



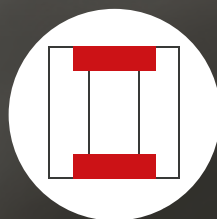
# Aerospace



Deburring



Chamfering



Counterboring



Drilling  
combined

# YOUR PARTNER IN AEROSPACE COMPONENT MANUFACTURING

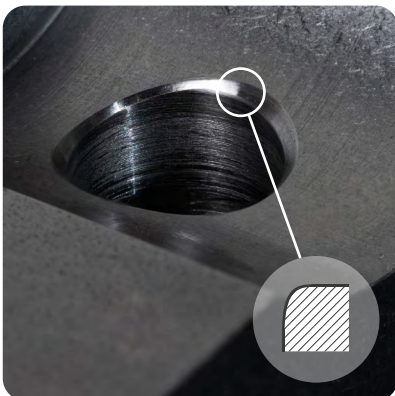
Aerospace manufacturing demands the highest standards of precision and process stability. Tight tolerances, perfect surface finishes, and burr-free bore edges are essential requirements. The main challenge: machining the back of the bore. HEULE's tool solutions enable deburring, chamfering, counterboring on both sides of the workpiece, as well as multi-process combined drilling. And this directly in the machining center – without turning the workpiece and in a single operation. This

saves time, reduces costs and delivers the quality required in fuselages, wings, engines and cockpits. Whether titanium, Inconel, or other superalloys: our solutions take over where others reach their limits. If the standard tool range does not offer a suitable tool for your application, our global deburring experts will be happy to discuss a customised solution to meet your specific requirements.

## TECHNOLOGY

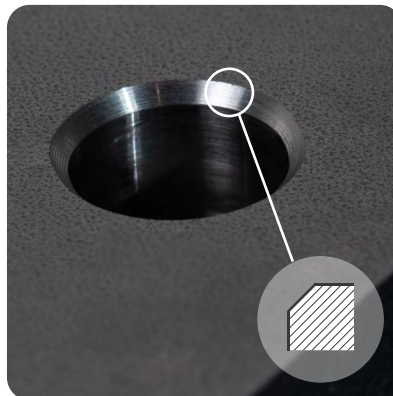
In focus: the back of the bore. HEULE develops reliable tool solutions which machine bore edges in a single operation – especially those hard-to-reach back edges. Solutions with combined drilling are also possible.

### Deburring



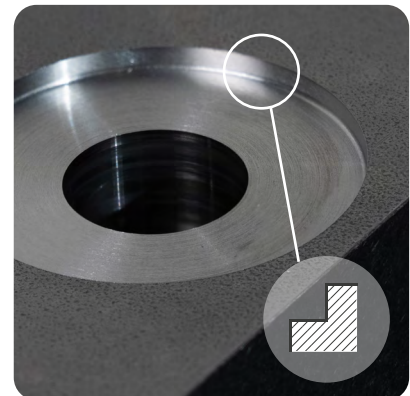
HEULE deburring tools deburr **even and uneven** bore edges, **front and back in a single operation** – without turning the workpiece or stopping the spindle. The automated process is highly reliable and cost-effective.

### Chamfering



HEULE chamfering tools remove burrs on **both sides** of the bore while **creating a defined chamfer**. They are particularly suitable for fully automated CNC operations and large batch quantities and impress with their consistent chamfer sizes.

