



INFINITY

Nonstop, Point-of-Use Abatement



System Description

The Infinity is a combination pyrophoric oxidation chamber and multistage wet scrubbing system. It is designed specifically for point-of-use (POU) applications where process gases are pyrophoric, water reactive, and corrosive, such as silicon nitride deposition and interlayer dielectric.

The Infinity safely combines low-cost compressed air or clean dry air (CDA) with tool exhaust gases from the vacuum pump. Pyrophoric gases are oxidized in the reaction housing (pyrophoric oxidation chamber). The gases remain dry until within a multi-chambered wet scrubber, thereby ensuring a clean open inlet port. The gases then enter an eductor venturi where particulate matter, such as SiO_2 , is removed. The next stage is a countercurrent packed section where water-soluble gases are absorbed. A high efficiency mist eliminator follows.

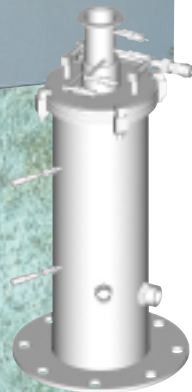
The Infinity utilizes state-of-the-art PLC for controls and monitoring of the system, plus a user-friendly operator interface terminal (OIT) for operator diagnostics.

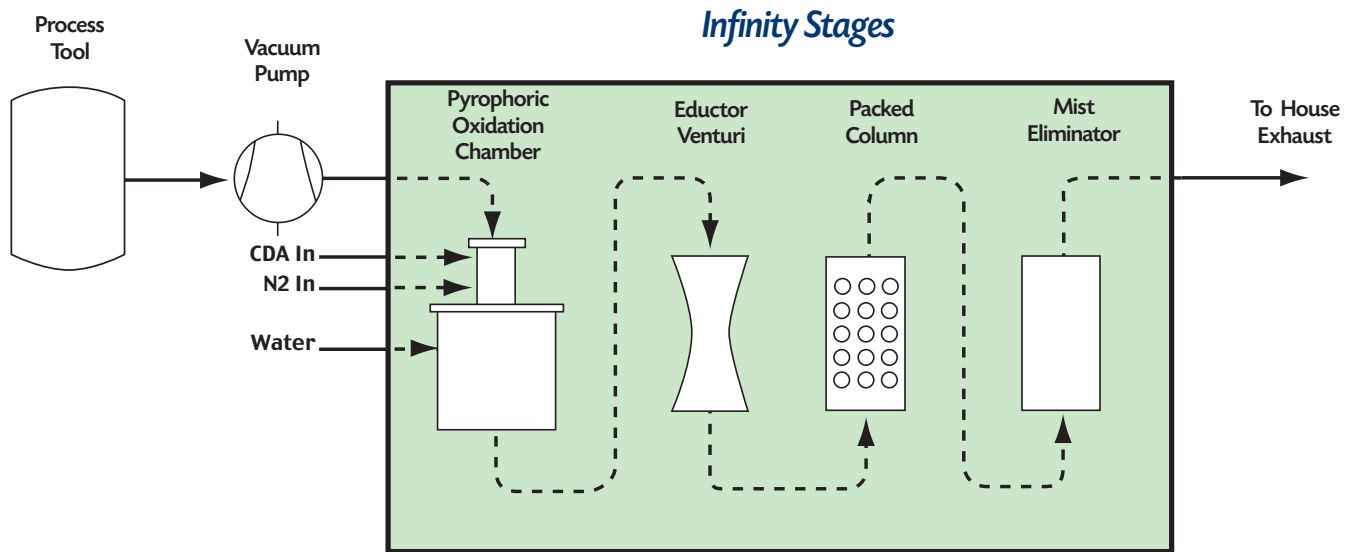
Advantages

- Low cost of ownership
- UL, SEMI S2, and CE compliant
- Reduced water consumption
- Non-clogging gas-water phase inlet
- Ease of installation and facilitation
- Negative inlet pressure for improved suction from vacuum pump
- Redundant safety interlocks
- Maintenance friendly layout
- Zero pressure drop
- Multistage scrubbing
- Long path gas residence time
- Double contained enclosure
- Multi-inlets available for multi-chamber tools

Pyrophoric Oxidation Chamber

This chamber incorporates the same novel approach to pyrophoric abatement as the Altair. Gases enter the unit through a reaction chamber that incorporates a water washdown and an N_2 shielded inlet. CDA is used to oxidize these gases that are treated further downstream in the wet scrubber section of the Infinity.





Typical Equipment Package

- Operator interface with PLC
- Sentinel Scrubber
- High efficiency mist eliminator
- CDA controls package
- NEMA 4 electrical enclosure
- Motor TEFC
- Skid mounted
- Centrifugal pump with mechanical seal
- Maintenance access doors

Facility Requirements

Gas Capacity	300 slpm	Fresh Water Feed	<1gpm
CDA/Compressed Air	10 slpm	Facility Exhaust	100 CFM @ - 0.5" w.c.
N2	100 slpm	Electrical	208V ø 20A

Materials of Construction

Scrubber Housing	Clear PVC
Pyrophoric Oxidation Chamber	316L SS
Frame/Skid	Extruded aluminum

Models

MTS-POC-100	Single inlet
MTS-POC-200	Dual inlets
MTS-POC-300	Triple inlets
MTS-POC-400	Quadruple inlets

Equipment Dimensions and Weight

System Footprint 32" L x 32" W x 80" H