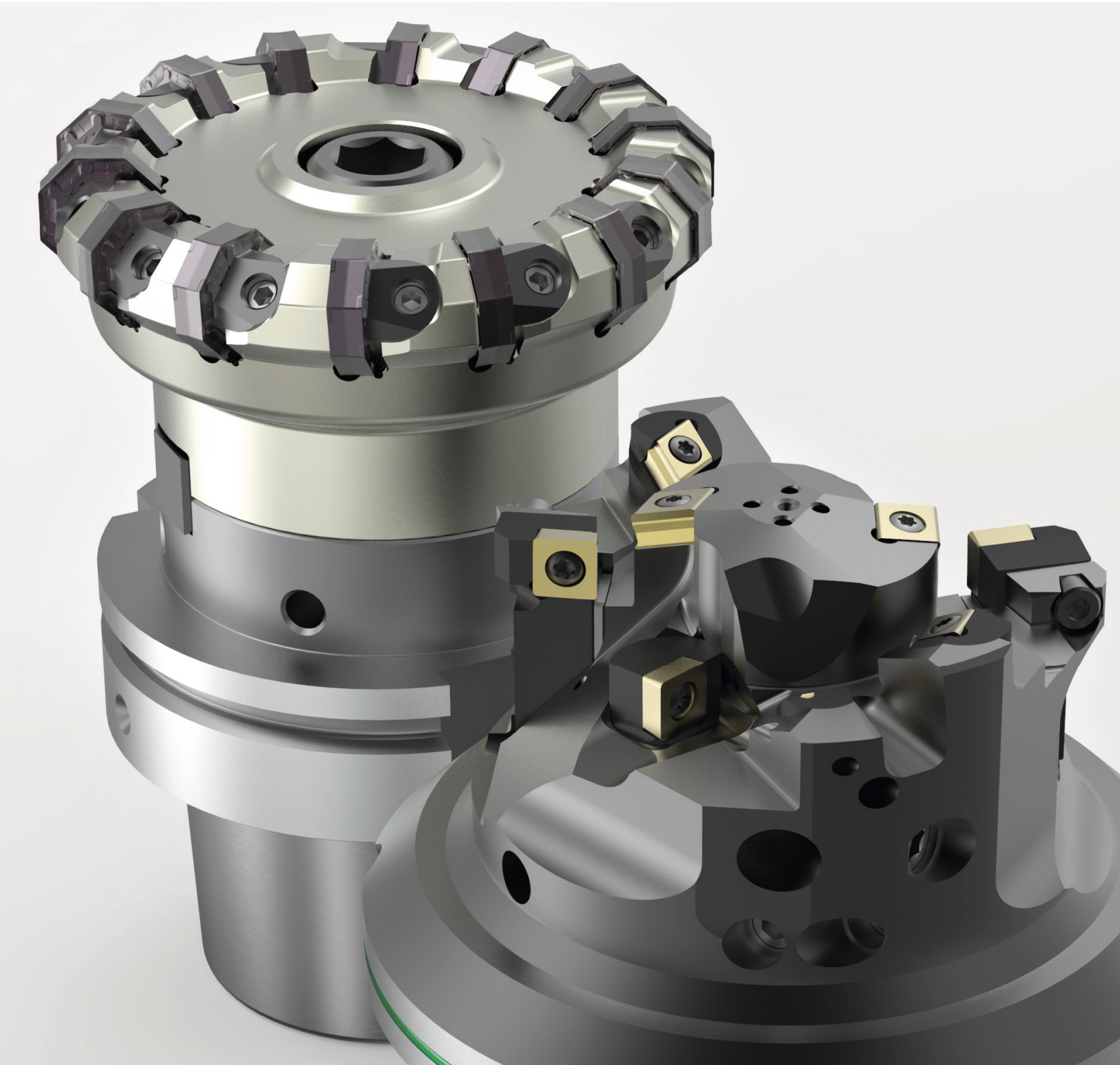
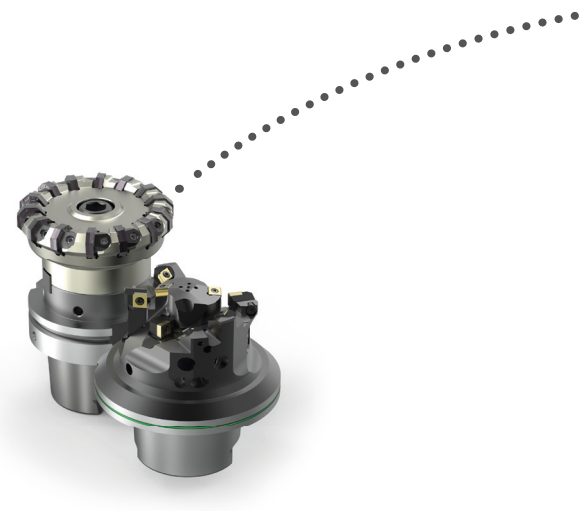
Your technology partner for cost-effective machining

