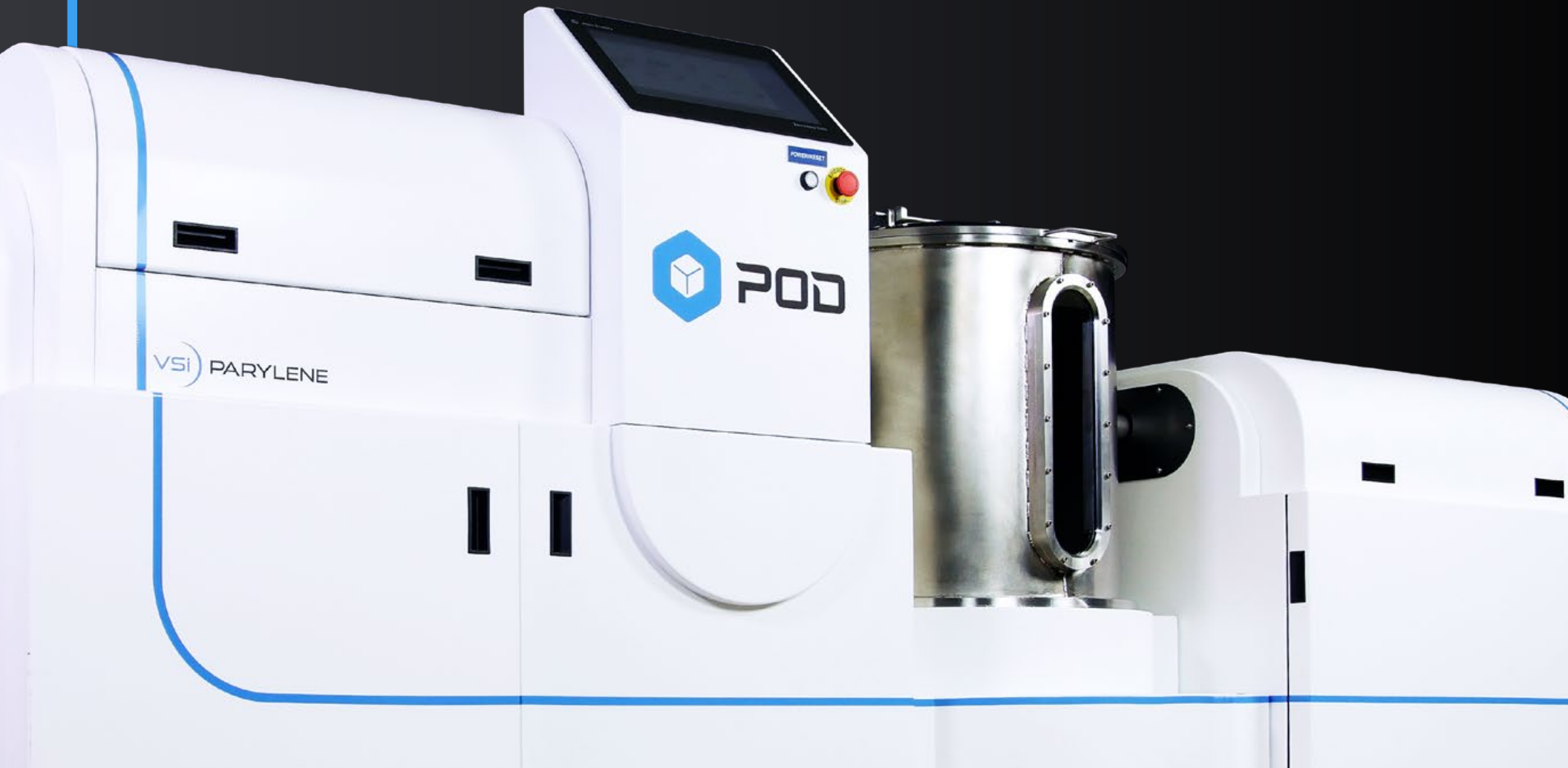
POD

PARYLENE ON DEMAND

Reliable, easy-to-use, in-house parylene production

A product of VSi PARYLENE



// CONCEPT

BRING PARYLENE IN-HOUSE

VSi's Parylene On Demand™ solution provides the industry's first complete parylene production system designed for easy process integration.

