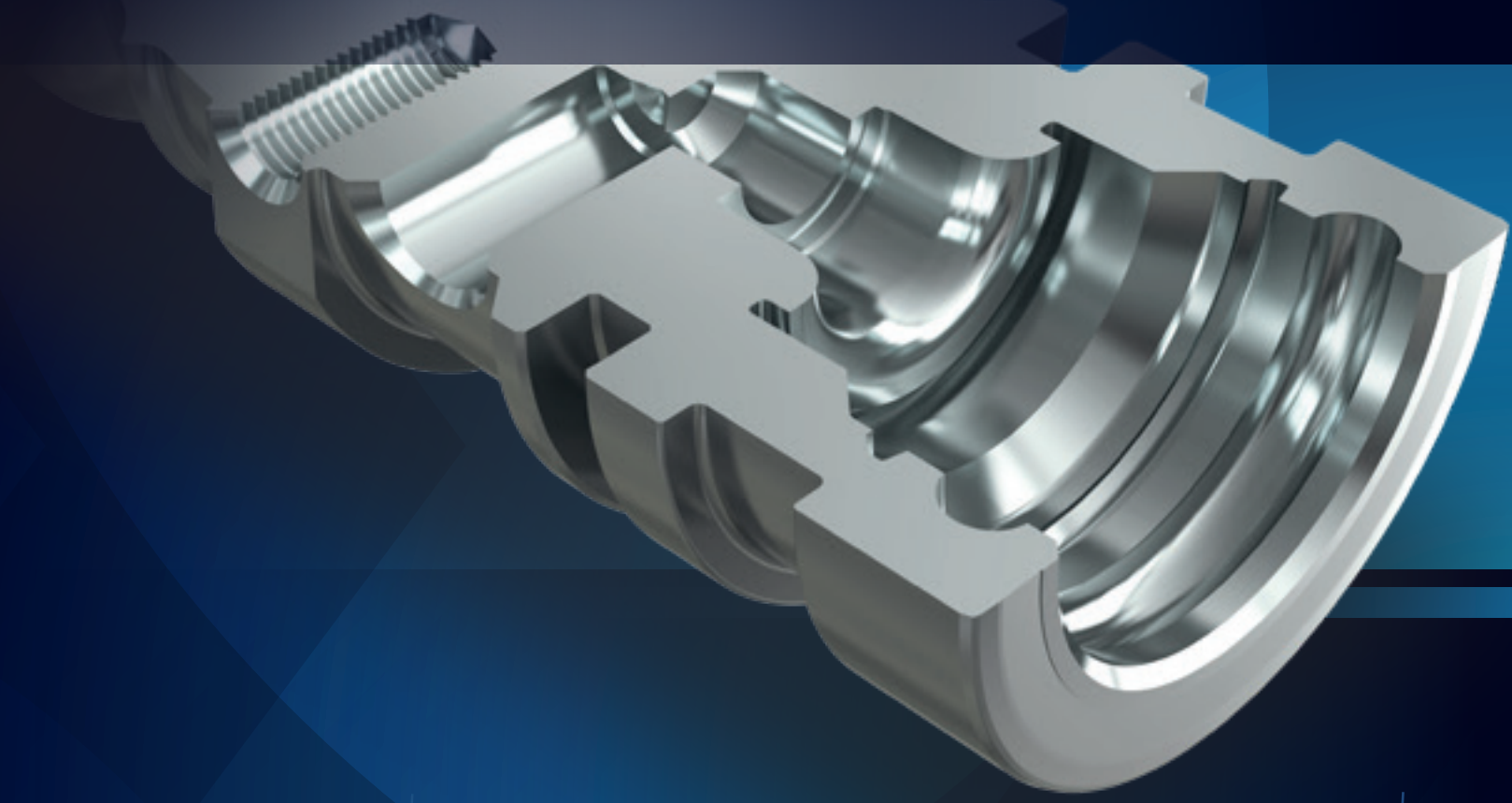


Kaestner
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SIMTEK



SIMTEK
C O M P A N Y G R O U P

Two tooling specialists,
one common goal:
Reducing your workpiece costs.



Kaestner
T O O L S



SIMTEK

Two tooling specialists, one common goal:

Reducing your workpiece costs.

The two tooling specialists SIMTEK and Kaestner-Tools stand for high quality carbide precision tooling solutions, which are characterized by their high performance ability.

In 2018, as Kaestner-Tools became part of the globally acting SIMTEK Group, the competence and experience of both specialists were combined.

The tooling ranges complement each other in an optimal way and can therefore offer you even more machining options.

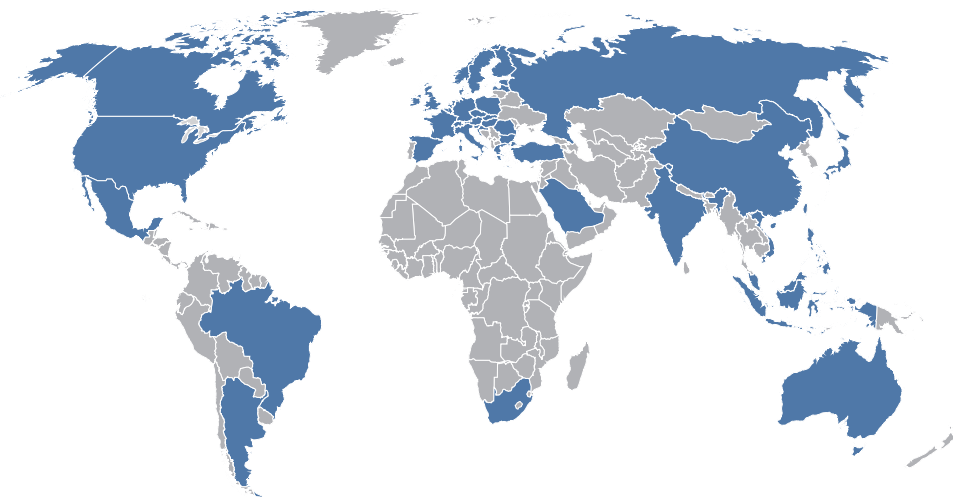
In this component evolution brochure, we show you how you can use tools from SIMTEK and Kaestner-Tools to reduce production times, increase process reliability and lower your workpiece costs.



Active all over the world. At home in metal industry.
The SIMTEK Group.

With approximately 500 passionate employees at six global locations, the SIMTEK Group is dedicated to developing, producing and selling high performance carbide tools for metalworking.

We work hard and with passion to develop the best possible solution for every application together with our esteemed clients. The will to provide maximum performance and reduce the workpiece costs for our customers leads us to think beyond standard tools.



SIMTEK Group sales regions



Made by SIMTEK. Made for you.

A new generation of high performance grades for SIMTEK precision tools: Designed and made by SIMTEK in order to meet highest expectations.

GRADIUM cutting grades stand for an ideal combination of carbide substrate, cutting edge finish and high performance coatings. They also stand for process reliability and high quality, which is one of the results of adding the coating production to the rest of the manufacturing processes we already do inhouse. This chain of manufacturing processes also provides even shorter production times and logistical advantages.

GRADIUM high performance grades:
Made for your success.

Short delivery time and rapid prototyping.

Produced with state-of-the-art high precision grinding and measuring machines.

High performance coatings from our latest in-house coating centers.

GRADIUM

The sum of many advantages: GRADIUM.

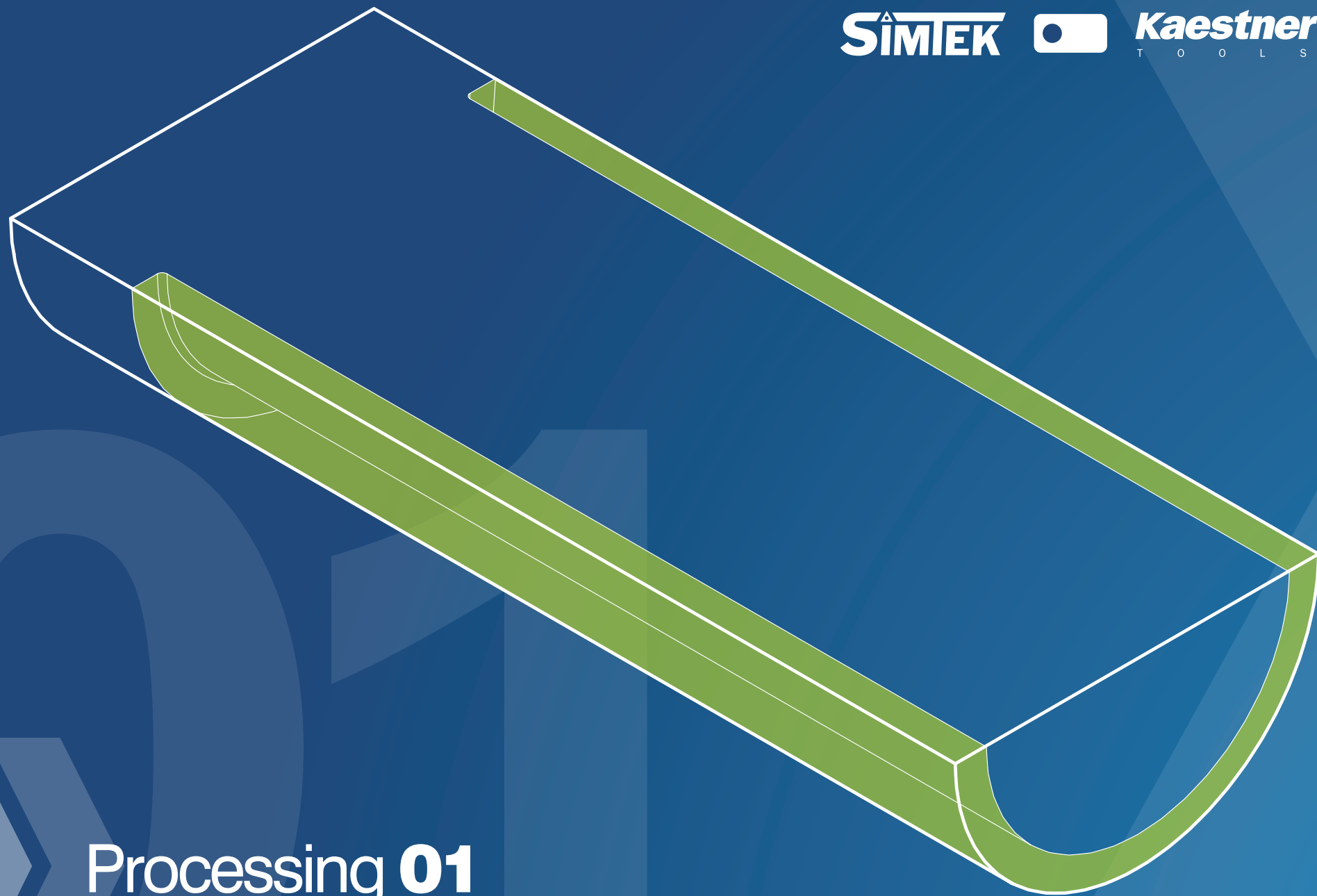
Specific cutting edge finish for each combination of tool and application.

High quality and process reliability.

Wear-resistant carbide substrates in a variety of hardness scales.



Tools marked with this symbol were optimized with
GRADIUM cutting grades

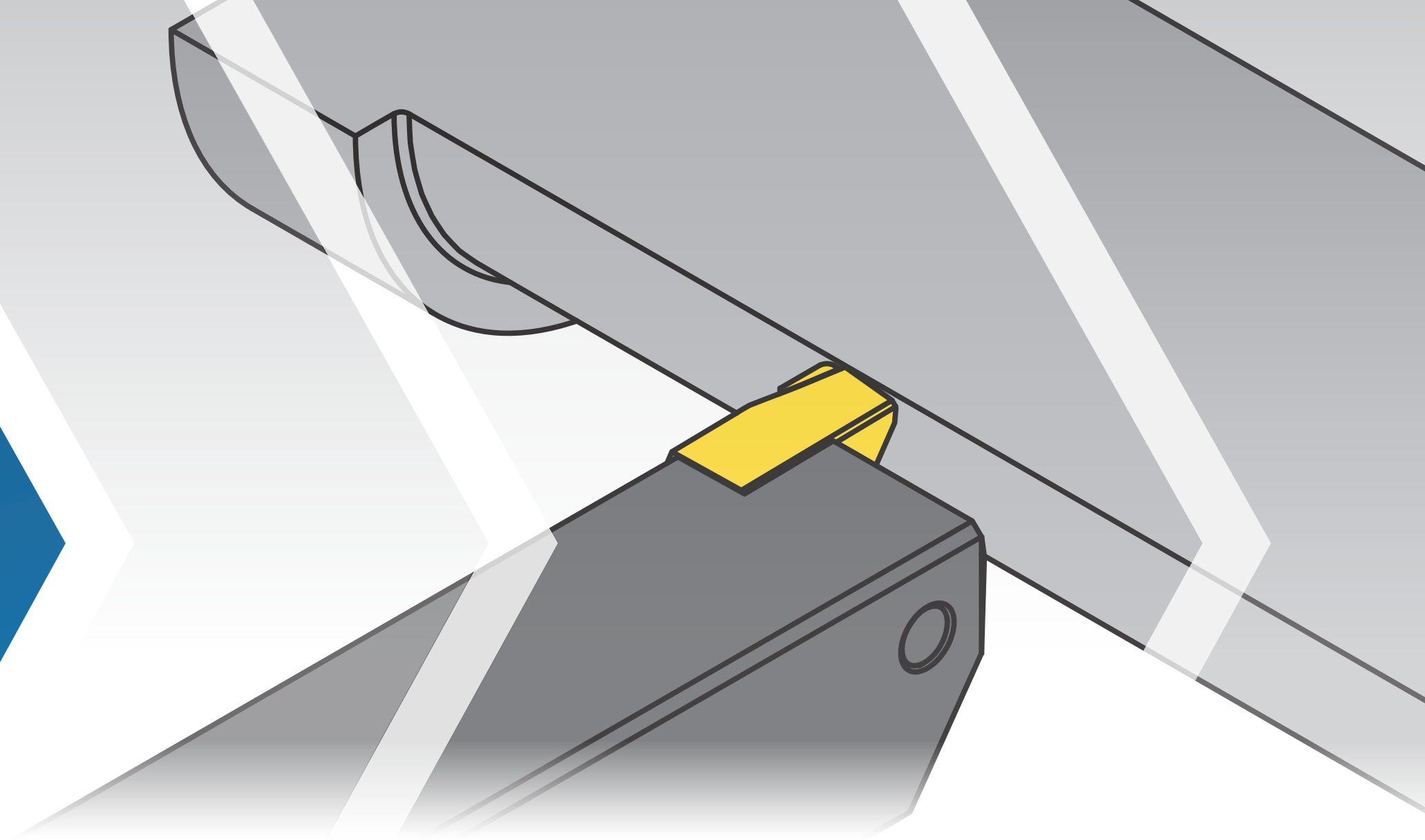


Processing **01**



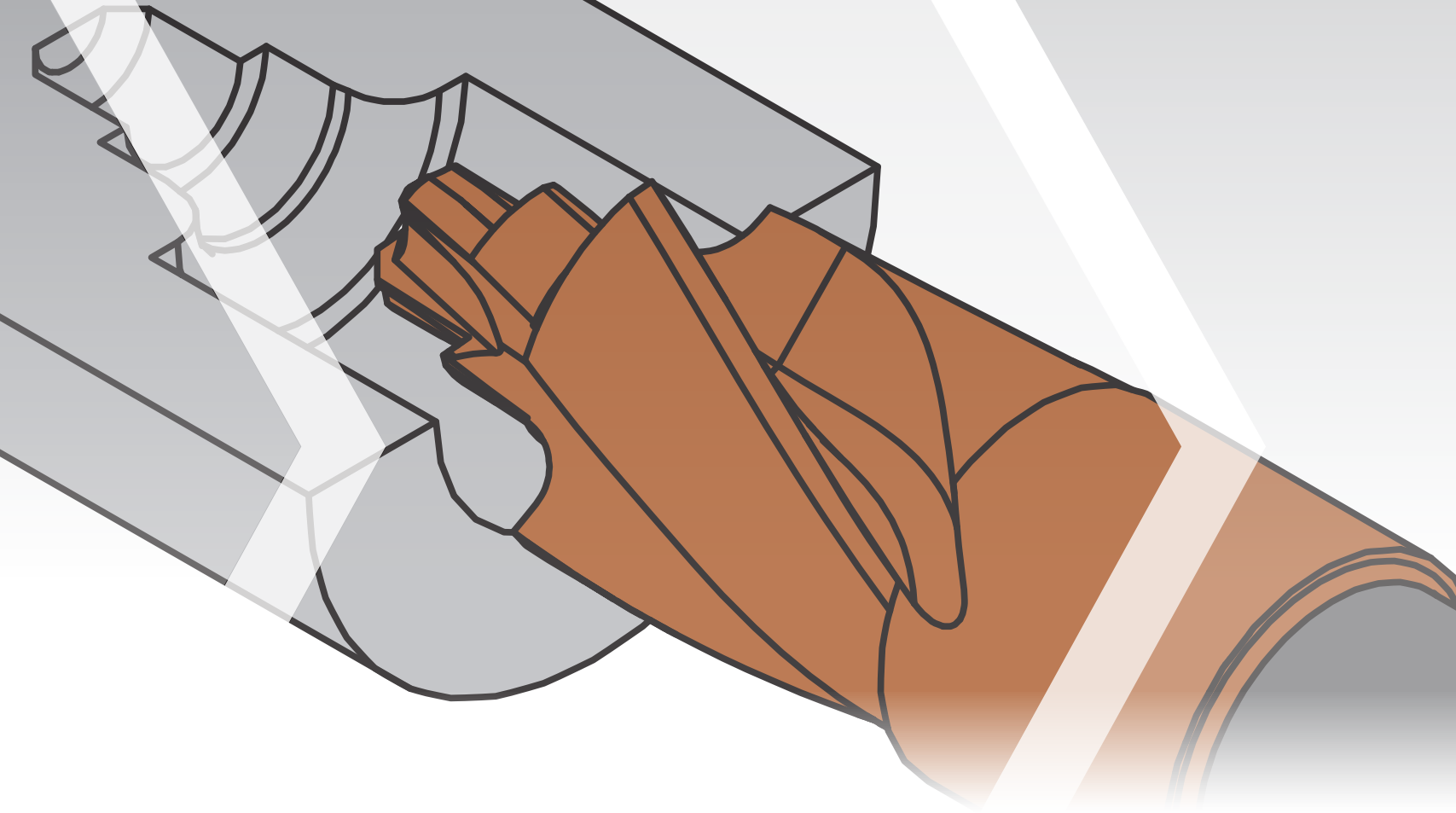
Longitudinal turning

The two-edged tool system simturn KX with cutting depths up to 7,0 mm and square shank sizes from 10,0 x 10,0 mm is ideally designed for external small part machining.



