CVD, CVA & CVI EQUIPMENT

Chemical Vapor Deposition

Chemical Vapor Aluminizing

Chemical Vapor Infiltration
**CVD Equipment**

**Advanced Chemical Vapor Deposition Coating Systems**

Bernex™ CVD systems are the most reliable CVD machines on the market. Since their introduction in the 1970s they have proven their reliability in hundreds of installations worldwide. They are used by all major manufacturers of cemented carbide inserts and are increasingly used for coatings on forming tools.

The turn-key Bernex™ BPXpro CVD systems have a dual computer system, self-diagnostic capabilities and fully automatic process control.

**Aluminum Diffusion Equipment**

As a further development of the CVD platform, the Bernex™ CVA systems are dedicated to the diffusion of aluminum into super-alloy components like hot-section turbine blades of aircraft engines and land-based gas turbines, which are subject to hot corrosion.

The CVA vacuum process uses gaseous precursors. It allows a very accurate control of diffusion depth and thickness over all inner and outer surfaces of the parts, irrespective of their geometrical complexity.

**CVI Equipment**

**Chemical Vapor Infiltration Equipment**

Bernex™ CVI systems are designed to coat the internal surfaces of porous materials such as carbon fiber bundles or 3D bodies that are used to make fiber-reinforced composites (FRC). The equipment is designed to deposit high temperature protective coatings such as SiC, BN, and pyrolytic C. Typical applications include aerospace, automotive, medical, and industrial components.
CVD, CVA and CVI coating equipment

Ionbond’s equipment division offers the most state-of-the-art technically advanced chemical vapor technology based coating systems. Dedicated process equipment is used in several industries to enhance the wear, friction and temperature properties of tools and components.

Used by numerous customers as well as in Ionbond’s own coating centers the systems prove reliability every day. They are engineered for highest productivity and low maintenance while offering the flexibility of fast material and process changes to accommodate mixed portfolios of coatings.

Capability extensions and upgrades

Ionbond coating equipment is designed and built with a long lifetime in mind. The modular design and in-house engineering protect your investment.

- Modules for new coating compositions
- Automation
- Hard- and software updates

Engineering and process support

Ionbond Equipment comes with ready to use process recipes for standard processes. Custom processes, hardware optimizations and custom designed systems are developed together with the customer to exactly meet requirements for the application. Even years after the installation Ionbond’s engineers are there to support your investment.

Quality assurance and CE conformity

Ionbond holds ISO 9001 certification and is an approved supplier to a number of world leading companies in many industries. Ionbond constantly improves its equipment to enhance productivity and lower the unit cost of coated products.

Ionbond equipment complies with all CE requirements according to Machinery Directives 2006/42/EC. It is engineered towards highest safety standards for operators and the environment.
Competence and Innovation – Worldwide

Ionbond is a leader in surface enhancement technology and provides advanced coating solutions featuring a broad range of hard, low friction, wear resistant coatings based on PVD, PACVD and CVD technologies for a wide range of applications. It has a global presence with coating centers in strategic locations across Europe, Asia, and North America and has one of the largest coating networks in the world.

Ionbond is part of the IHI group, a Japanese industrial group with significant R&D resources that operates through multiple business fields including: Energy and Resources, Social Infrastructure, Industrial Machinery and Aero Engines.

See our website for a full list of all coating centers and local equipment sales offices. www.ionbond.com