POD™ enables manufacturers looking to reduce technical risk, control costs and eliminate lead time by providing a complete, turnkey parylene ecosystem that includes parylene equipment, dimer, and expert support.

Meet Demand And Scale Up

Perfect for manufacturers whose current parylene outsourcing model no longer meets increasing demand or lead time requirements.

Lower Total Costs

Eliminate non-value add operations and shipping expenses. Get parylene at cost without external service markups.

Gain Complete Control

For high risk products where the manufacturer requires that parts never leave their possession.

// CONCEPT

PARYLENE INDEPENDENCE IN THREE SIMPLE STEPS.

Featuring global turnkey installation and support, POD™ can be installed at OEM or CM production locations worldwide allowing for high-quality parylene production measured in hours, not days or weeks.

1. **Custom Process Development**

   Our engineers study your application and develop a parylene deposition process custom tailored to meet your requirements.

2. **Installation & Optimization**

   The VSi team will install the machine on your factory floor and make any necessary adjustments to your custom process necessary to optimize production.

3. **On-Site Training**

   VSi process experts will come to your facility to train your staff and transfer know-how on your process and equipment.

// CONCEPT

OPTIMIZED BY EXPERIENCE.

With years of in-depth experience delivering top-of-the-line parylene solutions, VSi's engineering team has gone to extraordinary lengths to build a deposition machine that delivers reliable, high quality parylene coatings in one easy-to-use, low maintenance package.

// CONCEPT

A COMPLETE PARYLENE ECOSYSTEM.

POD™ is more than just a machine: it is an end-to-end parylene ecosystem that empowers businesses to achieve parylene independence, reduce risk, and improve profitability.

Equipment VSi's POD™ Parylene Coating Equipment is built for repeatable production and ease of use.

Dimer Optimize your process with VSi's reliable, high-performance parylene dimers.

Support Ongoing equipment and development support available

// FEATURES

A CLOSER LOOK AT PARYLENE DEPOSITION.

The full chamber viewport provides a top-to-bottom visual access to the chamber during coating allowing loaded fixtures to be viewed instantly from a wide range of angles. Passive “walk by” monitoring happens naturally. Rotation and fixturing can be seen from across the room and closer observation provides real-time feedback on film clarity during deposition.

// FEATURES

DESIGNED FOR EVERY USER.

The POD's 15-inch capacitive touch screen provides a easy interface to a powerful industrial grade system. The recipe-based pressure control software combines ease of use with complete control

For the Production Operator

With the touch of a button, the advanced logic control system automatically regulates deposition rate to optimize film quality.

For the Engineer

Diagnostic mode allows complete control of the system for process development and experimentation.

// FEATURES

EFFICIENT BY DESIGN

An interchangeable cold trap pot allows for a quick changeover between coating cycles. Designed with performance in mind, this unique feature enables back-to-back coating runs for higher volume production.

It's not just about the technology. Best practices in design, attention to detail, and quality components work together to produce many small improvements that play a big part in reducing daily maintenance.

// FEATURES

ENGINEERED FOR SIMPLICITY.

