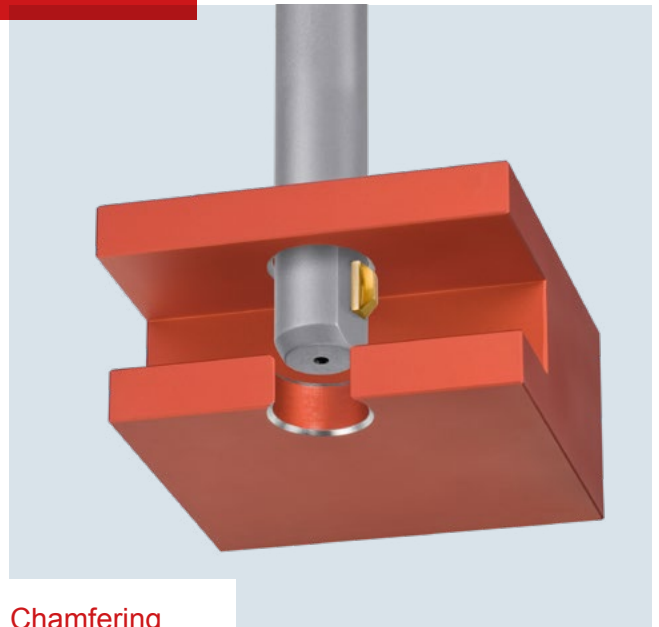
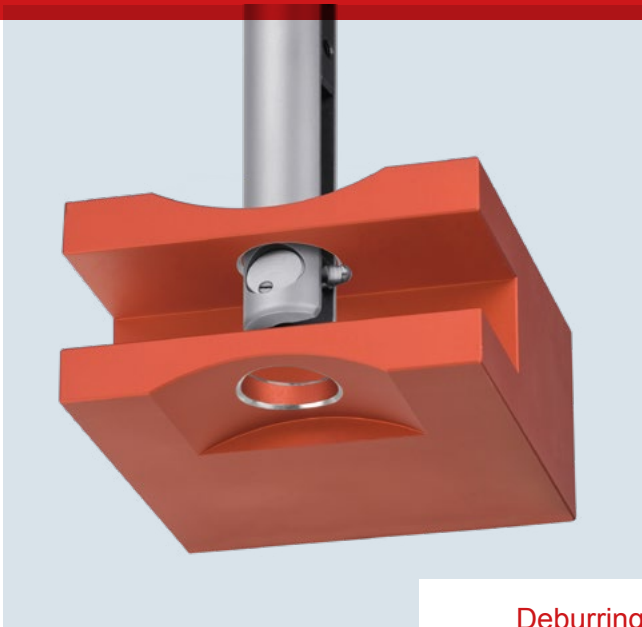
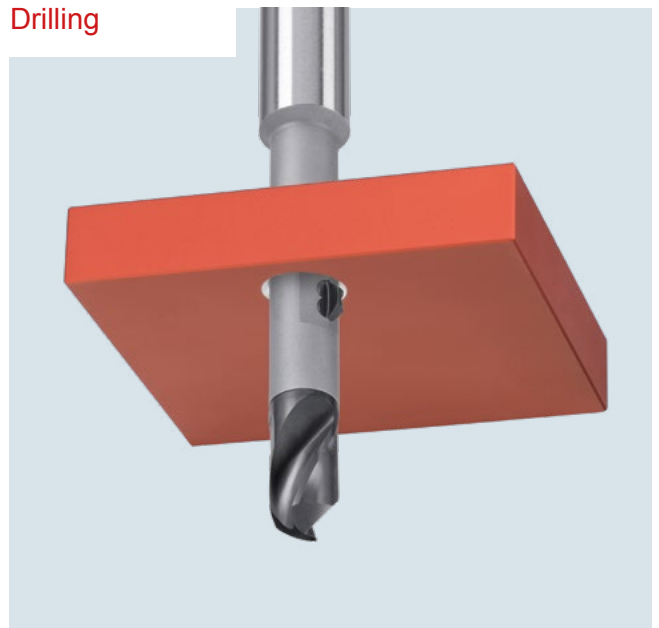
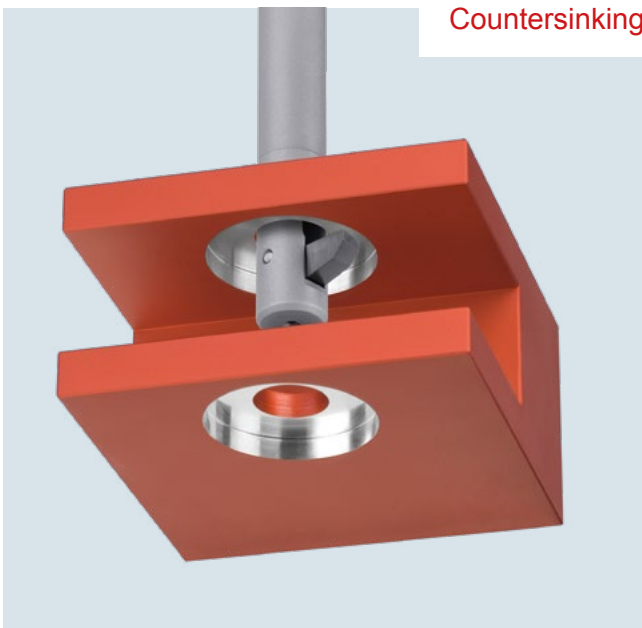