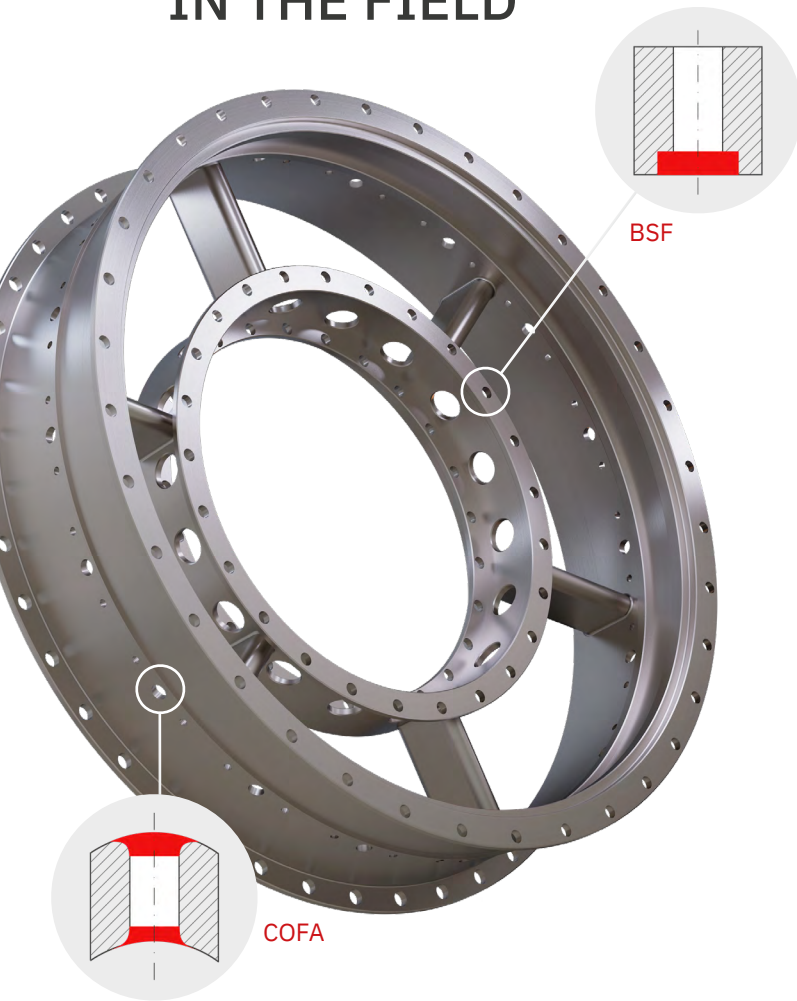
### Counterboring



HEULE backspotfacing tools machine the back of the bore **without turning the workpiece**. Backspotfacing is possible **up to 2.3 x bore diameter**. It is also possible to counterbore both sides of the bore and produce formed counterbores.



## IN THE FIELD

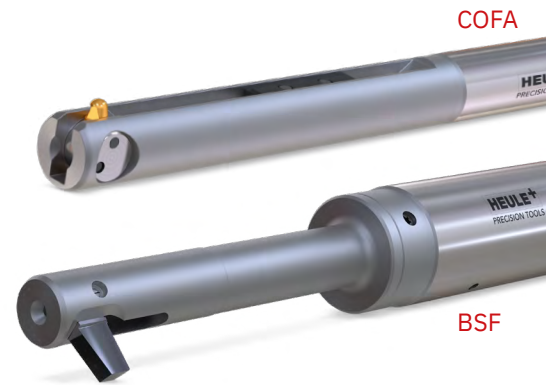


### Turbine Housing

A turbine manufacturer was looking for a cost-effective yet reliable solution for the backspotfacing and deburring of bores – all in a single setup and without having to turn the workpiece over.

With the **BSF backspotfacer** and the **COFA deburring tool**, HEULE offers customers the ideal solutions. The BSF enables backspotfacing, and the COFA ensures burr-free bore edges on both sides of bores as required by the customers. The result is significant time saving and thus reduced manufacturing costs.

- + Time saving of **45 minutes** per workpiece
- + Approximately **335 hours** saved per year
- + Cost saving of **47'700 EUR** per year

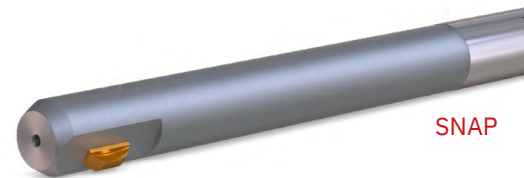
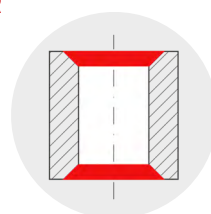


### Turbine Rotor

A turbine manufacturer was looking for an automated solution to deburr both sides of bores in a single operation. The goal was to minimise tool changes and process times while eliminating manual deburring.

HEULE recommended the **SNAP chamfering tool**, which produces the correct size chamfer on the front and back of the bore in a single operation. This eliminates the need for time-consuming rotation of the workpiece. The manufacturer appreciates its outstanding quality and reliability.

- + Consistent chamfering size
- + Consistent deburring quality
- + Elimination of manual processing
- + Time saving of **90 minutes** per workpiece
- + Annual cost saving of approx. **8'900 EUR**



SNAP

# On-site worldwide



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