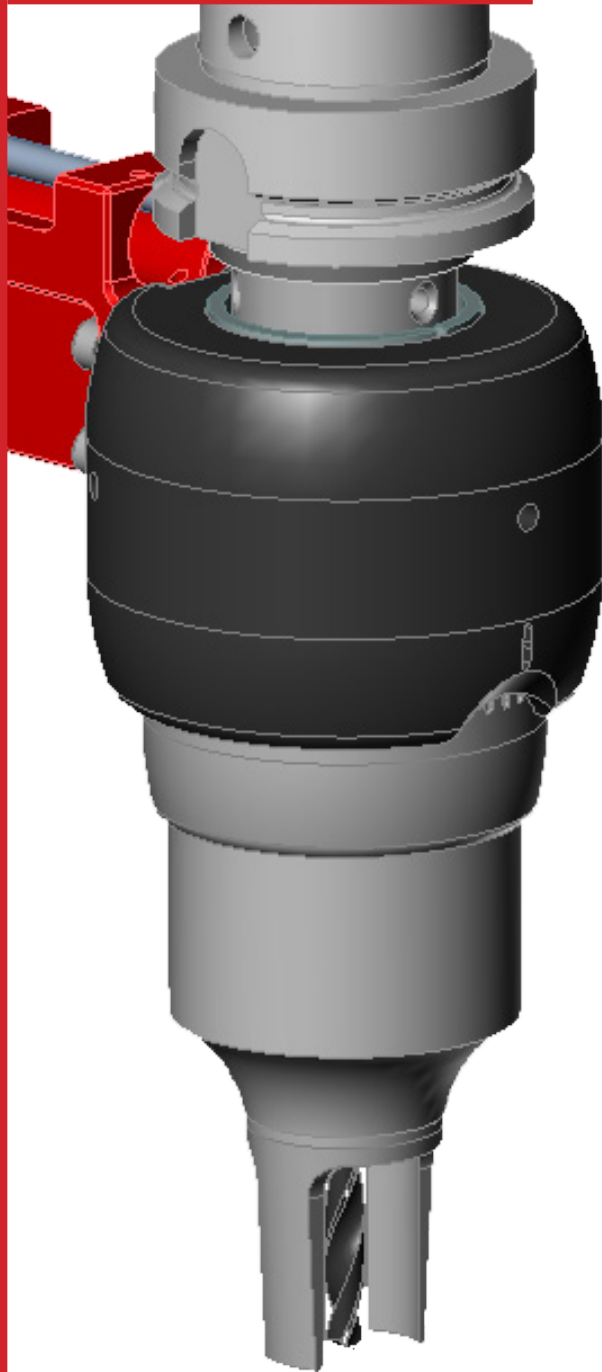


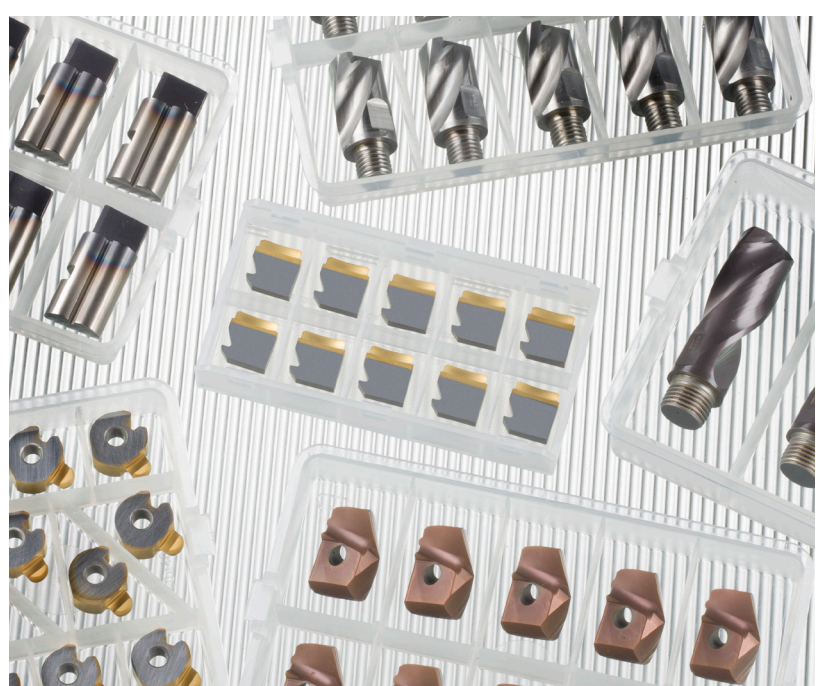