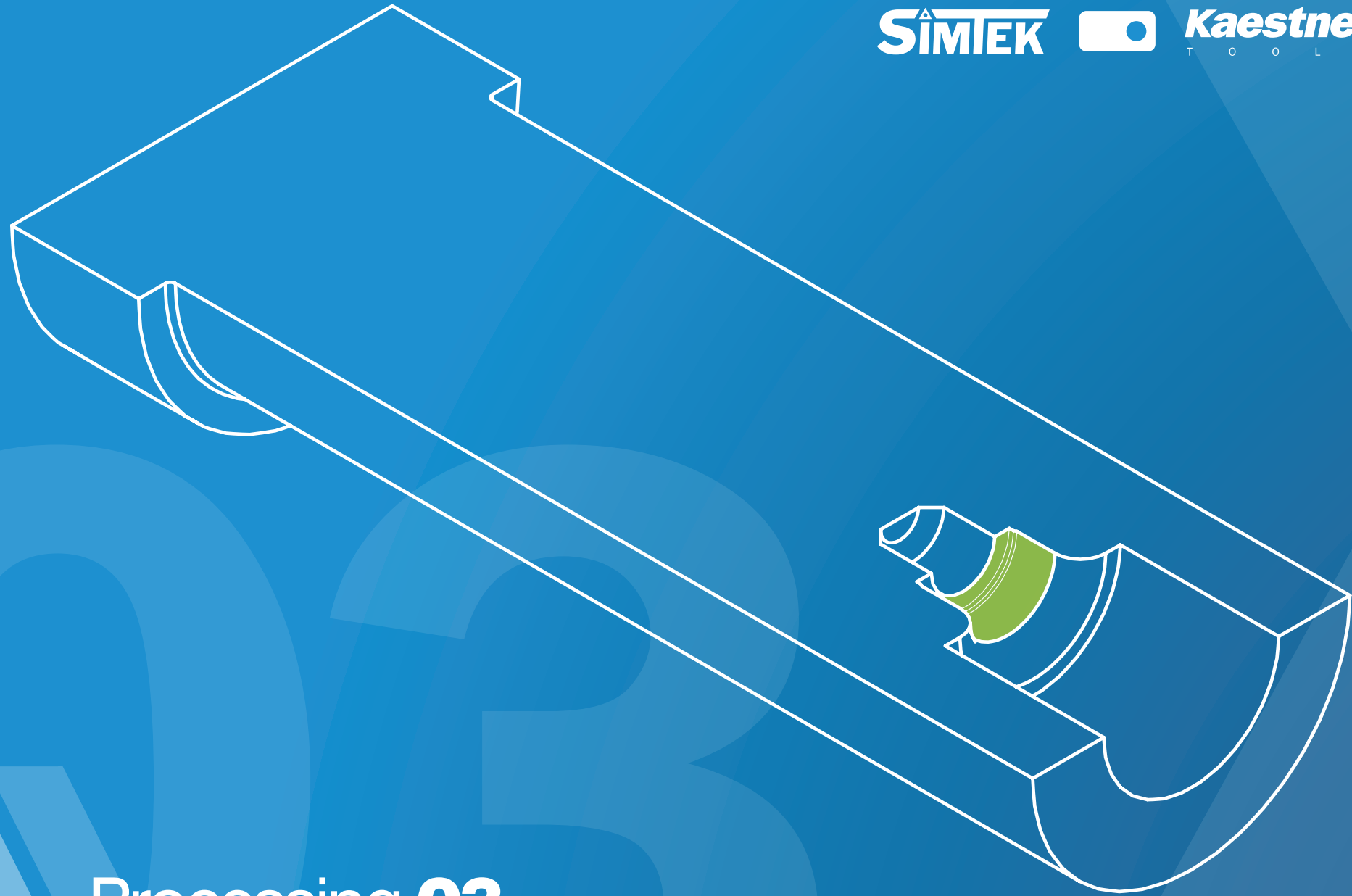


Processing 02

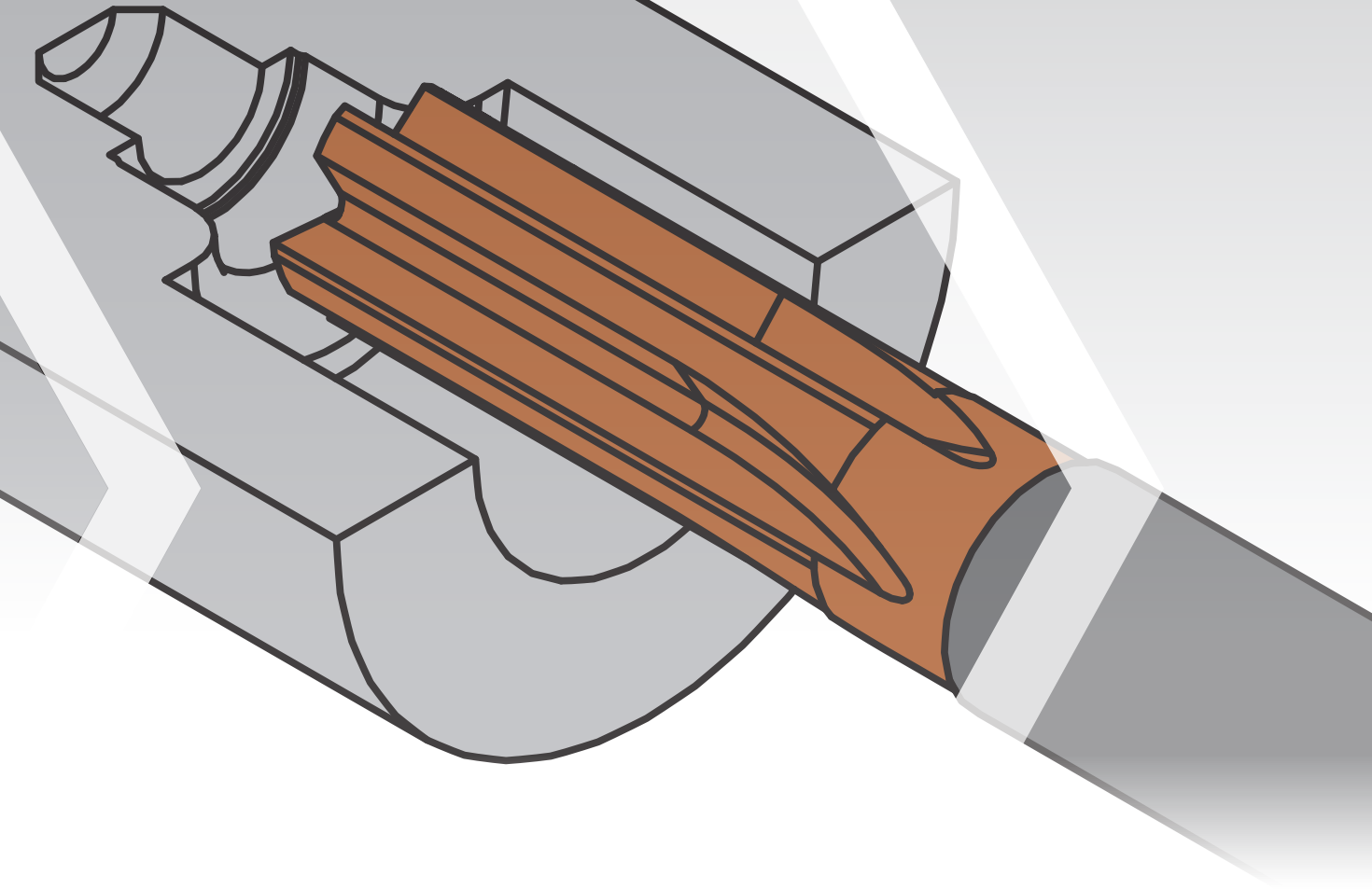


Contour bore with step drill

Machining of the entire bore contour with 3 diameters and internal radius. Kaestner-Tools offers step drills from $\varnothing 1,0$ mm up to $\varnothing 20,0$ mm with a length of up to 200,0 mm, as well as drill/countersink and drill/mill combinations.

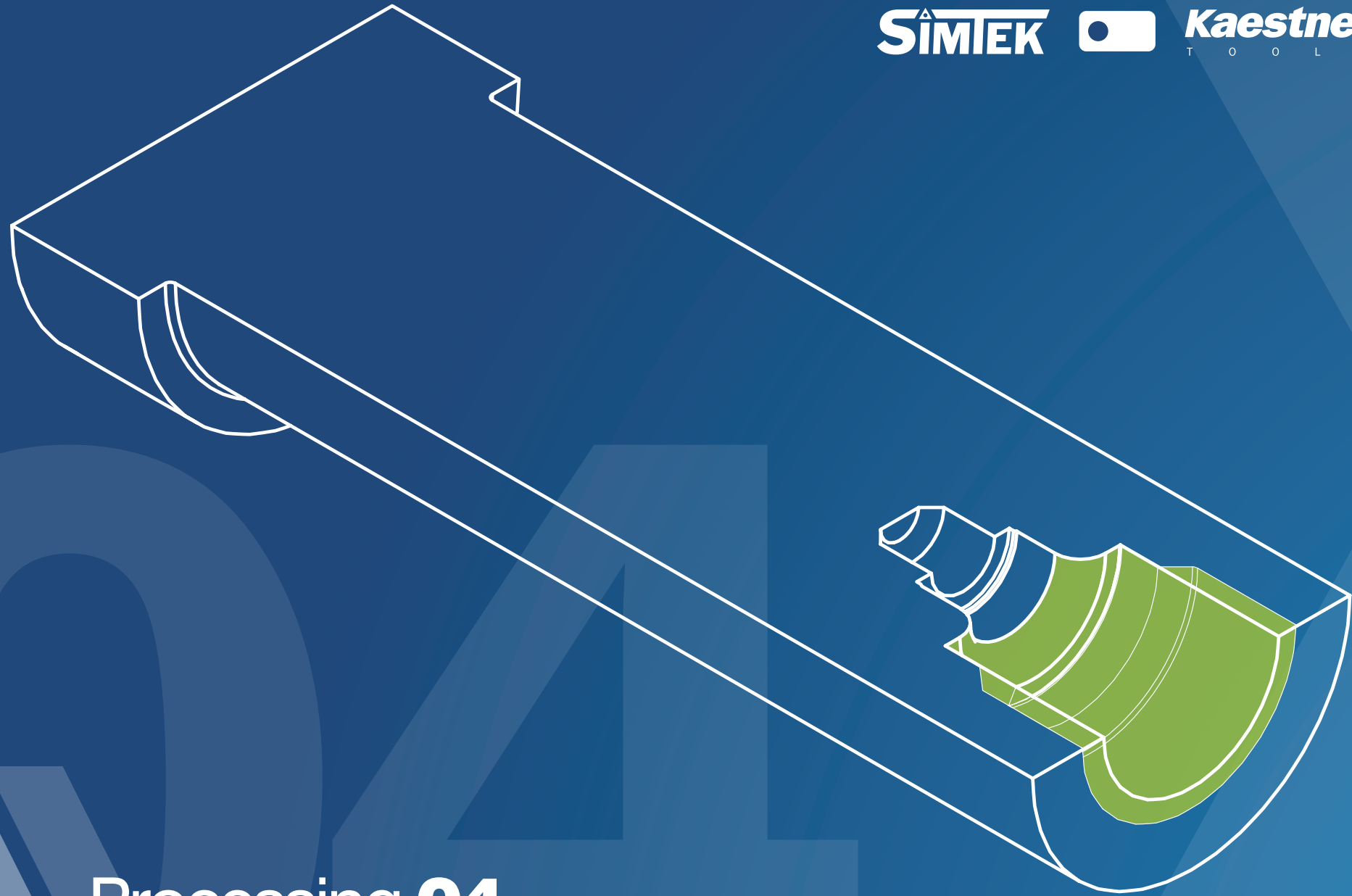


Processing **03**

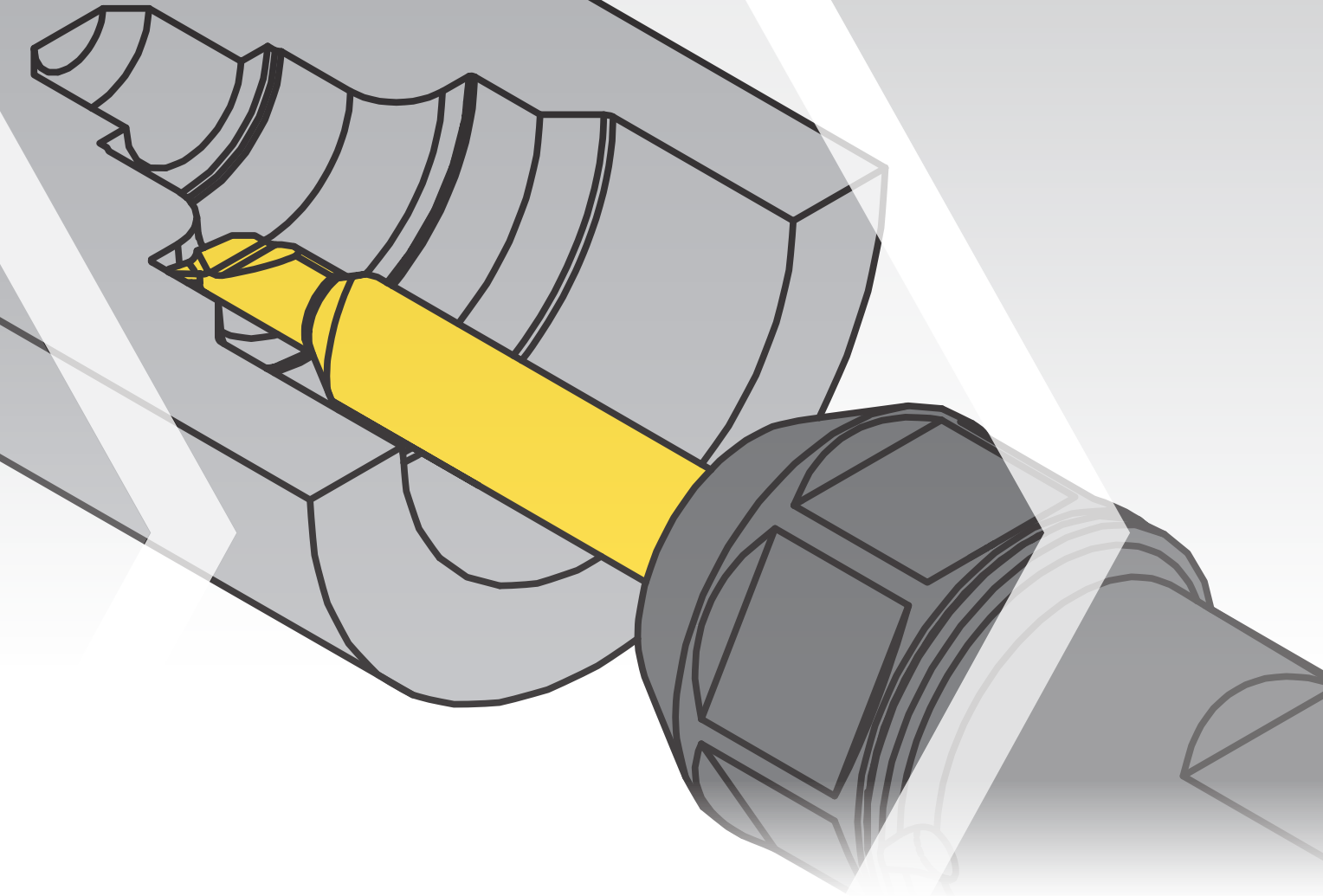


Reaming

High dimensional and shape accuracy and very good surface quality. Also available as stepped or taper reamers and combined drilling/reaming tools in tolerance classes IT7/IT6 with a position of $10\ \mu\text{m}$ and a cylindricity of $7\ \mu\text{m}$.

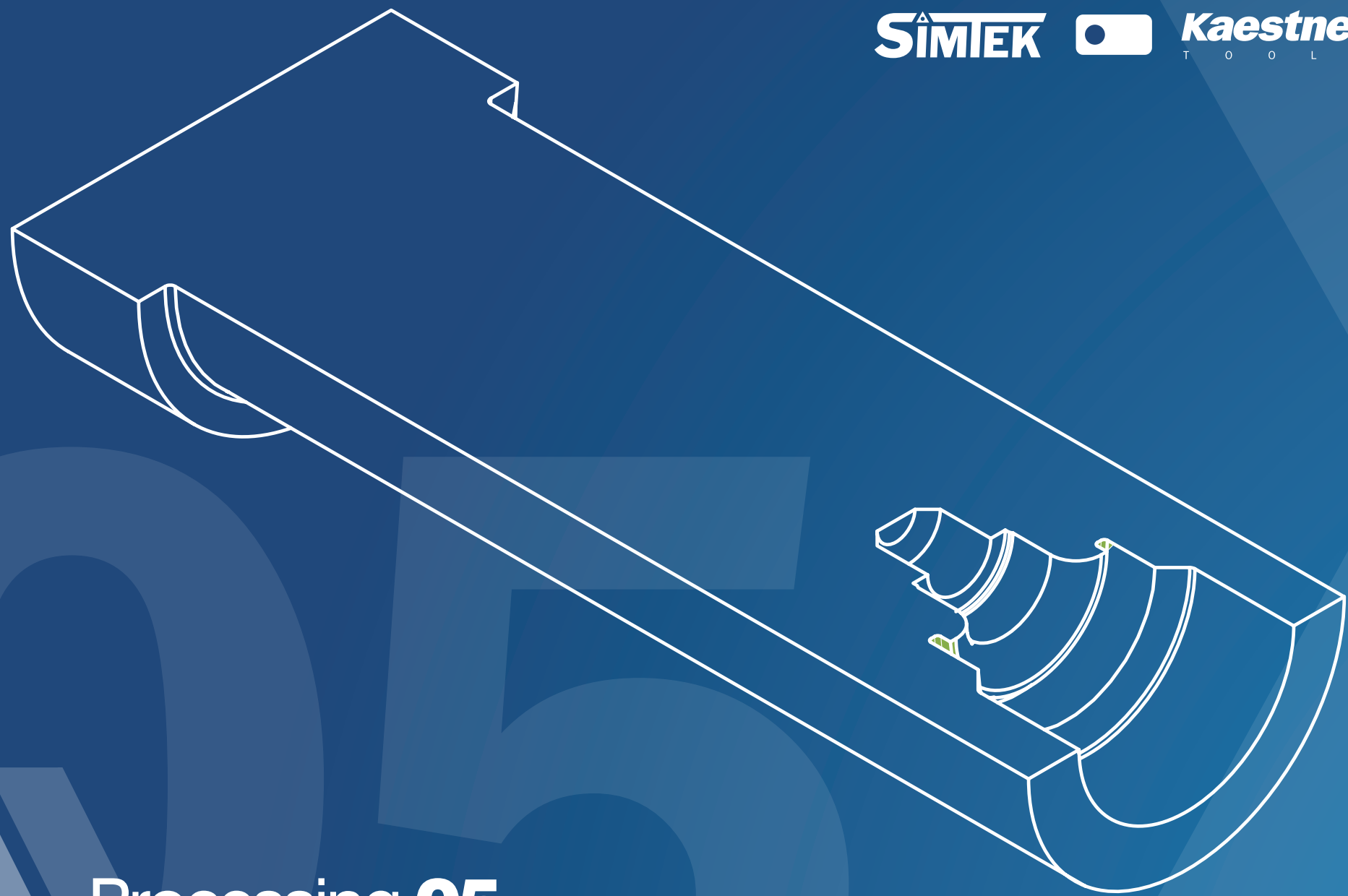


Processing 04

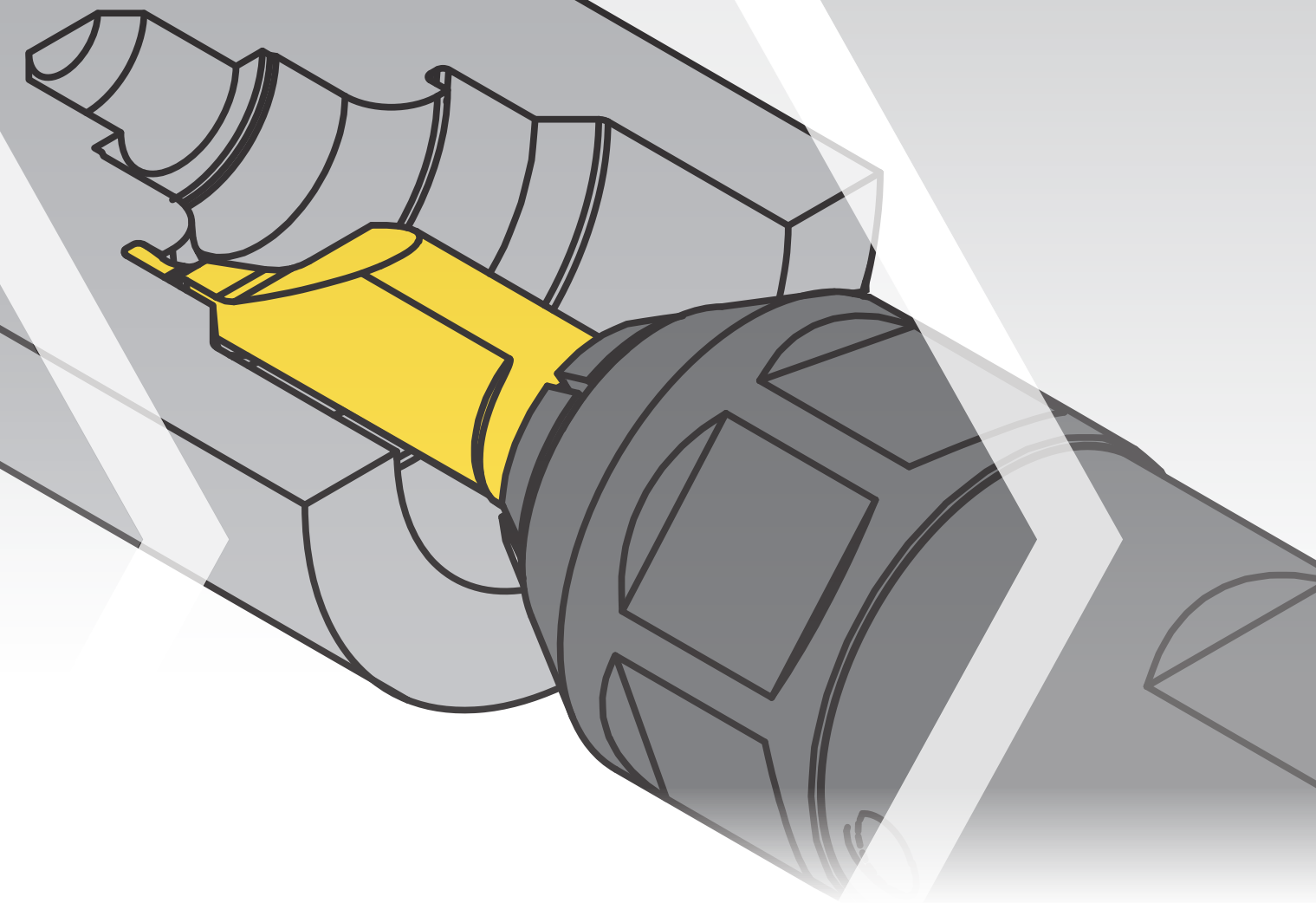


Boring and Profiling

With almost 3.000 standard tools simturn AX offers a suitable tool for almost every application in bores between 0,3 mm and approx. 20,0 mm.