ONE OPERATION

For Front and Back Deburring, Chamfering, Countersinking and Drilling.



Deburring Chamfering
Countersinking Drilling

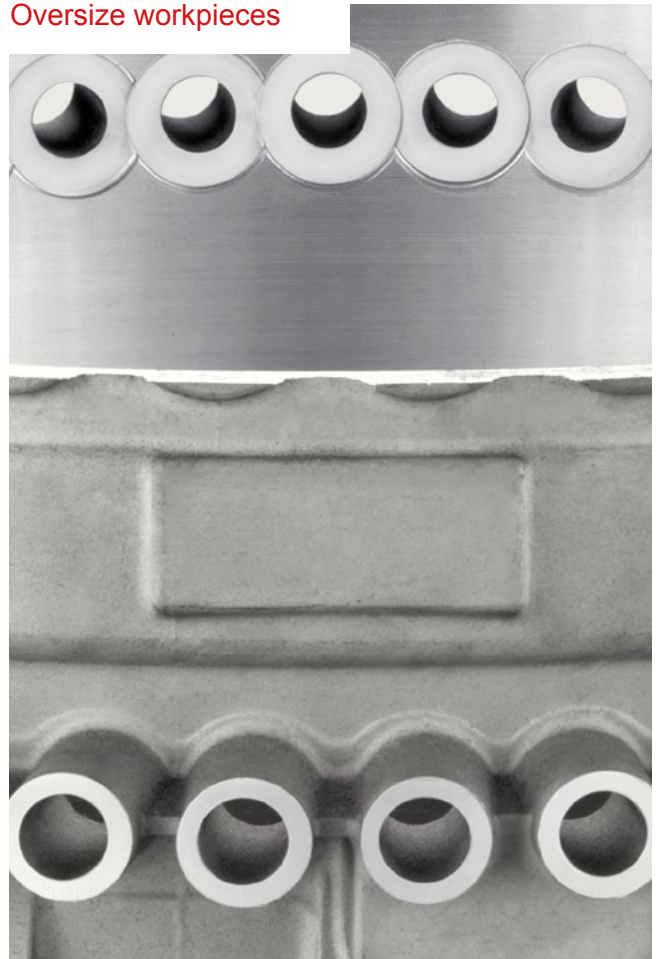




Large production runs
Complex materials



Inaccessible work areas
Oversize workpieces





Our Focus:

Cutting your production costs.

HEULE – for good reason.

What ultimately counts is your bottom line. Front and back machining of bore edges in ONE OPERATION without having to turn the workpiece will enable you to reduce your production times and eliminate the entire deburring operation outside of the machine.