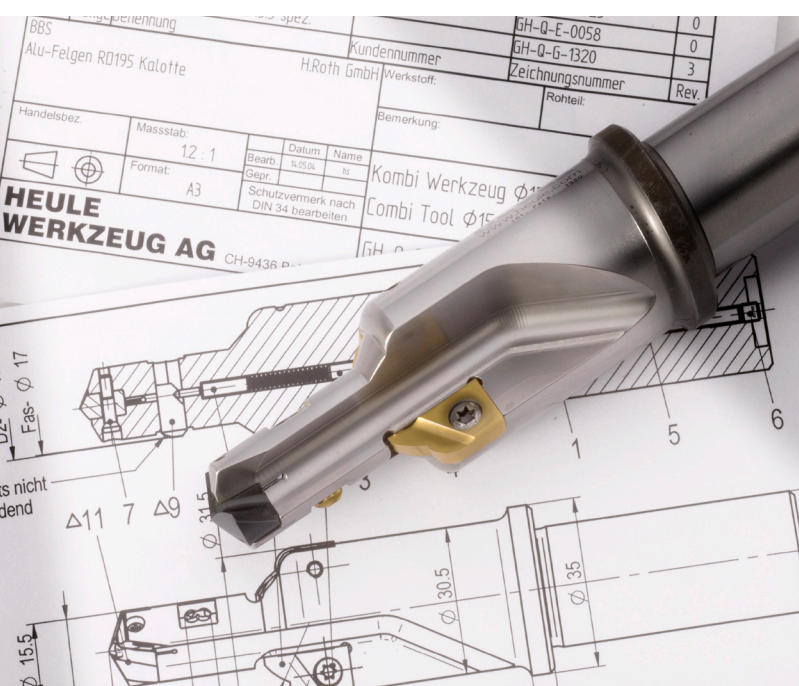
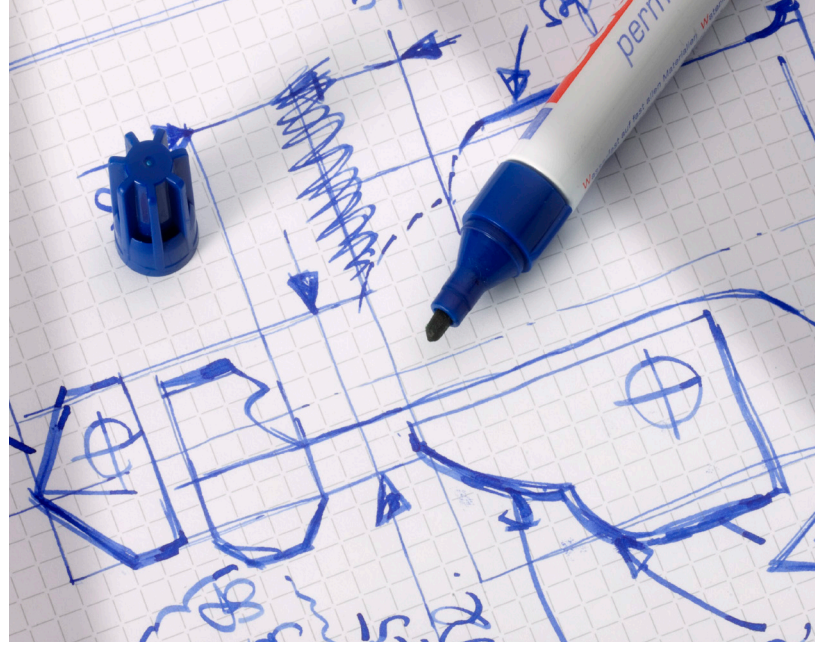
COMP