TOOLS WITH ISO ELEMENTS



ISO tools from MAPAL - Leading in technology



The high customer requirements are met by MAPAL from the design to the manufacture of the tools by means of extensive know-how and the latest technology. For this reason tools with ISO elements from MAPAL are leading both in the custom sector and standard sector.

The combination of continuous product innovations and a wealth of experience from more than 20 years is the basis of the tools' high performance – with the objective of achieving higher part qualities, better tool lives and increased productivity.

PRECISION, PERFORMANCE AND INNOVATIVE TECHNOLOGY

Process solutions

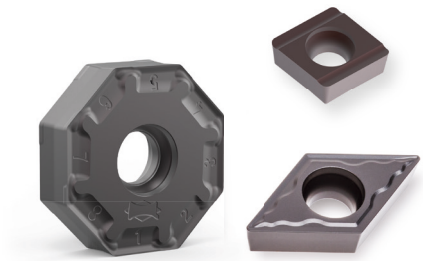
Solutions for complete workpieces

- Reduced machining costs due to complete machining tools
- Intelligent engineering guarantees process reliability and straightforward handling
- Fast and flexible on-site support

Standard programme

Broad standard programme of tools and indexable inserts

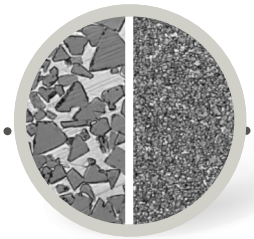
- High-performance programme of standard milling cutters
- Precise, cost-effective indexable inserts



Indexable inserts

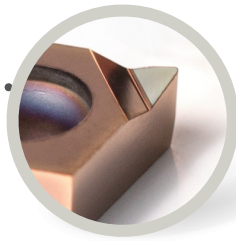
Inserts for every requirement

- Radial and tangential
- Pressed inserts for medium machining to roughing
- Ground inserts for finish machining
- PcBN and PCD tipping



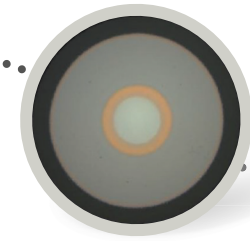
Substrate

Depending on the cobalt content and the particle size, a carbide grade is characterised by a particularly high hardness, nominal bending strength or ductility.



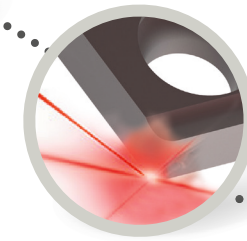
Geometry

Micro-geometry and macro-geometry for instance the chip guiding stage and the cutting edge design are matched precisely to the related machining task.



Coating

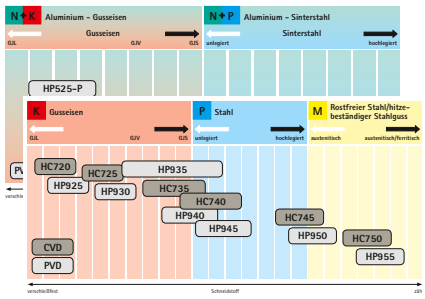
Depending on the application, it is possible to vary between extremely wear-resistant CVD coating and ductile PVD coatings.

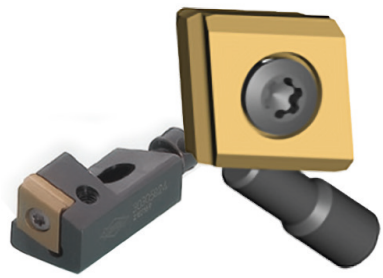


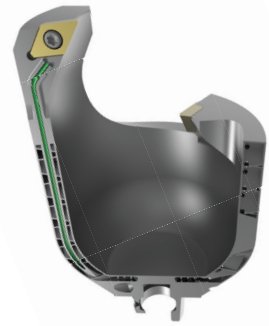
Post-treatment

The tool life of the inserts can be increased reproducibly by means of specific post-treatment.