But there is more: **optimization of process times** is only one element. All our tools are made of hardened tool steel and fitted with exchangeable carbide blades, specifically designed for use on CNC machine tools but can also be operated manually. The coatings and the geometries of the blades are matched to the material that is to be machined. This ensures **extended blade life** and a long life cycle of the tools.

High process reliability is the result of reduction to the essentials and of optimizing details.

Simple tool handling saves money and helps to avoid faulty pre-settings. An example: The changing of a blade by hand in fewer than 5 seconds only – in the machine, without further aids, without pre-settings, without program changes. Always as simple as possible!

With a **wide range of standard items stocked and ready to ship**, we make sure you have what you need quickly. The standard range is listed on our website.

Half of our turnover is generated by custom-designed tools for customers having specific needs. This proves our **strength as solution provider** and confirms HEULE's true innovation power in the deburring and back spotfacing field.

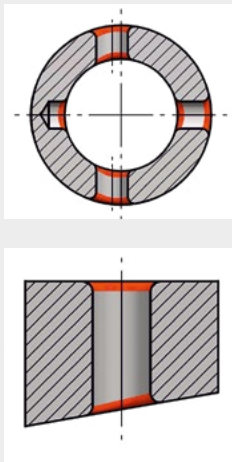
What the HEULE name stands for:

- Continuous innovation focused on back bore machining
- Assured quality (ISO 9001)
- Family-based company culture
- Active and applied environmental awareness
- Solid financial management

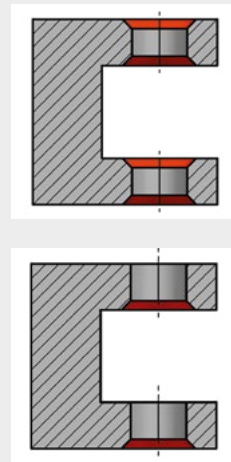
The core focus of our innovations: Back bore machining.

Application

Deburring



Chamfering



Characteristics

Removes burrs radially from even and uneven bore edges without requiring the workpiece to be turned. Even bore machining forwards and backwards. Manually as well as automatic operation. High efficiency and process reliability.

- Radial deburring of even and uneven bore edges
- Sloping surfaces of up to 30° max.
- Typical deburr size of 0.2-1.4 mm
- Usable for all materials, from aluminium to nickel alloys
- Available from Ø1.0 mm and larger

Removes burrs radially from even bore edges without requiring the workpiece to be turned. Even bore machining forwards and backwards. Particularly suitable for automatic operation with high volume. High efficiency and process reliability guaranteed.

- Controlled chamfering
- Machining forwards and backwards
- Suitable for reamed and readily drilled bores
- Usable for all materials, from aluminium to nickel alloys
- Available from Ø1.0 mm and larger

Products

Deburring tools

COFA – the universal deburring tool

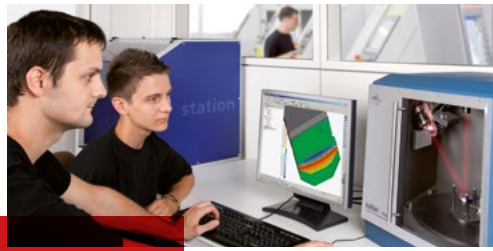
DL2 – the deburring tool for hole diameters from Ø1.0 mm to Ø2.1 mm