COMP Compensation Tool Drill and Countersinking

- Three different versions with different variances and height increments
- Leaves even the most critical finishes unmarked
- Uses remarkable VEX technology for the carbide drill and countersinks thread quickly





HEULE⁺

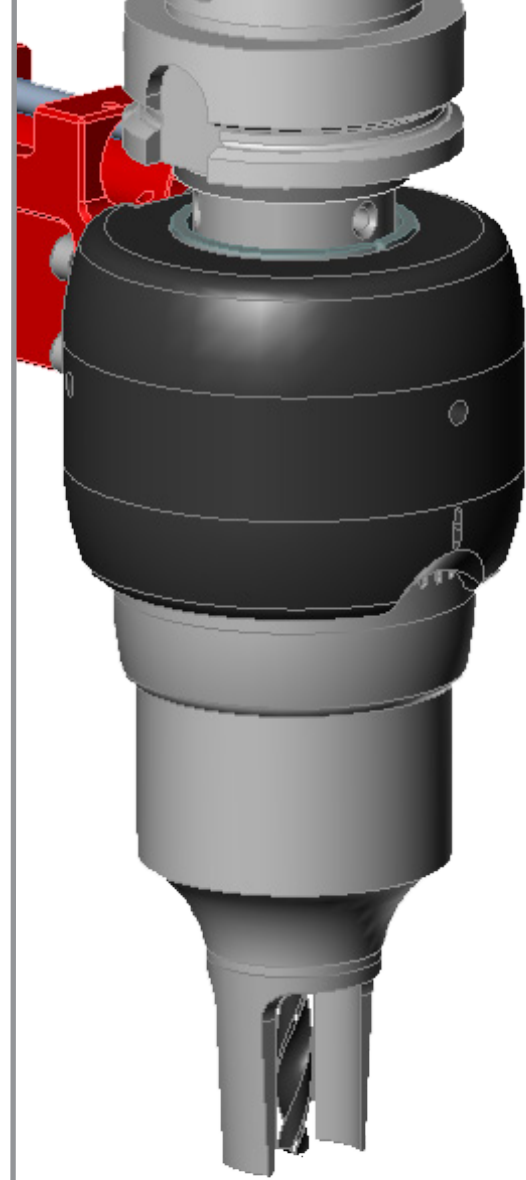
PRECISION TOOLS

The Innovator and Quality Leader
in the Cutting Tool Industry since 1961

Innovative Tools with Timesaving Results

Founded in 1961 by Heinrich Heule in the Rhine Valley of eastern Switzerland, HEULE continues to be a world leader in manufacturing of chamfering and deburring tools. After serving the European community for over 25 years, HEULE expanded to the United States. Heule Tool Corporation has been providing high quality chamfering and deburring tools to the North American market since 1988.

HEULE is committed to the values of quality, precision and service. Competent service, fast delivery times and customized solutions are the highest priorities. From all ranks, HEULE's committed and motivated expert staff carry out their work with reliability and professionalism. Customer's worldwide attest to the high quality standard HEULE provides and continually improves through innovative ideas and sophisticated technology.



COMP

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**SWISS
MADE**



ONEOPERATION

HeuleTool.com (513) 860-9900

Huele Tool Corporation
4722 A Interstate Drive | Cincinnati, Ohio 45246



Compensation Tool

Meeting aerospace customers' further need for accuracy and non-rotational end effectors that cannot mark super critical finishes, the COMP tool was born.