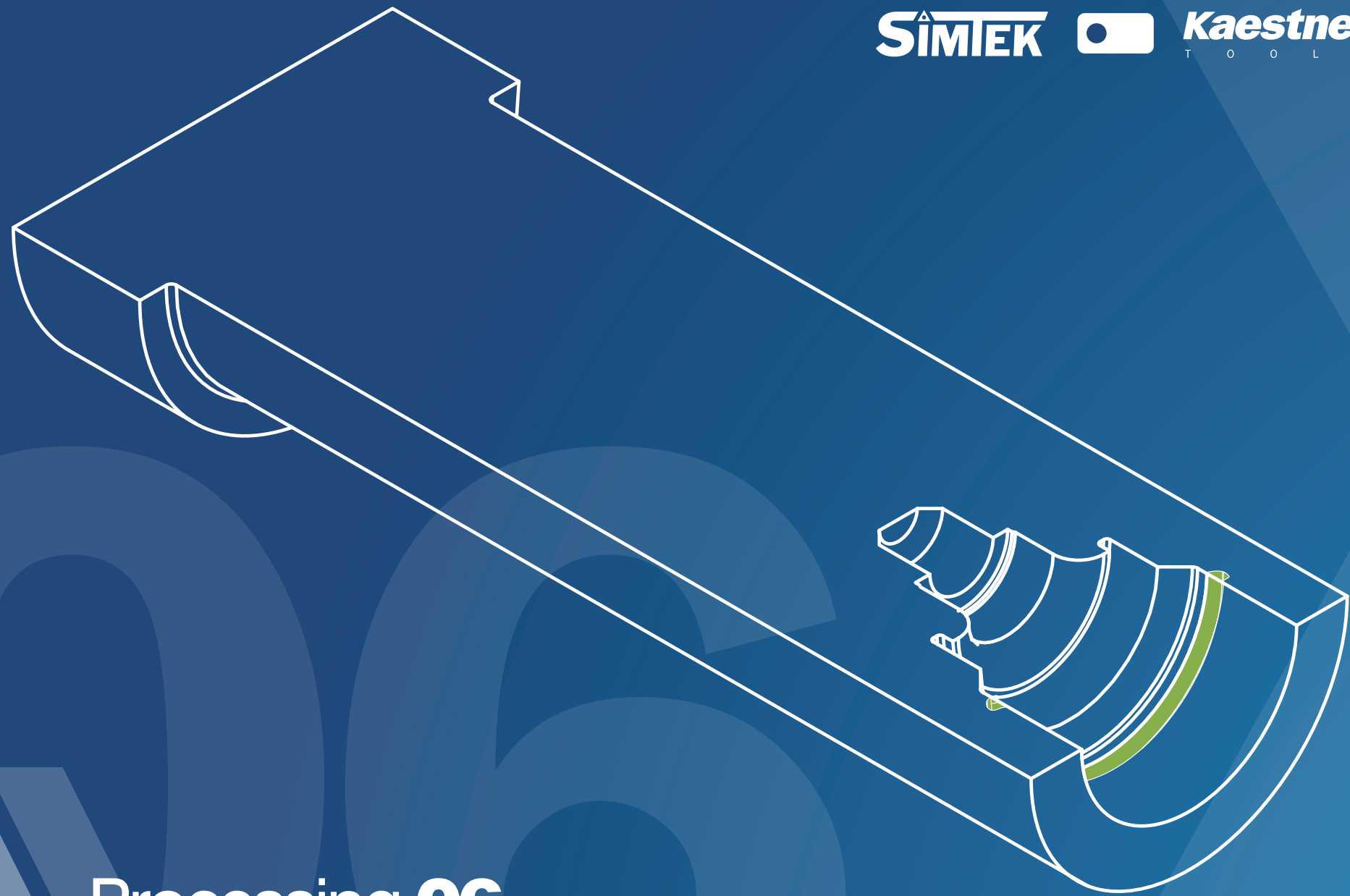


Processing **05**

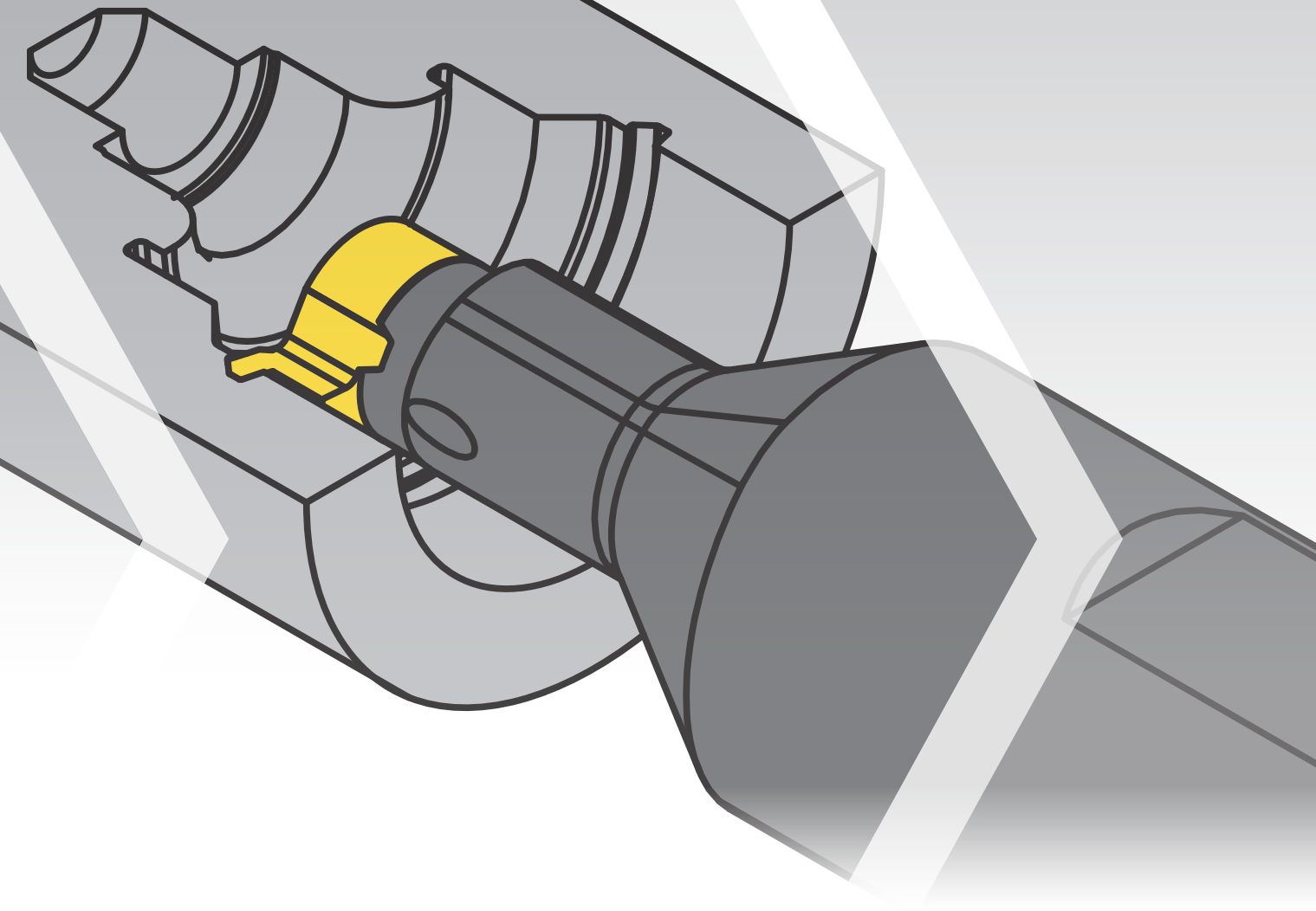


Face Grooving

Available in simturn AX standard for different diameters – for face grooving in bores or on pivots.

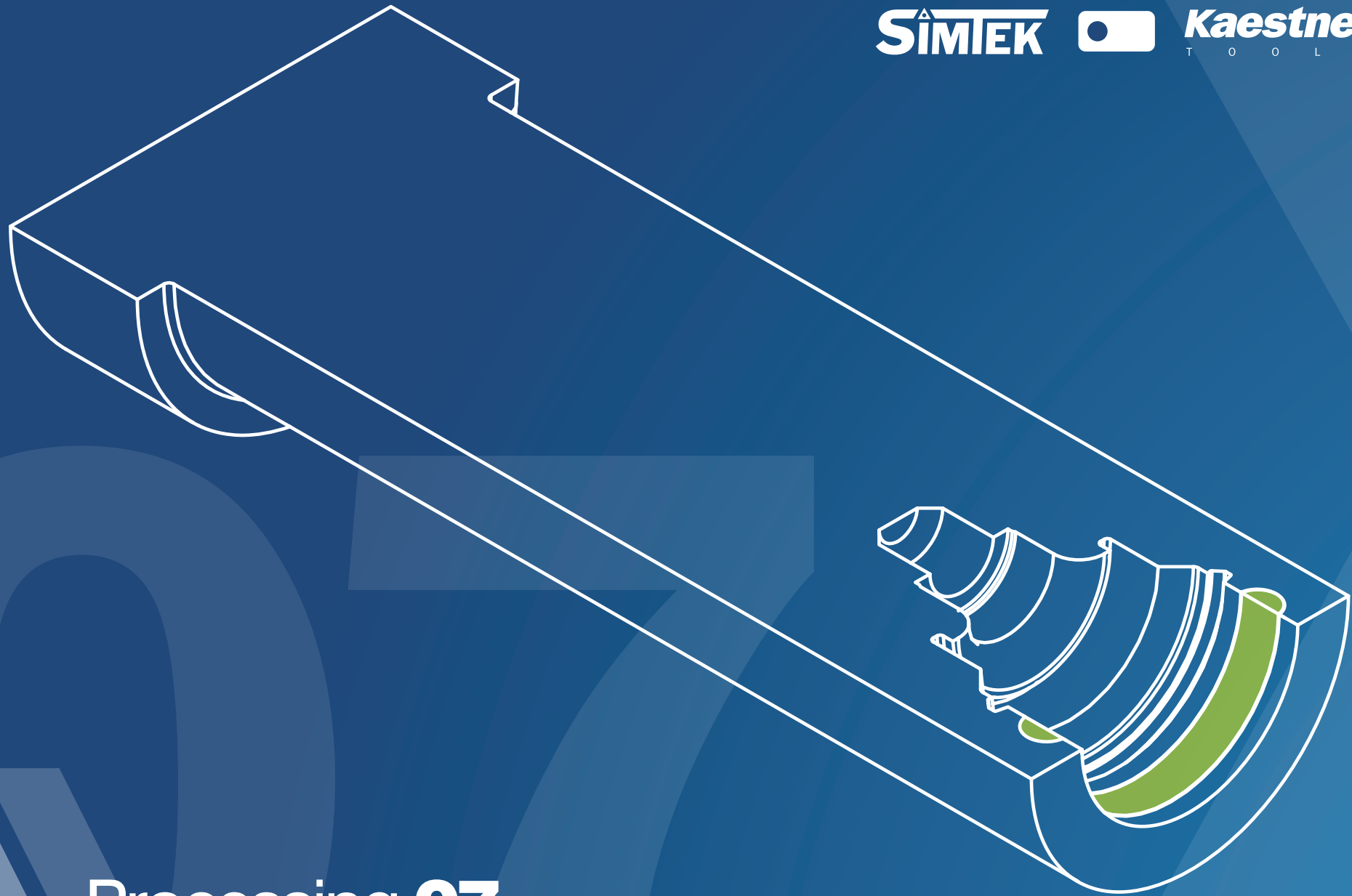


Processing 06

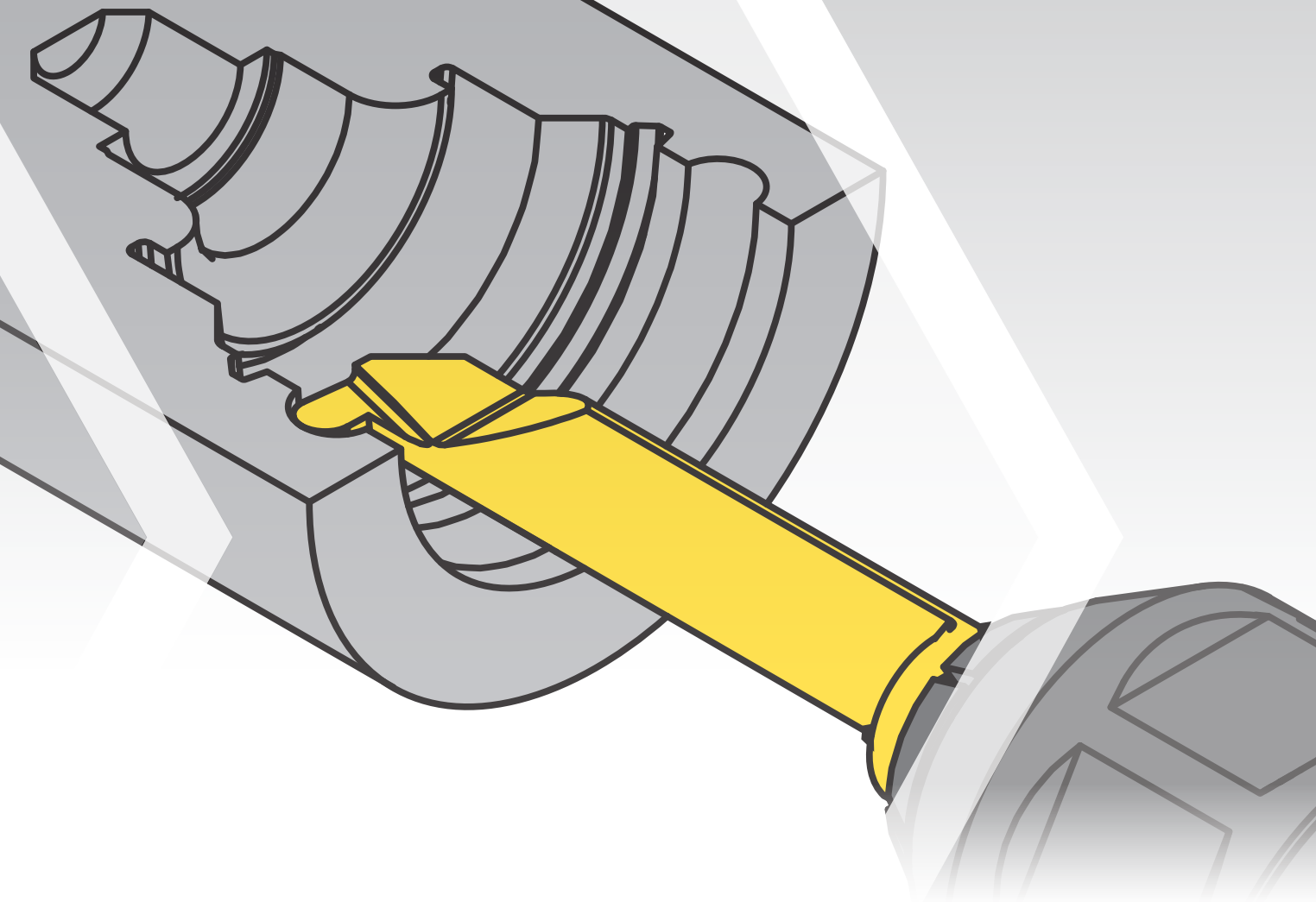


Profiling

Customized form cutting tool based on simturn DX, a tool system for the machining in bores between $\varnothing 7,0$ mm up to approx. $\varnothing 24,0$ mm.

