



xPro – S2

Vacuum Hard Coating System With New PDA III*-Technology and HiParc-Technology (optional)

The **xPro – S2** is the most advanced industrial small size vacuum coating system, which includes the PDA*-technology. It is specifically designed for the deposition of high performance metallurgical coatings, such as AlCrSiN, AlTiSiN, AlCrN, AlTiN, CrN, TiC,N, TiN and many others. Such coatings are evaporated by arc onto a variety of cutting tools, dies and moulds, components and consumer products for wear, erosion and corrosion protection as well as tribological purposes. The **xPro – S2** is also in a “pulsed” high power version as **xPro – S2H (HiParc**)** available, where the technology and power supply package enables faster deposition rates, shorter cycle times and significantly improved target utilisation.



The xPro – S2 is characterized by:

- Robust system designed for the rigorous production environment using sophisticated vacuum coating technologies.
 - Rugged construction marked by an extremely advanced highly refined design.
 - Extreme reliability based on intelligent straightforward design and construction.
 - The broadest spectrum of coatings and coating technology available in a single system at the lowest possible cost.
 - Fully automatic, computer controlled, closed loop process control providing process repeatability, reliability and a user-friendly environment.
 - The coating industry's broadest capabilities in the smallest footprint.
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Technical Highlights of the xPro – S2:

PDA III*-Technology

- PDA III* „Plasma-Diffused-Arc“ für die Abscheidung glatter und kompakter Schichten

Magnetic arc confinement MACIII*

- High target utilization
- Drastically reduced micro-particle formation

Short process time

- Increased heating capabilities
- Efficient cleaning and etching cycle

Improved coating properties

- Advanced interface formation
- Extremely clean process environment

Improved part handling and fixturing

- Safest most manoeuvrable transport carts
- Easy to load and use carts with high load capabilities

Improved software design

- Extreme ease of use
- Highly reproducible runs
- High level of flexibility for custom tailored coating solutions
- Remote control and diagnostics

Improved thermal management

- Intensive water cooling
- Double walled construction

Most reliable components

- Brand name components
 - Clever integration
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System Data

Size of vacuum chamber	680 × 650 × 1,150 mm (L × W × H)
Coating volume	350 × 720 mm (Ø × H)
No. of rotary platform (substrate carrier)	2
Size of rotary platform (substrate carrier)	480 × 430 × 1,015 mm (L × W × H)
Pumping	2 double stage rotary vane pumps 1 turbomolecular pump
Sources	2 large area arc evaporators
Power supplies	2 arc power supplies @ 210 A optional: 400 A pulsed (HiParc**) 1 pc 10 kW dc bias power supply
Heater	2 pcs, rated @ 12 kW each
Overall size	3,370 × 1,635 × 2,220 mm (L × B × H)
Power	80 kW, 400 V, 3 ph + N, 50/60 Hz

System capacity

Plasma volume	350 × 720 mm (Ø × H)
End mills Ø 4 × 50 mm	1,340 pcs
End mills Ø 12 × 75 mm	480 pcs
Inserts ½" x ½" x 4 mm	2,800 pcs
Hobs Ø 80 × 80 mm	72 pcs
Hobs Ø 100 × 100 mm	42 pcs

* PDA = Plasma-Diffused-Arc

**HiParc = High Power Pulsed Arc

PVT

Plasma und Vakuum Technik GmbH
Rudolf-Diesel-Str. 7
D-64625 Bensheim
www.PVTvacuum.de