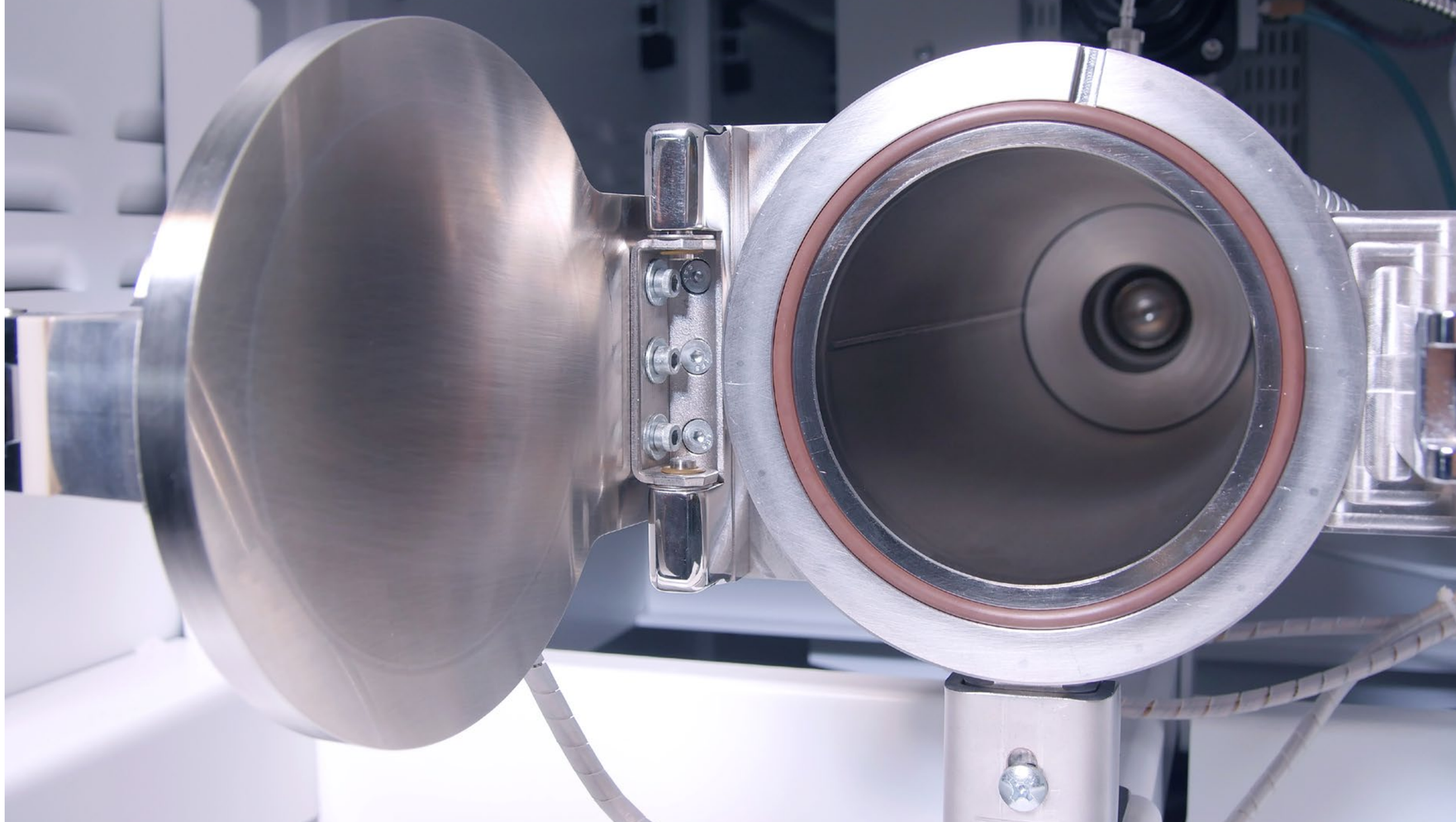
The re-engineered reaction path integrates greater simplicity, safety and control over the chemical deposition process. By utilizing the latest in alloy material technology, advanced fluorinated dimers such as Parylene F, can be used directly without damage to the system. And in the case of malfunction or necessary intervention, an integrated emergency-close valve instantly protects parts from damage.

No Quartz Liner

Advanced pyrolysis construction protects against damage without the need for cumbersome quartz tube liners.

Process Protection

Integrated emergency-close valve safely terminates system's reaction process to safeguard parts in the event of power failure or a necessary stop in the process.



TECHNICAL DATA

Coating Chamber

+ Large viewport allows full view of load for easy, continuous monitoring.
+ Standard dimensions: 24 inches diameter X 24 inches deep. Custom chambers available.
+ Adjustable, single port baffle
+ Separate pressure calibration port for easy and repeatable verification.
+ Vapor silane port (Silane vaporizer is an optional add-on)
+ Auxiliary 2.5" diameter port adds the ability to integrate optional horizontal tumbler or other feedthrough tools.
+ Variable speed, direct drive fixture rotation.
+ Built to accommodate fixture weight loads up to 300 pounds.

Control System

+ Easy to use interface with functions designed for operators, technicians and engineers.
+ Stores recipes for different applications for repeatability and control.
+ 15" capacitive touch screen interface.
+ Monitors usage and notifies user when maintenance is needed.
+ Industrial PLC control and computer allow integration into customers shop control programs.
+ Allows for remote support and internal network access.
+ Real time data viewing.