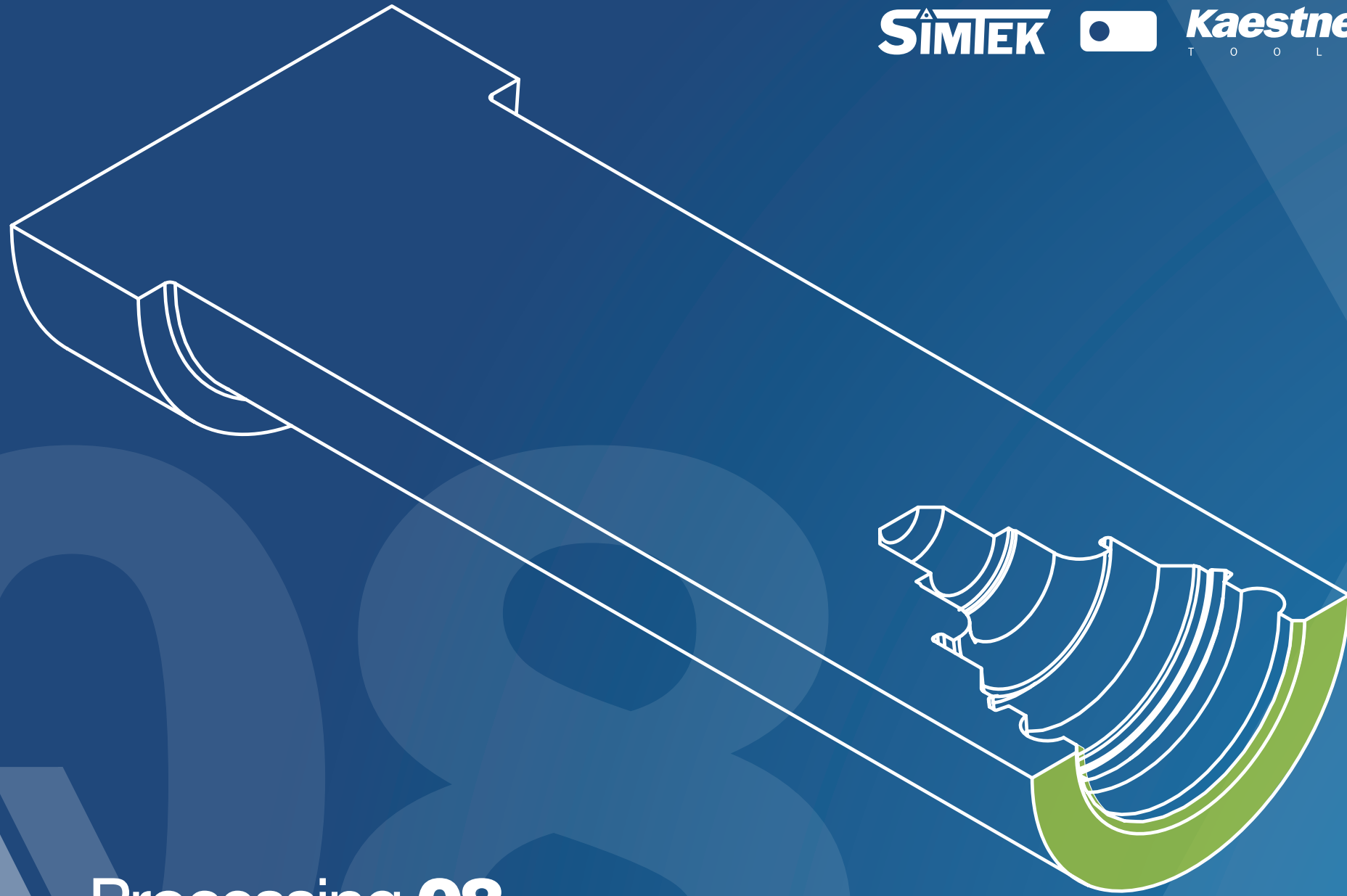


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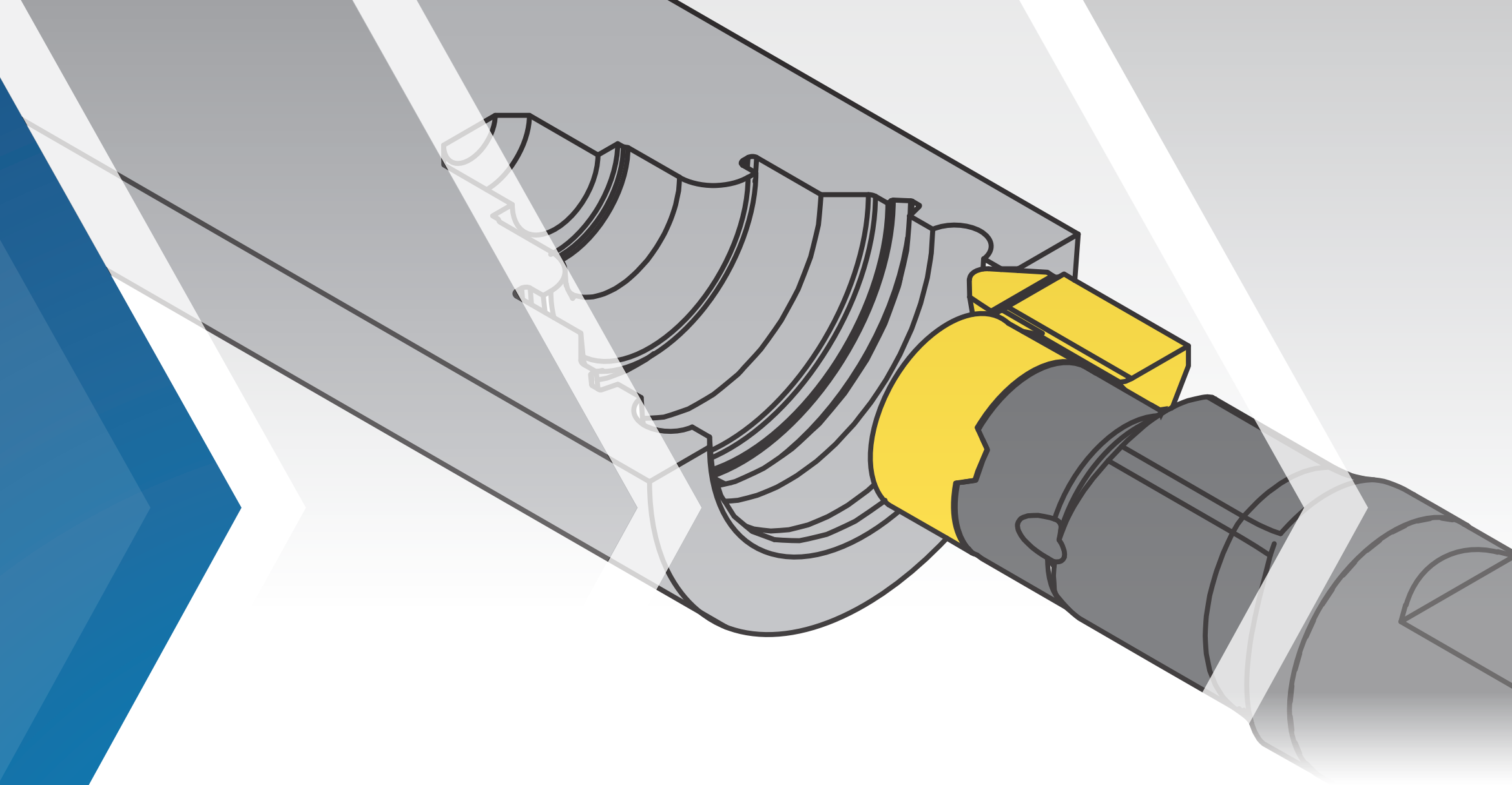


Profiling with full radius

Cutting tool based on simturn AX with full radius contour, suitable for grooving, contouring and profiling.

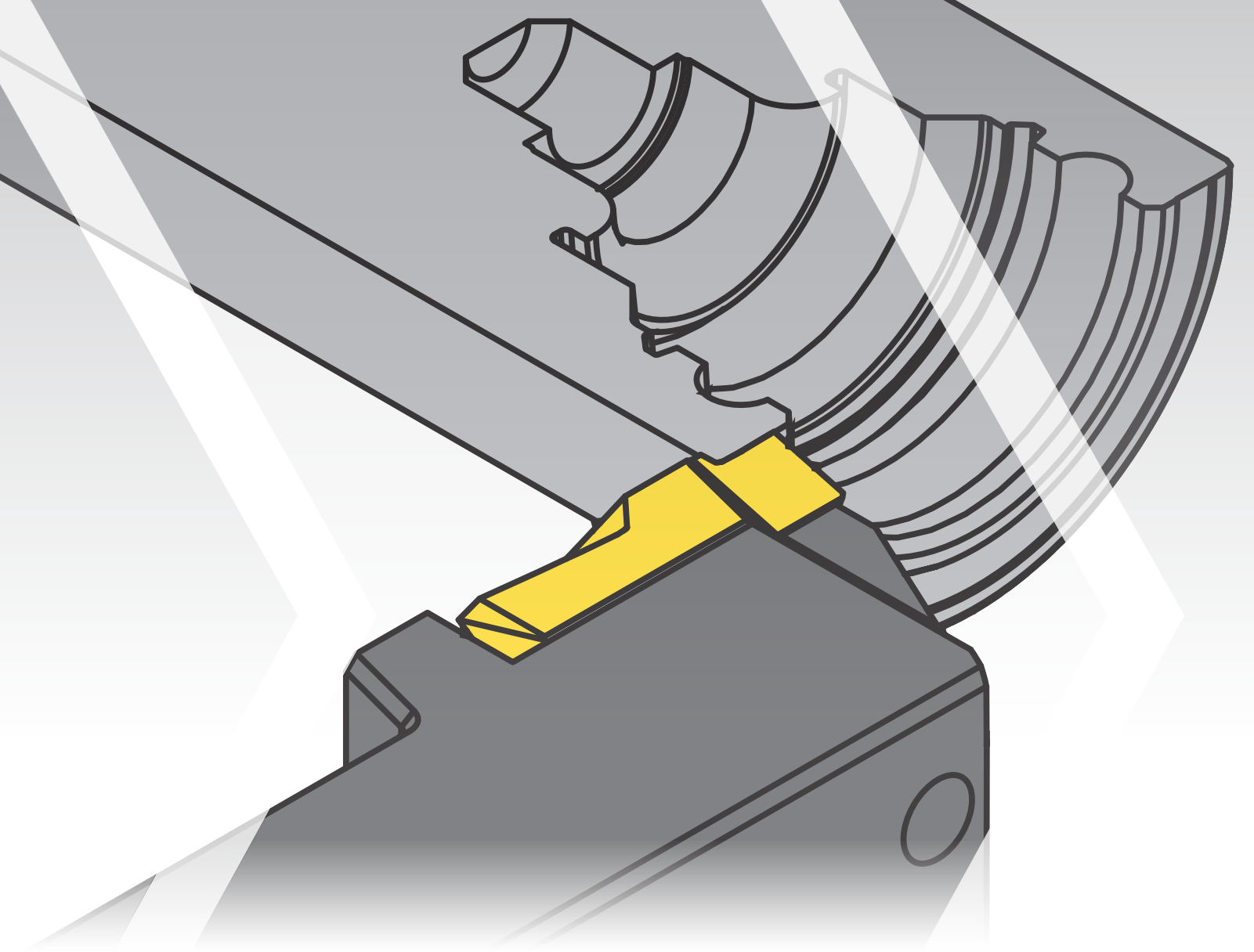
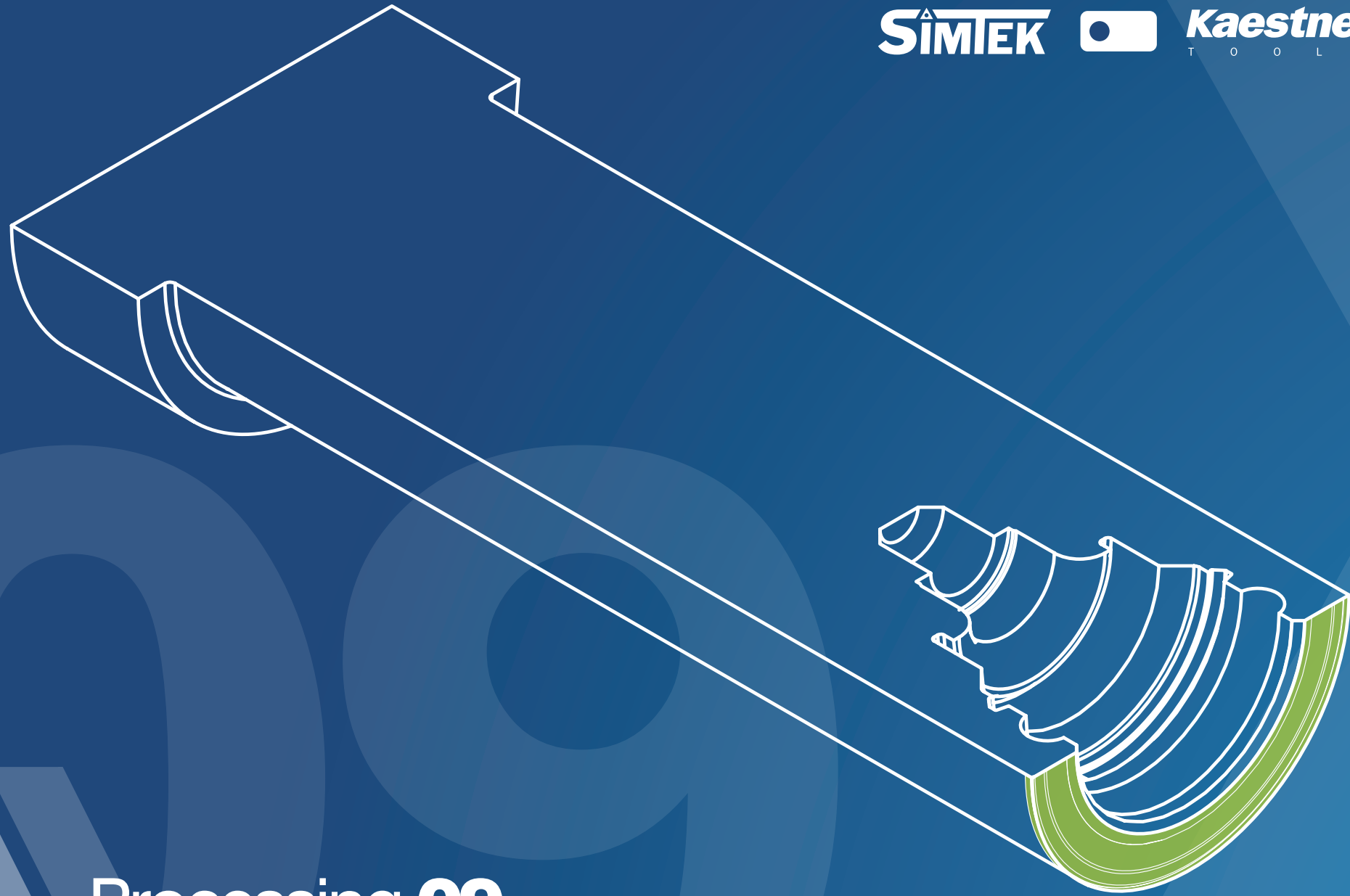


Processing 08



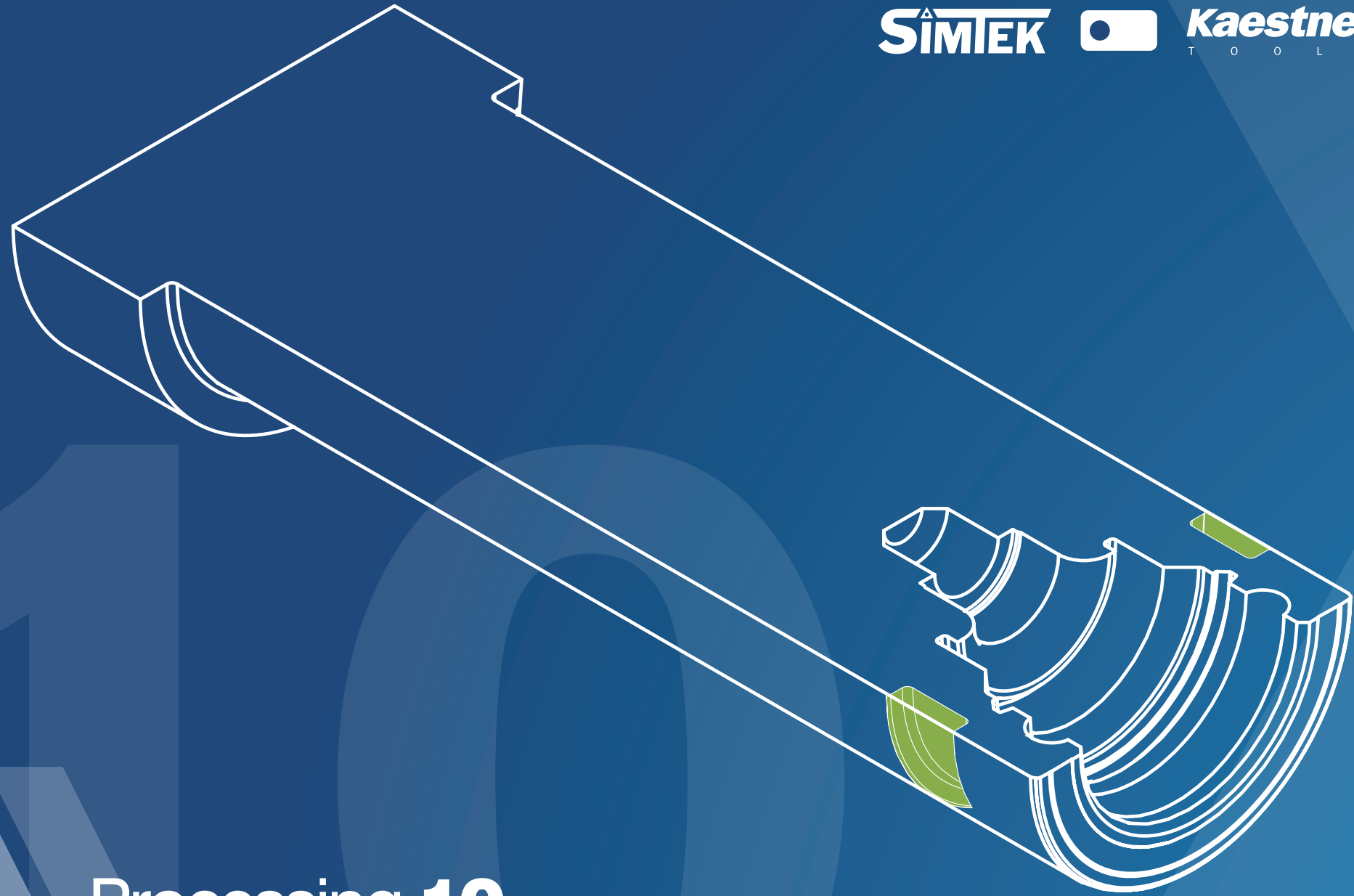
Chamfering and Facing

Chamfering of the inner contour with front mounted cutting tool based on simturn DX and axially aligned cutting edge.

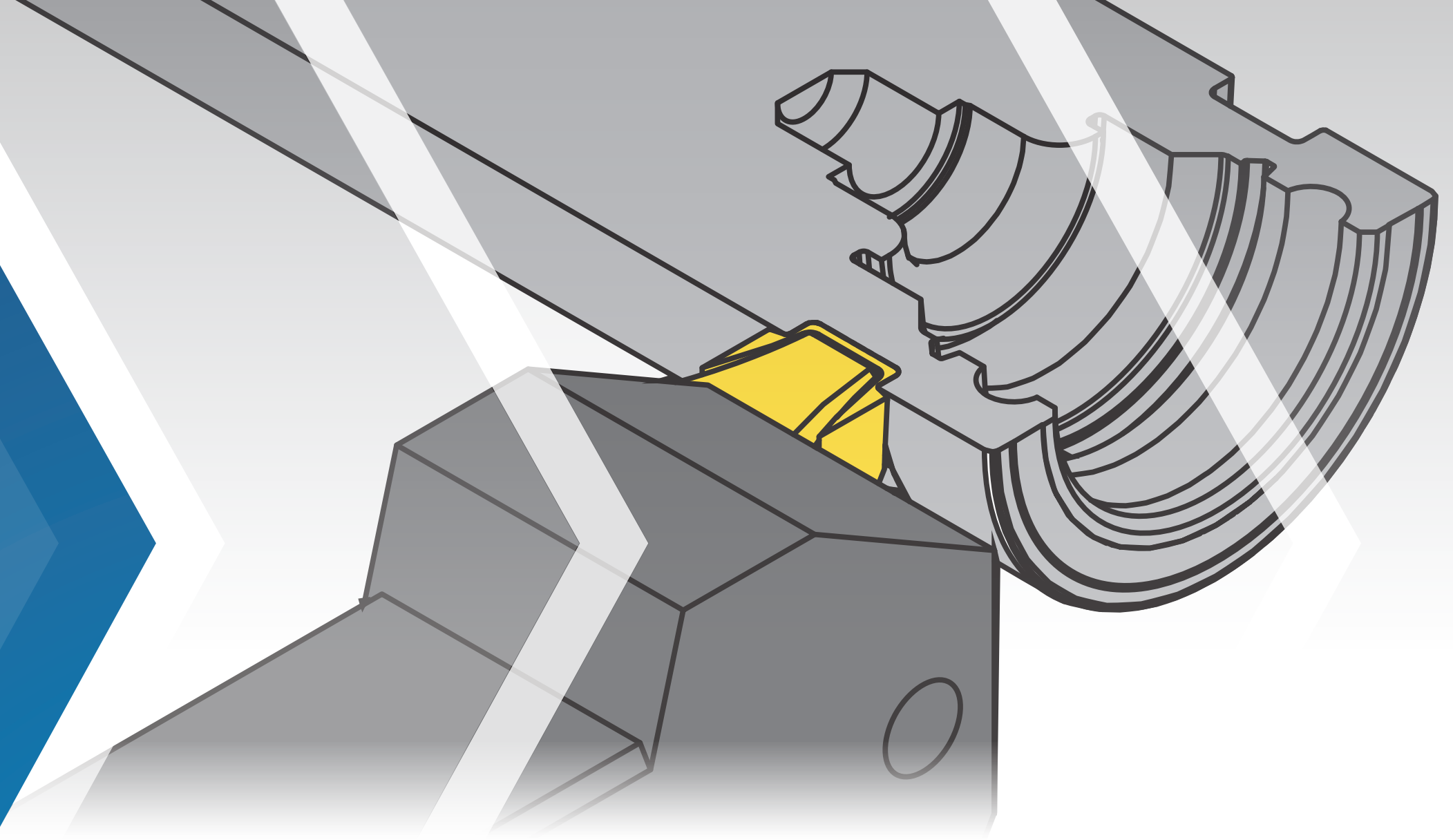


Facing and Chamfering

Individual tool from the product group simturn FX with three cutting edges. The precision ground cutting insert offers highest precision, high repeat accuracy and performance.

