

PYROPHORIC PROCESS EFFLUENT TREATMENT SOLUTION



APPLICATIONS

PECVD
 HDP-CVD

ADVANTAGES

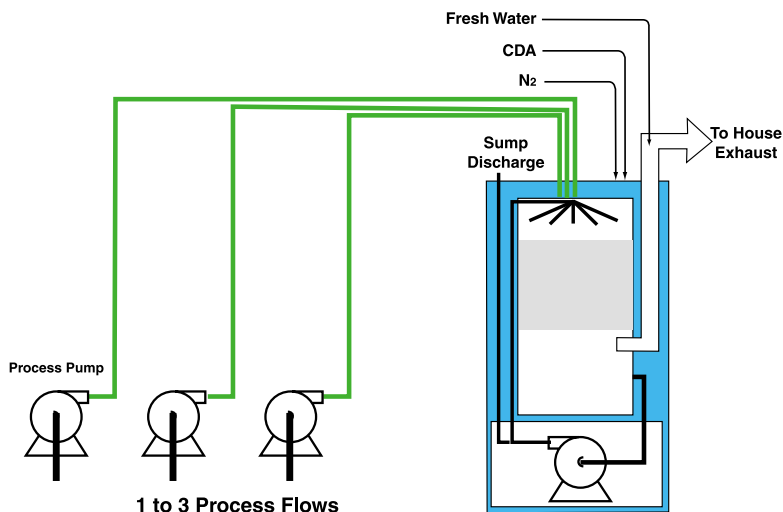
Safe and reliable Vector[®] ULTRA platform
 Low cost of ownership
 Extends capability of the ULTRA series
 Novellus[®] Speed[™] and Sequel[™] process characterization
 Safe silane treatment to a fraction of LEL
 Second generation entry design with 1 to 3 inlets
 High-efficiency, 2-stage water treatment
 No fuel requirement
 110% secondary containment
 Integrated safety cage

Larger deposition platforms combined with the increased use of fluorinated chamber cleans have created additional challenges for process effluent treatment.

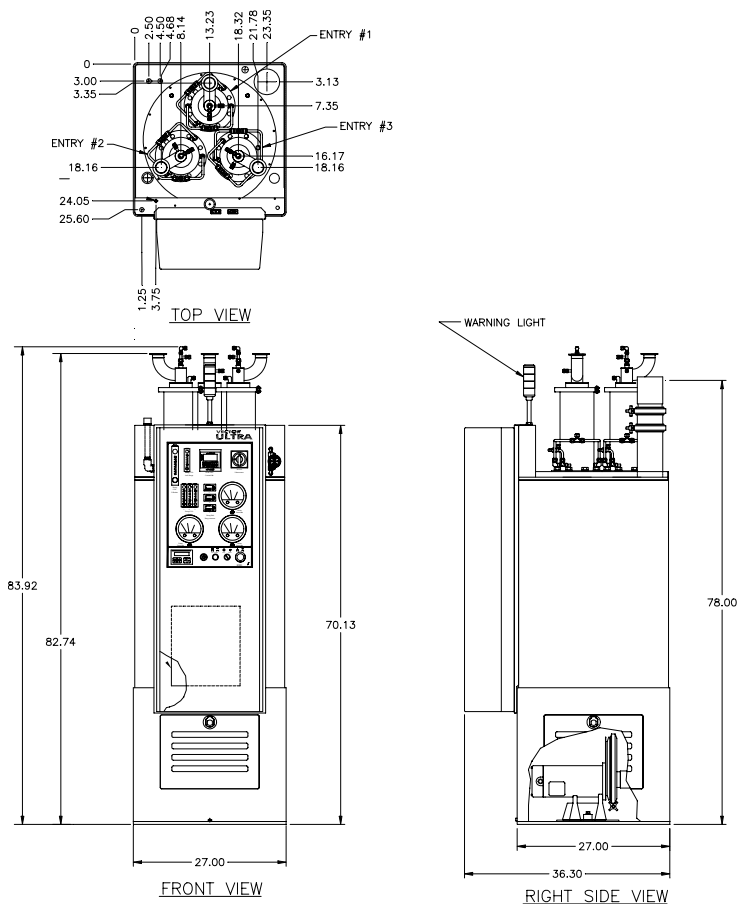
The Vector[®] ULTRA 6000 Series is the latest effluent treatment solution from ATMI that extends the capability of the successful Vector[®] ULTRA product line. Currently, the 6000 series has been fully characterized for Novellus[®] Speed[™] and Sequel[™] processes. The 6000 series uses a second-generation pyrophoric entry that has been designed to reduce pyrophoric gases to a fraction of LEL without using external fuel sources. This new solution can be configured to safely treat 1 to 3 pyrophoric-containing effluent streams using a controlled addition of CDA in the inlet.

