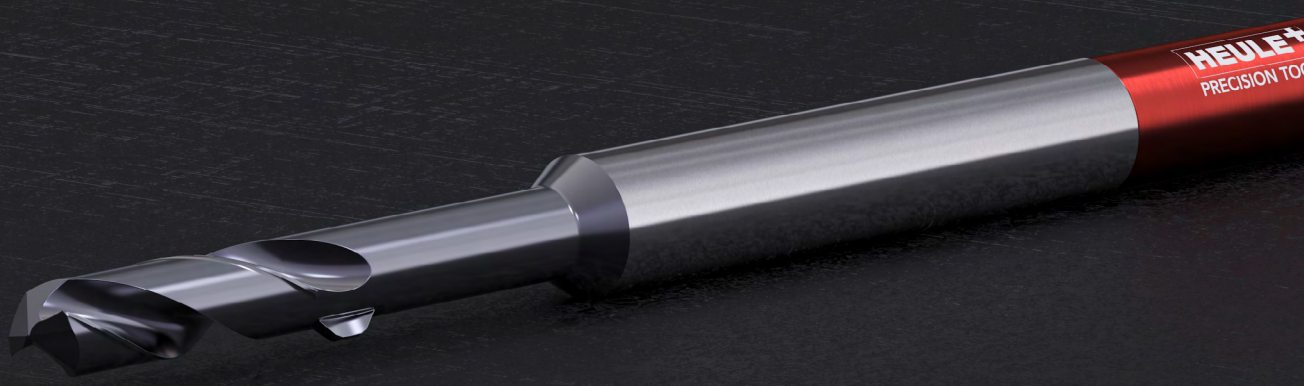
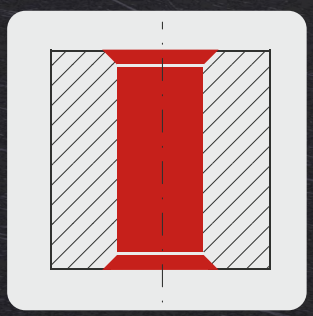
NEW!

HEULE+
PRECISION TOOLS



DCC

Solid carbide drill combined with chamfering front and back
for bore-Ø 4.0 mm – 10.0 mm



ONE OPERATION

product development in progress

ONE OPERATION – Drilling and Chamfering combined

Economical drilling and chamfering on both sides of the workpiece in one operation for bore-Ø 4.0 mm – 10.0 mm

One single pass of the tool and the bore is completely machined. The DCC creates a bore and then chamfers both bore edges front and back. The machining operation is carried out without turning the workpiece or changing tooling, which results in a reduction of process times and costs.

A solid carbide drill body is used in combination with the standard HEULE SNAP chamfering system. Since the drill bit and the tool body are manufactured as one piece, very precise results are achieved. In addition, high cutting speeds/feeds are possible.

Operating Principle and Applications

The DCC combines drilling with chamfering. The solid carbide tool ensures the best concentricity and drilling performance. The SNAP system of HEULE also creates a high-quality chamfer on the front and back bore edges.

The DCC can be used for diameters from 4.0 mm to 10.0 mm, covering drilling depths of up to 2.5 x drill diameter.

The integrated chamfering blades are available for forward and backward chamfering or backward chamfering only. Depending on the application, a chamfering capacity of up to 0.8 mm is possible. The blades and drills are designed specifically for the application. If larger chamfers are required for forward chamfering, countersinking features can be integrated into the tool.

- The DCC is used for machining even and slightly uneven bore edges
- It is extremely reliable for CNC operation and ensures high cost-effectiveness and process reliability
- The defined cutting process with a ground carbide blade ensures complete edge breakage - the edge is completely burr-free
- Easy replaceable carbide chamfering blades with material-specific coatings
- Quick setup and reduced downtimes due to easy handling

Image 1: Each DCC is individually designed for the customer's application and thus offers maximum performance.

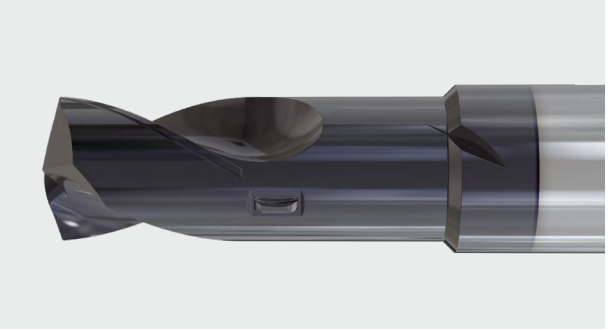


Image 2: If a larger chamfer is required, an additional stepped cutting edge can be integrated.