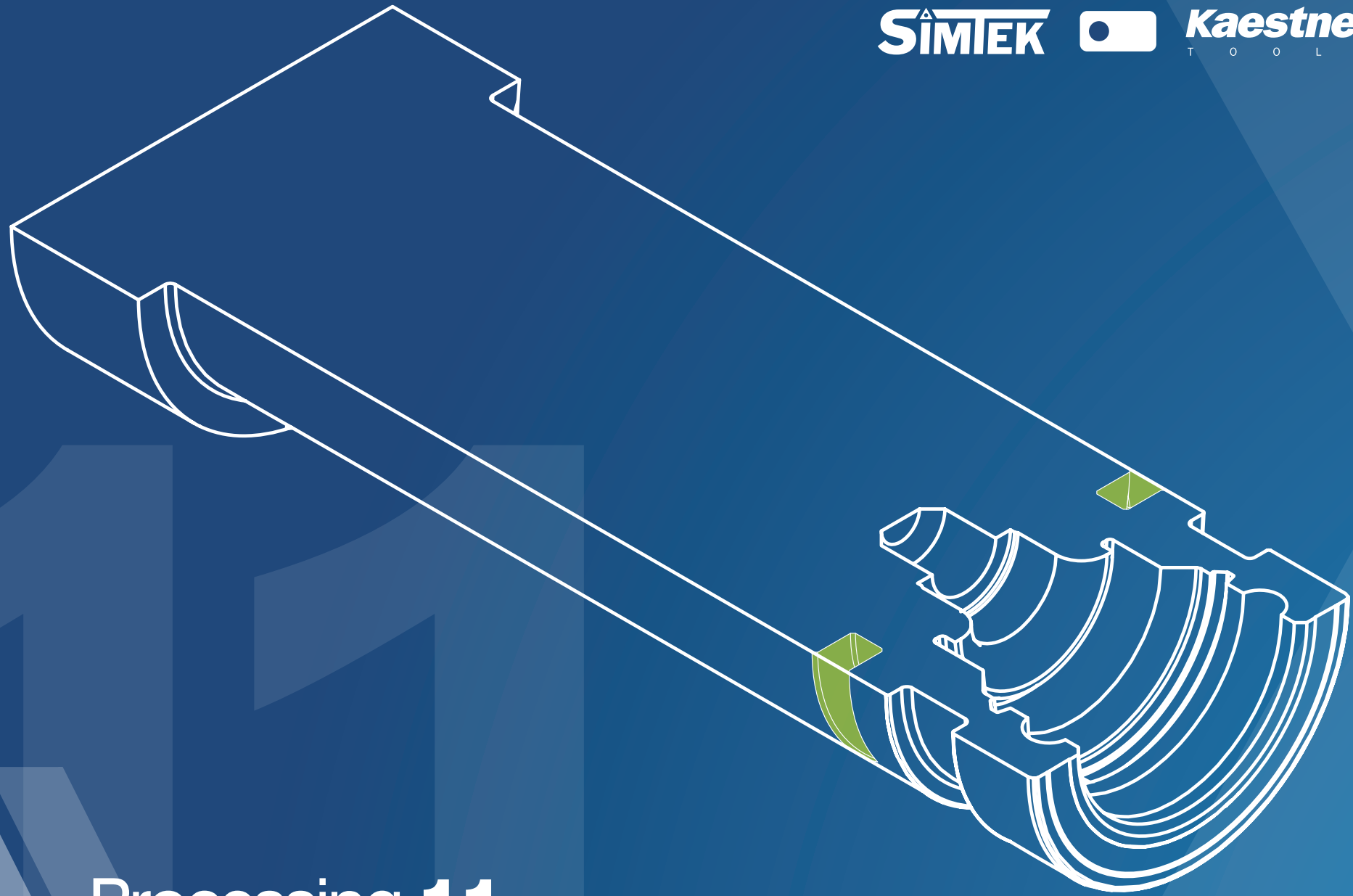


Processing **10**

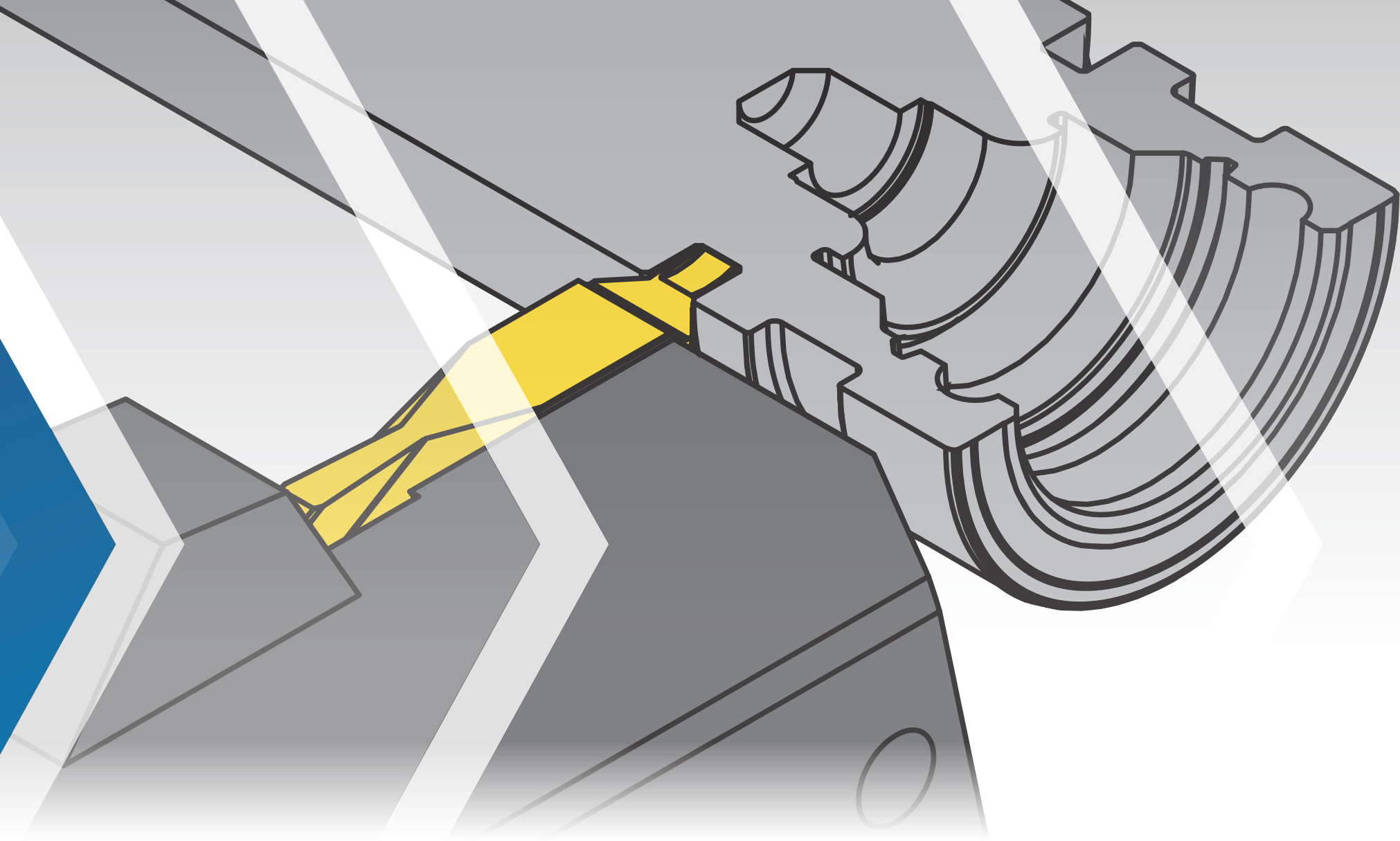


Grooving and Chamfering

Bolted, very powerful clamping of a three-edged cutting tool from the simturn FX group. The cutting tool produces the groove including the groove outer edge chamfer and offers optimal chip control thanks to chip breakers.

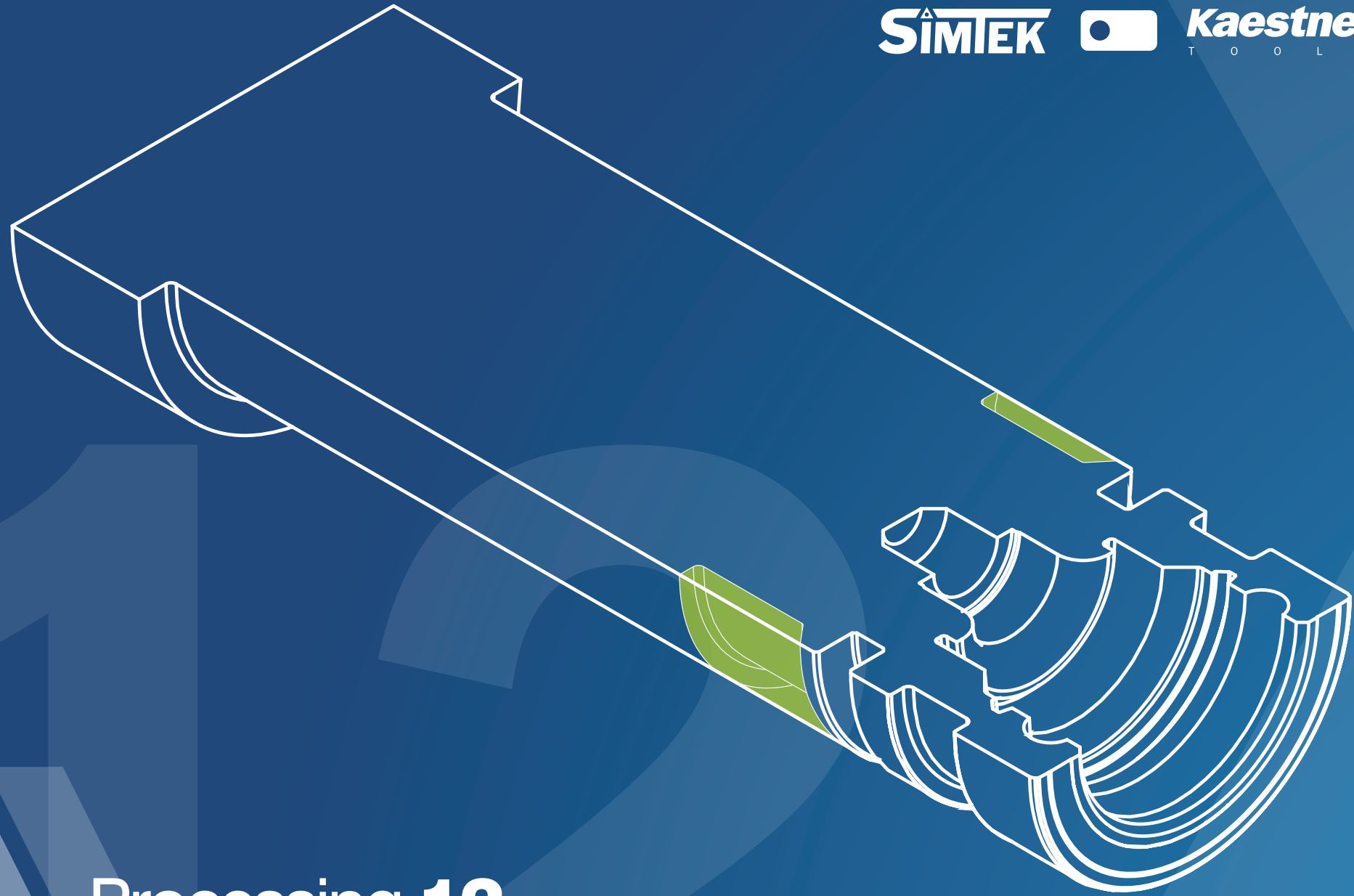


Processing **11**

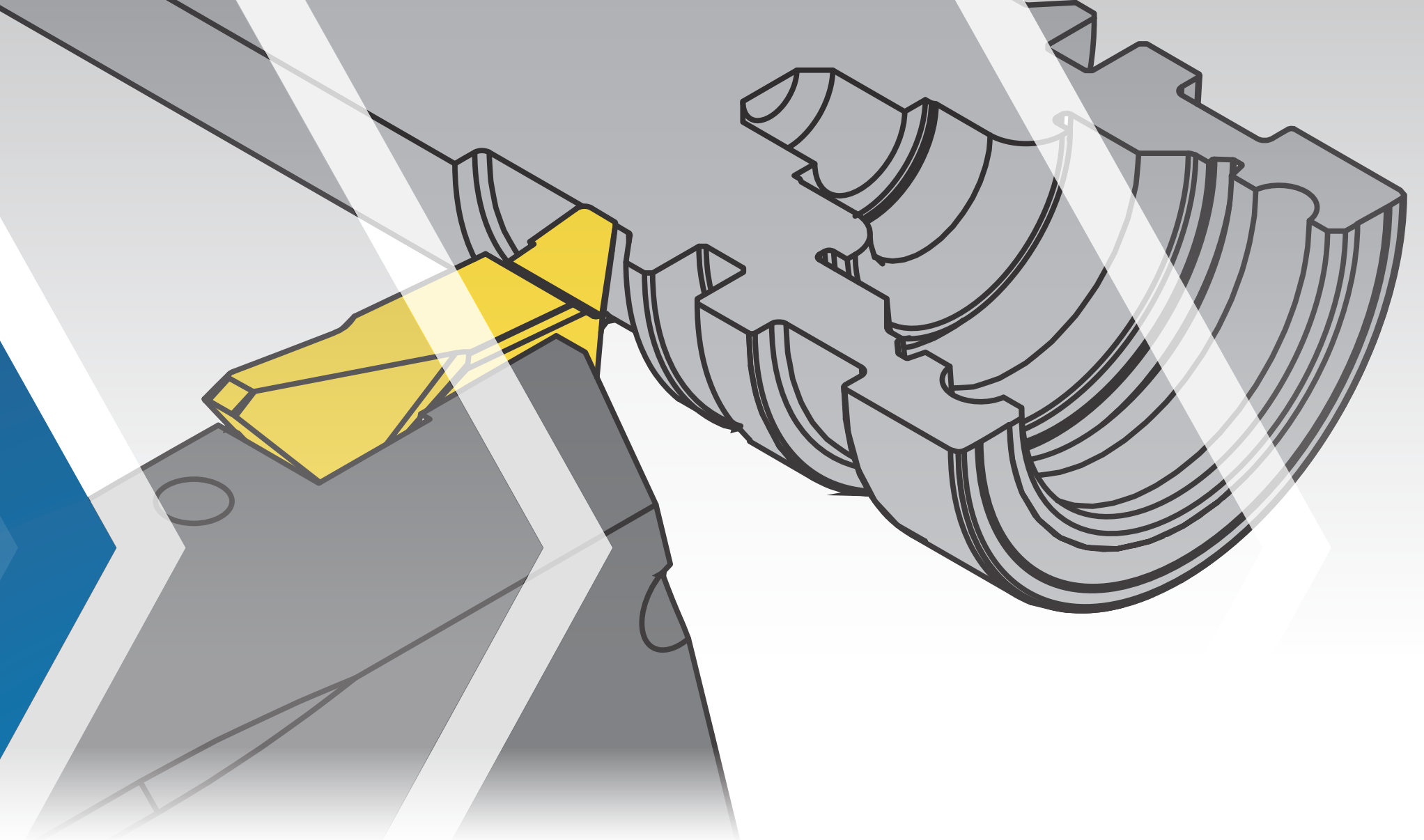


Grooving and Chamfering

simturn FX cutting tool with straight groove form, groove and chamfer with controlled chip removal.

