

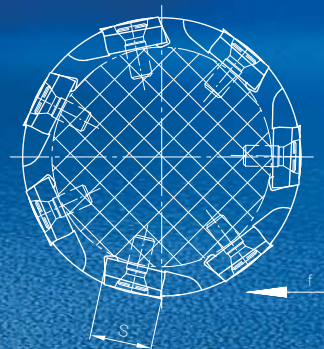
Tangential inserts



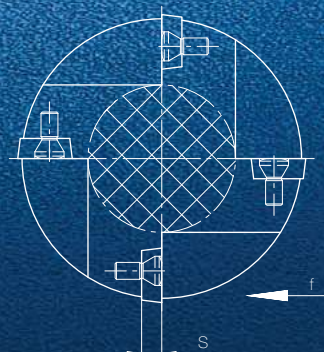
HOLLFELDER
GÜHRING
CUTTING TOOLS



Tangential inserts

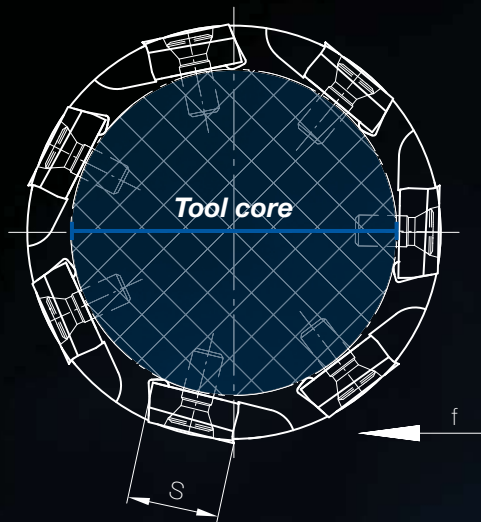


***Conventional
indexable inserts***

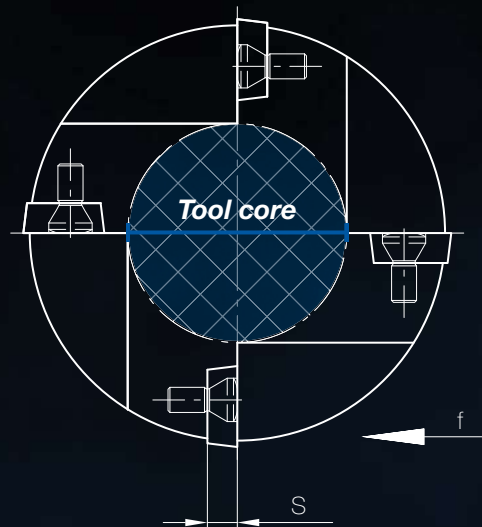


Tools with tangentially mounted indexable inserts

Tangential inserts



Conventional indexable inserts



➤ **maximum carbide cross-section enables high feed rates**

Tangential inserts have a fundamentally different geometry to the cutting edges of conventional indexable inserts. The carbide cross-section in the cutting direction is considerably larger, protecting the insert seat in the event of wear or churning.

➤ **larger core cross-section for high process reliability**

Having the indexable inserts positioned tangentially on the outer edge of the base body enables the size and stability of the core to remain unchanged, which increases the stability and precision of the tool. This decreases vibrations, resulting in a high level of process reliability and precise work results.

➤ **more cutting edges and tighter spacing between them**

The tangential positioning enables a higher number of cutting edges per tool, which increases the metal removal rate of each. Tighter cutting edge spacing allows the cutting forces to be distributed precisely across the various cutting edges and minimises wear.

➤ **large corner radii can be achieved**

➤ **highly positive cutting geometries are possible**

➤ **the tangential inserts are available in a variety of cutting materials and geometries**

Motor block

Circular milling cutter

tight cutting edge spacing

various cutting materials can be used

with a stable core cross-section, this robust solution can achieve high feed rates

Machining example

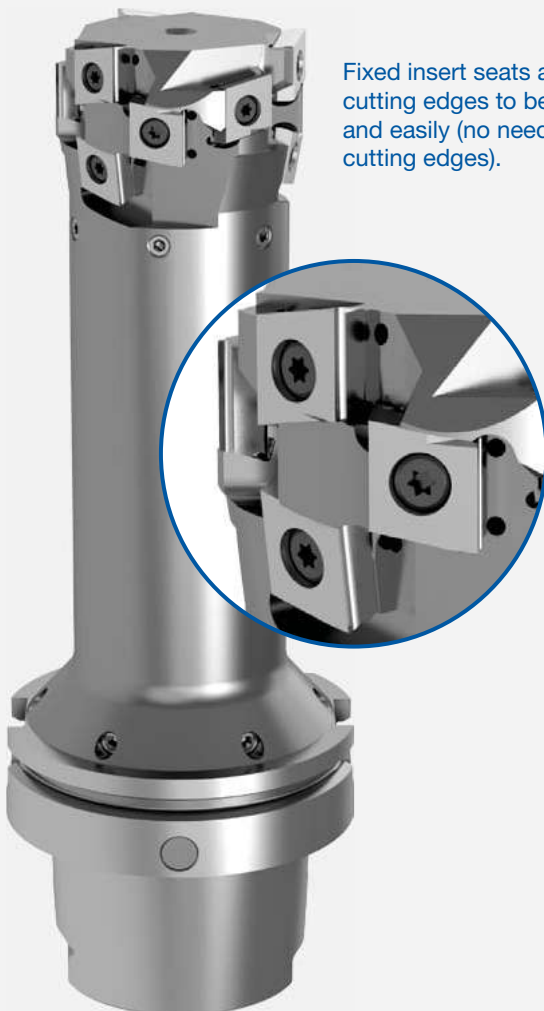
Circular milling a clearance cut for the honing tool into the cylinder bore