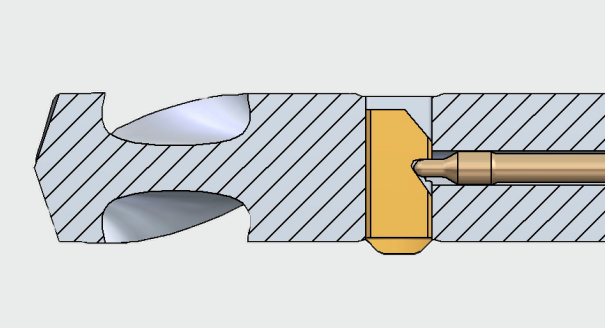
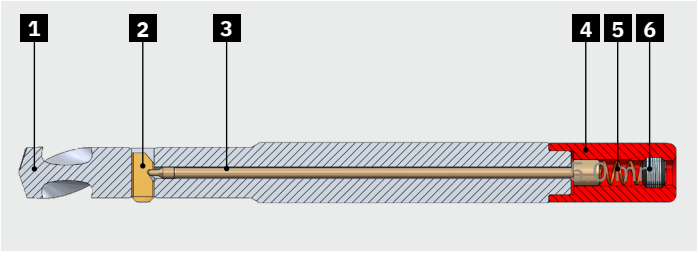


Image 3: The mechanical, spring-loaded operating principle ensures a reliable process and a simple blade change.

Tool Concept



1 Carbide tool body
2 Blade
3 Control bolt
4 Sleeve
5 Spring
6 Clamping screw

The DCC tool has a carbide drill body. The blade for front and back chamfering is based on SNAP technology and made of coated carbide.

The mechanical, spring-loaded operating principle ensures a reliable process and simple blade change.

Application example

Workpiece: Bore-Ø 6.0 mm / height 7.5 mm drilled & chamfered on both sides / 42CrMo4S
Machine: CNC Mori Seiki
Old: Drill tool + countersinking tool + manual turning (workpiece)
New: DCC

Cycle time reduction: **74%**

Savings:
- No need to rotate the workpiece
- No need to change tools
- Only 1 instead of 2 tools in the machine
- Simpler tool management
- Elimination of manual machining

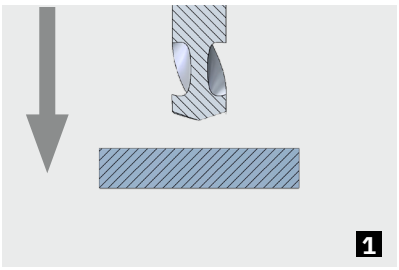
Your tool solution

Do you have an application for the DCC? We would be happy to check the feasibility and find a solution for you.

Contact

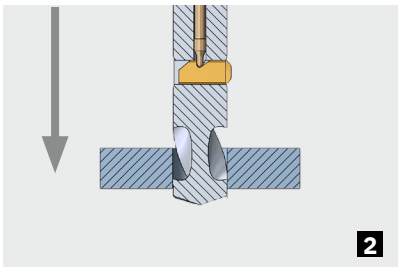
www.heule.com/en/contact

Sequence of Operation / Programming

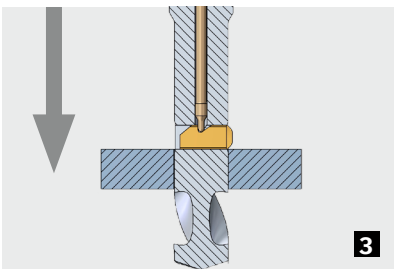


Rapid traverse of the tool to just above the surface of the workpiece.

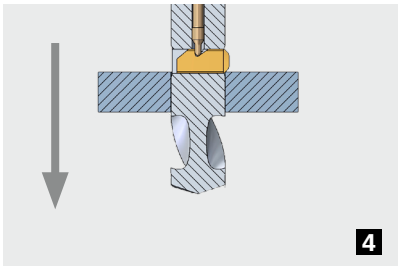
Pay attention to the clearance distance.



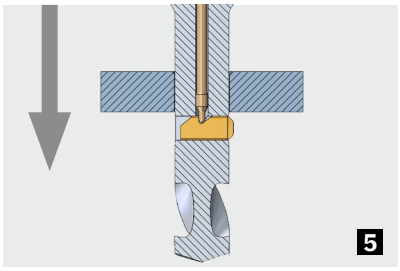
In working feed the bore is produced. Continue in working feed until the drill insert is completely clear of the bore.



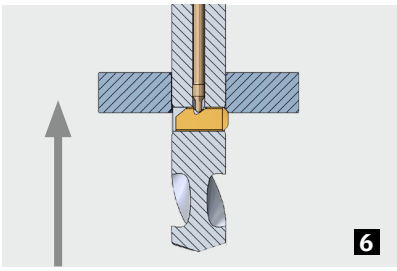
In rapid feed the SNAP blade is positioned just above the surface of the workpiece/bore.



In working feed the chamfer is generated. Continue in working feed until the blade is completely retracted into the tool body.



The tool can now travel through the hole in rapid feed until the SNAP blade is clear of the back edge of the bore and fully extended.



The back chamfer is machined in working feed (no change of spindel direction). As soon as the SNAP blade is completely retracted into the tool, the tool can travel out of the bore in rapid feed backward.

Onsite worldwide

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