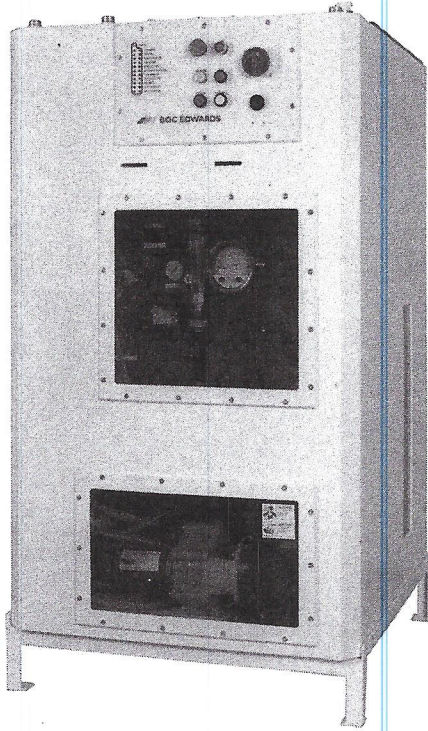


## GP WETSCRUB PROCESS CHAMBER SCRUBBERS



BOC Edwards' Wet Scrubbers offer exhaust management at minimal cost for preservation of assets and regulatory compliance. These units are suitable for treatment of exhaust streams containing water-soluble and water reactive gases.

Process Chamber Water scrubbers are suitable for many processes including Metal Etch, Poly Etch, LPCVD Nitride, PECVD Nitride and Epitaxy. Application specific variations are available for enhanced abatement performance.

- Lowest cost of ownership
  - Minimum water usage
  - Small footprint
  - Available in water absorption and dosed models
- High efficiency operation
- Simple, robust technology
- Easily serviced from front
- Minimum service requirements
- 1 to 4 independent process gas inlets
- Fully S2 compliant

### Features & benefits

Counter-current flow design assures that reaction by-products do not accumulate in the packed column. High volume liquid loading and sieve tray distributor assures uniform scrubbing throughout the packing volume.

Compact design maximizes scrubbing capacity for all applications while maintaining a small footprint and excellent serviceability.

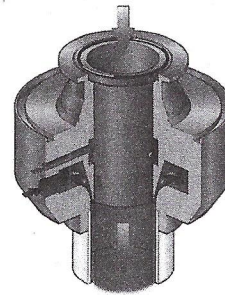
Full secondary containment for liquids and gases assures safe operation. Nitrogen purged Interstitial is inerted for safety and preservation of component life. The outer case is a water and gas tight secondary containment.

Pressurized liquid discharge permits the scrubber to be optimally located for process considerations. There is no need for floor drains or auxiliary sumps because the scrubber discharges directly to overhead drains.

Ergonomically friendly design complies with SEMI S2 guidelines. All components can be safely serviced without special tools in minimum time.

Fully integrated chemical dosing is available for applications that require higher DRE's. Onboard components include chemical reservoir, chemical dosing pump and pH control system. An optional chemical supply module is available.

### Coaxial gas inlet

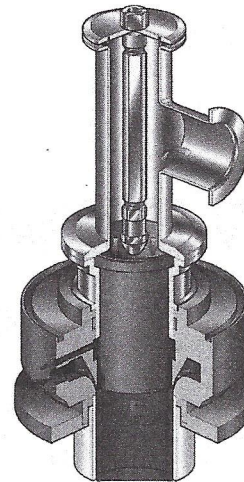


Inlet nozzle design permits reactive gases and condensable reaction by-products to enter the scrubber without precipitating or reacting at the scrubber inlet. A nitrogen curtain retards reaction of the incoming process gas with the inlet water ring jet.

Inlet servicing is infrequent due to this design, however when required, the removable inlet sleeve can be easily serviced or replaced in less than one minute.

The Coaxial Gas inlet is standard on all Process Chamber Scrubbers.

### High temperature inlet



Recent innovations in wafer processing have included heating the vacuum pump exhaust stream to 150 °C to prevent condensation of reaction by-products. This optional inlet provides periodic removal of any condensed reaction by-products allowing operation for extended periods without intrusive maintenance. Cleaning cycle can be triggered remotely or by cycle timer.

### Differential pressure sense

Scrubber differential pressure is sensed between scrubber inlet and outlet. A soft alarm notifies when pressure increases to pre-set level so that service can be scheduled.

### System pressure sense

Exhaust System pressure is monitored and alarmed if static pressure decreases to set point.

### Exhaust eductor

Some processes particularly Epitaxial deposition may be discharged directly to atmosphere after treatment. This option provides an adjustable draw at the process tool of up to 2" w.c. The eductor is fully enclosed within the secondary containment envelope.

### FireSafe construction

Outer cases of Corzan 4910 CPVC are available for venues that comply with FM 4910 protocols. The scrubber outer containment is fabricated from this new class of materials and the interstitial is inerted with Nitrogen.



## Seal flush pump

Processes that generate significant quantities of Hydrofluoric Acid and particles may require a special pump to extend the pump service life. This design provides a fresh water flush of the mechanical pump seal. Service life is extended many times over a standard pump.

### TECHNICAL DATA

#### Connections

Process inlets	
Standard	2" Custom Flange
High temperature	NW50
Exhaust outlet	4" FNPT
Interstitial exhaust	½" FNPT
Water supply	½" FNPT
Drain	¾" FNPT
Cooling water	½" FNPT
Nitrogen	¼" FNPT
Max inlet flow rate	70 slpm N <sub>2</sub> /inlet
Services required	
Electrical	
Model 75	208 V 60 Hz 1 Ph
Model 150	208V 60 Hz 3 Ph
Nitrogen	>3 scfm @ 50 psig
Water supply	>6 gpm @ 30 psig
Cooling water	>2 gpm @ 55 °F
Exhaust	-2" w.c.
Dimensions/weight	
Model 75	24" x 36" x 54"/340 lbs.
Model 150	34" x 36" x 62"/440 lbs.

NEW

4

PAGE  
140

### ORDERING INFORMATION 1-800-848-9800

#### Model

- 1 Model 75 case, 208 V, 1 phase, 60 Hz "S" model
- 2 Model 150 case, 208 V, 3 phase, 60 Hz "S" model

#### Series & matls. of cons.

- 1 W-series, PVC construction
- 3 R-series, PVC construction
- 5 D-series, PVC construction

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#### Number of inlets

- |              |   |
|--------------|---|
| One inlet    | 1 |
| Two inlets   | 2 |
| Three inlets | 3 |
| Four inlets  | 4 |

#### Options

- Standard
- High temperature inlet
- Epitaxy (with exhaust eductor)
- PECVD nitride

#### Extras

- Standard
- System pressure sense