Ozone Gas Delivery System

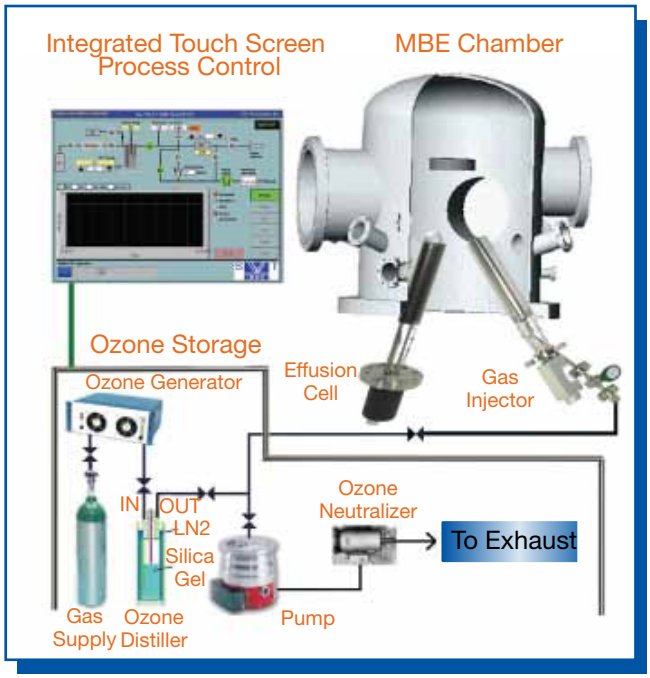
Description

SVTA-O3 ozone gas delivery system is designed to provide ultra pure fluxes of ozone as a powerful oxidant in MBE and other vacuum deposition processes. It consists of three modules: the ozone generation, advanced gas handling, and ozone injection.

Ozone delivery is a two step process:

1. In charging mode, diatomic oxygen molecules are fed into an ozone generator and ozone is stored in a temperature regulated trap. After distillation, all remaining diatomic oxygen molecules are pumped into an exhaust system.

2. In deposition mode the trap is depleted using a computer controlled warm-up process and an automated gas delivery system. The gas is injected using SVT Associates water cooled ozone injector source. The materials of all wetted parts are chosen to minimize recombination of produced ozone for high efficiencies.



SVTA-O3 Delivery System for a MBE System

The turn-key system is stand alone retrofittable to any MBE system. The integrated touchscreen control unit provides ease of operation and a small laboratory footprint.

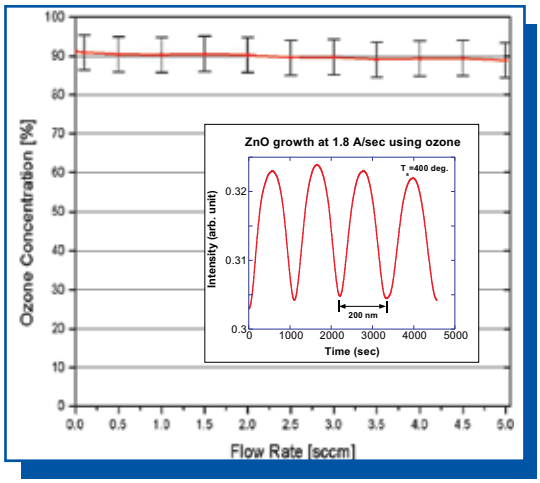
Features

- Fully Enclosed Gas Cabinet with Safety Gas Monitor
- Precise Capacitance Based Flow Regulation
- Abrupt Run/Vent Operation with Short Gas Lines to the Source Injector
- RoboMBE™ Computer Controlled Remote Operation

Specifications

Utility Ratio	1 hr charge/10 hr operation
Ozone Flux	*3 x 10^{16} molecules/cm^2 s
Flange Mount (CFF)	2.75", 4.50" or 6.00"
Cooling	Liquid N_2
Size	26" x 18" x 78" (66 cm x 46 cm x 200 cm)

*Operating Pressure at 1.0 x 10^{-5} Torr



Very high and stable ozone concentration over a wide flow rate range.

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