To develop an optimal cutting material, the factors substrate, macro-geometry and micro-geometry as well as coating and post-treatment must all be considered and matched to each other.







Complete cutting material series

Large range between wear resistance and ductility

- Straightforward, clear selection of the optimal cutting material
- PVD and CVD coating

Exact adjustment

Adjusting elements for high tolerance requirements

- Adjusting systems developed specifically for ISO inserts
- Very accurate and easy to use setting feature
- ISO cartridge

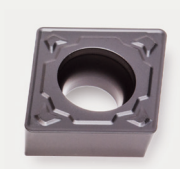
Lightweight design

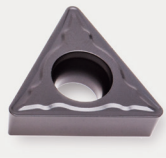
Complex geometries using additive manufacturing

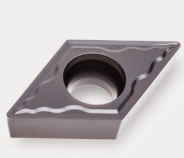
- Reduction of the weight of the tools
- Optimised coolant supply
- Internal balancing

TURNING AND BORING
Positive radial inserts


SCMT, SPMT

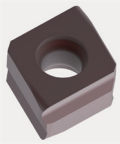

CCMT

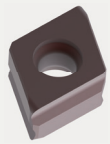

TCMT

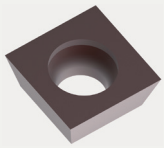

DCMT

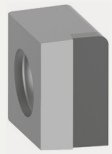

VCMT

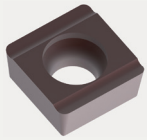
BORING

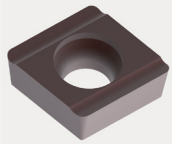

CTHQ, CTNQ


FTHQ, FTNQ


STHE, STHD


PCD/PcBN-tipped


SCHT, SPHT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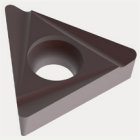
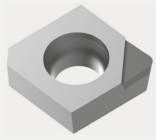
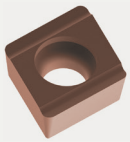

TCHT


PCD/PcBN-tipped

BORING
Mixed machining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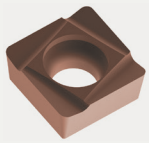
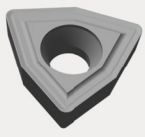
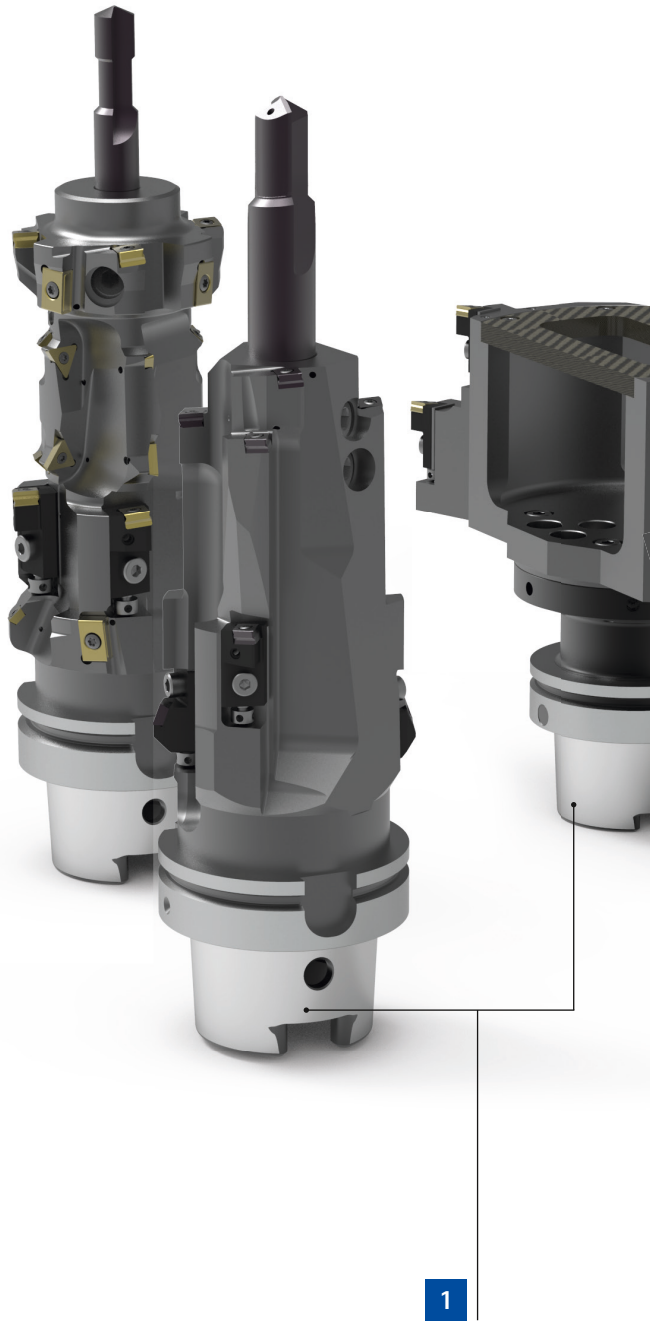

