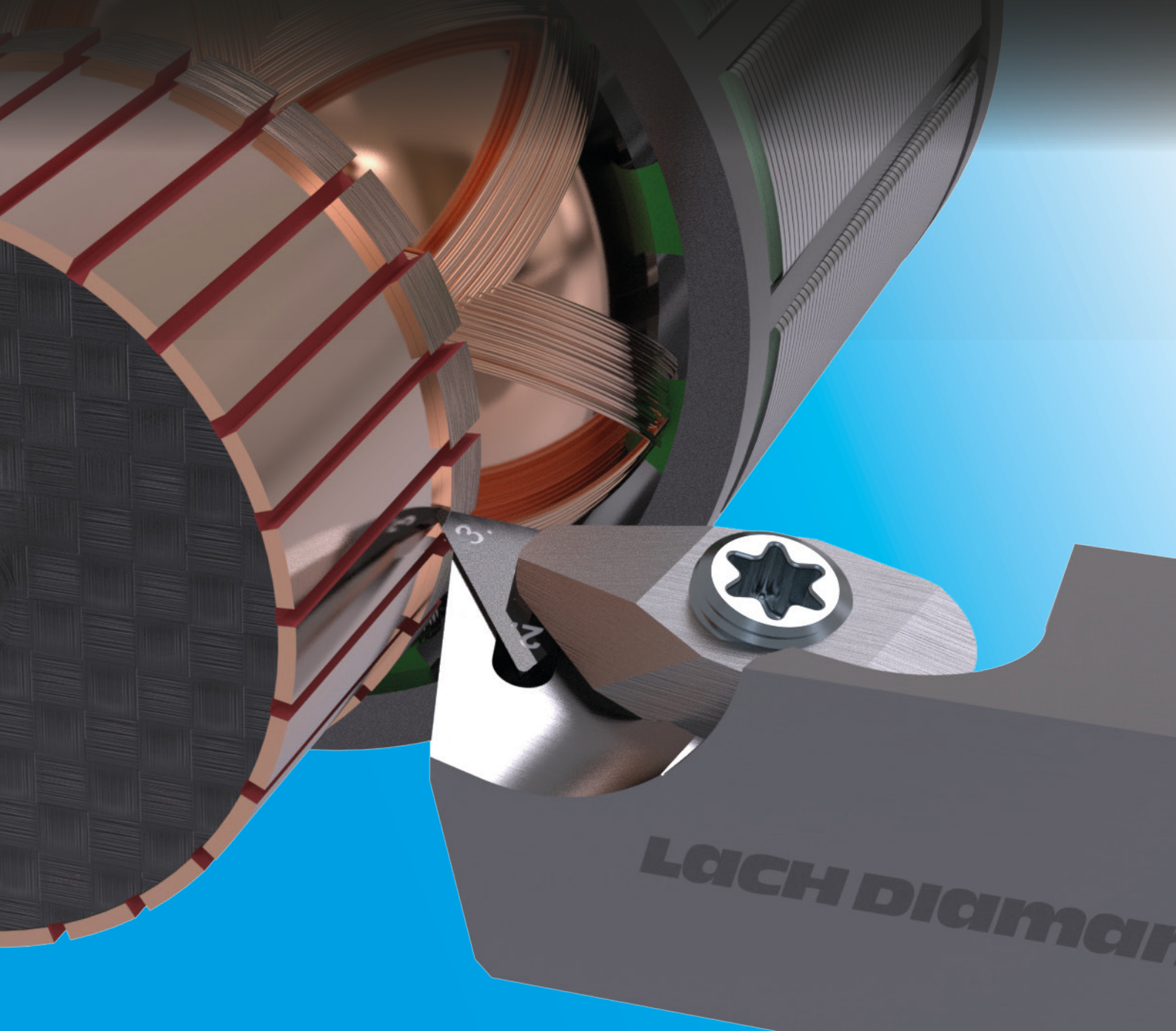


LACH DIAMOND

Commutator Turning

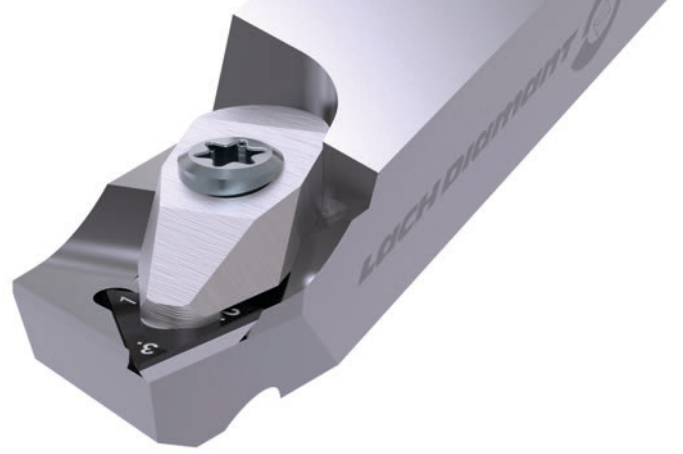
PCD Tools and Wear Parts



for maximum precision and tool life in series production


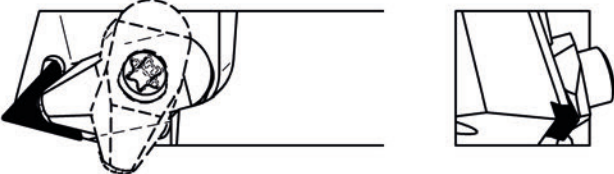


Diamond Experience since 1922

PCD Commutator Turning Tools for Corner Radius Turning



Advantages corner radius turning


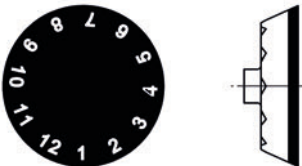
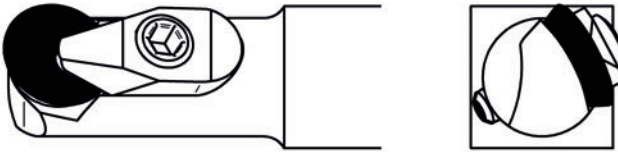
- minimum burr formation
- low cutting forces
- reduced tool wear
- adjustable surface quality

Type	Order Code	Art. No.
TFGN - Cutting insert suitable for tool holder CTBF and CTCF  Corner radius turning (with radius), peel turning (without radius)	D - TFGN - 08 01 02	42 210 257
	D - TFGN - 08 01 03	42 210 551
	D - TFGN - 07 01 02	42 210 698
	D - TFGN - 07 01 03	42 210 810
CTBF - Tool holder with swiveling clamp 	CTBFR - 1212 H08	45 100 183
	CTBFL - 1212 H08	45 100 184
	CTBFR - 1212 H07	45 100 458
	CTBFL - 1212 H07	45 110 457
KFGN - Cutting insert suitable for tool holder CXVF 	D - KFGN - 07 01 02 R	42 211 167
	D - KFGN - 07 01 03 R	42 220 751
	D - KFGN - 07 01 05 R	42 220 750
	D - KFGN - 07 01 02 L	42 211 168
	D - KFGN - 07 01 03 L	42 220 749
	D - KFGN - 07 01 05 L	42 211 166
CXVF - Tool holder with swiveling clamp 	CXVFR - 12 12 F07	45 100 693
	CXVFL - 12 12 F07	45 100 692

PCD Commutator Turning Tools for Peel Turning

Advantages peel turning

- better surface quality (Ra, Rz) at the same parameter setup
- improved access depending on the commutator design