X-BORES – deburring technology for extremely intersecting bores and cross bores

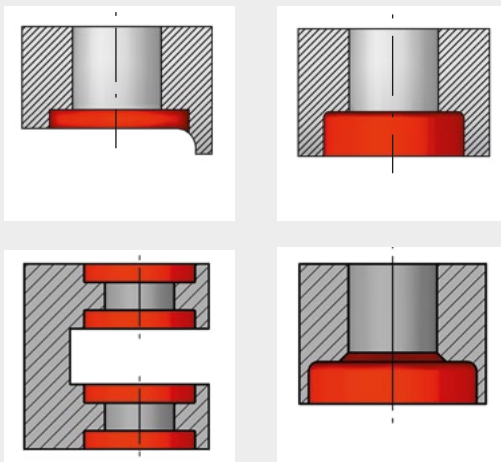
Chamfering tools

SNAP – the efficient chamfering tool

DEFA – the chamfering tool for high dimensional accuracy



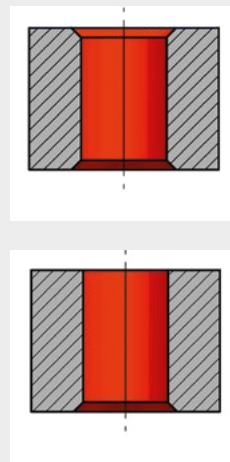
Countersinking



Countersinks forwards and backwards, or backwards only. Without turning the work-piece.

- Countersinks up to 2.3 x bore diameter
- Machines all bore edges in a single pass, no need to turn the workpiece
- Chatter-free sinking
- Allows interrupted cut
- High efficiency and process reliability

Drilling-Chamfering



Efficient drilling combined with front and back chamfering in one single pass.

- For bore depths up to 2 x bore diameter
- Two operation steps in one tool
- Easy to exchange drill bit and carbide chamfer blade
- Short set-up and ancillary times thanks to simple handling

Countersink / back spotfacing tools

BSF – the efficient back spotfacing tool

SOLO – the automatic front and back counter-boring tool

GH-K – the chatter-free front countersinking tool

Drill combination tools

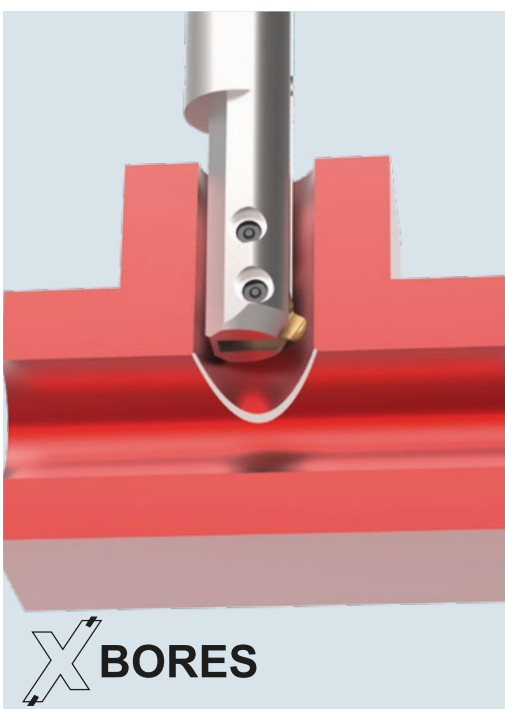
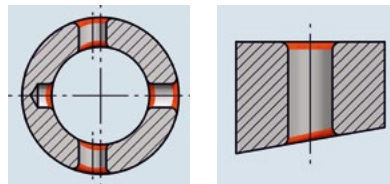
VEX – the combined drilling and chamfering tool

DEBURR



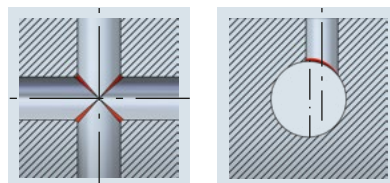
COFA – The universal deburring tool.

The COFA tool removes burrs on the front and back of a drilled through-hole on even and uneven surfaces in a single cycle. It radially removes the burrs off the bore edges, without requiring the workpiece to be turned or the spindle to be stopped. It can be applied universally in manual or automatic operations – for high volume production.



COFA-X – Mechanical deburring of 1:1 crossbores.

With X-BORES HEULE advances into uncharted technical territory that has been out of reach so far. With its COFA-X system combined with today's machine capabilities HEULE possesses a new solution. In a close cooperation with the customer, our R&D team examines the feasibility and develops a tailored tool for the specific application.