Reaction Path

+ Pyrolysis tube compatible with Parylene C, N, F, and AF-4. No quartz liner required.
+ Pyrolysis zone utilizes a 3-zone furnace with the ability to independently adjust each zone. Maximum temperature of 1,200° C.
+ Heated loading door.
+ Vaporizer allows for 1,000g dimer capacity.
+ Vaporizer valve allows the ability to stop the reaction and protect loaded chamber in the event of a power failure or intentional stop.

Vacuum Pump and Cold Trap

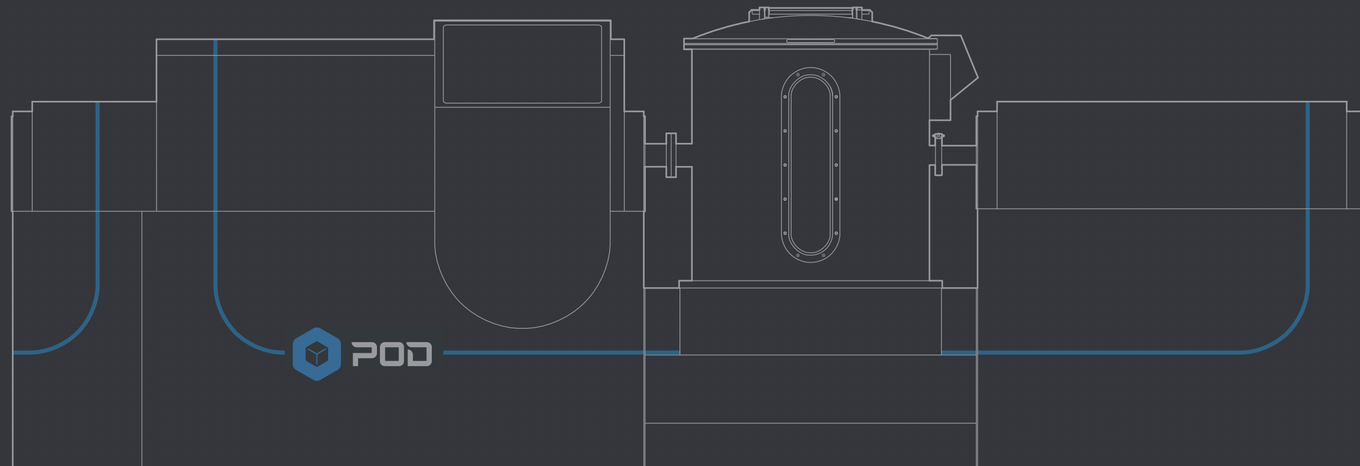
+ Low noise direct drive dual stage mechanical pump with exhaust filter.
+ Cold trap is mechanically refrigerated with no expendable refrigerants used. Designed for long-life, easy maintenance and quick turnover.
+ Pump valve closes the system to protect chamber and pump in the event of a power failure or intentional stop.
+ Two stage pump valve to reduce chamber disturbance when pumping down.

Enclosure

+ Three module enclosure design: Reactor Module, Chamber Module, Pumping Module. Chamber Module is interchangeable to allow for different sizes of chambers to be attached.
+ Modules are custom fabricated out of steel and powder coated to ensure a safe, durable, and attractive system.
+ Panels throughout for easy access to all mechanical and electrical systems.

Installation Data and Operating Conditions

+ Voltage: 208 V 60Hz 3 Phase, 45A largest load (Optional: 400V 50Hz 3 phase, 25A custom configurations upon request).
+ Compressed Air: 6 bar/ 80 psi
+ Assembled Machine Footprint: 12 ft X 4 ft (each module fits through 36" doorways)
+ Net Weight: approximately 1,800 pounds
+ Ambient Operating Temperature: 60-85 degrees Fahrenheit
+ Ambient Humidity: < 80%RH



Request a Free Economic Analysis

To get started, visit **pod.vsiparylene.com** to request your custom economic analysis and find out if in-house parylene is the right fit for your production.

Financing options available.

A product of VSi PARYLENE

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