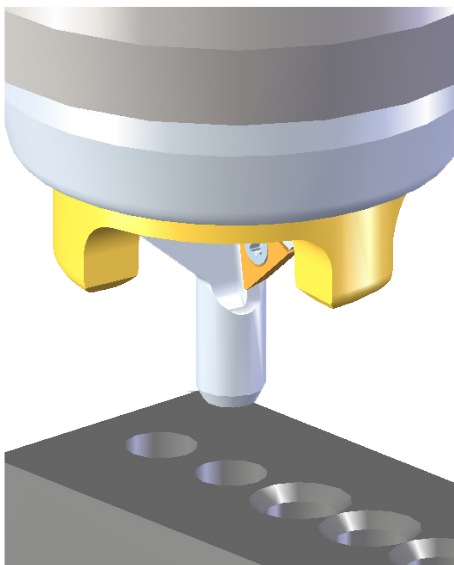
The Heule COMP tool highlights the true meaning of swiss engineering and innovation by meeting the challenges of manufacturing state of the art tooling that can hold up in high demand production facilities.

GOOD THINGS COME IN THREE

V1

The earliest version of an adjustable countersink allowed simple insertable inserts to front countersink holes where the surface of the part varied.

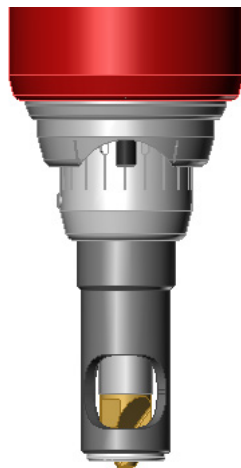
Variant of part +/- 2.5mm/height increments +.04



V2

This tool allowed the nylon cage to contact the part first avoiding chip interference. The double compression action allows for drilling and accurate countersinking with a solid carbide step drill.

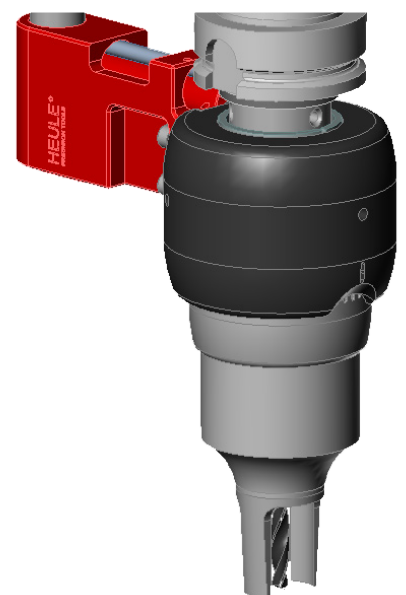
Variant of part +/- 3.5mm/height increments +.04



V3

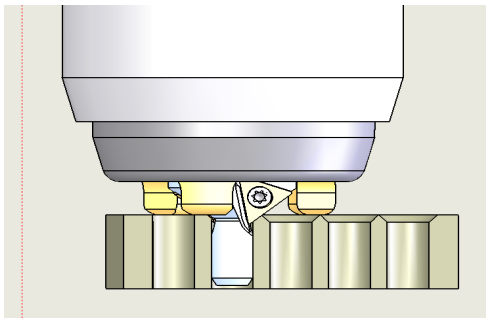
The latest COMP tool offers fine adjustment to the chamfer depth of .0008" (0.02mm), a longer drill depth of up to 3xd, and non-rotating arm for no marking of critical parts

Variant of part +/- 3.75mm/height increments +.02



How Does The COMP V1 Tool Work?