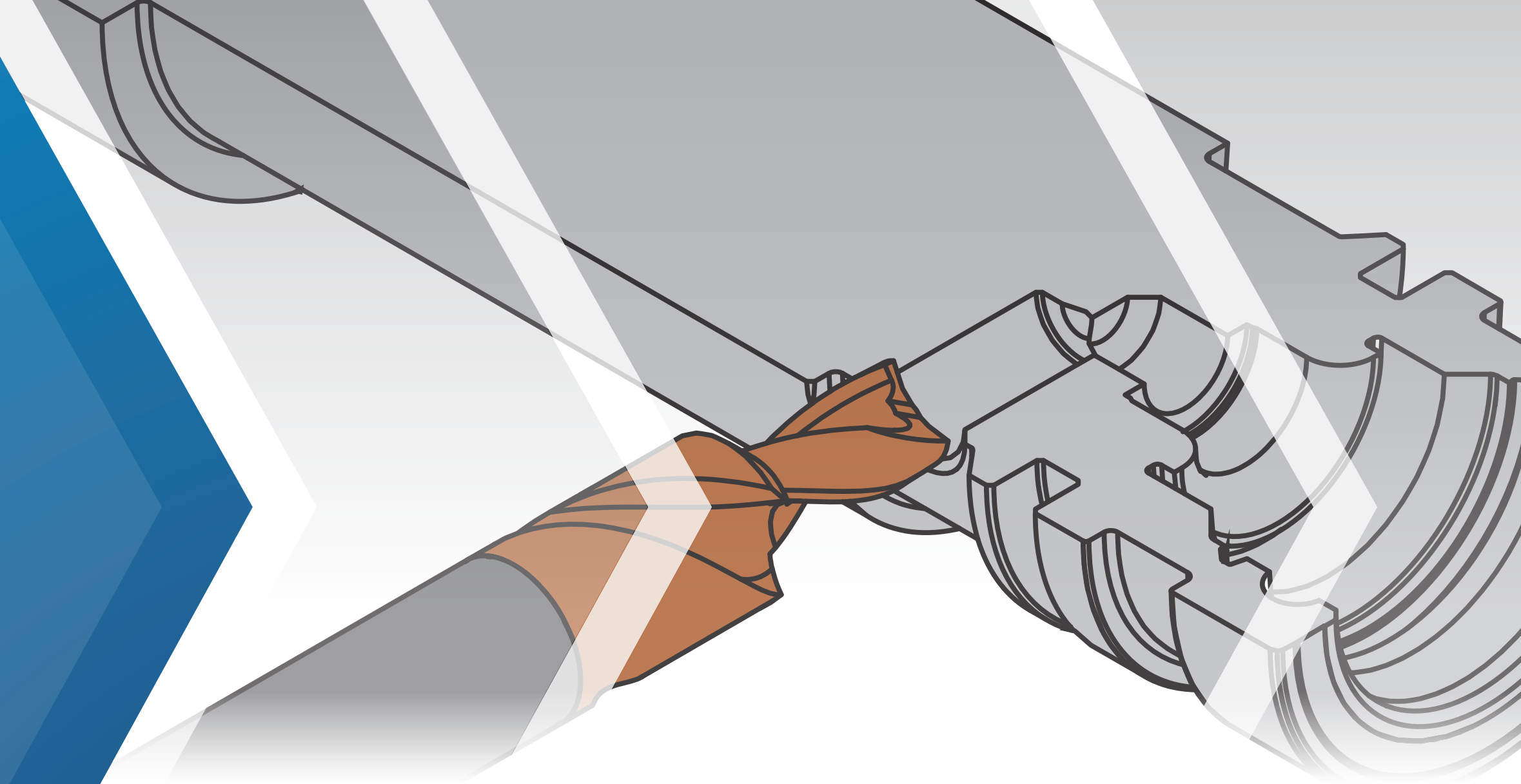
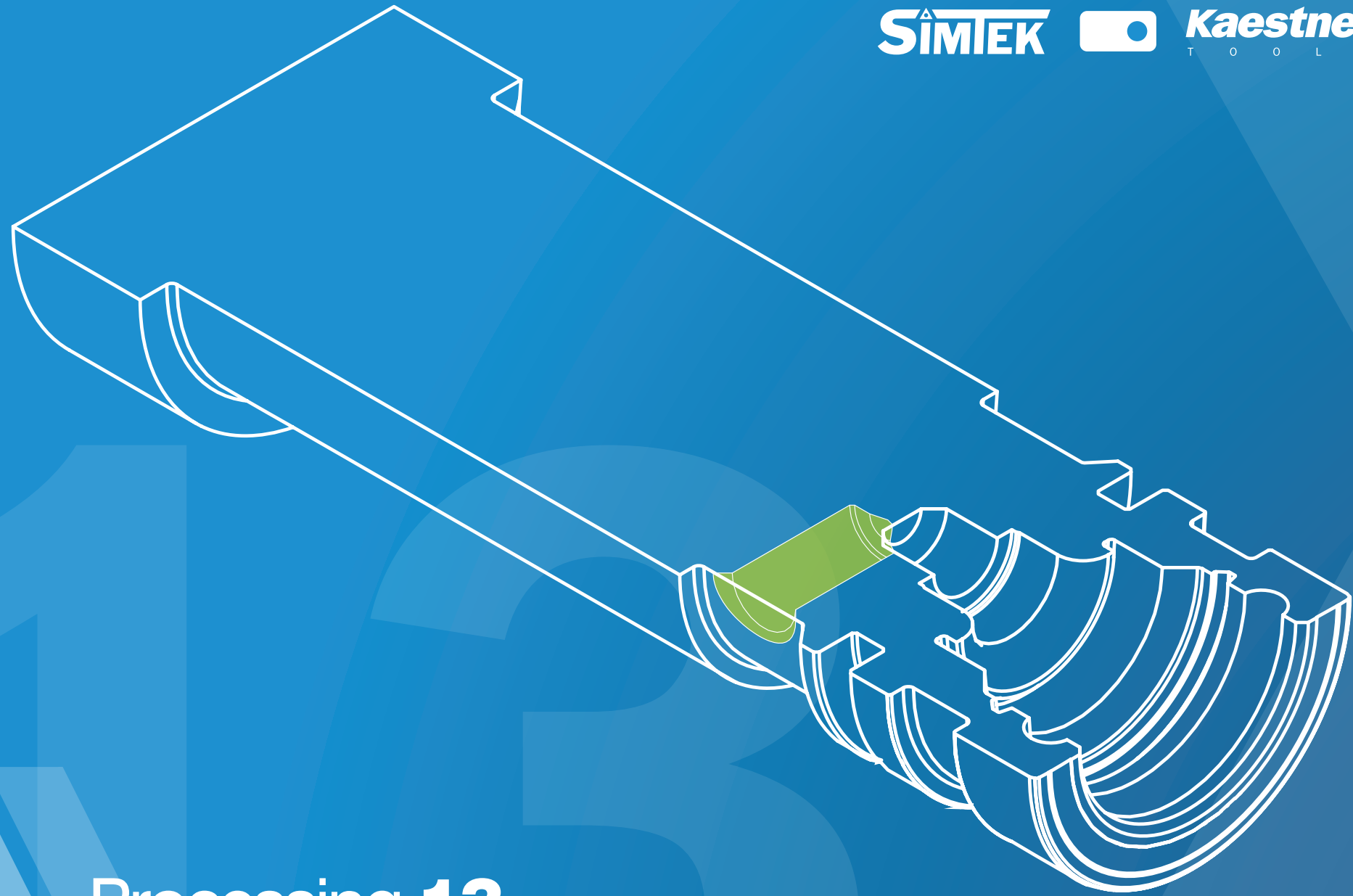


Processing **12**



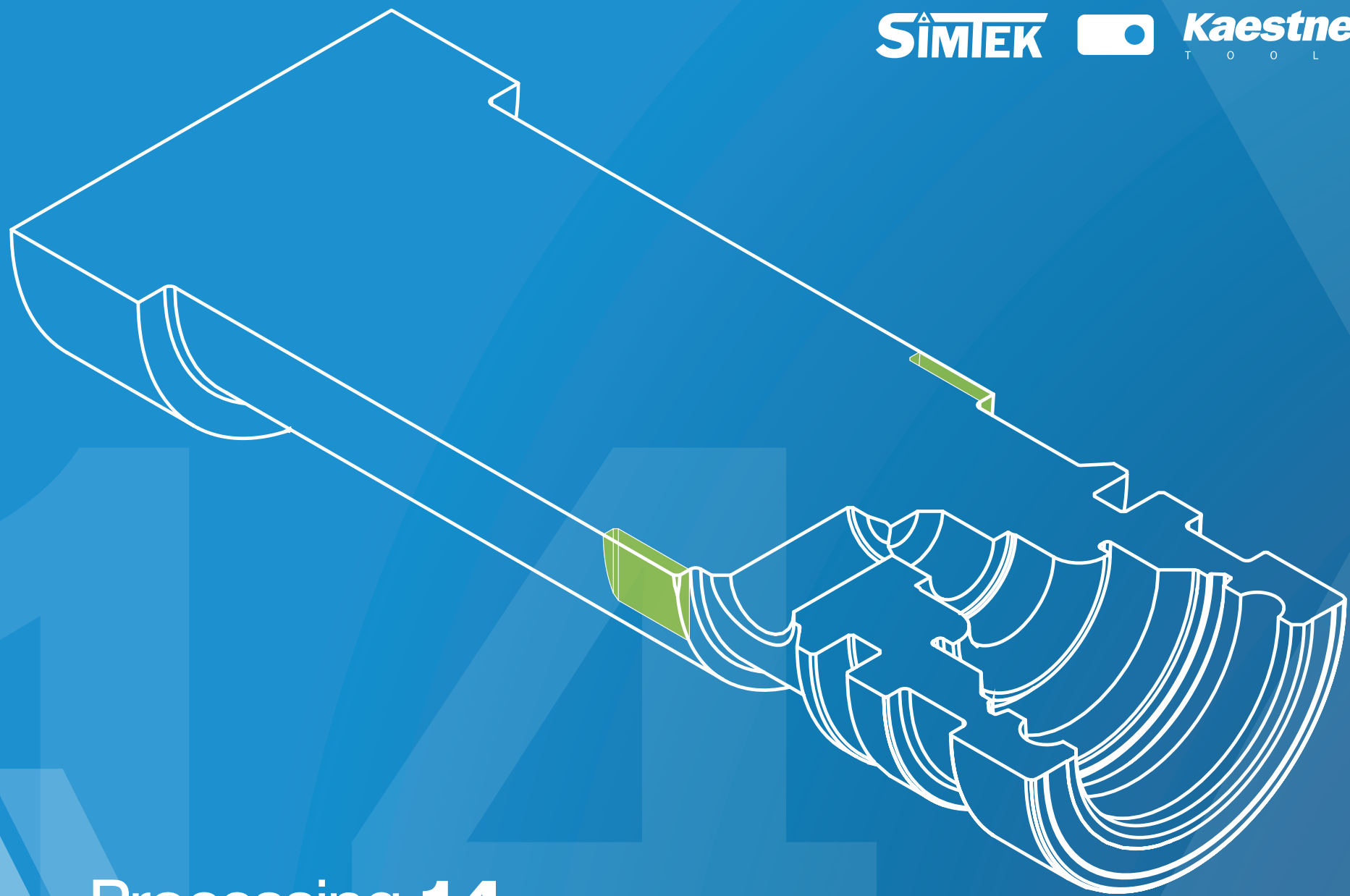
Profiling

Profiling and longitudinal turning tool based on simturn FX, with three cutting edges and high change accuracy.

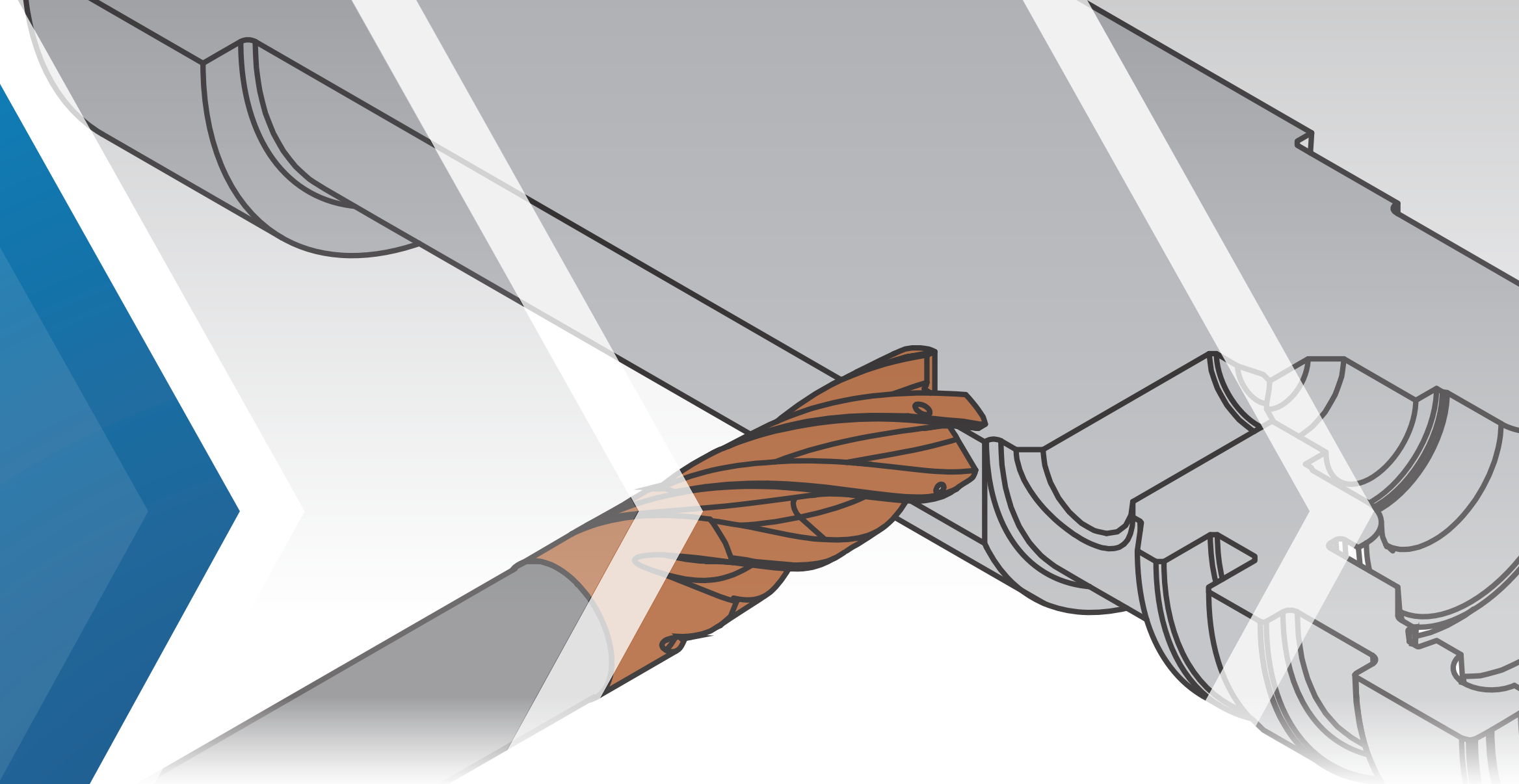


Flat bottom drilling

Drilling and chamfering with a Kaestner-Tools flat drill. These are manufactured with different tip geometries, such as shape E-tip or various corner and transition combinations.

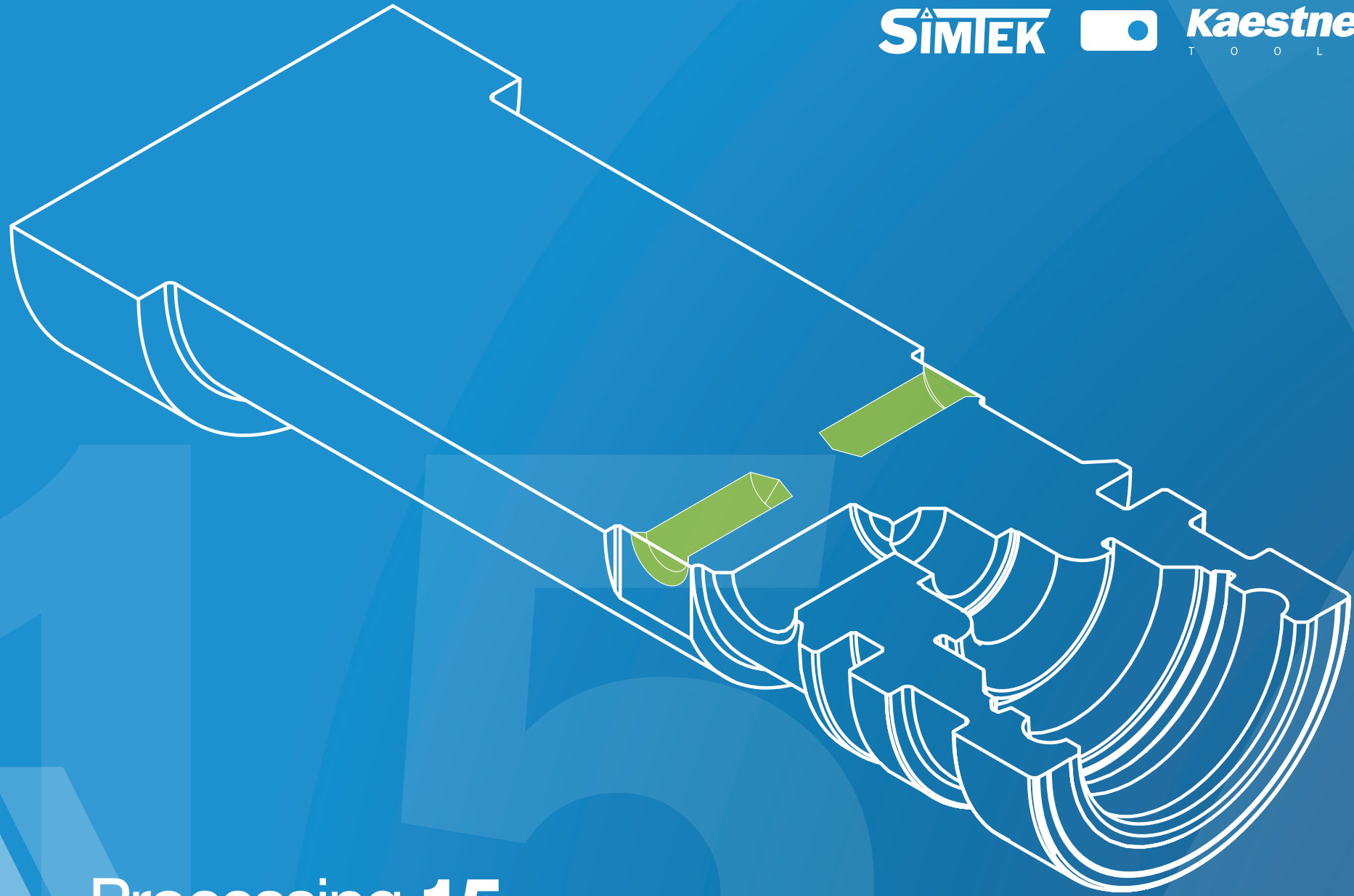


Processing **14**

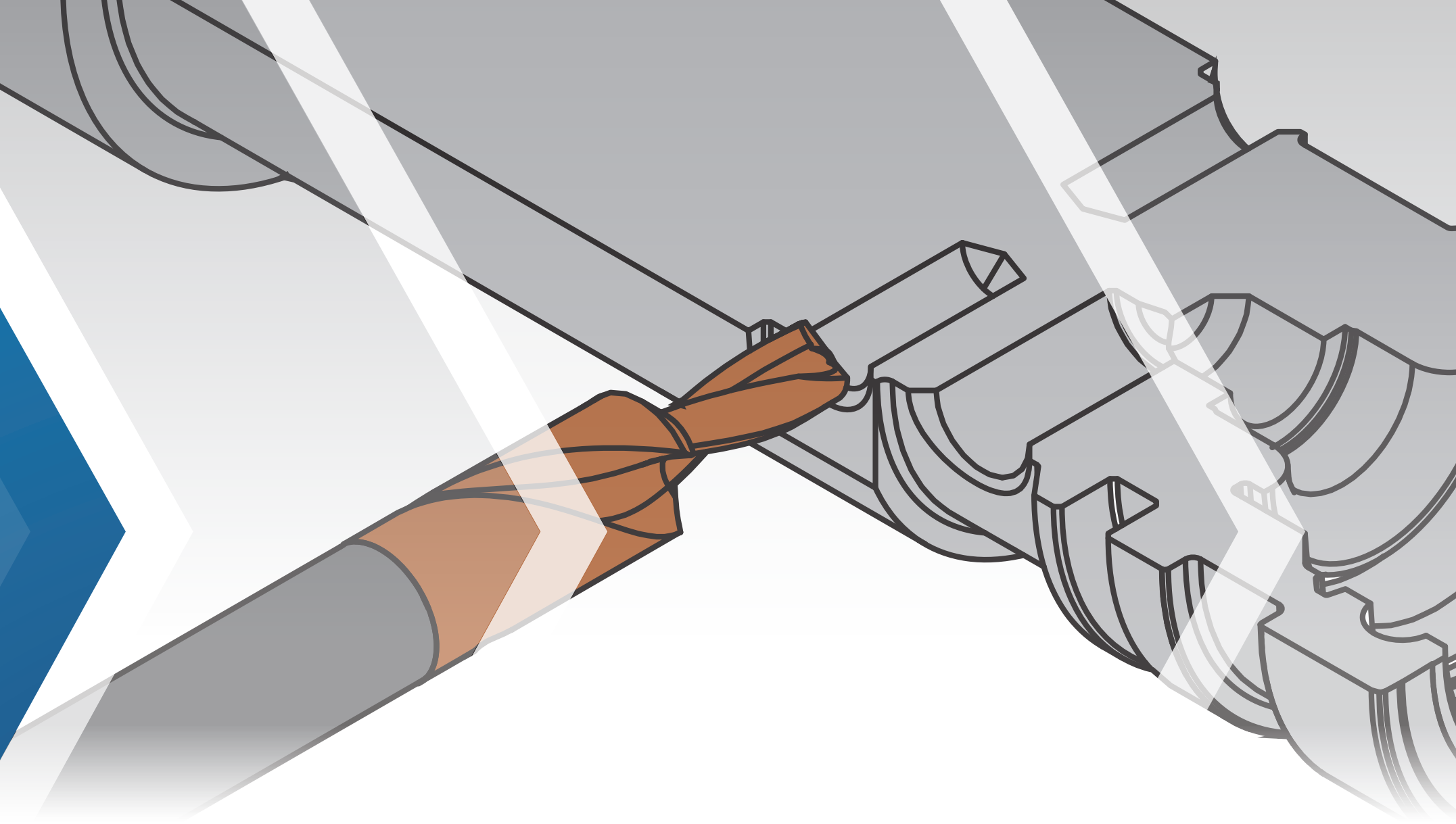


Polygonal milling

Solid carbide milling cutter with internal coolant supply can be optimized with one coolant channel per tooth in our standard range.

