



## xPro – M3

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

The **xPro – M3** is the most advanced industrial medium 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 – M3** is also in a “pulsed” high power version as **xPro – M3H (HiParc\*\*)** available, where the technology and power supply package enables faster deposition rates, shorter cycle times and significantly improved target utilisation.



xPro – M3

## **The xPro – M3 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 – M3:**

### **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	<b>860 × 860 × 1,150 mm (L × W × H)</b>
Coating volume	<b>520 × 720 mm (Ø × H)</b>
No. of rotary platform (substrate carrier)	<b>2</b>
Size of rotary platform (substrate carrier)	<b>660 × 650 × 1,015 mm (L × W × H)</b>
Pumping	<b>2 double stage rotary vane pumps 1 roots pump 1 turbomolecular pump</b>
Sources	<b>3 large area arc evaporators</b>
Power supplies	<b>3 arc power supplies @ 210 A optional: 400 A pulsed (HiParc**) 1 pc 15 kW dc bias power supply</b>
Heater	<b>3 pcs, rated @ 12 kW each</b>
Overall size	<b>3,650 × 1,615 × 2,220 mm (L × B × H)</b>
Power	<b>100 kW, 400 V, 3 ph + N, 50/60 Hz</b>

## System capacity

Plasma volume	<b>520 × 740 mm (Ø × H)</b>
End mills Ø 4 × 50 mm	<b>2.100 St.</b>
End mills Ø 12 × 75 mm	<b>720 St.</b>
Inserts ½" x ½" x 4 mm	<b>4.400 St.</b>
Hobs Ø 80 × 80 mm	<b>128 St.</b>
Hobs Ø 100 × 100 mm	<b>78 St.</b>

\* PDA = Plasma-Diffused-Arc

\*\*HiParc = High Power Pulsed Arc

## PVT

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