



SH STERI SYSTEM OZONE STERILIZATION SYSTEM

THE STEELHEAD STERI SYSTEM COMBINES EVERYTHING NEEDED FOR A FULL FUNCTIONING OZONE STERILIZATION AND FILLER TRANSFER SYSTEM.

- Ozone Production
- Ozone Absorption
- Surge Control
- Filler Re-pressurization Pump
- PLC Control System
- Skid Mounted

We feature our highly effective counter current absorption system, with 90+% transfer rates at flows up to 300 gpm. Other features for this design are:



- Ozone Generation, Absorption, & Filling Supply Systems Rated from 30 to 300 gpm
- State of the Art CLEARWATER TECH Ozone Production System
- Compressor Drying or Oxygen Generation System Included
- Manual Variable Adjustment of Ozone Production Level Standard
- Optional Continuous Ozone Monitoring with auto PID loop Control of Ozone Generator
- Steelhead's Proprietary Stainless Steel Counter-Current Absorption Column
- Level Controlled Surge Tank to Balance Incoming and Outgoing Flows
- Stainless Steel Re-Pressurization/Filler Supply Pump
- CPVC or Sanitary Stainless Inlet and Outlet Piping
- All Components in System Pre-Piped and Pre-Wired
- Individual Control for System Power, Level Control, Ozone Production, and Pump Operation, each with Indicator Lights
- Easy to Drain, Easy to Clean

Optional Features

Rosemont Continuous Ozone Monitor with Proportional Control

pH or TDS Product Monitors

Heated Ozone Destruct Unit for Surge Tank Off Gassing

Ambient Air Ozone Gas Detection System:

Includes Air Monitor, Visual and Audible Alarm, Shut Down of Generator

General Information Only
Specific Features are presented in Quotations
Subject to Change at any Time

OZONE SYSTEM PROCESS

The following process description is provided to better help you understand the ozone system offered.

AIR PREPARATION

The Steelhead Ozone system uses air drying, or in some cases, oxygen generating systems to prepare air for ozone production.

OZONE PRODUCTION

The ozone production system is an air cooled, corona discharge cell. The cell is constructed use 316 stainless steel electrode material and a glass coated dielectric. The ozone cells are cooled by forced air convection to dissipate heat and optimize ozone production. As the prepared air flows through the precisely spaced gap within the cell, high voltage is applied on the dielectric causing ionization of the oxygen molecule. This cleaves the bonds of the molecule, producing electrically charged atoms of oxygen. These charged atoms come together with molecular oxygen to produce ozone.

The ozone production can be varied by adjusting the frequency control on the ozone generator. This control allows for 0 to 100% adjustment.

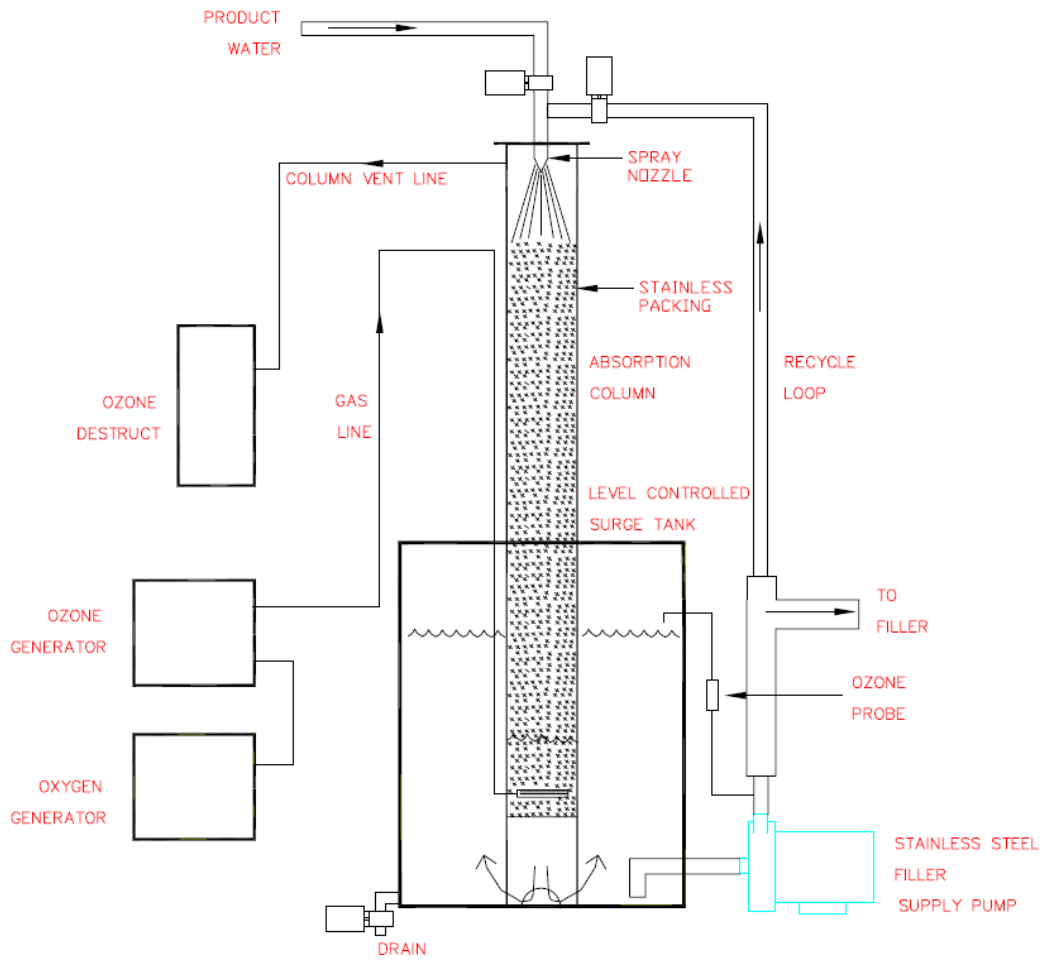
OZONE ABSORPTION

Steelhead incorporates the ultimate in absorption systems to transfer the ozone that is generated to the product water stream. It is called a counter current two-phase extraction column. In this column, the product water is introduced into the top where it is distributed over a special packing material that exposes a large surface area. This greatly facilitates the transfer of the ozone from the air stream to the water stream. The ozone laden air enters the bottom of the column and passes upward through the packing to exit at the top. As the high surface area interaction takes place, the ozone is extracted and enters the downward flowing water stream.

PRODUCT WATER TRANSFER

The Steelhead Ozone system incorporates with it a filler transfer system for the ozone laden product water. This system will give continuous pressure to the filler while maintaining an adequate level of product water at the ozone system. After the ozone laden product water exits the absorption column, it enters the filler surge tank. This tank has a level control system associated with it that prevents the tank from overflowing. As the tank fills, a level float switch located inside will activate the air valve located on the absorption column inlet pipe. This will prevent flow into the absorption column until the filler reduces the water level in the surge tank.

The product water is moved from the surge tank to the filler using a stainless steel centrifugal pump. The stainless pump moves the water from the surge tank, through a pre-plumbed 10 micron stainless steel filter system, and directly to the filler connection or other point of use. Bypasses are built into the pump to accommodate filler shut-off conditions and the pump is protected against running dry by a low level "cut-off" switch located in the surge tank.



Above schematic displays a Steelhead Steri System with recirc bypass and monitoring.

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