

More information on:

www.ceratizit.com/hdt

360°
Degrees of freedom

Different turning operations

with only one tool

Variable approach angles

outstanding chip control

Multi-award-winning:



High Dynamic Turning with FreeTurn Tools **THE REVOLUTION IN TURNING**

CERATIZIT is a high-tech engineering group specialised in tooling and hard material technologies.

Tooling the Future

www.ceratizit.com

TEAM CUTTING TOOLS

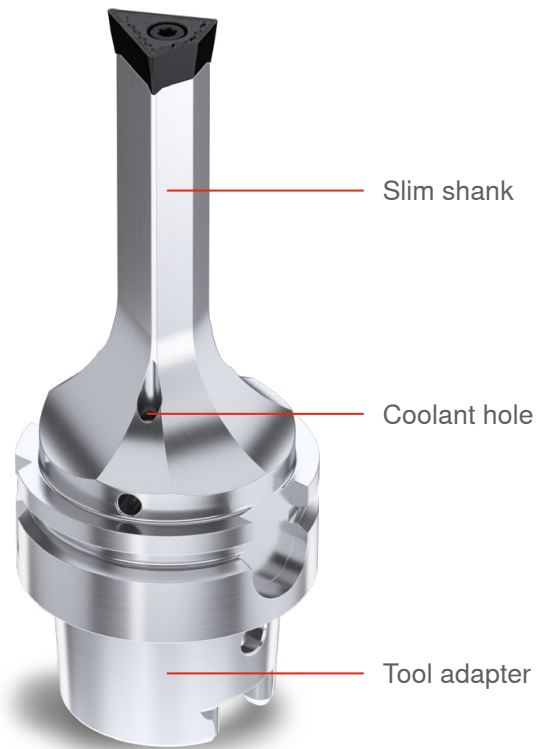


High Dynamic Turning (HDT)

With High Dynamic Turning, HDT for short, and the dynamic FreeTurn turning tools, CERATIZIT is turning the conventional method of turning completely on its head. All familiar turning operations such as roughing, finishing, contour turning, facing and longitudinal turning can now be completed using just one tool.



Conventional application:
5 tools



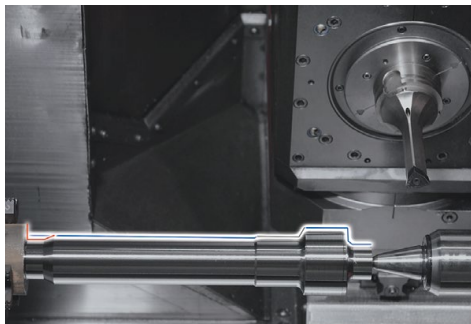
Application with FreeTurn:
1 tool

Time comparison

Material 42CrMo4

Dynamic cutting parameters in the process based on catalogue cutting data

Roughing

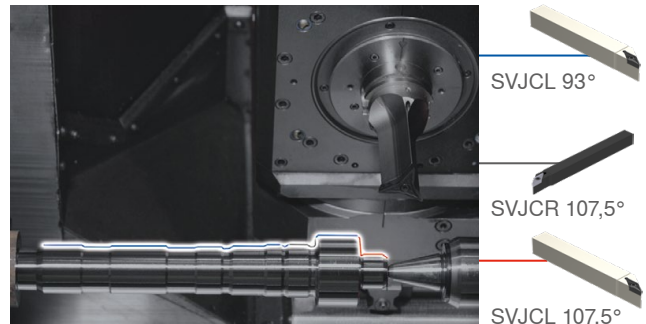


DCLNL 95°

DDJNR 93°

DVJNL 93°

Finishing



SVJCL 93°

SVJCR 107,5°

SVJCL 107,5°

Conventional production

Conventional production time for a single part with six different tools

= 3:32 minutes

Production with FreeTurn

Production time for a single part with the HDT

= 2:50 minutes

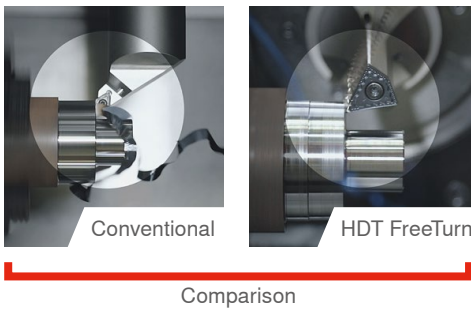
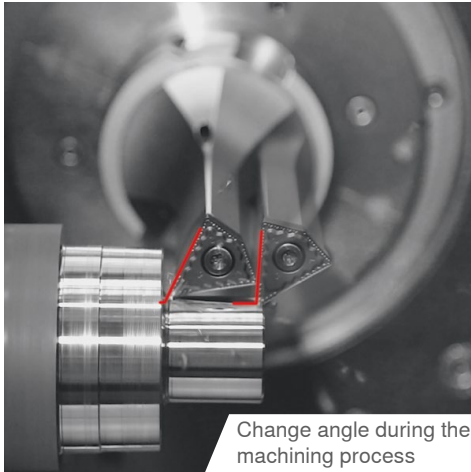
25%
Time savings

Follow our video: A time comparison between conventional machining and the HDT. You'll be amazed!