Material: AlSi9 / GG25 (cast iron liner in aluminium component)

Cutting material: PCD / carbide with PROTON coating

Fixed insert seats allow individual cutting edges to be changed quickly and easily (no need to adjust the cutting edges).

Tangentially mounted indexable inserts with double positive cutting geometry.



Turbocharger housing

Axial grooving tool

no damage to the cutter body if an insert breaks

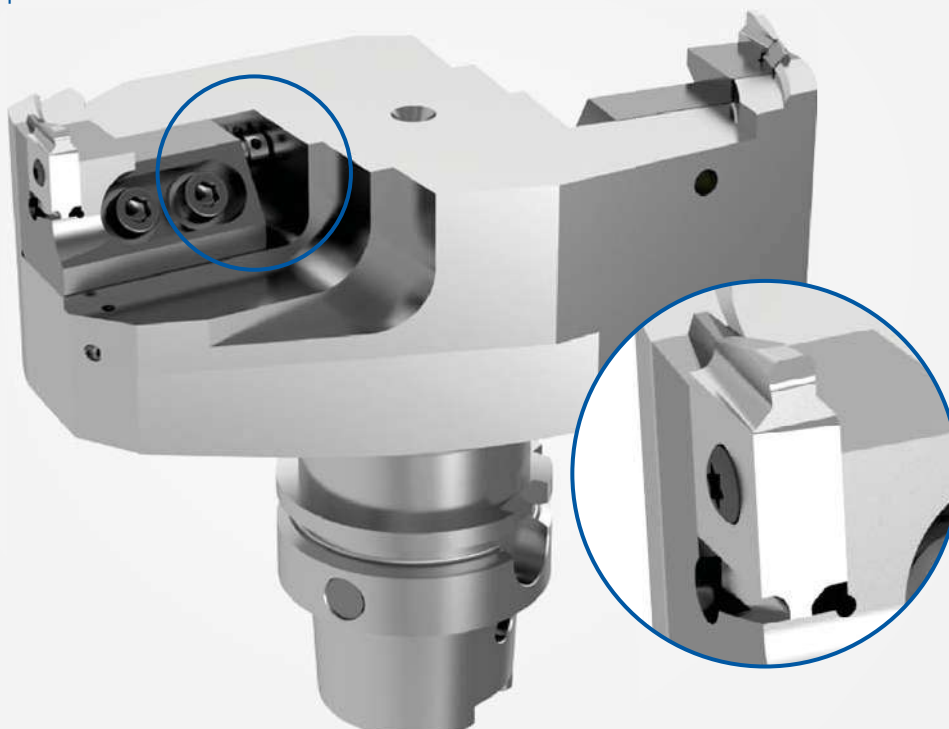
maximum carbide cross-section enables high feed rates

Machining example

Producing an axial groove in the flange face

Material: 1.4848, GX40CrNiSi25-20 | Cutting material: carbide with SIGNUM coating

The machining diameter can be precisely adjusted via the short indexable insert holder. If required, the large adjustment range enables a number of cutting passes.



Profile inserts with two usable cutting edges are mounted tangentially.