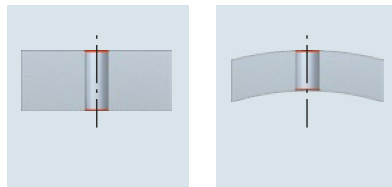


ONE OPERATION



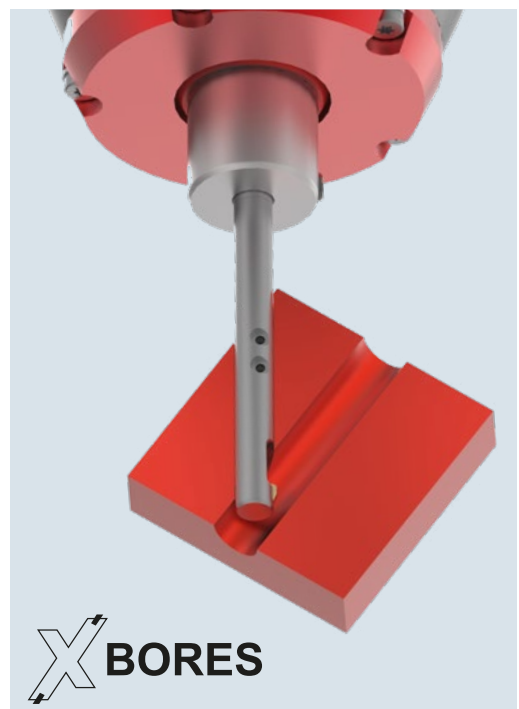
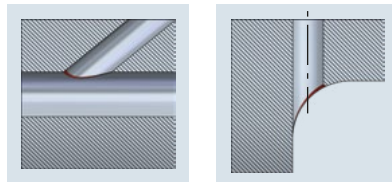
DL2 – The deburring tool for hole diameters from $\varnothing 1.0$ to $\varnothing 2.1$ mm.

The DL2 tool completes the existing standardized product range in the diameter range smaller than 2.1 mm. Despite its miniature dimensions, it fulfills the high customer demands with regard to process reliability and deburring quality. Simple handling, fast blade changes without tool reclamping and its robust construction distinguish this product.

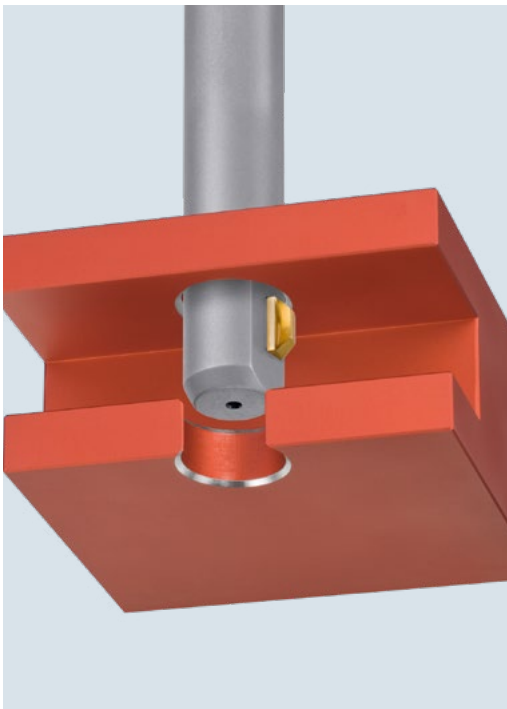


CBD – Deburring tool for oil bores from $\varnothing 5.0$ mm to 10.0 mm.

By developing the CBD system, HEULE has introduced a new function and work concept. Bore intersections with a low main bore/cross bore ratio and flat penetration angle become burr free because of a defined cutting process that ensures a complete edge break. In cooperation with the customer, our R&D team examines the feasibility and develops a tailored tool for the specific application.

