Vacuum Deaeration

The DSI Vacuum Deaeration System removes insoluble gases and entrained air to reduce foaming and maximize filling speeds.

Design
DSI Process Systems incorporates a horizontal tank design, which provides 25% more surface area to maximize the level of deaeration.

Flexibility
A CO_2 sparge assist is included in the system which can be automatically disabled for non-carbonated products.

Performance
Analog level and vacuum transmitters are provided to easily monitor and troubleshoot deaerator performance. VFD controlled discharge pump to deliver the precise pressure to the usage points.

Durability
Stainless steel wetted vacuum pump internals to withstand carbonic acid created by CO_2 injected into the water. The deaeration system is capable of handling most cleaning solutions in proper concentrations, including passivation chemicals, caustics, acids, as well as chlorine and ozone. The system can handle temperatures of up to 210 °F.

Simple Operation
All I/O is controlled by a single Allen Bradley PLC with a touch screen operator interface. Controls can be stand-alone or inegrated into the blending system.

A Complete Solution
Combine multiple single-deaeration units on a single skid to provide central plant water deaeration capabilities.

Oxygen Levels

Single Stage, 0.05 - 1.0 ppm
Dual Stage, 0.03 - 0.07 ppm
Central/Multi Stage, 0.03 - 1.0 ppm

DSI Process Systems
4630 West Florissant Ave
St. Louis Missouri 63115
800-342-5374
314-382-1525 Fax 314-382-5234
www.dsiprocess.com

Combine multiple single-deaeration units on a single skid to provide central plant water deaeration capabilities.

CIP Integration

DSI can incorporate an integrated CIP system into the deaeration system. A single use CIP system can be integrated by utilizing the deaeration or carbonated product tank as the CIP tank. The system provides a 3 or 5-step hot/cold CIP program with the ability to enter and modify user-defined programs. Each CIP program, including the standard routines, allows temperature, time, and chemical concentration modifications. The CIP integration option has an extended package to meet specific reporting and CIP verification requirements.

Construction

- All product contact surfaces, process connections, support hangers, air and CO_2 piping is constructed of 304L stainless steel.
- Final connections to pneumatic valves and devices consist of stainless steel pneumatic fittings with ¼" high temperature pneumatic tubing.
- The entire deaeration system is mounted on a 304 stainless steel 3" x 3" square tubing frame.
- Electrical conduits and trays are made of 304 stainless steel.
- Manufactured conduit fittings have covers facing horizontally or downward to prevent water entry.
- All "seal-tite" type connectors are made of non-corroding material. No "uni-strut" type material is used on the skid to prevent crevices.
- The entire system is pre-wired and includes all motor starters and I/O.
- All motors are painted white along with other painted surfaces where appropriate.
- All welding is performed by DSI in-house certified welders.

Performance and Operational Specifications

Capacity (GPH)	7,000 – 12,000
Discharge Air Content	0.4 – 1.0 PPM
Max Inlet Air Content/Temp	8.0 PPM @ 45 °F
Discharge Pressure	20 psig; 50 psig (optional)
Dimensions	4'L x 7'W x 10'H
Process Connections	Tri-Clamp
Gasket Material	EPDM; Viton (Optional)
Shipping Weight	5,000 LBS (Empty)
Treated Water	40-70 psig ±5 psig, 150-200 GPM with 3" Tri-Clamp ends
CO_2	250-300 psig, 4-6 SCFM; 1" NPT ends
Amps	60
Voltage	460 VAC 60HZ / 3PH

Process/CIP Design
Automation/Electrical Design
Fabricated Modules/Components
Installation
Project Management
Commissioning/Training
System Integration
Design/Build Projects

dsi process systems

We serve the following industries:
Carbonated and Non-Carbonated Beverages, Juice, Water, Food, Dairy, Pet Food, Personal Care Products, Pharmaceutical, Household Goods and Specialty Chemical.