Aquarius Technologies coarse bubble aeration system has been developed by our team of engineers with an unparalleled background of experience in the design, application and operation of wastewater treatment aeration systems. This experience comes with the knowledge to select the right diffuser system for the application and engineer that system to have an economical capital cost, be easy to install and designed to meet almost any process requirement.
Wide Band Stainless Steel Diffuser

Long Life and Proven Performance
The Aquarius Technologies’ wide band stainless steel diffuser system is based on a proven design developed over forty years ago. The diffuser system is used in a wide array of applications from activated sludge to aerated mixing and aerobic digestion. The most beneficial characteristics of the wide band stainless steel coarse bubble diffuser system are the robust construction and reliable performance over its decades long design life.

Wide Band Stainless Steel Diffuser System Features
- Wide range of diffuser airflow from 5 – 50 scfm
- Low headloss over the full range of operation
- Full length bottom diffuser deflector prevents material from being pulled into the body of the diffuser
- Mutually reinforced gusseted diffuser connector for unmatched long-term strength and durability
- Constructed of 304L and 316L stainless steel
- NPT connectors throughout for ease of installation
- Welded assemblies are passivated following fabrication using full immersion method
- Produced in the USA for the highest quality fabrication
Aquarius Technologies’ knows that every application is unique and selecting the right diffuser for the job makes all the difference in whether the system performs up to expectations or falls short. Whether it is our wide band stainless steel diffuser system, diaphragm check valve diffuser system, single drop diffuser system or cast in place diffuser system, you can rely on Aquarius making the right coarse bubble aeration equipment selection to fit your needs.

Diaphragm Check Valve Diffuser

A Design Method that Prevents Clogging
Aquarius Technologies’ diaphragm check valve diffuser system utilizes either a stainless steel or PVC piping system and has been designed for applications where traditional fixed orifice coarse bubble or fine bubble diffuser systems can have a propensity to clog.

Prevention with Underside Diffusion
The diaphragm check valve diffuser resists clogging due to the air release being on the underside of the diffuser and the diaphragm cap seals tightly to the base when the air is shut-off, thus preventing backflow into the diffuser or piping system. The diaphragm check valve diffuser is attached to the piping system using an NPT connection to factory installed threaded bosses on the crown of the pipe.

Single Drop Diffuser

Maintenance without Tank Drain Down
Aquarius Technologies’ single drop diffuser system has been designed for challenging applications which require the ability to maintain the diffuser system without tank drain down. The single drop diffuser system does not have any small orifices or pipe restrictions below the liquid level which would clog or plug, however in the rare occurrence, the vertical drop piping and diffusers can be rodded-out from the top of the tank. This may be especially beneficial in heavy solids applications, such as mechanically thickened aerobic digesters or sludge holding.

Single Drop Diffuser System Features
• Corrosion resistant 304 stainless steel, 316 stainless steel or galvanized piping system construction
• Corrosion resistant PVC single drop diffuser assembly
• Large diameter diffuser and piping for non-clog operation
Cast In Place Diffuser

Clear Floor Space for Ease of Clean-out
Aquarius Technologies’ cast in place diffuser has been designed for aerated mixing where an unobstructed tank floor is required for sand or grit clean-out.

Cast in Place Diffuser Features
• Corrosion resistant stainless steel construction
• Non-clog and low headloss operation
• Removable air flow control orifice
• Can be cleaned or maintained by compressed air purging

Cast in Place Diffuser Applications
• Flow equalization
• Storm water holding
• Influent or mixed liquor channels