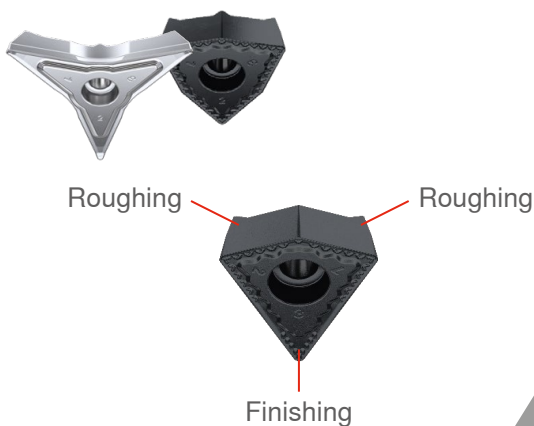
Variable approach angle

- ▲ Can be changed during machining
- ▲ Adjustable feed rates
- ▲ Perfect chip control
- ▲ Dynamic turning in all directions
- ▲ Pull and push cut



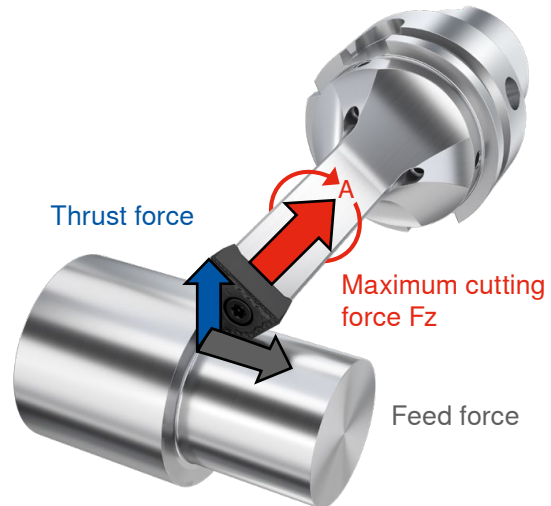
Flexibility

- ▲ Turning with just one tool
- ▲ Huge savings on tool types
- ▲ No tool changes = huge time savings
- ▲ Indexable inserts with up to three ISO geometries can be used on one holder
- ▲ An indexable insert with multiple cutters can consist of different point angles, flanging radii, chip breakers, coatings and cutting materials and can be customised for use.



Stability

- ▲ The main force occurring (cutting force F_z) is directed through the tool into the spindle
- ▲ Optimal force distribution



Productivity

- ▲ Almost all workpiece contours can be machined
- ▲ 40% higher feed rate value
- ▲ Up to 90% fewer empty runs
- ▲ Adjustable feed rates during the process
- ▲ Improved surface quality thanks to ideal adjustment of the approach angle
- ▲ The versatility of the FreeTurn means fewer tool changes
- ▲ Fewer tool spaces required in the machine

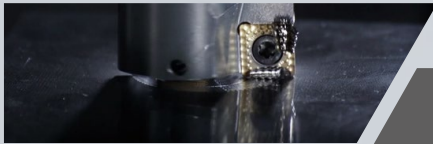


UNITED. EXPERIENCED. METAL CUTTING.



**SPECIALIST FOR INDEXABLE INSERT TOOLS
FOR TURNING, MILLING AND GROOVING**

The product brand CERATIZIT stands for high-quality indexable insert tools. The products are characterized by their high quality and contain the DNA of many years of experience in the development and production of carbide tools.



**THE QUALITY LABEL FOR
EFFICIENT BORE PRODUCTION**

High-precision drilling, reaming, countersinking and boring is a matter of expertise: efficient tooling solutions for drilling and mechatronic tools are therefore part of the KOMET brand name.



**EXPERTS FOR ROTATING TOOLS,
TOOL HOLDERS AND CLAMPING SOLUTIONS**

WNT is synonymous with product diversity: solid carbide and HSS rotating tools, tool holders and efficient workholding solutions are all part of this brand.



**CUTTING TOOLS
FOR THE AEROSPACE INDUSTRY**

Solid carbide drills specially developed for the aerospace industry bear the product name KLENK. The highly specialized products are specifically designed for machining lightweight materials.