



INTRODUCTION OF STN-20D30 TYPE PVD COATING EQUIPMENT

The STN-20D30 type PVD Coating Equipment has been specially designed for decorative PVD hard-coating, for this purpose the unit is equipped with 26 arc evaporation sources .

The extreme high rate of ionization in arc evaporation technology provides excellent adhesion properties of the coating to the substrate surface and dense, strong layers.

For the required golden color the system is provided with Titanium targets and Zirconium targets, also including Titanium-Nitride (TiN) and Zirconium-Nitride (ZrN) process.

Other colors can be realized by choice of the right target material and appropriate process control.

The advanced Controlled Arc system with controlled steering of the arc ensures a smooth and homogeneous layer. The controlled Arc-system also provides high coating uniformity and excellent target utilization efficiency.

The process is running fully automatically by a Programmable Logic Control-unit.

Chamber, vacuum system, gas flow and controls are chosen of first class design and ensure a reliable, repeatable production with high system availability.

GENERAL SPECIFICATIONS OF STN-20D30

Process chamber

- Vacuum Chamber Inner Size 1800*H3500 mm
- Stainless steel, double walled, water cooled
- One front door, water cooled front door with the same curve as the cylinder chamber in order to strengthen its rigidity.
Two view ports on the door cooling by water
- Substrate heating, Power 24kW effective
- Temperature control by thermo-couples

Pumping system

- Two Oil Diffusion Pump 22000 L/s
- Two Roots Vacuum Pump 600L/s
- Six Rotary Vane Pump 70L/s & 30L/s

Cathodes Arc Ion Sources

- Number Arc: 26
- Type: Advanced Controlled Arc
- Target size: $\Phi 100 \times 40$ mm
- Position: around chamber
- Power supplies: 14, DC, max.160 A
- Arc-ignition Effective

Turntable

- Loading capacity coating zone: 1600*H3300mm
- Max. Weight: 300kg
- Satellite axis 24 with integrated 6 rotation
- Satellite diameter: 550mm/ 230mm

Control system

- Process control automatic by color touch screen Programmable Logic Control (PLC)
- A computer with SinoarcLink software to communicate with the standard PLC system

Operation Cycle time

- Less than 35 min (decorating coating)