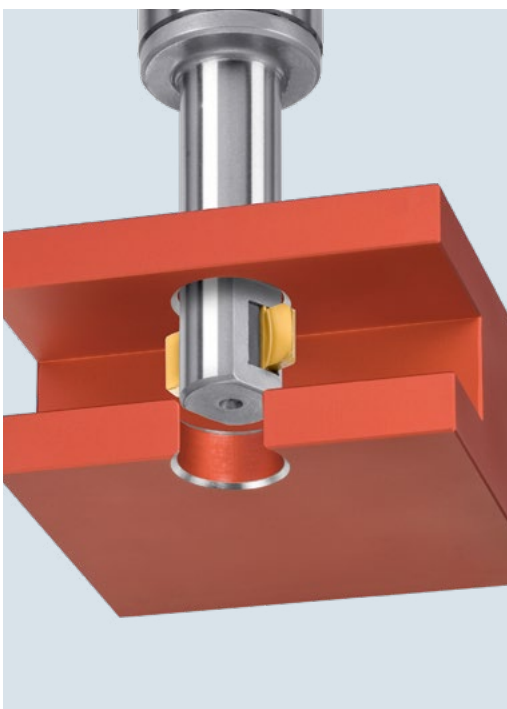
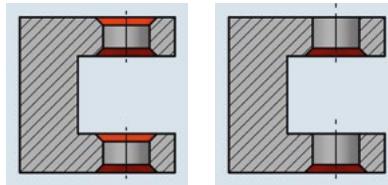


CHAMFER



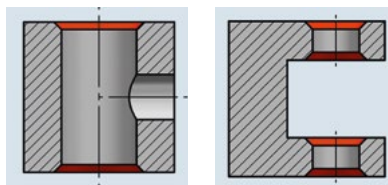
SNAP – The economic chamfering tool.

The SNAP tool is an efficient front and back chamfering tool that is easy to use and offers quick blade change, which makes it practical for any manufacturing environment. Without any need to turn the workpiece or to stop the spindle, it removes the burrs and chamfers the edges. The SNAP tool has been designed for automatic operation involving large production lots.



DEFA – The chamfering tool for high dimensional accuracy.

The double bladed DEFA chamfering tool creates predefined front and back chamfers in a single operation without stopping or reversing the spindle. The chamfer diameter can be adjusted on the tool. The DEFA tool is essentially used for the production of hard-to-machine materials especially when a large burr is involved.

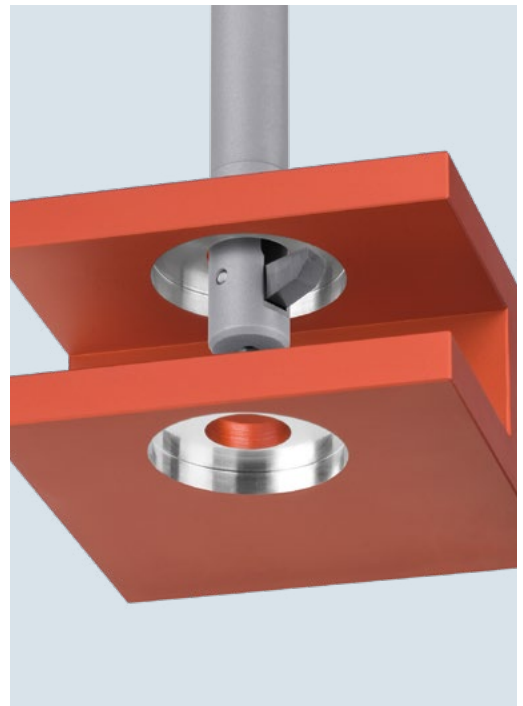
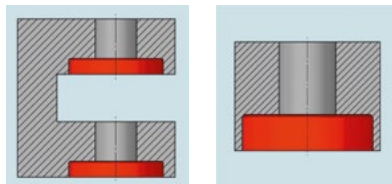


ONE OPERATION

COUNTERSINK

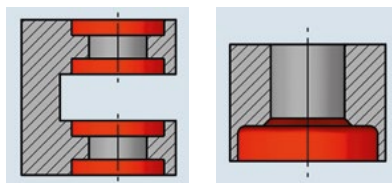
BSF – The back spotfacing tool for diameters of up to 2.3 x bore-Ø.

The surprisingly simple BSF tool concept allows back spotfacing or back counter-boring in **ONE OPERATION** without turning the workpiece. The robust tool is distinguished by its simplicity and high process reliability. The blade swings out into working position by the rotation of the spindle whereas the retraction is controlled by the internal coolant pressure of the machine. It is used for bores ranging from Ø6.5 to 21.0 mm.

