

TT[®]-C-DLC

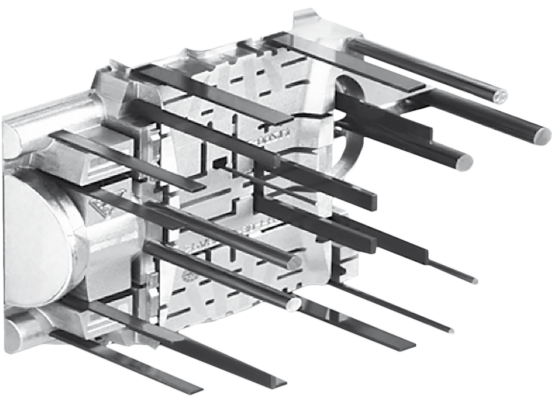
Tribological C-DLC coating

C-DLC coatings are a subgroup of amorphous diamond like carbon coatings (DLC – Diamond-Like Carbon).

Contrary to the classic DLC coating with gaseous hydrocarbons (e.g. Acetylene or Methane), the C-DLC coating is produced with a PVD method (PVD – Physical Vapor Deposition) by magnetic sputtering of a carbon target. By adding reactive gases during the coating process, the hydrogen content and therefore the mechanical and tribological attributes of the coating can be regulated and optimized for each application.

C-DLC can have a higher micro hardness as well as a lower friction coefficient as the DLC coatings.

TT[®]-C-DLC coatings are normally applied in a layer thickness of $1,5 \pm 0,5 \mu\text{m}$. Due to its attributes, this coating process is preferably used for standards.



Attributes of the TT[®]-C-DLC coatings

PVD coating	a-C/a-C:H
Coating composition	Multiple layers
Micro hardness	2.500 – 3.100 HV
Thickness of coating*	2 μm
Max. operational temperature	350°C
Friction against steel	< 0,12
Deposition temperature	< 180°C
Abrasive wear strength	+++
Corrosion resistance	+++
Colour of coating	Black-grey

* thickness of coating depends on the application (with respective tolerance of coating thickness +/- 1 μm)

** value of friction against steel (100Cr6), measured in a test of sliding wear Ball/plate tribometer, unlubricated

Applications

- Highly stressed tribological systems
- Machining tools in plastic material or aluminium processing
- Ejector, slide damper and guide bar

TT-DLC is not suited as coating on cavities and shaping contours. We recommend to cover these areas.



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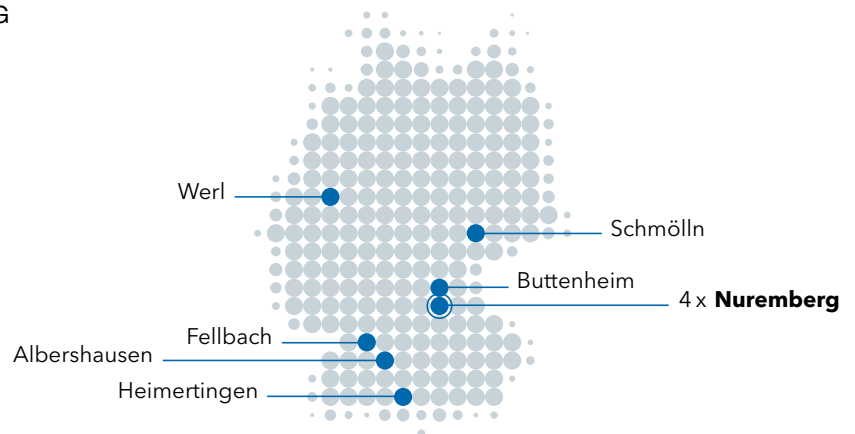
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