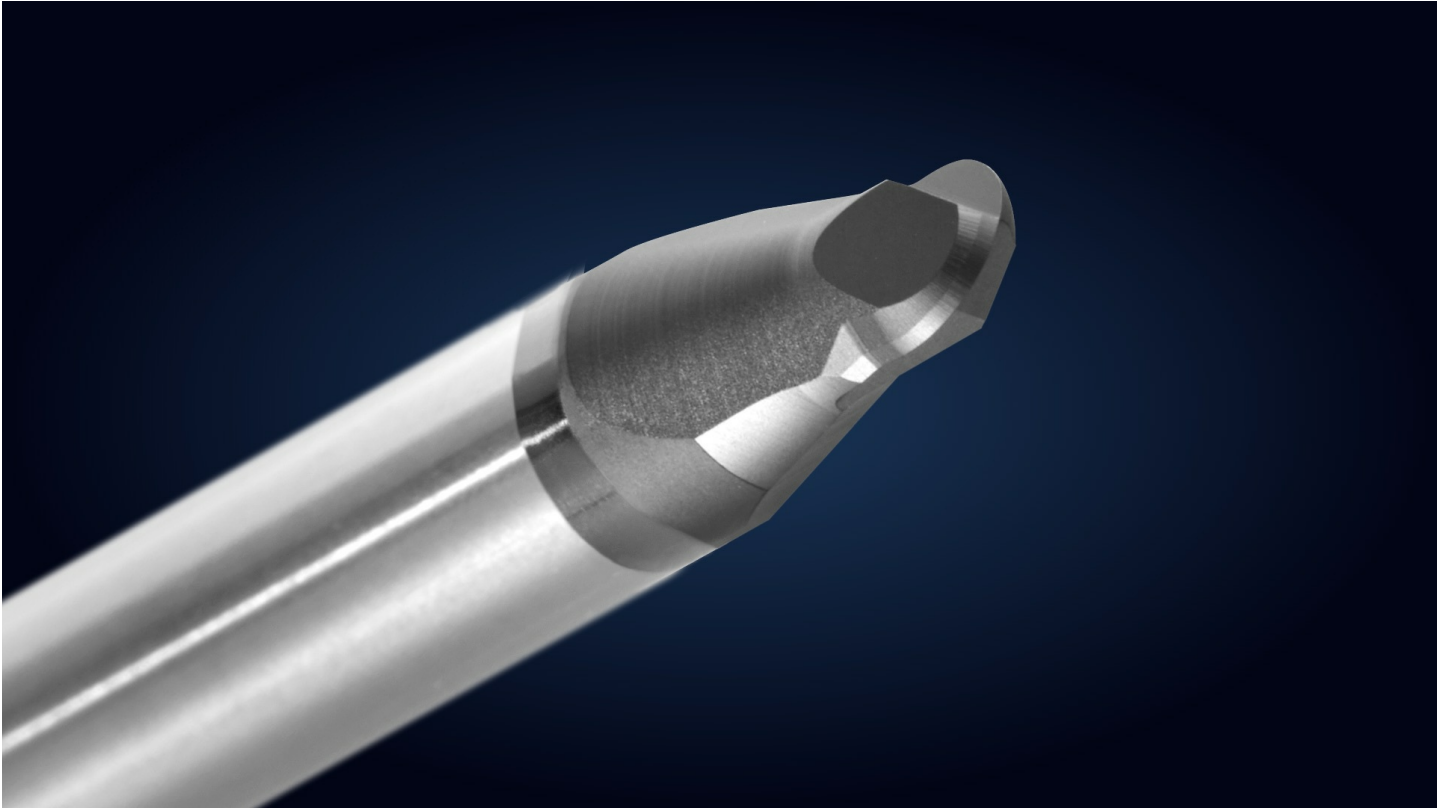


New diamond coating material - a milestone for tool and mould makers



Machining sintered carbide more economically - milling instead of eroding with CCDia®CarbideSpeed®

Milling carbides instead of eroding or grinding them brings enormous advantages: shorter cycle times, better surface finishes, more environmentally friendly machining, no corrosion and the production of more complex contours. With the newly developed CCDia®CarbideSpeed®, CemeCon now provides tool manufacturers with a precisely matched diamond coating material that creates ideal conditions even for the toughest operating conditions – and thus enables users to cut carbide economically.

In the manufacture of punches and dies made of carbide, tool and mould makers today often use the cost- and time-intensive eroding process. Milling and drilling operations offer enormous possibilities in this respect: By cutting the carbide and thus manufacturing the actual component, the previously necessary and costly electrode production is no longer necessary. The production of a punch, for example, is thus significantly shorter. In addition, eroding produces a white edge zone with slight damage due to the heat input. This has to be removed again by elaborate polishing. When machining, there is no “damage” to this edge zone. This enables an extremely high contour accuracy with better surface qualities. The range of complex 3D contours that can be produced is also greatly expanded. The fact that the numerous advantages of machining are currently not used more frequently is not least due to the difficult machinability of the sintered carbides.

“Hard ness grades between 900 and 2,200 HV, high wear resistance and heat hardness require extremely powerful and stable precision tools. For this reason, very few solutions for milling carbide have been found on the market to date. The lack of coating solutions sets limits here for many tool manufacturers – but this is changing with immediate effect.”, says Manfred Weigand, Product Manager Round Tools at CemeCon.

CCDia®CarbideSpeed® - the solution from the market leader

The above-mentioned challenges did not leave CemeCon in peace. As the market and technology leader, the company always has the claim to present coating solutions in premium quality. The result: CCDia®CarbideSpeed® – a coordinated solution for carbide machining. The diamond coating material combines maximum adhesion with a microhardness of 10,000 HV_{0.05} for maximum wear resistance. Already in the first pilot projects during the development phase, it has been shown that precision tools with a CCDia®CarbideSpeed® coating achieve at least the same, usually even better performance in terms of productivity and economy than existing solutions. This shows the great potential of the new coating material - not to mention a significantly improved workpiece surface quality. Series production has now begun. “With this new coating material, quite some tool manufacturers will stir up the market for the economical machining of carbide,” Manfred Weigand is convinced.

[Milling](#)

[Carbide](#)

[erode](#)

[sintered](#)

[electrode production](#)

[contour precision](#)

[Workpiece surface](#)

[surface quality](#)