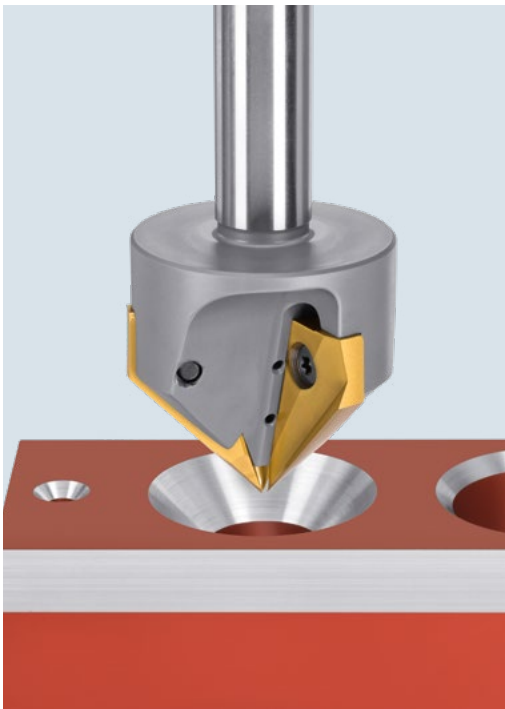


SOLO – The automatic front and back counterboring tool.

The SOLO tool allows for production of front and back countersinks and back spotfacing of through holes with positive control in **ONE OPERATION** without requiring the work piece to be turned. The blade is extended and retracted radially through the action of centrifugal force. The SOLO tool is distinguished by its ease of use and its high production reliability.

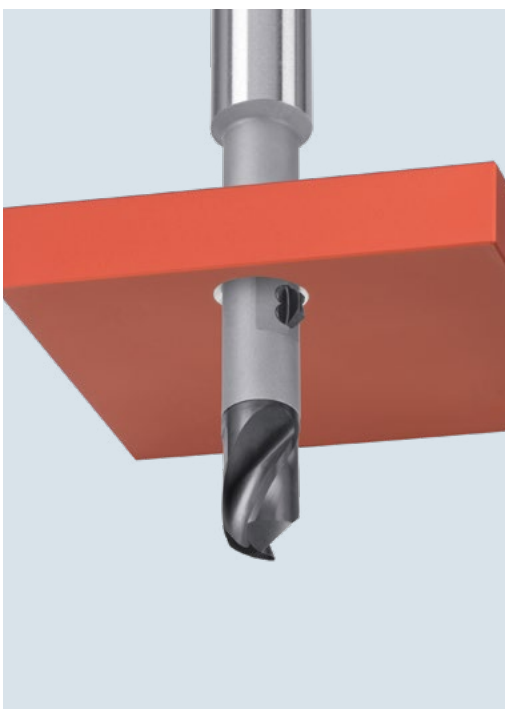
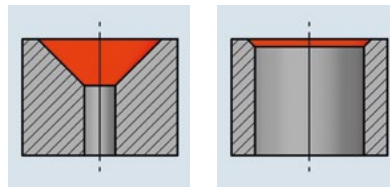


COUNTERSINK DRILL + CHAMFER COMBINED



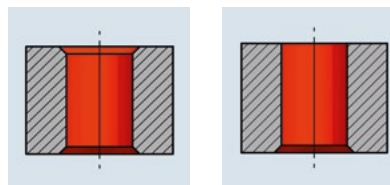
GH-K – The chatter-free countersinking tool.

The GH-K tool has three exchangeable countersink blades which are precision ground as a match set to achieve unmatched countersink finishes. The tool feeds the coolant through an inner supply duct directly to the blade. GH-K is unique because of its large countersinking range from Ø3.0 to Ø25.0 mm or from Ø5.0 to Ø45.0 mm.



VEX – The combined drilling and chamfering tool.

The VEX tool combines a replaceable solid carbide high performance twist drill with HEULE's patented SNAP chamfering system to make drilling and front and back chamfering in a single process possible.