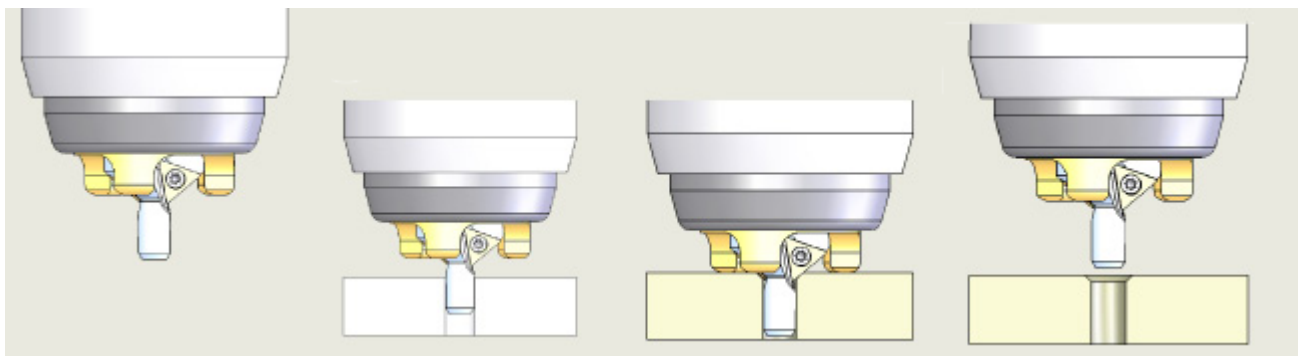
This tool is spring loaded and designed to cut a specific countersink size. Once the specific size chamfer is produced, the face of the tool stops rotation while making contact with the part; and the cutter cannot travel further into the part. COMP V1 was designed with approximately 2mm of spring loaded travel so even a part location variance of up to 0.080 of an inch will not be a problem. Variant of part +/- 2.5mm/height increments +.04.



Test Plates: Countersink Angles or Radius

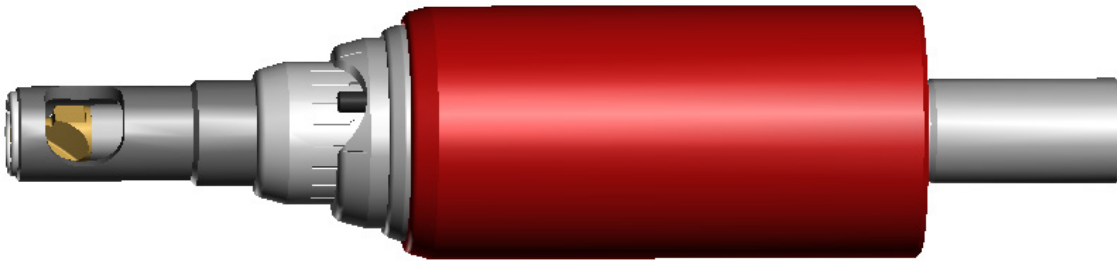


Programming Sequence



How Does The COMP V2 Tool Work?

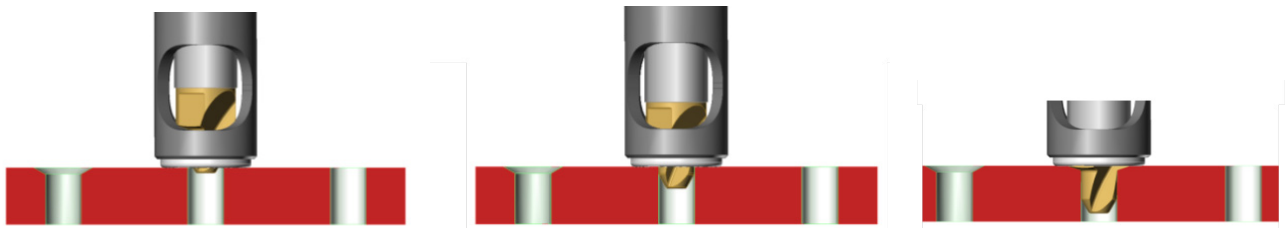
This tool allows the cage to contact the working part first, avoiding any chip interference. The double compression action allows for drilling and countersinking with a carbide step drill or counter with pilot. Using the VEX technology, the carbide drill has a threaded quick change steel shank. The acrylic ring is easily replaceable; variant of part +/- 3.55mm/height increments of +.04.