Built upon the safe and reliable Vector[®] ULTRA platform, the new system utilizes our latest pyrophoric entry technology in combination with the industry-leading water treatment technology. Extensive DRE (Destruction and Removal Efficiency) data is available for a variety of Novellus[®] applications. Water-soluble effluent gases such as F₂, NH₃, SiF₄, HF and particulates can be removed with greater than 99% efficiency with the 2-stage water system.¹

The Vector product line is well known for its high uptime and low cost of ownership. The simple, open design reduces the frequency and duration of planned maintenance. The 6000 series also reduces fresh water usage to 0.3 gpm while using inexpensive CDA to treat silane flows. In addition to low cost, safety is a priority with the Vector[®] ULTRA series. Standard safety features such as double containment and safety cage help make the 6000 series a safe treatment solution.



¹ Treatment efficiency is dependent upon several process variables including gas concentration and particle size. An abatement requirements review can define the expected performance



TOOL COMMUNICATION AND INTERLOCKS

- Dry contacts (Standard)
- RS-232
- RS-484

OPTIONS AND ACCESSORIES

- Heat exchanger
- 2nd sump/pump
- Extended warranty
- Spare parts kit
- Communication cables
- Electrical supply options:
 - 200 VAC, 3 PH, 50/60 Hz
 - 380 VAC, 3 PH, 50 Hz
 - 460 VAC, 3 PH, 60 Hz

PERFORMANCE SPECIFICATIONS

Process Flow	
Total Flow, Per Inlet	283 slm (10 scfm)
Total Pyrophoric Flow ⁽¹⁾	2 slm (0.1 scfm)
Compressed Gas/per inlet ⁽¹⁾	
Nitrogen	10 slm (0.4 scfm)
Clean Dry Air (CDA)	62 slm (2.2 scfm)
Water Consumption/per inlet	
Fresh Water ⁽¹⁾	0.3 gpm (1.1 slm)
Chilled Water ⁽²⁾	2 gpm (19 slm)
Power Consumption	1100 watts
Reliability	
MTBF	> 8,000 hours
MTTR	< 2 hours

FACILITIES SPECIFICATIONS

Connections	
Process Inlet(s)	KF-50, 2" (52mm)
Process Exhaust	-0.5 to -4 in w.c. (-1.2 to -10 mbar) 4" Diameter (102 mm)
Nitrogen	80 psig (5.5 bar) 1/4" compression fitting
Clean Dry Air (CDA)	80 psig (5.5 bar) 3/8" compression fitting
Fresh Water	30 psi (2.1 bar) 1/2" compression fitting
Chilled Water ⁽²⁾	30 psi (2.1 bar) 1/2" NPT, PVC male
Drain, Pressurized	5 gpm (19 slm) 3/4" NPT, PVC female
Electrical Supply	208/230 VAC, 50/60 Hz, 3-phase, 10 A
Overall Dimensions	84 H x 27 W x 36.3 D in (2,134 x 686 x 922 mm)
Clearance	
Front	36" (914 mm)
Right	24" (610 mm)
Left	12" (305 mm)
Weight	
Shipping, Dry	450 lbs (204 kg)
Operating	570 lbs (258 kg)

(1) Process dependent for application
 (2) Only for 3-inlet system with heat exchanger