SPECIALTY COATING SYSTEMS™

SCS Labcoter® 2 (PDS 2010)

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For Parylene laboratory research, applications development and testing, the SCS Labcoter 2 Parylene Deposition System (PDS 2010) performs reliable and repeatable application of SCS Parylene conformal coatings. The portable Labcoter 2 applies Parylene coatings to components such as circuit boards, sensors, wafers, medical devices, MEMS and elastomeric components for research, development and repairs.

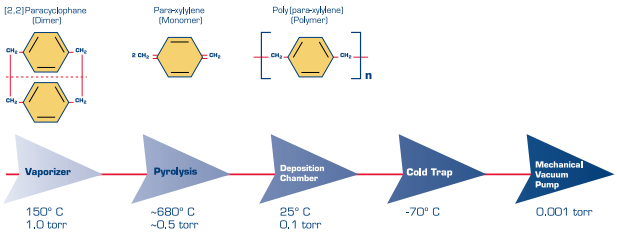
Labcoter® 2 Features

- Modular generation unit construction
- Interchangeable chamber modules
- Choice of LN_2 or mechanical chiller
- Closed-loop monomer pressure control
- Continuous process monitoring
- Low-noise, direct drive vacuum pumps
- Fixture rotation
- Optional tumble coat operation
- Optional remote vacuum pump

The Parylene Deposition Process

Ultra-thin Parylene coatings are inert and biocompatible and have excellent moisture, chemical and dielectric barrier properties. Parylene polymer coatings are applied via vapor deposition equipment, which allows for the precise control of coating rate and thickness. The deposition process begins as the powdered precursor (dimer) is vaporized under vacuum and heated to form a dimeric gas. The gas is then pyrolized to cleave the dimer into its monomeric form, and finally is deposited as a transparent polymer film. The polymerization process occurs at ambient temperatures and does not involve solvents, catalysts or cure forces. Parylene coatings can be applied in thicknesses from several hundred angstroms to 75 microns.

Parylene Deposition Process (Parylene N)



SCS LABCOTER® 2 PDS 2010

Optional Features

Cold Trap Options

Choose one of the following for use with the Labcoter 2:

- Manual-fill LN_2 cold trap
- Automatic-fill LN_2 control
- Mechanical chiller

Mechanical Chiller Specifications	
Dimensions (W x D x H)	10 x 20 x 18.5 in / 25.4 x 50.8 x 47 cm
Power	110 VAC, 60 Hz, 1Ø, 7A or 220 VAC, 50 Hz, 1Ø, 5A

Start-up Kit

Everything you need to start Parylene coating with your Labcoter 2 including Parylene C or N dimer, tape, microsoap and brushes.

Chamber Options

- Removable lid chamber: 12 x 12 in / 30.5 x 30.5 cm, electropolished stainless steel chamber with buna gasket and removable lid with handles (approximately 22 L capacity).
- Reduced capacity chamber: 12 x 3 in / 30.5 x 7.6 cm, electropolished stainless steel chamber with view port and buna gasket (approximately 5.5 L capacity).

Chart Recorder

Two-channel, two-color chart recorder to record vaporizer temperature and vacuum chamber pressure during the Parylene vacuum deposition process, with user-selectable chart speed.

Standard PDS 2010 Fixture

Used to hold parts in place during the Parylene vacuum deposition process.

Variable Speed Tumble Coat Adapter

Includes a variable speed DC rotation drive system (2 to 12 RPM), rotary coupling (used to rotate the parts basket) and three stainless steel mesh cylindrical parts baskets.

Parylene Dimer

SCS Parylene dimer is the chemical precursor in the deposition process, and its quality is critical. We have a dedicated and proprietary manufacturing source to ensure that all SCS dimer meets our precise and demanding standards. The dimer is a stable granular white powder and is available in one-pound and half-kilogram containers.

Labcoter® 2 Specifications	
Dimensions (W x D x H)	19.5 x 23.5 x 50.5 in / 49.5 x 59.7 x 128.3 cm
Weight	170 lb / 77.18 kg
Chamber size	12 x 12 in / 30.5 x 30.5 cm Electropolished stainless steel with view port (approximately 22 L capacity)
Power	110 VAC, 60 Hz, 1Ø, 20A or 220 VAC, 50 Hz, 1Ø, 15A
Dimer Capacity	Up to 0.38 lbs / 125 gm
Vacuum Pump	6.9 CFM / 11.72 m^3 / h, rotary vane (Optional remote mount 10 CFM)
Controls	Semiautomatic, microprocessor temperature and pressure controls, fault alarm monitoring

SCS Labcoter® 2 with optional mechanical chiller

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