

The Z 700

The Z 700 single-chamber system is the decorative hard coating system most widely used today. Introduced in the early 1980's, this system has been constantly improved based on our broad experience in systems engineering. With the introduction of our new Z 1100 system, the extensive experience acquired in its development has been applied in redesigning the Z 700.

Basic System Design

The successful and proven original system design has been retained in spite of all of the detailed improvements that have been implemented. The Z 700 is largely identical to the Z 1100 in its basic features, but its size and capacity are slightly less than half that of the Z 1100.

System Features

- **Coating Chamber**
The coating chamber is 700 mm in diameter, and is equipped with a front-mounted door for use in loading and unloading operations and a pumping port located on its base.

Fig. 8 The interior of the coating chamber

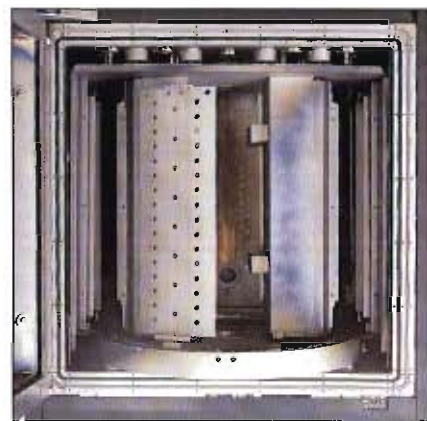


Fig. 9 The highly successful Z 700 single-chamber system

- **Coating Sources**
Standard PK 500 magnetron cathodes in bolt-on versions. Target dimensions are 488 mm x 88 mm x 6 mm. The useful coating height is 400 mm.

- **Substrate Carrier**
The substrate carrier incorporates a shutter for presputtering operation, and is equipped for accepting substrate holders. The substrate carrier is 560 mm in diameter; its useful substrate loading area is approx. 1,500 mm x 400 mm.

- **Heaters**
Two radiant heaters for heating both sides of substrates.

The Systems

- **Pumping Stations**
The fore vacuum pumping station, which consists of a DK 200 rotary vane pump and a WS 501 Roots pump, is incorporated into a separate, free-standing pump rack. Three TURBOVAC 1000 turbomolecular pumps are installed in a pump housing located beneath the system. These pumping stations evacuate the system to its processing pressure in less than 10 minutes.
- **Gas Inlets**
Four different process gases can be handled using the system's high-precision gas flow regulators.

- **Partial Pressure Regulation**
The Z 700 uses the same system used in the Z 1100.
- **Coating System Controller**
corresponds to that used for the Z 1100.

Your benefit: The Z 700 is your best choice

- for pilot-scale coating runs;
- for running smaller batch sizes;
- if flexibility is more important than high throughputs.

Fig. 10 The high-vacuum pumping station with its three TURBOVAC 1000 turbomolecular pumps

