements with no performance degradation and no need to replace polymeric membranes.



## Easy Installation and Maintenance

The AB Jet Aeration Diffuser system is engineered for straightforward installation and maintenance. The diffusers can be easily retrofitted into existing aeration basins or incorporated into new wastewater treatment plants. The modular design facilitates quick and hassle-free installation, reducing downtime and associated costs.



## Flexible Configuration Options

The diffuser system offers flexible configuration options to meet the specific requirements of different wastewater treatment facilities. Whether it is a large-scale municipal plant or a smaller industrial application, the GWT AB Jet Aeration Diffusion system can be customized to achieve optimal performance and efficiency.



## Compliance and Safety

The GWT AB Jet Aeration Diffuser system complies with industry standards and regulations for wastewater treatment. It undergoes rigorous testing and quality control measures to ensure reliable and efficient operation. The system is designed with safety features to prevent clogging, fouling, and back flow, ensuring the smooth and trouble-free operation of the aeration basin.

## Installation Pictures

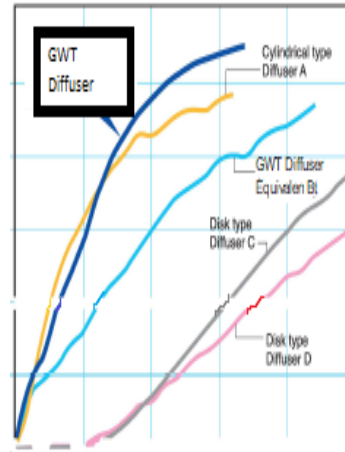


Industrial Wastewater



Domestic Wastewater Aeration Basin

## SOTE/Pressure Loss Curves



Name of Product	Dissolution of Oxygen to a Depth of 16 ft	Pressure Loss
GWT AB Diffuser	23%	None
Cylindrical Type Diffuser	24%	.4 psi
Equivalent Type B Diffuser	13%	None
Disk Type Diffuser C	28%	.43 psi
Disk Type Diffuser D	30%	.86 psi

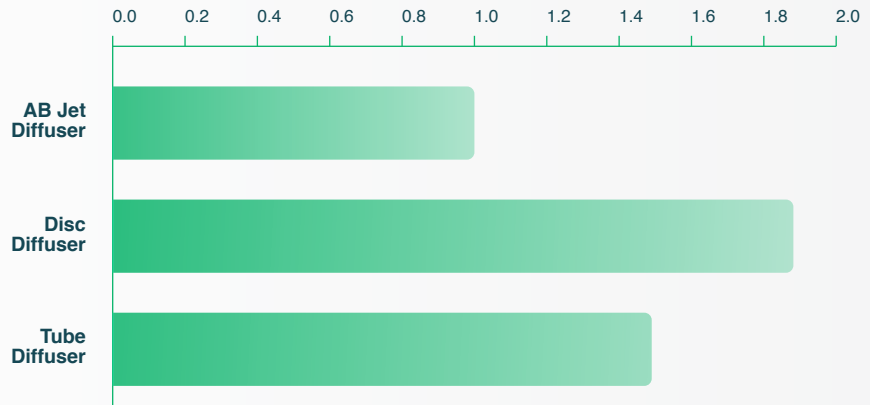
## Synopsis

The GWT AB Jet Aeration Diffuser system provides a state-of-the-art solution for wastewater aeration basins, offering exceptional oxygen transfer efficiency, energy savings, and improved treatment performance. With its advanced jet aeration technology, durability, and ease of installation, this diffuser system delivers numerous benefits, including enhanced mixing, odor reduction, and flexible configuration options.

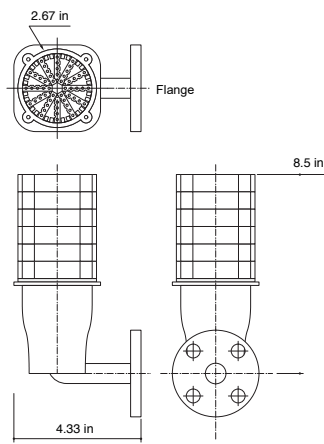
Choose the GWT AB Jet Aeration Diffuser to optimize your wastewater treatment processes, improve efficiency, and meet regulatory requirements with confidence.

## Power Consumption

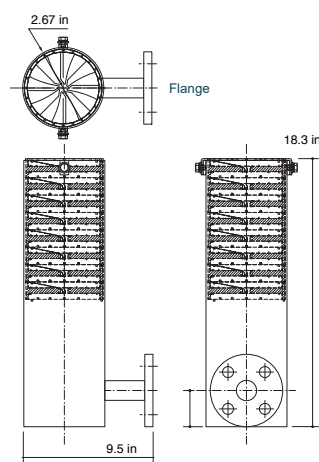
GWT AB jet diffusion systems use 45% less power than the comparative disc diffusion system and about 18-20% less than wide band tube diffuser.



## ASM Series Diagram



## AB Series Diagram



## Specification Table

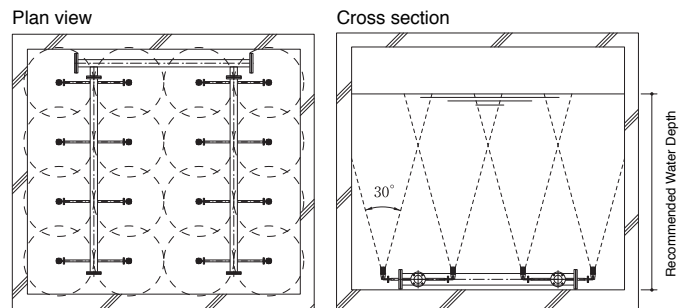
Product Name	Part Number	Applied Air Volume	Size	Connecting Part
JET DIFFUSER	AB250	6-9.66 SCFM	6-9.66 SCFM	ANSI Flange
	AB750	21-32 SCFM	21-32 SCFM	ANSI Flange
	AB1100	32-46 SCFM	32-46 SCFM	ANSI Flange
	AB1500	46-60 SCFM	46-60 SCFM	ANSI Flange

\*Air volume can be adjusted based on wastewater design specifications. Do not hesitate to consult with us!

**Process Optimization Services Available**

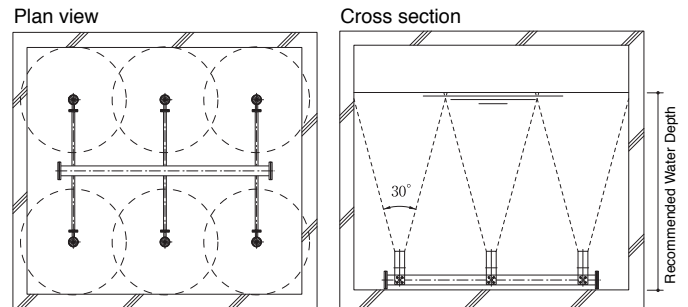
## Installation Examples

**ASM Series:** For Commercial Application



**Recommended water depth: 24-78 inches (600 – 2000mm)**  
 (does not necessarily apply when using equalization tank)  
**Air spray angle: approx. 30 degrees**

**AB Series:** Commercial, Industrial, Municipal Applications



**Recommended water depth: 59-236 inches (150-600 cm)** does not necessarily apply in the case of high-load circulating water such as in painting booths or deep shaft aeration. **Air spray angle: approx 30 degrees**

\*Installation is generally performed so that wave bursts sweep across the water surface, but this does not necessarily apply depending on load, etc. Feel free to consult with us.



**Contact Genesis Water Technologies** or one of our authorized representatives to see how you can integrate these systems into a new or existing biological wastewater treatment plant today!

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