

IonBond PVD - RR *Road Runner*

Advanced PVD Coating - Cathode Arc Coating System



- **User friendly**
 - Ergonomic features
 - Compact construction
 - Simple to operate and maintain
 - Flexible
- **Repeatability / Reliability**
 - Fully automatic operation
 - Excellent coating uniformity within the chamber and between batches
 - Industrially proven for maximum uptime
- **State of the art communications**
 - Industrial PC with remote control and diagnostic features
 - Automatic self check program
 - Process data archiving
- **Process optimization**
 - Rapid cycles
 - Maximized usable coating zone
 - High plasma density
 - Stable process
 - More than 10 years of database recipes
- **Multiple source technology**
 - Multiple sources for target material allows for deposition of complex coating structures / combinations
 - Target shape designed for maximum target usage and productivity
- **Safety**
 - Safety interlocks to protect both operators and the equipment

The IB-PVD-RR is designed for rapid coating of complex coating structures (up to 4 materials simultaneously).

The IB-PVD-RR is configurable for maximum flexibility. It can be ordered with:

- 0 to 4 planar arc sources
- 0 to 12 (4x3) round arc sources
- A mixture of both planar and round arc sources

The IB-PVD-RR is characterized by:

- Robust system designed for the rigorous production environment using sophisticated vacuum coating technologies.
- Extreme reliability based on intelligent straightforward design and construction.
- Fully automatic, computer controlled, closed loop process control providing process repeatability, reliability and a user-friendly environment.
- The coatings industry's first „Plug and Play“ deposition system. No costly add-ons required
- The coating industry's broadest capabilities in the smallest footprint.
- Profitable runs available the same day the system arrives, quick and simple installation

Load examples:

- Shank tools: Ø 12 x L151mm = 1'235 pcs
- Shank tools: Ø 16 x L92mm = 624 pcs
- Hobs: Ø 120 x L280mm = 26 pcs
- Hobs: Ø 80 x L180mm = 60 pcs

Coating processes:

Metals: Ti, Zr, Cr, AlTi
 Nitrides: TiAlN, AlTiN, TiN, CrN, ZrN, TiCrN, AlTiSiN
 Carbonitrides: TiCN, ZrCN, TiZrCN, TiCrCN, AlTiSiCN
 Multi-layers: Infinite combinations.

In addition to coating equipment, IonBond is able to provide all the necessary auxiliary equipment required for a turn-key coating operation including:

- Cleaning
- Pre-and post treatment
- Coating removal
- Quality control

With hundreds of coating machines installed around the globe, IonBond is able to provide consumables, spare parts and support wherever needed.

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COMPONENTS	DATA
Process chamber	
Type	Double walled chamber
Material	Stainless steel
Chamber size	Ø 1000mm x 1150mm
Usable plasma zone	Ø 700 x 730 mm (±15%)
High precision zone	Ø 700 x 600 mm (±10%)
Net loading capacity	500 kg (1100 lbs)
Heating	52 kW total, on 4 sides
Fixturing	Carrousel, 3 rotation
Arc Sources	
Number Arc	Up to 4 planar, 12 round or a mixed configuration
	Water cooled
Power Supplies	Individually powered arc sources according to configuration
Pumping System	
Turbomolecular Pump	1900 l/s
Primary pump	65 m ³ /h (two stage)
Root pump	500 m ³ /h (two stages)
Support pump	12 m ³ /h (two stage)
Substrate / Bias Power Supply	
Power Supply	45kW, high performance
Voltage	20 – 1000 V.
Control Instruments	
Control System	Industrial PC with remote control and diagnostic features
Pressure Measurement	1 Piezo gauge 2 Pirani gauges 1 Penning gauge 1 Baratron gauge
Temperature Measurement	8 thermocouples
Gas control	Precision mass flow controllers
Utilities	
Air	7-8 bar, particle free
Electrical	3 x 400V/480V, 50/60 Hz, 120kW
Standard Gases	Ar, N ₂ , C ₂ H ₂
Water	150l per minute, 4.5 bar at inlet
Safety Systems	
Numerous safety interlocks to protect operators and equipment	

At IonBond® we offer you a full range of PVD, CVD and Pa-CVD equipment and propose the optimal technology for your surface treatment needs