SCHT

DRILLING FROM THE SOLID

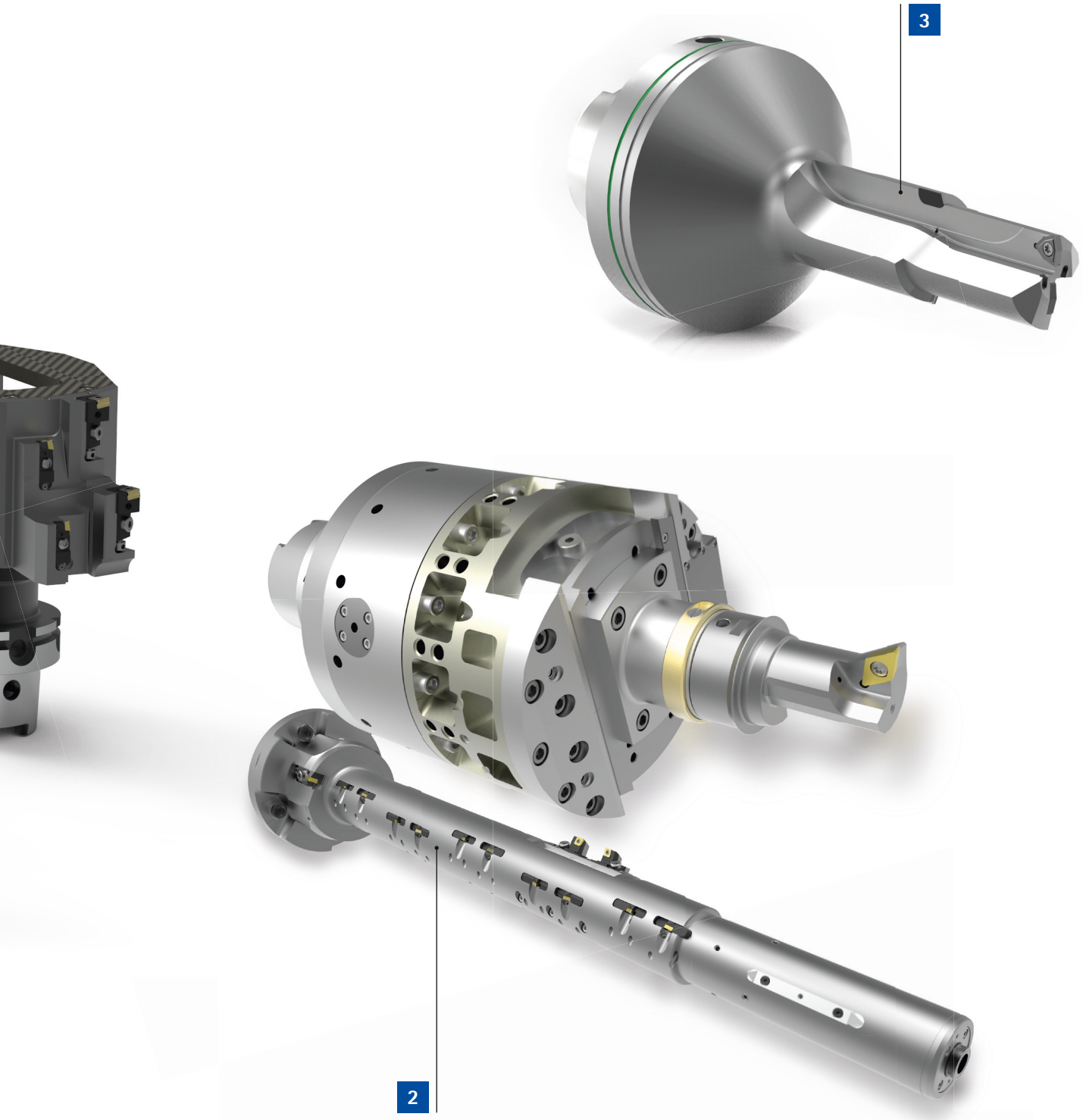

WOGT



1 Innovative boring

Tools in the standard and custom area with radial and tangential indexable inserts, also designed as combination hybrid tool.

