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Cutting edge preparation | K-Land  
with elastic bonded diamond tools

# Cutting edge preparation | K-Land

Artifex Dr. Lohmann GmbH & Co. KG in cooperation with Rothenaicher Schleifwerkzeuge has achieved a breakthrough combining super-abrasive tool with unique grinding and polishing capabilities. The two recently developed grinding wheel bondings now enable a highly process-reliable grinding of main cutting edge corrections such as K-Land, as well as the increasingly important step correction for drills.

Cutting edge preparation has long been an established production process for enhancing the performance of all major cutting device technologies. The cutting edge preparation is used after tool grinding to reduce the micro-defects of the cutting edge resulting from this process and to produce a defined cutting edge form adapted to the subsequent cutting process. Tools come finished from the CNC machine, no downstream process costs

## WORKPIECES

Drilling tools (High performance drills and step drills)

## MATERIAL

Hard metal

## MACHINES

All conventional CNC grinding machines (e.g. Schütte, Walter, Reinecker)

## PROCESS DESCRIPTION

Producing of a main cutting edge on negative angle of rake and simultaneous edge rounding

## PROCESS SETUP

Cutting speed $v_c$ :	20 - 30 m/s
Infeed $a_e$ :	5 - 200 $\mu\text{m}$
Feed rate $v_f$ :	15 - 25 mm/min
Cooling lubricant :	Emulsion   Oil

## TOOL

Product :	ARTIFEX DA - R
Bonding :	Special rubber bonding
Hardness :	W (soft)   H (hard)
Grit size:	Diamond 16 $\mu\text{m}$
Delivery form :	1V1 OD $\varnothing$ 100 mm

## BENEFITS of a polished and micro-rounded K-Land

Better layer adhesion and prevention of premature buildup and crater wear on the cutting edge

Increasing edge stability with respect to cutting edge chipping

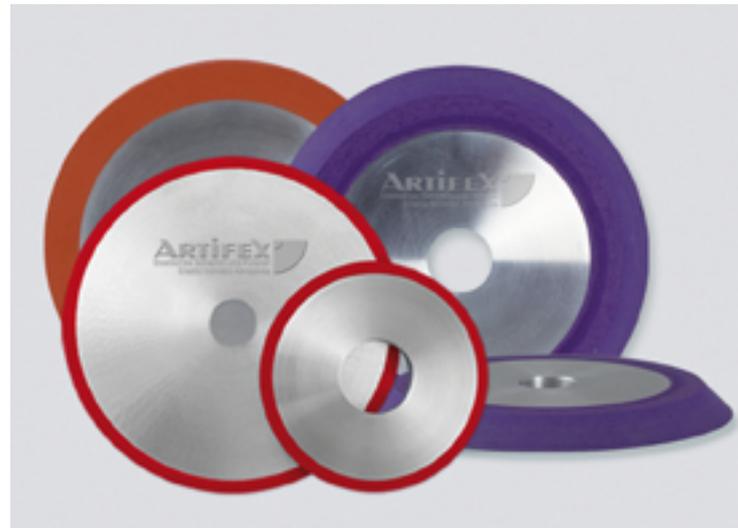
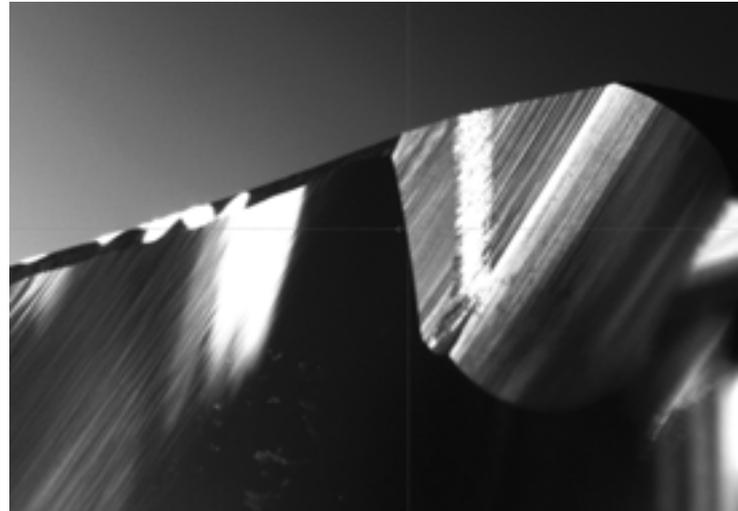
Increasing the life span of the work pieces up to 270 %

The method can be produced with all angles and chamfer widths, depending on the material and application

The method is process-reliable and adjustable

No rounding of the secondary cutting edges

Top surfaces with highly precise micro-rounding on the cutting edges.



## The ARTIFEX promise

We stand for tools that guarantee the highest quality standards. All ARTIFEX products are „Made in Germany“ and their above-average service life speaks for itself.

**Our service:** You have individual requirements, we offer customised solutions regardless of the material, shape or dimensions. We will gladly advise you on your premises.