Brake calliper

Pre-machining tool

stable process

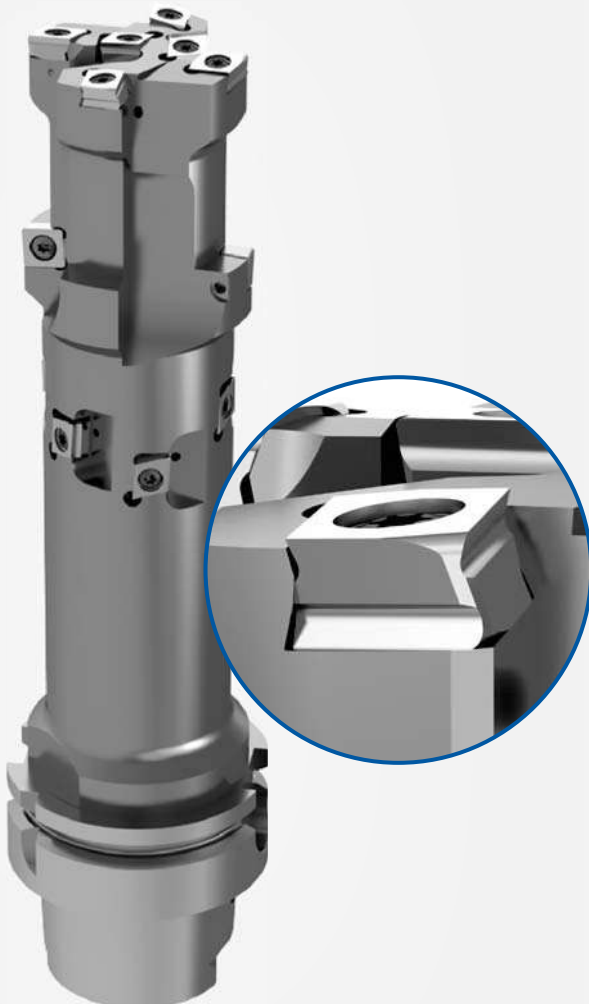
stable core cross-section

maximum carbide cross-section

Machining example

Pre-machining the piston bore

Material: GG25 | Cutting material: carbide with PROTON coating



Tangential inserts with **four cutting edges** and double positive cutting geometry.



Shaft

OD turning tool

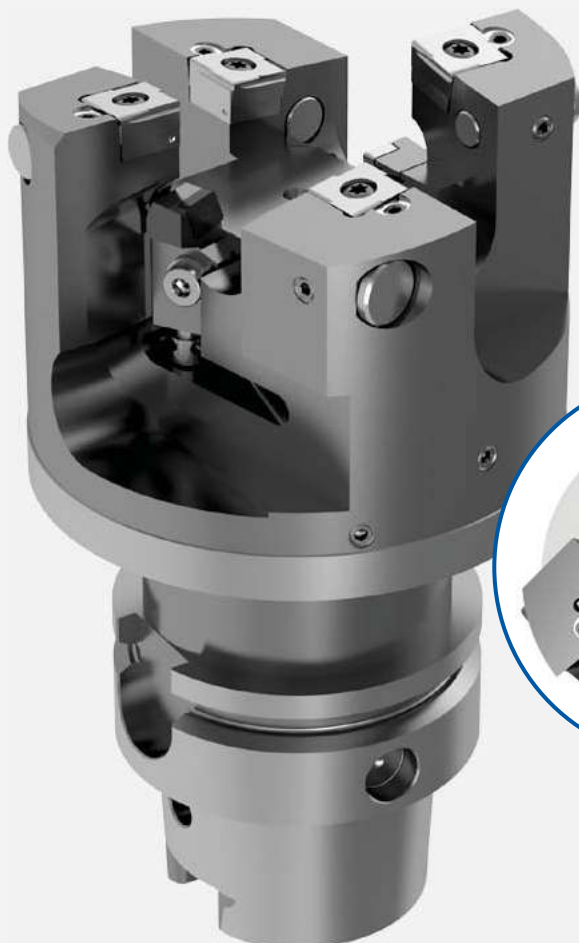
the diameter can be set with micrometre precision

efficient combination tool for processing diameters and machining chamfers

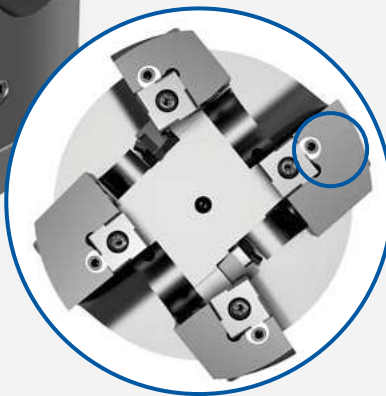
Machining example

Turning multiple diameters

Material: 1.4301, stainless steel | Cutting material: carbide with SIGNUM coating



Stationary tool
for turning multiple
diameters.



Tangential insert with **four cutting edges** that can be adjusted with micrometre precision.



Cross member

Gang milling cutter

large radii can be machined

short machining times as a result of multiple operations being combined in one tool

long service life thanks to PCD-coated cutting inserts

Machining example

Milling connection taps in a single step

Material: AISi9 | Cutting material: PCD



The gang milling cutter combines the double-sided milling of two taps.

Tangential inserts with PCD cutting edges ensure a long service life and short machining times.



HOLLFELDER-GÜHRING CUTTING TOOLS
Wertachstrasse 27 • D - 90451 Nürnberg • Germany
Phone + 49 (0) 911 / 64 19 22-0 • Fax + 49 (0) 911 / 64 19 22-10
E-mail: info@hollfelder-guehring.de • Internet: www.hollfelder-guehring.de