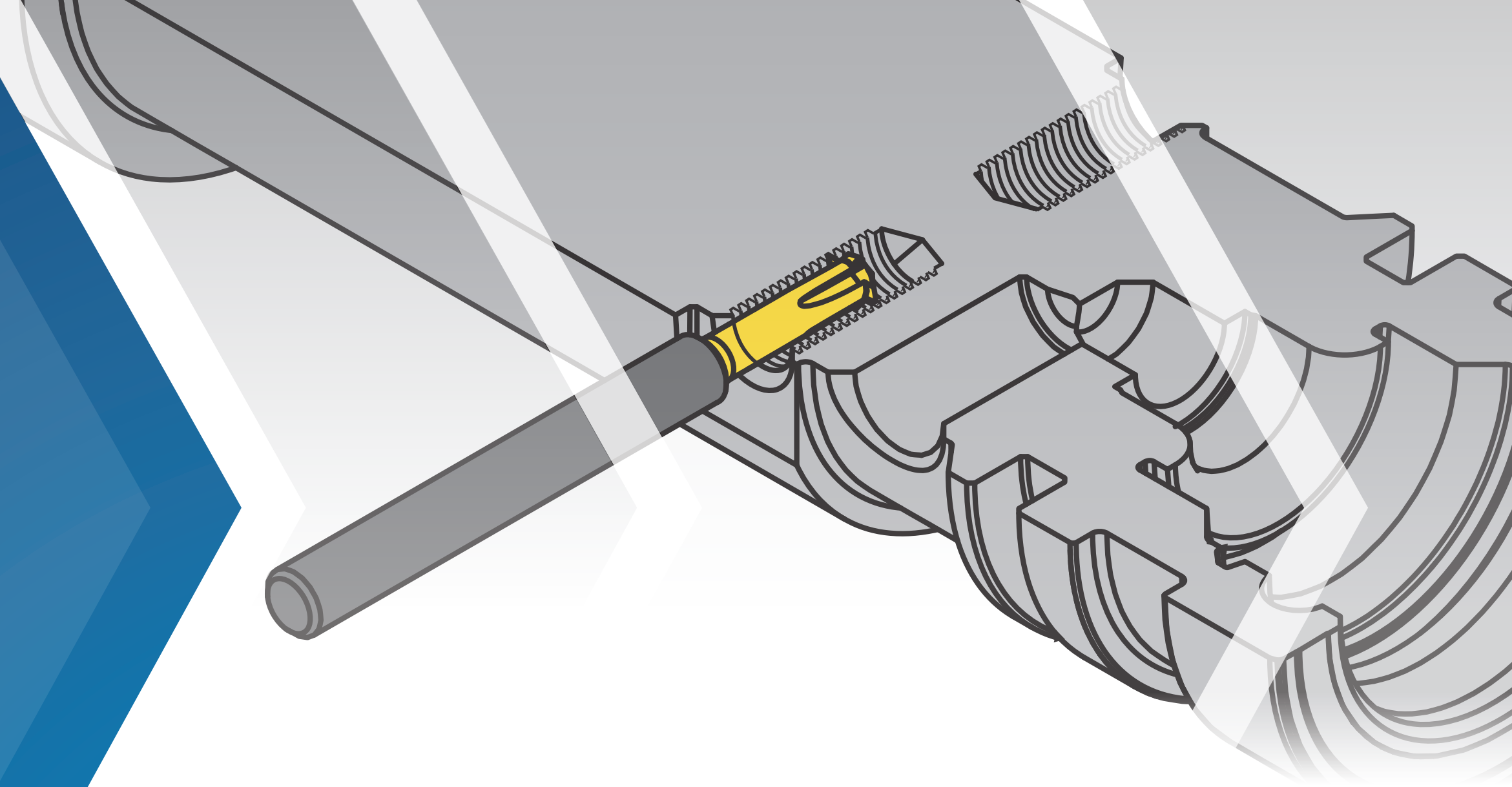
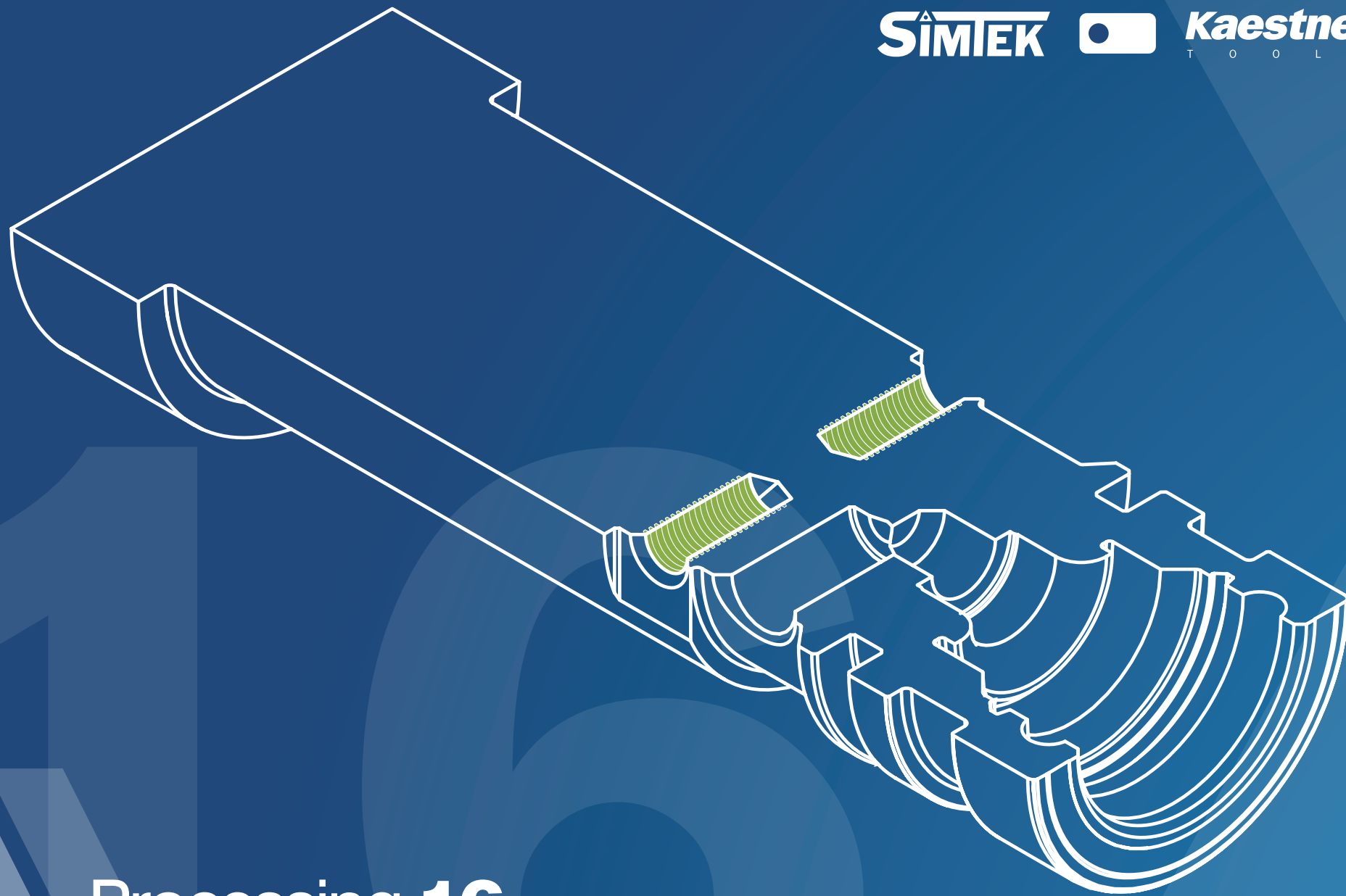


Processing **15**



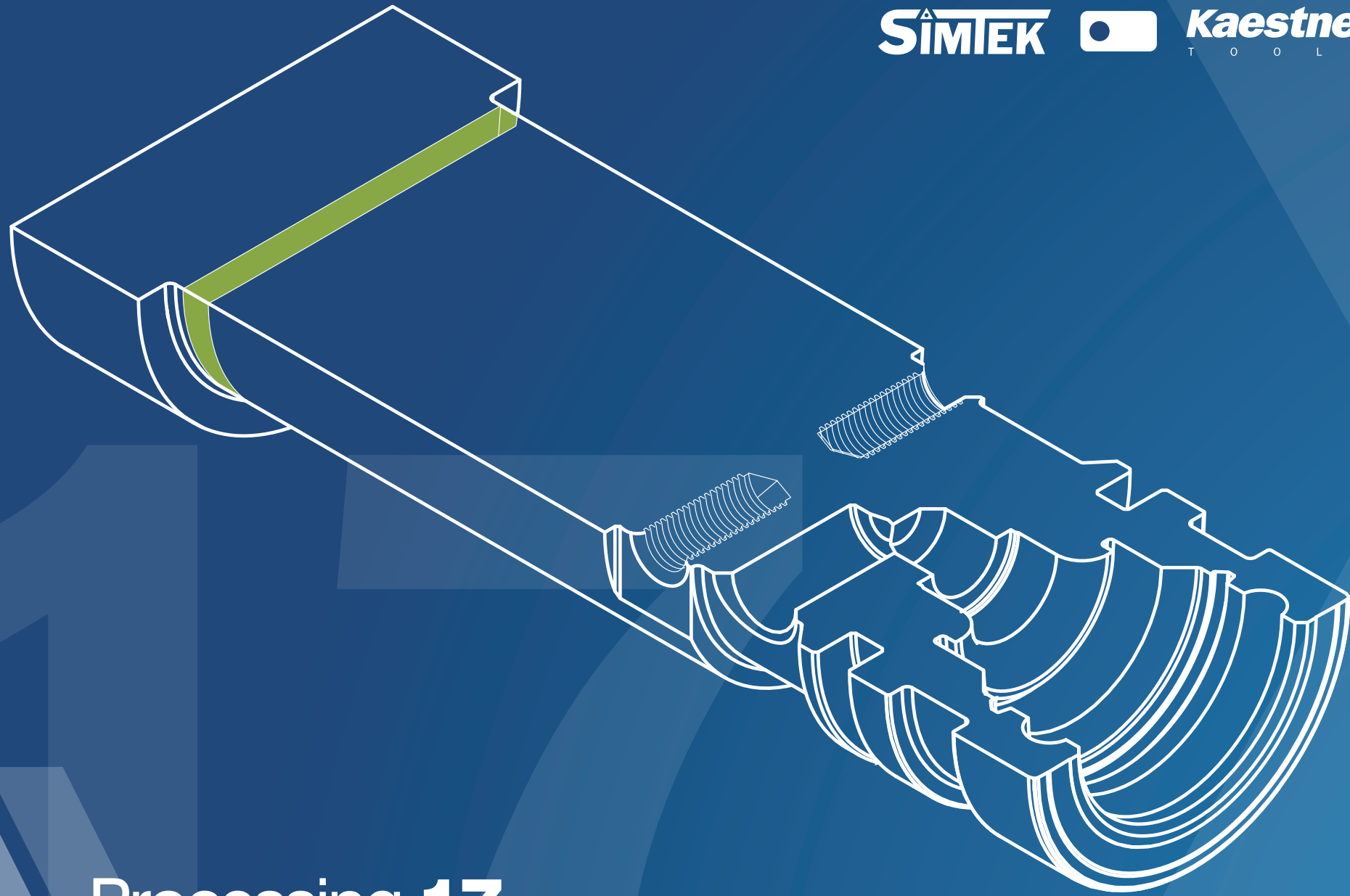
Core hole drilling

Drilling of the core hole for subsequent thread milling operation. High-performance drills from Kaestner-Tools offer enormous savings potential and lasting performance, thanks to the Kaestner Tools regrinding service.

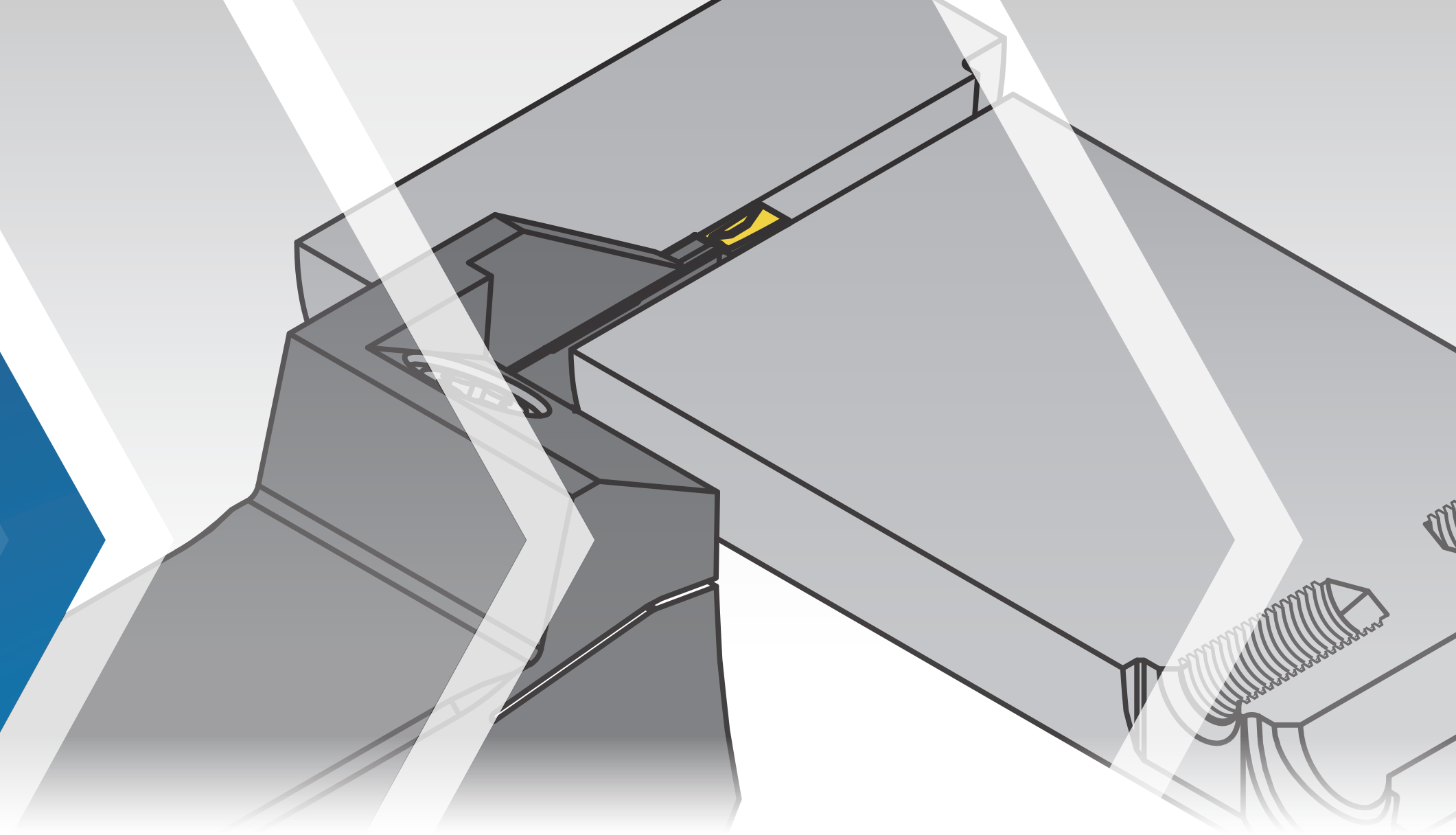


Thread milling

Metric thread milling from bore diameter 1,38 mm as standard. The tool system simmill AX is available with 3 or 4 cutting edges and with shank diameters from 3,0 mm.