Innovative cutting mater



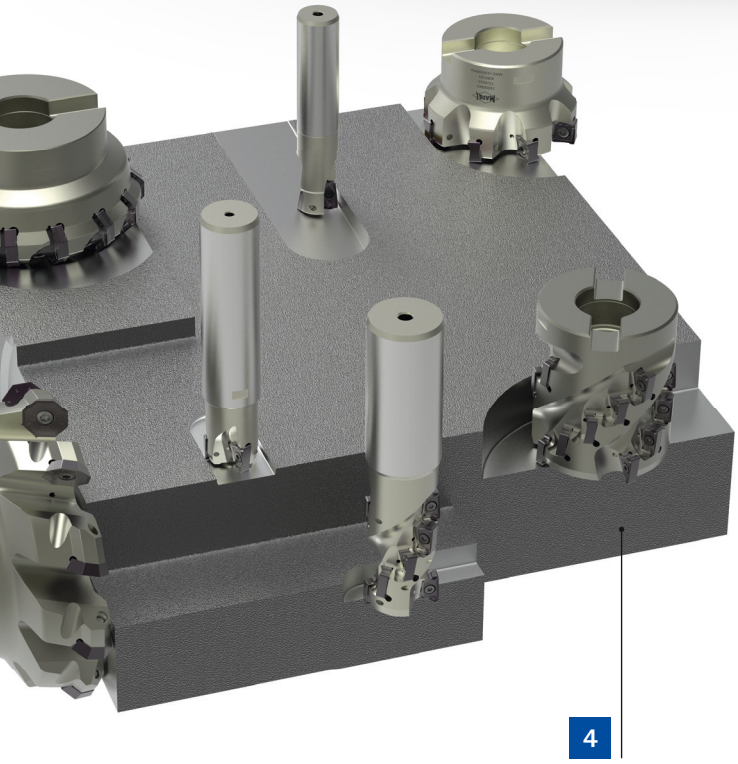
2 Actuating tools and line boring bars

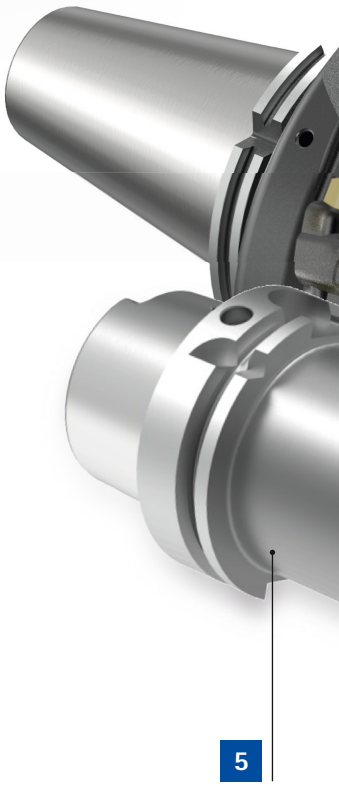
Tools for complex contours with highest rationalisation and optimisation potential.

3 Drilling aluminium from the solid

Indexable insert from CVD diamond coated carbide. Multi-stepped with indexable inserts or PCD finishing step possible.

