

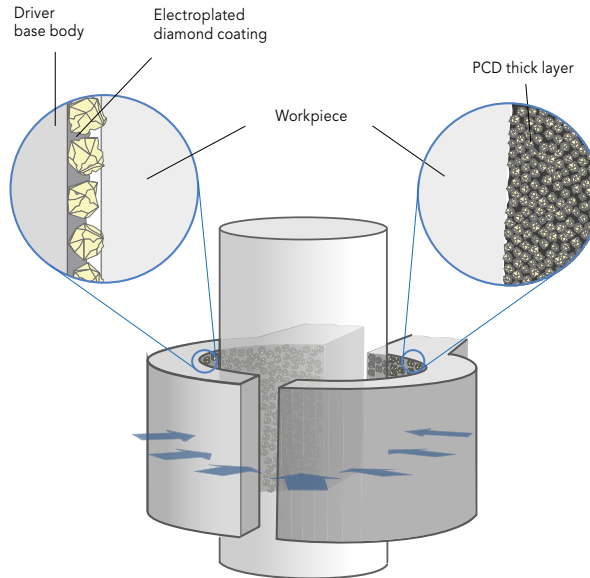
DRIVERS AND GRIPPING ELEMENTS

12

FLEXIBLE DUE TO ELECTROPLATED DIAMOND COATINGS

The use of electroplated diamond coatings can be used even for complex geometries and is characterized by a non-slip and wear-resistant coating.

A wide range of grit sizes allows the roughness to be adapted to the specific application. Due to the possibility of resurfacing the undamaged base body, electroplating is a very cost-efficient option compared to new procurement. The costly, usually hardened base bodies can thus be used several times. An electroplated diamond coating is chemically resistant and has a long service life.



PCD-BACKED GRIPPING ELEMENTS

With its high wear resistance and extremely fine microstructure, PCD is the ideal material for very precise gripping elements. The geometric accuracy of PCD is thus maintained over a very long period of time, which means that the gripping process can be carried out with a high degree of process reliability. The repeatability is unsurpassed, even more than 50 times higher than that of carbide.

PCD-tipped assembly and handling elements can be realized with an accuracy in the μm range. Due to the very fine-grained diamonds in PCD and the corresponding fine machining, roughnesses of $R_z = 2 \dots 8 \mu\text{m}$ are possible. The surfaces produced in this way have a good grip, but do not damage the component surface. Ground PCD surfaces can also be produced. Another advantage of PCD is its chemical stability.

Type	Galvanic coating		PCD coating (roughened)
Diamond coating	D35	D426	Thick layer
Accuracy	0,015-0,02 mm	0,015-0,02 mm	0,002 mm
Roughness	~Rz 40 μm	~Rz 120 μm	Rz 2-8 μm
Advantages	<ul style="list-style-type: none"> • Durable • Repairable • Cost effective 		<ul style="list-style-type: none"> • Durable • High accuracy • Chemically resistant

ACCURATE - SAFE - DURABLE

The handling of components with smooth or very abrasive surfaces presents special challenges for gripping elements. High-quality diamond coatings matched to the process increase the holding force of grippers, hold-downs, guide elements, etc.. They prevent wear and securely fix the component without damaging it.