ONE OPERATION

CUSTOMIZED TOOLS



Maximum Productivity

Tools tailored to the customer's needs with multiple operations in one single pass.

Workpiece geometry, material, fixturing, machining process and the requirements that cutting tools are expected to fulfill vary from industry to industry. Hence, no application is like any other. As solution finders, we take up this challenge.

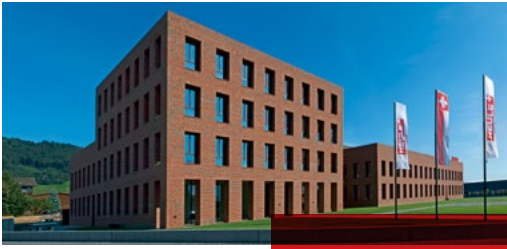
On the basis of our standard technologies, we combine multiple operations in a single tool or adapt tool dimensions and blades to suit your machining concept and to offer you the best possible performance. Thanks to our in-house development and manufacture of all components, we are flexible and fast.

HEULE is not a common tool supplier – HEULE is a developing partner. We passionately take care of your deburring problems and you find time to spend on your own important topics.

A success story exemplified by an aluminum wheel rim manufacturer:

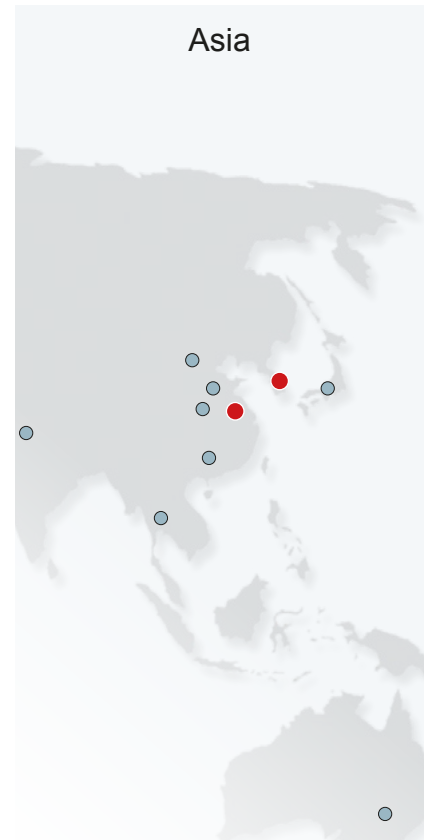
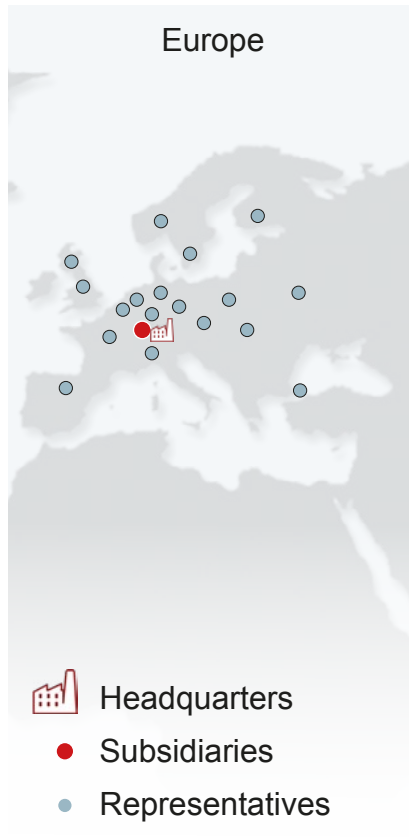
Our customer used to machine the lug bolt holes in two operations – first drilling using a step drill, then back deburring using an interpolation tool. With the HEULE Drilling Countersinking Combi Tool, they can now produce the bores in One Operation. The customer's voice:


„The process time reduction is enormous. We have boosted output by 157 rims per day and per machine.“



The HEULE Service.

We distribute our products worldwide while providing global and competent on-site service.



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- Subsidiaries
- Representatives



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