ials meet advanced tools



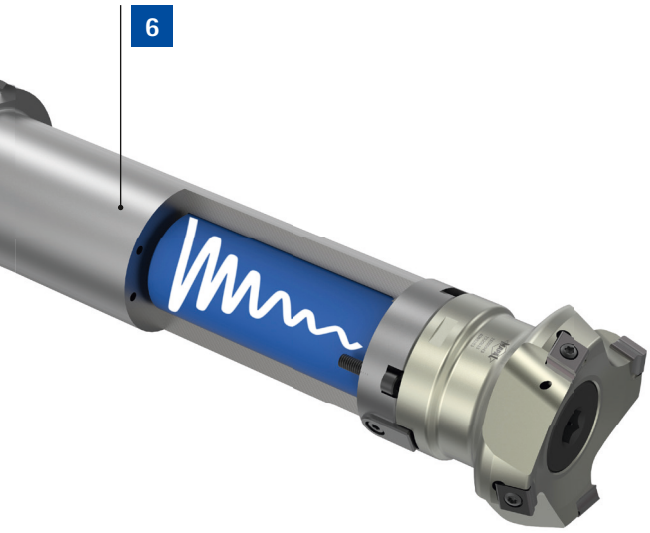


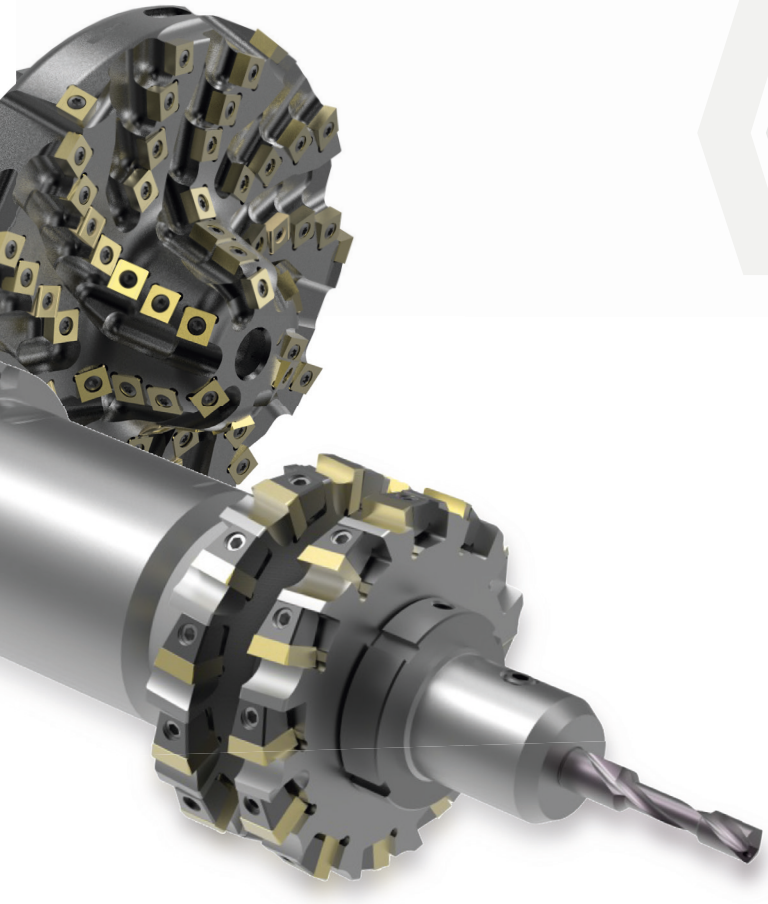
4 Cost-effective milling

Radial and tangential indexable inserts in standard and custom area.

5 Custom and combination milling cutters

Matched to the machining process for optimal cycle times. Reduction of tool changes and therefore chip-to-chip times.



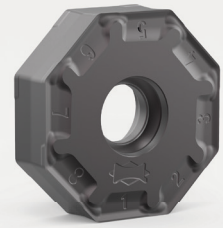


6 Vibration damping system

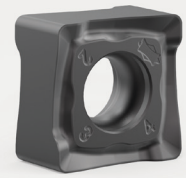
Standard adapter for all tool systems and custom solutions, optimally matched to every application and tool.

MILLING
Radial indexable inserts

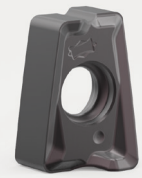

OFMT


ONKU

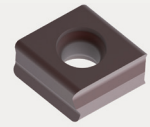

SDKT

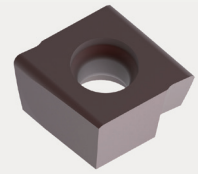

SNMU


AOKT

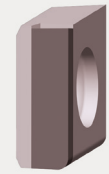

ANMU

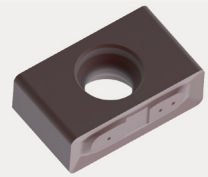
MILLING
Tangential indexable inserts


CTHQ


CTHH


PCD/PcBN-tipped


PCD/PcBN-tipped


LTHU

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