CatArc® 2500

PVD Coating System

Straightforward Design

Affordable Reliability

Small Footprint, Big Results

Experience Switched Arc Technology in PVD Tribological Coatings

CatArc® 2500 PVD Hard Coating Syster

Unparalleled flexibility and rapid cycle time makes small batch processing more efficient than ever

Revolutionary Simplicity

VTI introduces the CatArc® 2500.

With two vertically adjustable coating zones, this system uses two VTI-patented switched-arc 2" X 10" (51mm x 254mm) cathodes.

The CatArc® 2500 is an affordable in-house alternative to outsourcing your Physical Vapor Deposition (PVD) coatings. VTI delivered the first rapid cycle coating system in 1989, forging the genre of Lean PVD processing equipment. By minimizing work-in-process and maximizing continuous product flow, VTI improves quality, cost efficiencies and proves that bigger is not always better. This is exactly what the CatArc® 2500 PVD Coating System delivers.

Due to differences in part design, geometry, orientation, and thermal properties, large batches can present serious challenges to operating an efficient coating line. Our innovative combination of rapid cycles and small batch sizes has created a revolutionary solution for coating and optimization.

The modular design allows us to configure the CatArc® 2500 to meet your requirements. The CatArc® 2500 takes up less than 45 square feet of floor space (4 square meters), making it ideal for small manufacturing areas. Best of all, aggressive pricing enables more users to enjoy the benefits of equipment ownership. Many companies that previously could not justify the high capital investment for competing systems can now bring PVD coatings in-house.

FEATURES

Rapid Cycle with Dry Pumping

Fast pumping cycles utilize the industry's finest Edwards Dry Star rotary screw and Agilent turbomolecular pumping packages.

Modular Design

Custom configurations are easily accommodated through our modular design approach. We can design the system to match your process, and assist with integration into your production facility.

Compact Footprint

Largest coating zone with the smallest foot print of any industrial PVD coating system on the market today.

Total Integration

Complete process includes installation, operator training, process engineer training, fixturing assistance, internet based service access, troubleshooting, and fast on-site assistance.

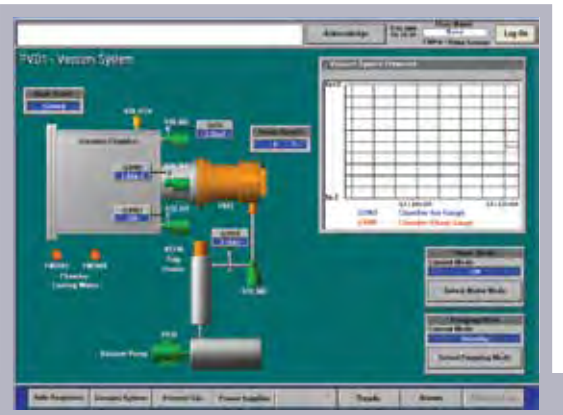
Simple Chamber Layout
Easy access to sources, tooling, and rotary feed-through assembly

Turbomolecular Pump
High efficiency vacuum pumping system with optional gate valve

Infrared Pyrometer
Optical temperature monitoring and control

Human Machine Interface (HMI)

The custom-designed user interface can be programmed in several languages. A remote communications link allows for diagnostics and troubleshooting through the included data logging PC.



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Trusted Design in Engineering

When you purchase a Vergason Technology coating system, you benefit from over thirty years of engineering refinement. Built into each system is the know-how that can only be achieved by designing, manufacturing, installing, and operating hundreds of vacuum coating systems across the globe.

Customer support begins even before we receive your order. We take the time to understand your requirements and configure your system exactly as you need. Our field service engineers install the system and ensure it performs as expected. With all new systems, we train your operators and maintenance technicians, as well as provide detailed documentation.

Our technical expertise extends to process development and applications support. The CatArc® 2500 can be configured with multiple coating process sequences to operate in a fully automatic mode, manual mode, or can be user-configured in the field. If you wish to develop your own coatings or processes, our applications engineering team will work hand-in-hand with yours.

Durability and robust continuous operation are hallmarks of Vergason Technology equipment. Still, all PVD coating systems require occasional field engineering support to operate at peak performance. Our remote communication link will allow our engineers to perform trouble shooting diagnostics and make program modifications to your CatArc® 2500 without being on site. If you need service, our field engineers are always on call.

Superior engineering coupled with top quality support has earned Vergason Technology a reputation for creating the most durable high-performance coating systems on the market.

BENEFITS

Engineered Integrity
Your company, technicians, engineers, and customers can rely on the CatArc® 2500 for years of reliable service.