Stepped Surface Countersinking

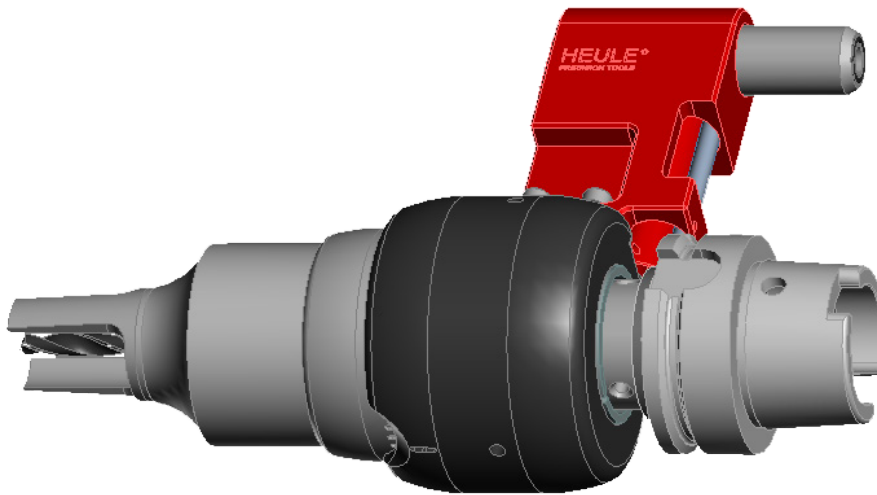


Programming Sequence

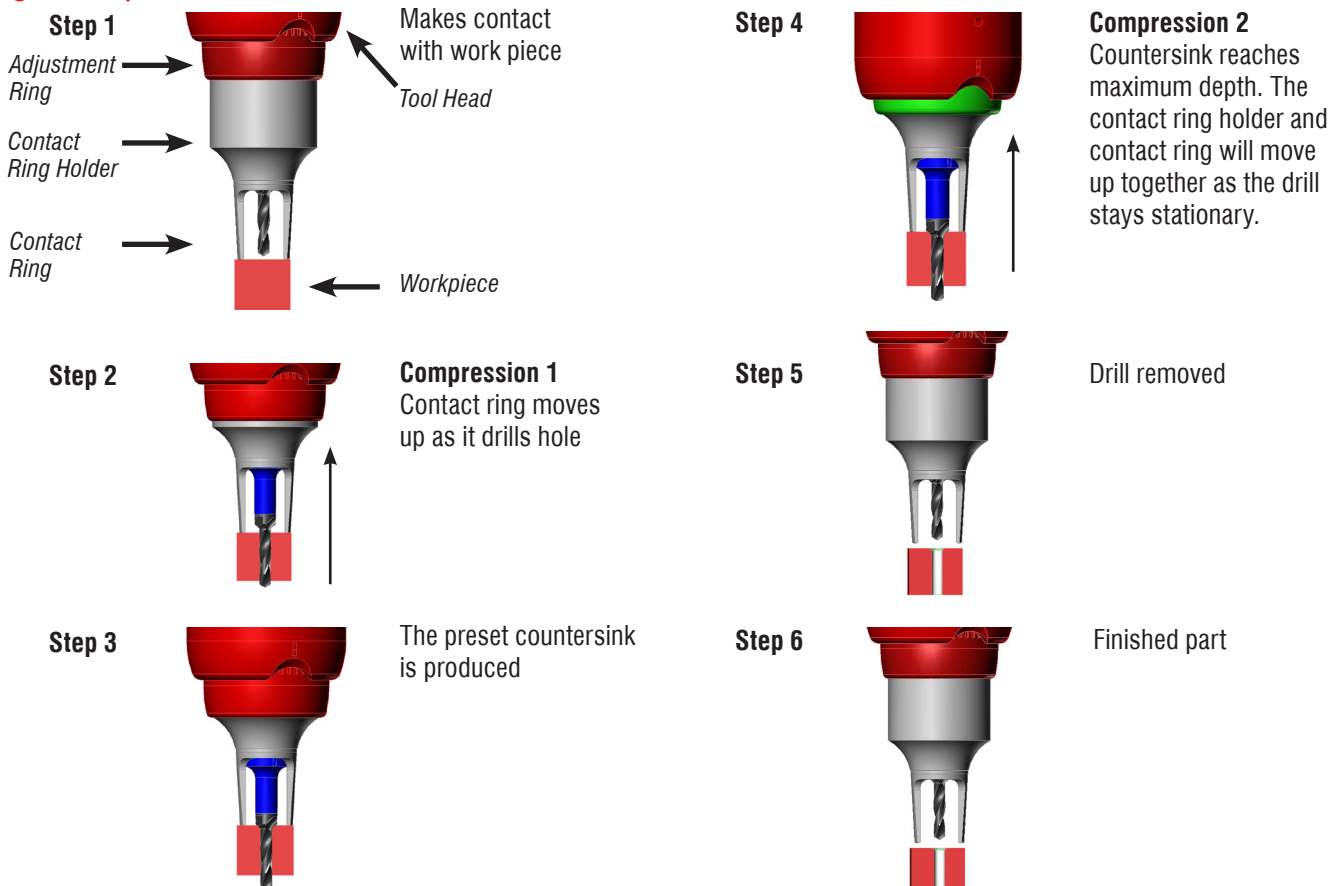


How Does The COMP V3 Tool Work?

The COMP V3 offers fine adjustment to the chamfer depth of .0008" (0.02mm), a longer drill depth of up to 4xd, and coolant through capabilities. This is a double compensation tool which means the contact ring compresses as the hole is drilled, and then the contact ring holder compresses after the predetermined countersink depth is reached. The COMP V3 contact ring does not spin due to the anti rotation device, leaving no markings. This tool is best chosen when finish is a high priority. Variant of part +/- 3.75mm/height increments of +.02.

