

- Modular system for delivering volatile precursors to chemical vapor deposition (CVD) processes.
- Easy to install and operate.
- Vent/run and dilution mass flow controllers provide accurate delivery of precursor to CVD process.
- Vacuum line eliminates air and moisture contact with precursor.
- All components vacuum leak tested.
- Bubblers available on request.

Used for chemical vapor deposition R&D and manufacturing for:

- Medical devices
- Sensors
- Solar cells
- Semiconductor devices
- Thin films materials
- Nanotechnology



A-PD Precursor Delivery System

Features

The purpose of the Surfx precursor delivery system (PDS) is to ensure that the vapor from the liquid precursor is accurately fed to the plasma source for deposition onto the substrate.

The bubbler containing the liquid precursor is immersed in a temperature controlled bath. By adjusting the temperature setting, the desired precursor vapor pressure can be achieved.

The vent/run flow manifold is operated via a simple sequence of push buttons on the control box.

Bubbler and dilution flow rates may be adjusted by the operator to vary the delivery rate of the precursor vapor over a wide range.

Proper leak-free fittings and bellows-sealed valves ensure clean and repeated use with multiple precursor materials.

Our engineers can assist you in selecting the process needed for your desired film composition.

Specifications

Temperature Bath	Precursor Control Box
Temperature Range: -25 to 150 ± 0.01 °C Cooling Capacity: 100 to 500 W Heater Capacity: 800W Bath W x L x D: (6.6 x 7.3 x 6.0 inches) Bath Volume: 7.2 Liters (1.9 Gallons) Air Flow Requirements: 170 CFM Weight: 27 kg (60 lbs) Voltage: 120 or 240 VAC @ 50 -60 Hz Current: 120 VAC: 8 amps 240VAC: 4 amps	Height: 152 mm (6.0 inches) Width: 354 mm (14.0 inches) Depth: 254 mm (10.0 inches) Weight: 26 kg (12 lbs) Voltage: 120 or 240 VAC @ 50 -60 Hz Power: 50 Watts
Gas Supply	Bubbler Specifications*
Inert gas: 25 psi ± 5 psi Bubbler Gas Flow: 0 to 2.0 L/min MFC Precursor Dilution Gas Flow: 0 to 5.0 L/min MFC Air for pneumatic valves: 50 to 75 psig	*Bubbler not supplied with A-PD Recommended Specifications: Minimum Capacity: 150 ml Maximum Capacity: 1000 ml Fittings: VCR (SS-4-VCR-3)

Schematic of Precursor Vent/Run Flow Manifold