Minimized Down-Time
User-focused design provides easy access to all components, minimizing down time for routine maintenance.

Streamlined Efficiency
Smaller batches and rapid cycles allow more runs per day. This in turn makes it easier to optimize batch loading for each type of part.

Environmentally Friendly
PVD systems are the most “green” of the performance coating technologies. There are virtually no effluents or hazardous waste created.

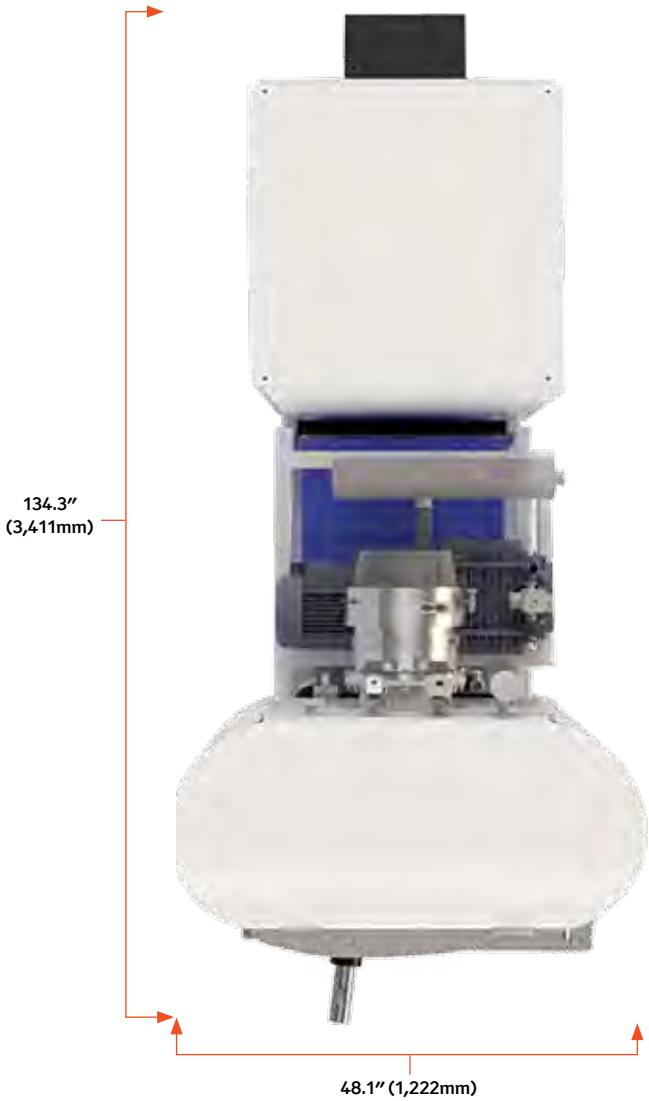
Smoother Films
Switched-arc sources deposit smoother films than conventional arc coatings due to the reduction of macro-particle inclusions.

Aluminum Titanium Nitride (AlTiN) Coated Carbide Tools

The CatArc® 2500 offers multiple coating options for a wide variety of applications.

CatArc® 2500 PVD Hard Coating System

FOOTPRINT



SPECIFICATIONS

Stainless steel chamber, with fast-change removable liners

Approximate chamber size 28" (711mm) x 28" (711mm) x 28" (711mm)

Coating zone: 16-inches (406mm) diameter by 20-inches (508mm) high

Edwards Dry Star rotary screw roughing pump

Agilent turbomolecular pump

4 kW electric substrate heaters thermocouple controlled

VAT vacuum valves

MKS mass flow controllers and capacitance manometer

Advanced Energy Solvix LF10 substrate bias power supply

IGBT switched CatArc® sources

Ferrofluidic rotary substrate rotation and view port shutters

Ircon Modline 5 substrate temperature monitor

Windows-based operator interface with PLC controlled process in multiple operator languages

Fixturing design support

Internet-equipped

UTILITY REQUIREMENTS

Electrical:

480 VAC, 100 AMP, 3 Phase, 60 Hz

Compressed Air:

75 PSIG @ 6 CFM (5.2 bar @ 170 LPM)

Cooling Water:

60-70°F (16-22°C) non condensing

45 PSI (3.1 bar) inlet, maximum

15 gpm (57 lpm) outlet, maximum

Non-condensing, minimum pressure differential input vs output of 20 psi (1.4 bar)

Optional stand alone chiller

VTi®

Vergason Technology, Inc.
166 State Route 224
Van Etten, NY 14889 USA
607.589.4429
www.vergason.com | sales@vergason.com