Type	Order Code	Art. No.
CTCF - Tool holder with swiveling clamp 	CTCFN - 1212 H08 - Vario*	45 100 505
	CTCFR - 1212 H08 - 18°	45 100 468
	CTCFL - 1212 H08 - 18°	45 100 469
	CTCFR - 1212 H07 - 18°	45 100 472
	CTCFL - 1212 H07 - 18°	45 100 473
RFGN - Round insert suitable for tool holder CRCF 	D - RFGN - 09 03 00 - 0	42 220 404
	D - RFGN - 09 03 00 - 12	42 210 968
	D - RFGN - 09 03 00 - 16	45 211 031
	D - RFGN - 09 03 00 - 20	42 211 032
CRCF - Tool holder 	CRCFN - 1212 H09 - R - Vario*	45 100 566
	CRCFR - 1212 H09 - R - 20°	45 100 548
	CRCFL - 1212 H09 - R - 20°	45 100 592

* with adjustable angle of attack

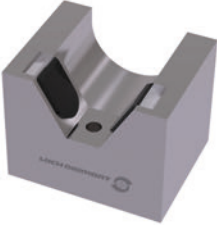
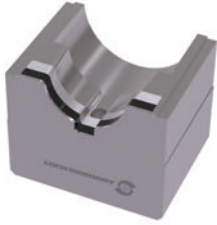


Parameter recommendations for corner radius and peel turning of copper commutators

$a_p = 0.02 - 0.15 \text{ mm}$
 $v_c = 200 - 600 \text{ m/min}$
 $f = 0.04 - 0.08 \text{ mm/rev}$

Brazed turning tools for corner radius as well as for peel turning of copper commutators on request

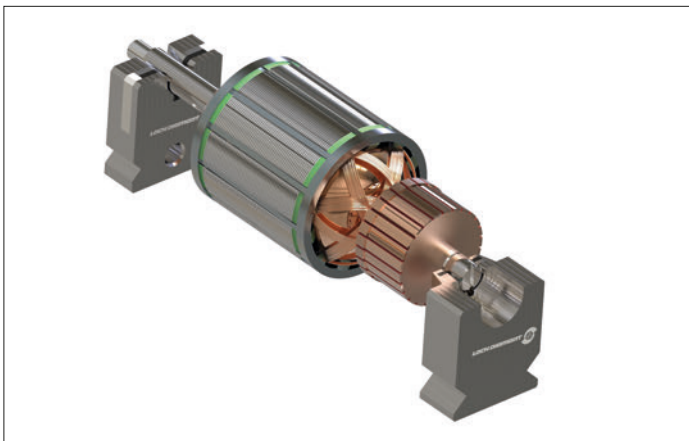
PCD Wear Protection for the Copper Turning Process of Commutators

PCD wear parts have proven to be real cost killers in comparison to carbide, cermet or ceramic parts. The polished surface and the hardness of the diamond results in extreme low wear and minimum friction.

PCD-tipped Prisms	PCD-tipped Bearing Shells (monolithic)
 <p>for maximum flexibility</p> <p>design for different shaft diameters depending on the commutator, e. g. Ø 6-12 mm</p>	 <p>for maximum guide accuracy</p> <p>design for one specific defined shaft diameter according to customer specification</p>
PCD End-stop	PCD-tipped Pivot Bearings (two parts)
 <p>accurate positioning for trouble-free processing</p>	 <p>for maximum guide accuracy</p> <p>design for one specific defined shaft diameter according to customer specification</p>

LACH has manufactured wear parts from experience since 1973

- ◆ Roller-burnishing tools for polishing of centers
- ◆ Measuring probes at the machine during grinding
- ◆ Steady rest blocks and support strips for centerless grinding
- ◆ Work rest blades for the processing of abrasive materials
- ◆ Shock cutters and counter cutters when granulating plastics
- ◆ End gauges when inspecting precision parts
- ◆ Nozzles for high-pressure atomizers
- ... and many more applications



Commutator on bearing shells prepared for copper turning



Peel turning in action

Feel free to ask us. We shall be pleased to advise you and to offer a custom-made solution.

LACH DIAMOND INC.
 4350 Airwest Drive, S.E.
 Grand Rapids, MI, 49512 USA

Phone +1 (616) 698-0101
 Fax +1 (616) 698-0232
www.lachdiamond.com
office@lachdiamond.com

