

# Universal PVD Hard Coating System

## 通用PVD硬涂层系统

### **DREVA 600C**



Main Features

- Field proven, reliable and refined equipment concept.
- Design with two large vacuum chamber doors in which the coating sources are installed.
- 6 or 12 VTD-proprietary round arc sources with shutters and power supplies.
- Option: Magnetrons for sputtering (planar and tubular), including HiPIMS.
- Option: Hollow cathode for plasma pre-treatment, heating and ion assisted deposition.
- Radiative substrate heaters for a process temperature up to 500°C.
- Usable coating volume: Ø 500 mm x 500 mm.
- Internal chamber size: Ø 700 mm x 875 mm.
- Customized part holder for various tool and component designs.
- Low noise level of about 65 dBA.
- Fully automated control system and data logging which can be accessed via VPN.
- Gas inlet system for up to 5 process gases (standard are Ar, N<sub>2</sub> and Acetylene).

Applications

- Hard coating of tools and parts:  
**DREVA 600C**
- Decorative hard coating:  
**DREVA 600C Decorative**

Customer Benefits

- Modular configuration enables an application-specific adaptation.
- Customer-specific substrate carriers.
- Easy access to all relevant components for system operation and maintenance.
- Straightforward project execution.

Technical Advantages

- 1-fold, 2-fold and 3-fold substrate rotation according to application.
- Simple operation via editable recipes.
- Access of two employees in parallel through two large vacuum chamber doors.
- Remote diagnostics for troubleshooting over the internet (VPN).
- Backing pumps are maintained on a service frame without crane or forklift.
- Simple & safe technology transfer from lab systems to customer's DREVA 600C.
- Shipping of the DREVA 600C including accessories on a 18t truck or 20ft high cube container.
- Relocation on the shop floor is possible just with a forklift.
- Plug and play installation by connecting cooling water, process gases, electricity, compressed air and exhaust at a single spot.
- Hard coating productivity of up to 1,040 Ø 8 mm drills per batch on < 5m<sup>2</sup> floorspace.

Range of Coatings

- Hard coating of tools and parts as mono- and multi-layer:  
AlCrN, AlTiN, AlTiSiN,  
CrN, TiAlN, TiCN, TiN,  
TiSiN, WC (only sputtered)
- Decorative hard coatings:  
Grey, Gold, French Gold, Bronze,  
Champagne, Copper, Brown,  
Mocca, Anthracite, Black

## 特性

- 经实践证明，设备运行可靠、品质优良。
- 采用两扇大型真空室门设计，便于靶材的安装。
- 6个或12个VTD专用圆形电弧源，配有挡板和电源。
- 可选：磁控溅射（平面和管状），包括 HiPIMS（高功率脉冲磁控溅射）。
- 可选：空心阴极，适用于离子体刻蚀、加热和离子辅助沉积。
- 辐射加热器，满足工艺温度高达500°C的要求
- 有效涂层区域:  $\varnothing$  500mm x 500mm.
- 炉腔规格:  $\varnothing$  700mm x 875mm.
- 定制化夹具，满足各种刀具和零部件的设计需求。
- 低噪声级别，大约 65dBA。
- 全自动控制系统，使用 VPN 进行数据采集。
- 可满足 5 种工艺气体的充气系统（这些气体通常是氩气、氮气和乙炔）。

## 用途

- 刀具和零部件的硬质涂层：  
**DREVA 600C**
- 装饰性硬质涂层：  
**DREVA 600C Decorative**

## 技术优点

- 单维、两维和三维产品旋转，满足不同用途需求。
- 采用可编辑配方，运行简单。
- 两名员工可并行通过两个大型真空室门。
- 基于 internet 的远程故障诊断处理 (VPN)。
- 不借助吊车或叉车就能在维修机架上完成前级泵的维护。
- 从实验室系统到用户的 DREVA 600C 机型，技术转让简单且安全。
- DREVA 600C 的发运，包括使用 18t 卡车或 20ft 高箱运输的附件。
- 仅凭借一台叉车就能完成在工作场所的重新安置。
- 即插即用安装，在单一供应源可接通冷却水、工艺气体、电力、压缩空气和排气。
- 在占地面积不足 5m<sup>2</sup> 的工作场所，硬质涂层产量每批次可装载 1040 个直径 8mm 钻头。

## 客户利益

- 模块化设计，满足各种用途需求。
- 针对不同用户的产品装夹。
- 所有相关部件，方便系统运行和维护。
- 项目执行简单明了。

## 涂层类别

- 刀具和零部件单层和多层硬质涂层：  
AlCrN, AlTiN, AlTiSiN,  
CrN, TiAlN, TiCN, TiN,  
TiSiN, WC (仅溅射)
- 装饰性硬质涂层：  
灰色、金色、法国金、青铜色、  
香槟酒色、铜色、棕色、  
深咖啡色、无烟煤色、黑色

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