CVD/PVD

Coating process CVD (Chemical Vapour Deposition)
- Chemical deposition
- Coating suitability for drill-holes and undercuts
- Coating temperature of approx. 1000°C
- Subsequent vacuum re-hardening treatment necessary
- Use of dimensional stable materials
- Excellent adhesion

Coating process PVD (Physical Vapour Deposition)
- Physical deposition in a low temperature plasma
- Limited coating suitability for drill-holes and undercuts
- Coating temperatures from 200 up to 500°C
- Coating suitability below the final annealing temperature
- No dimensional change of the base material
- Good adhesion

WHICH PROCESS IS TO APPLY FOR WHICH PURPOSE?

CVD
- Extreme hardness and performance

PVD
- High hardness without dimensional change

Whatever the coating process, we provide you with competent advice.
CVD/PVD

**Processes**

The CVD coating process defines the chemical vapor deposition of hard materials. At temperatures of approx. 1000°C, the gaseous components circulate around the substrate. This involves a chemical reaction of the components at the tool surface which build adhesive layers.

In opposition to the exclusively thermally activated CVD process, the PVD technology enables a physical deposition of thin layers. This allows reduced processing temperatures and thus to deposit hard coating layers at a temperature that is below the final annealing temperature.

**Advantages of hard coating layers**

- Increase in endurance
- Reduction of downtimes
- Lower unit costs
- Prevention of wear due to abrasion or adhesion
- Increase in number of strokes and cycle times
- Reduction of lubricants

We provide you with competent advice on the selection of a suitable coating system for your specific applications.

**Preconditions to be fulfilled**

**CVD**

- Selection of suitable materials
- Heat resistant materials

**PVD**

- Preferably use of secondarily hardened materials
- Use no oils or emulsions containing silicone