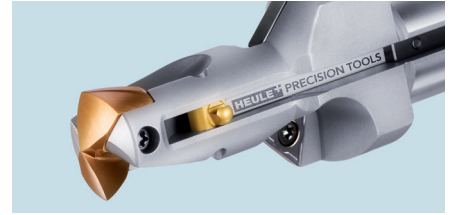
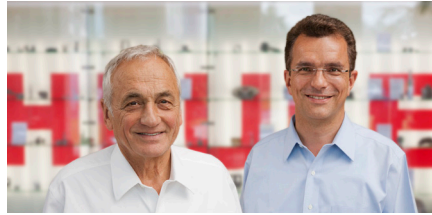


Working Principle



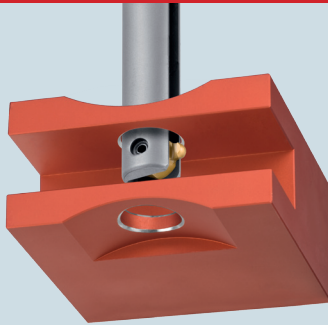
Over 50 Years of Manufacturing Cutting Tools

HEULE manufactures cutting tools of the highest quality and precision consistent with Swiss craftsmanship for use in the machine tools of some of the world's largest manufacturers; and the smallest machine shops.



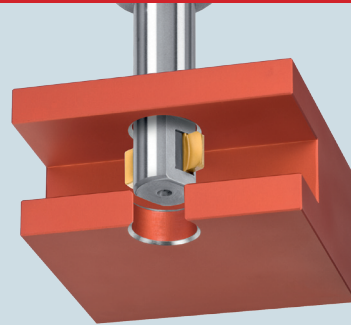
DEBURRING

COFA
SNAP



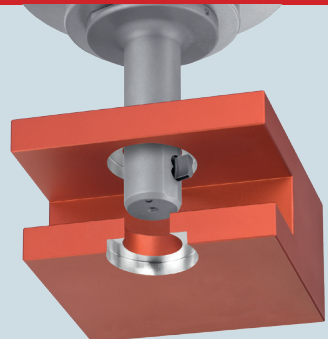
CHAMFERING

SNAP
GH-S
DEFA



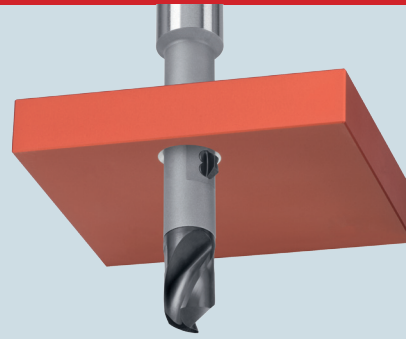
COUNTERSINKING

BSF
SOLO
GH-Z/E
GH-K



DRILLING

VEX-P
VEX-S



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