

Rottweil, 17<sup>th</sup> May 2021

## Face grooving tools for O-ring groove with 55° undercut

Baier Drehteile GmbH & Co.KG is committed to producing precise turned parts for every industry. At the company location in Gunningen, Germany, around 60 employees design customer-specific turned parts, manufacture prototypes and produce them in series. Depending on the requirements and intended use, three different turning processes are used at baierdrehteile: CNC turning, multi-spindle turning and cam turning. Therefore, on the approximately 5,000 m<sup>2</sup> production area with 65 machines, it is possible to react flexibly according to customer requirements in order to produce turned parts quickly, economically and in the highest quality.

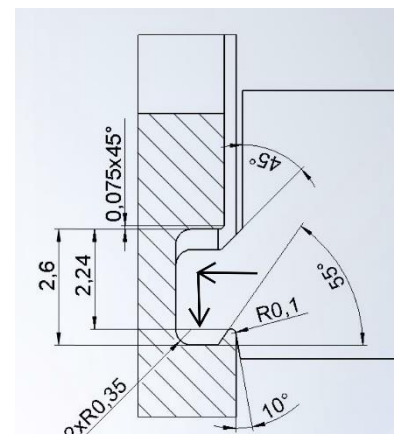


*Coolant connection*

The highest quality is also required in the production of coolant connections for the automotive industry. In order to optimally design the O-ring groove of these adapters, a recess with undercut is required. The workpiece is machined on an INDEX C200. The material used is stainless steel 1.4305 and attention must be paid to good surface quality. In order to realize the contours with 55° undercut, baierdrehteile decided to use the new face grooving tools of the ANF system from Dieterle. Fabian Hohl, production manager at baierdrehteile, says: "A cutting edge, which was profiled according to our needs, could be realized quickly and worked very well right away!"

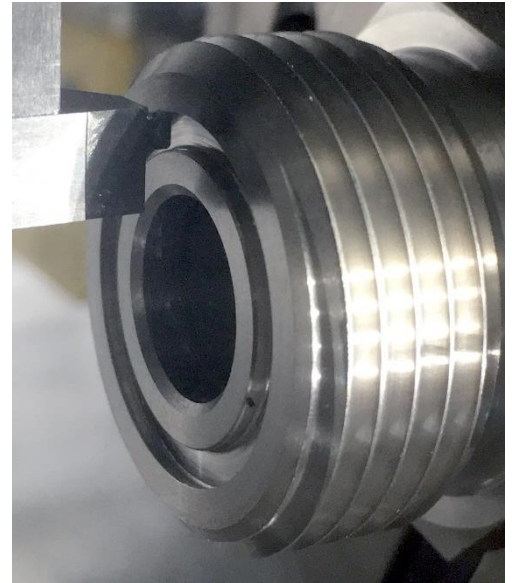
The undercut is produced in both axial and radial direction. The inserts of the ANF system are so stable that they can withstand radial pressure. The good chip control and optimum chip flow prevent cutting edges from breaking out, and thus, the complete project could be carried out quickly and without complications.

For projects of this type, the advantages of form grooving compared to copy turning become clear. Such contours can either not be realised at all with copy turning or only with additional time expenditure. Profiled inserts guarantee economical and reliable production, since the contour of the workpiece is clearly defined by the profiled tool.



*Drawing detail coolant connection*

The ANF system offers a wide range of geometries for grooving, turning, full-radius grooving and thread turning with shank dimensions from 8x8 to 25x25 and a grooving width of up to 8 mm in the standard program. In addition to these standard tools, the ANF system can also be used with inexpensive form grooving inserts that can be profiled according to customer specifications. Face grooving tools are the latest addition to the program and are currently available from stock in shank sizes from 10x10 to 20x20. The ANF face grooving holders are designed for a plate width up to 6 mm and a profile depth up to 5.5 mm. "The small-format solid carbide profile blanks of the ANF system are not only attractively priced, but with customized profiles they are also ideal for machining demanding contours, as can be seen here in the example of baierdrehteile," comments Michael Dieterle, Managing Director of Dieterle.



*ANF axial grooving tool in use at baierdrehteile for the production of an O-ring groove with 55° undercut*



*From right: Fabian Hohl, Production Manager at baierdrehteile, and Michael Dieterle, Managing Director at Dieterle*

"We do not only supply our customers with standard turned parts, but also find solutions for complex workpieces and develop innovative prototypes. Therefore, we depend on a tool supplier we can absolutely rely on. Dieterle offers us this reliability and can also react competently and quickly to demanding tooling requirements," notes Fabian Hohl.



## Contact:

Otto Dieterle Spezialwerkzeuge GmbH  
Predigerstr. 56  
78628 Rottweil  
Tel.: +49 (0) 741 94205 0  
info@dieterle-tools.com  
www.dieterle-tools.com



Baier Drehteile GmbH & Co. KG  
Marienweg 8  
78594 Gunningen  
Tel.: +49 (0) 7424 9553 0  
info@baier-drehteile.de  
www.baier-drehteile.de



**baier**drehteile