

CASE STUDY

Application: Cross Hole Deburring

Industry: Aerospace

Material: Inconel 718

Tool: COFA

Benefits: Safety, Quality, Less Waste

HEULE+
PRECISION TOOLS

Challenge: An aerospace manufacturer was seeking ways to **improve the consistency of its deburring process** and **reduce the potential for human error** inherent in manual work. The manual method also required operators to **handle sharp components**, which carried a **risk of injury**. By addressing both **consistency and safety**, the company aimed to enhance reliability and create a safer, more controlled process. The combination of safety considerations and the desire for **more reliable outcomes** made it clear that an **automated solution** was the right path forward.

Solution: The manufacturer implemented the **HEULE COFA tool, model GH-C-M-0453 with a COFA8Y-339-Z2 blade**, on a **Hermle VMC machining center**. Designed specifically for **automated deburring**, the COFA tool ensured **uniform edge quality** while eliminating the variability that can come from manual processes. By removing the need for operators to handle sharp edges directly, it also created a **safer working environment**. The tool proved its effectiveness by reliably **deburring 400 holes—20 holes per part—in Inconel 718**, a challenging aerospace alloy, without failure.

Outcome: The introduction of the COFA tool provided **significant benefits**. The manufacturer achieved **consistent, repeatable results** that met aerospace requirements, while greatly **reducing the possibility of operator injuries**. The **automated process** also **reduced the likelihood of rework, increased efficiency**, and **freed skilled operators for higher-value tasks**. With these improvements in place, the company began exploring additional opportunities to apply **HEULE's deburring technology** across other applications, further extending both **safety and productivity gains**.