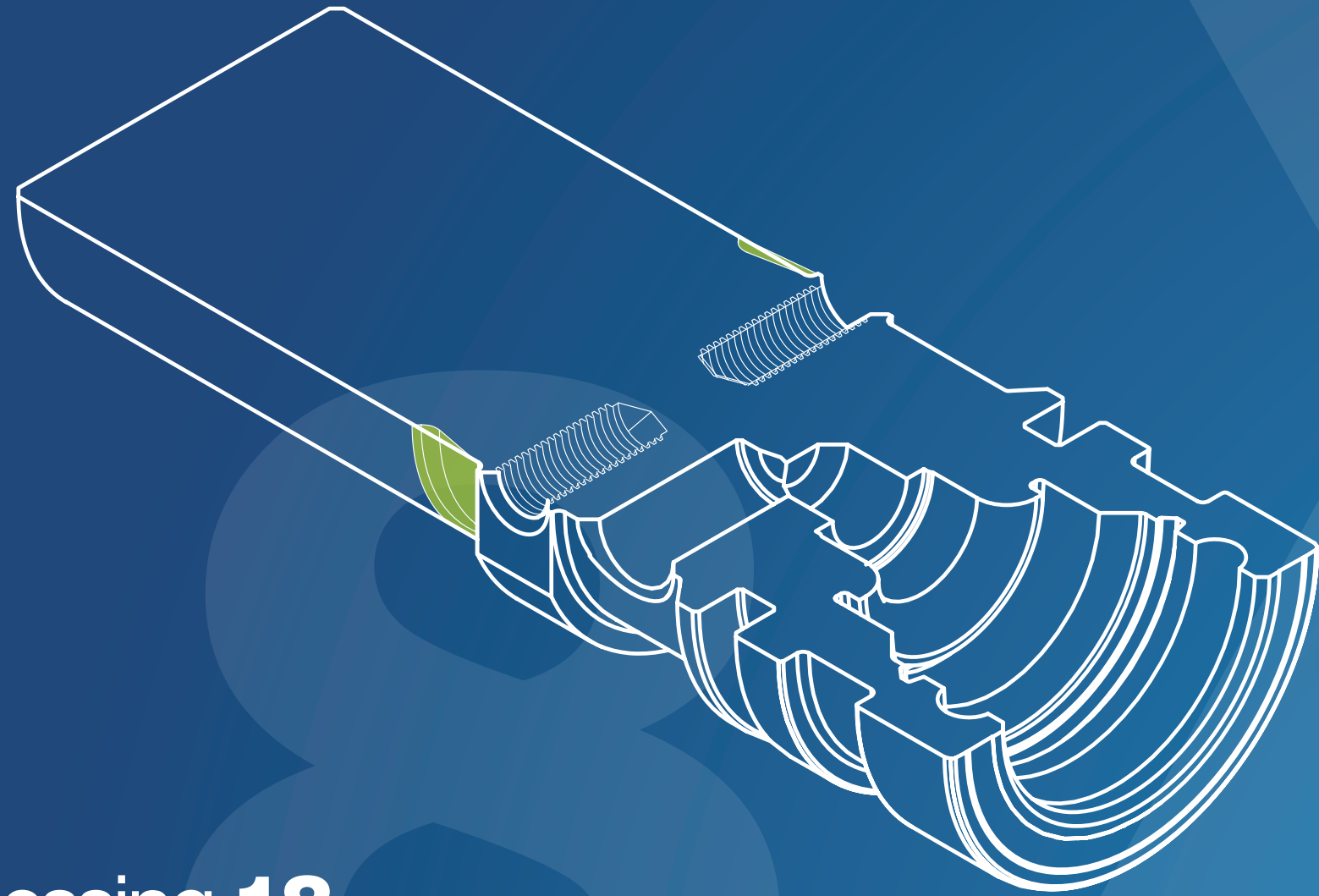


Processing 17

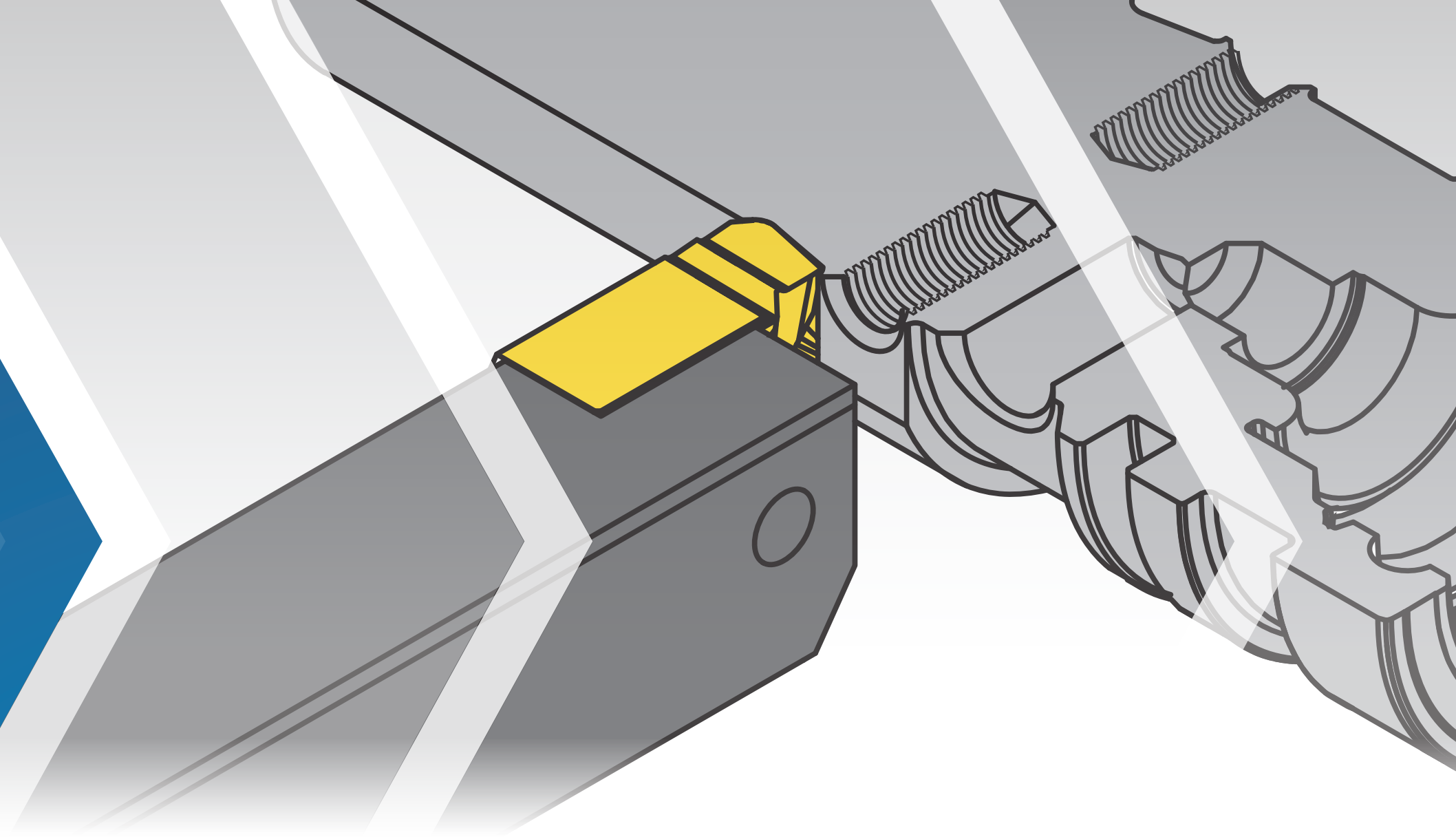


Parting Off

Double-edged tool system simturn H2, suitable for internal and external machining and cutting depths up to 18,0 mm. Standard shank sizes from 10,0 x 10,0 mm.

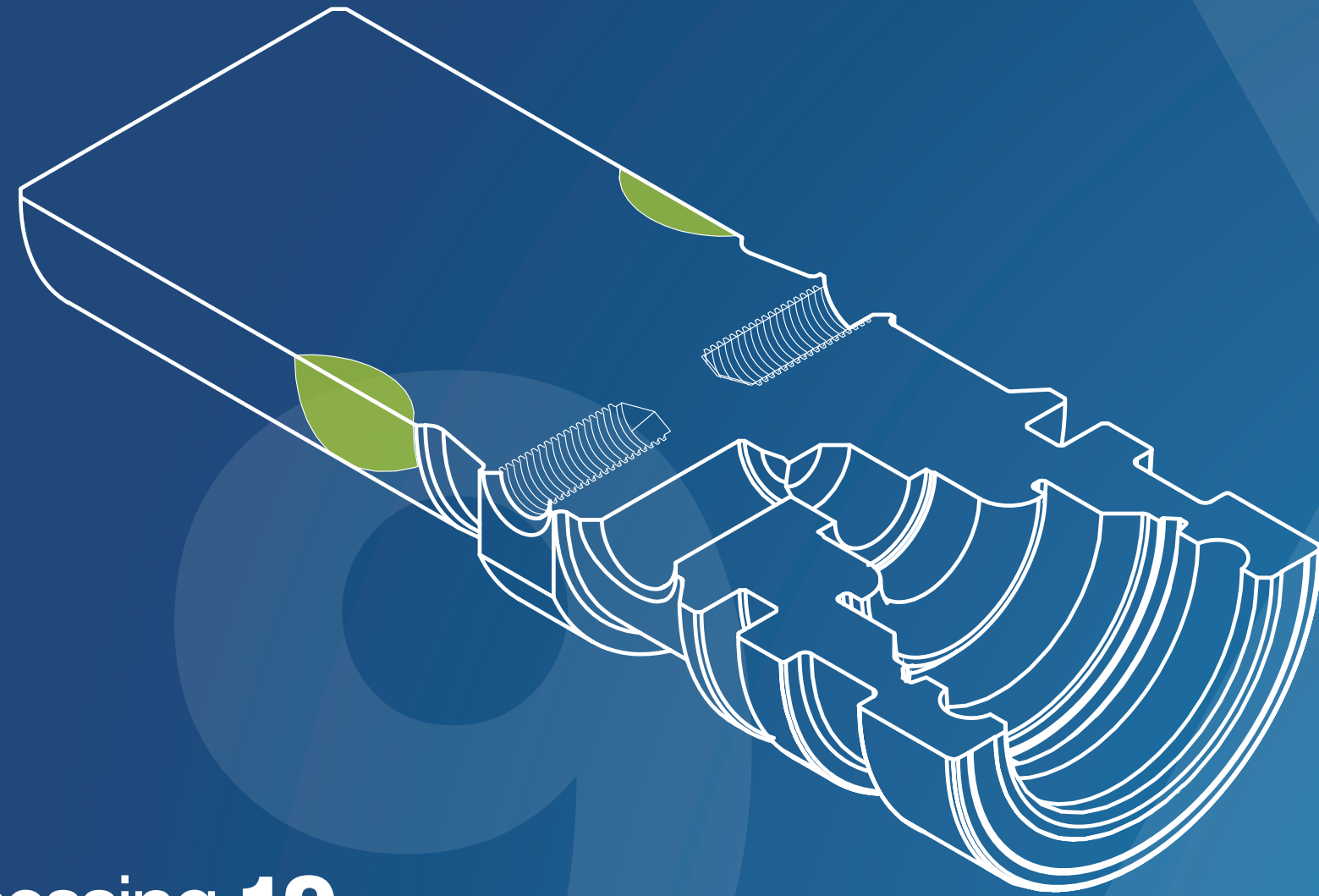


Processing 18



Profiling

Customized form cutting tools based on simturn KX. Optimum force absorption thanks to laterally screwed indexable insert.

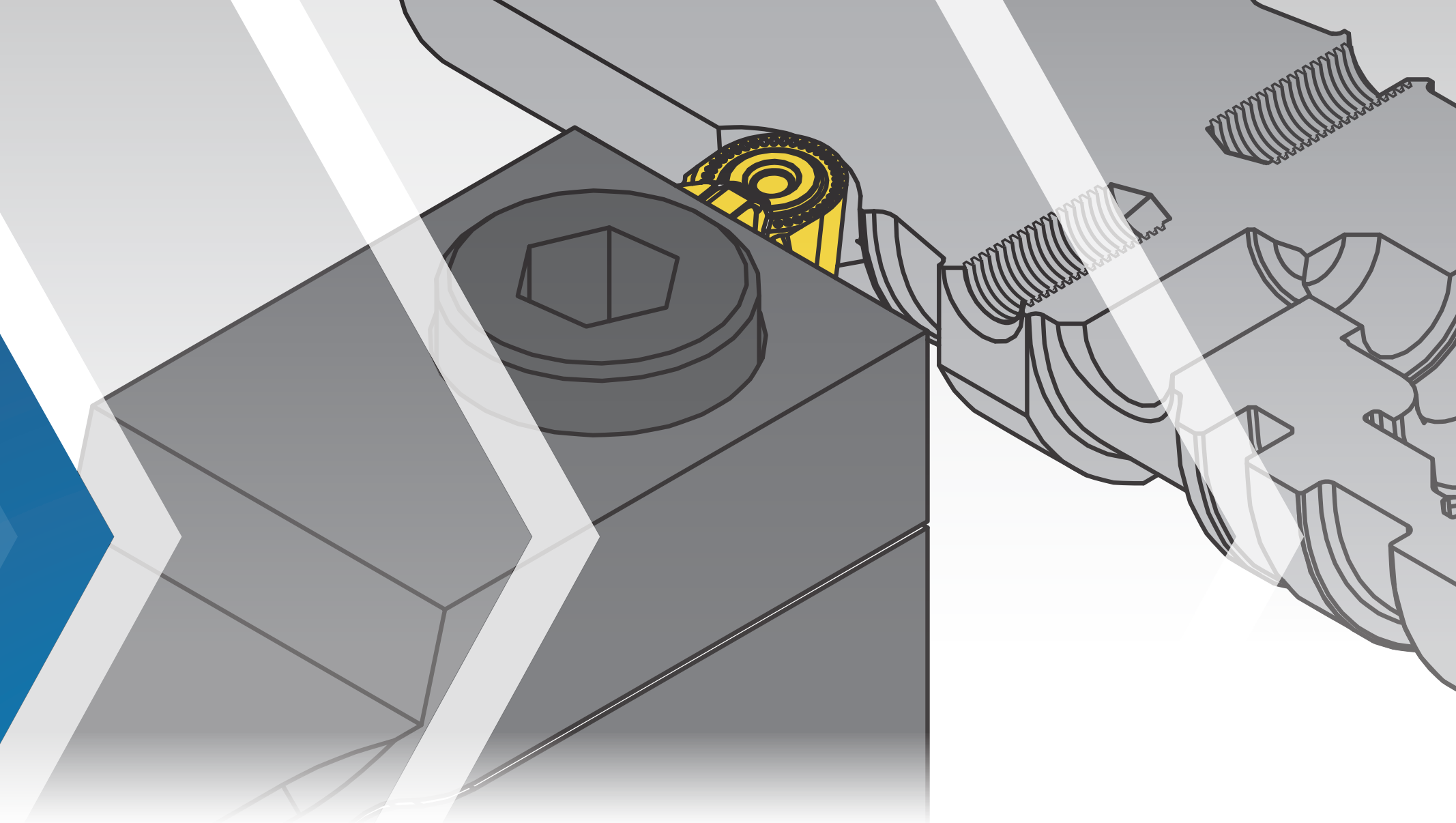


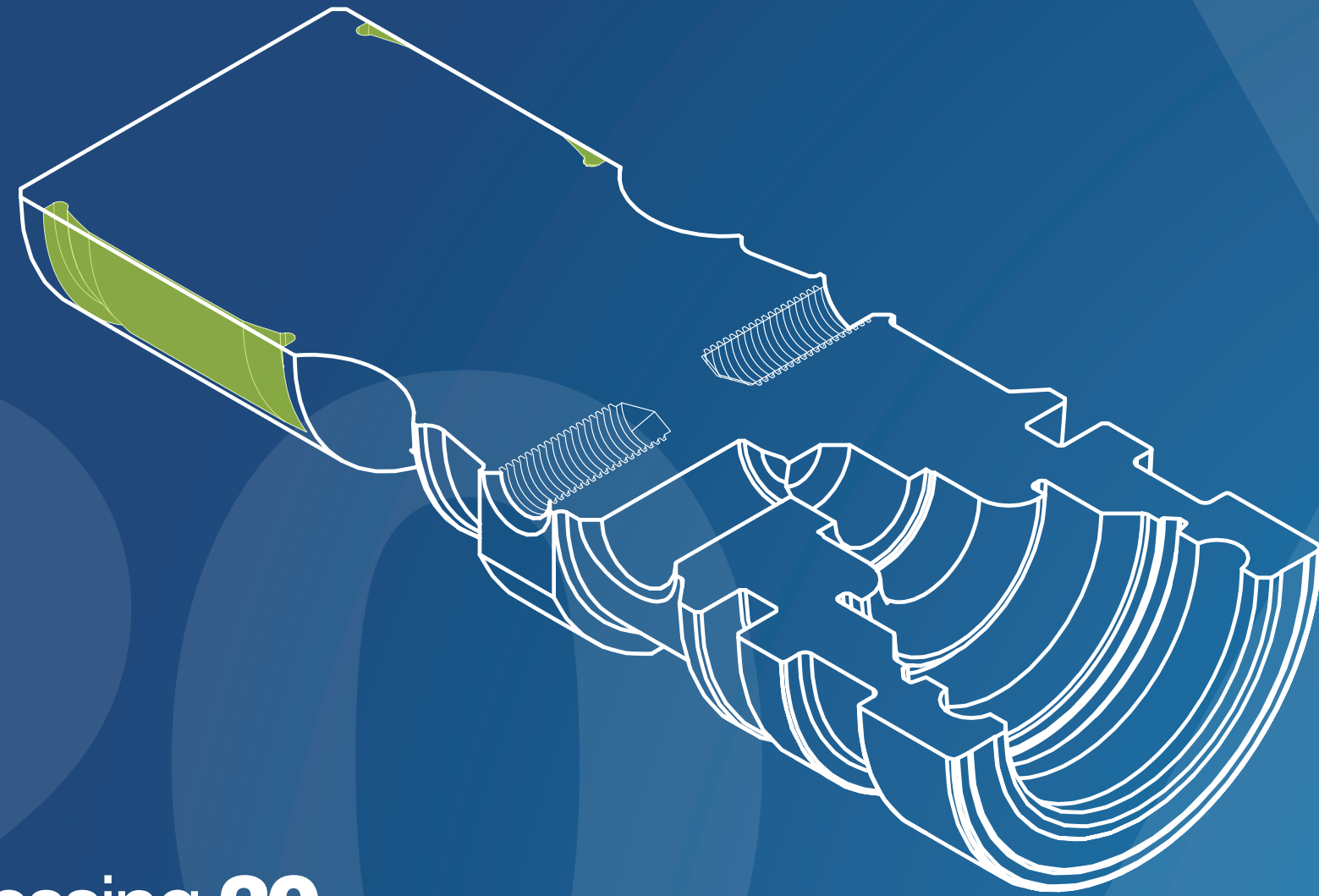
Processing **19**



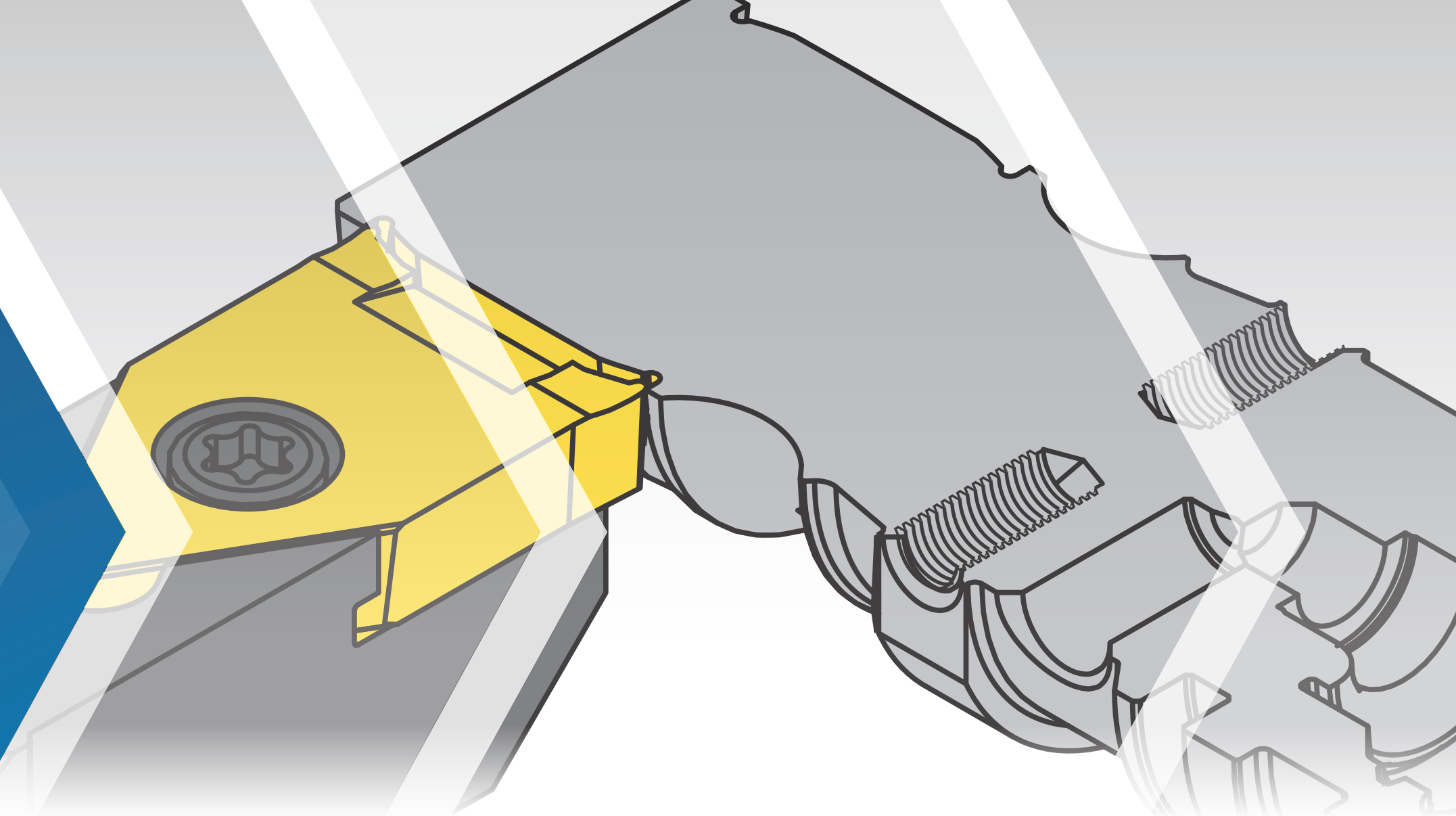
Profiling

Full radius cutting edge profile with special chip geometry for optimum chip control. simturn GX is a double-edged tool system with maximum cutting depths of up to 26,0 mm.





Processing **20**

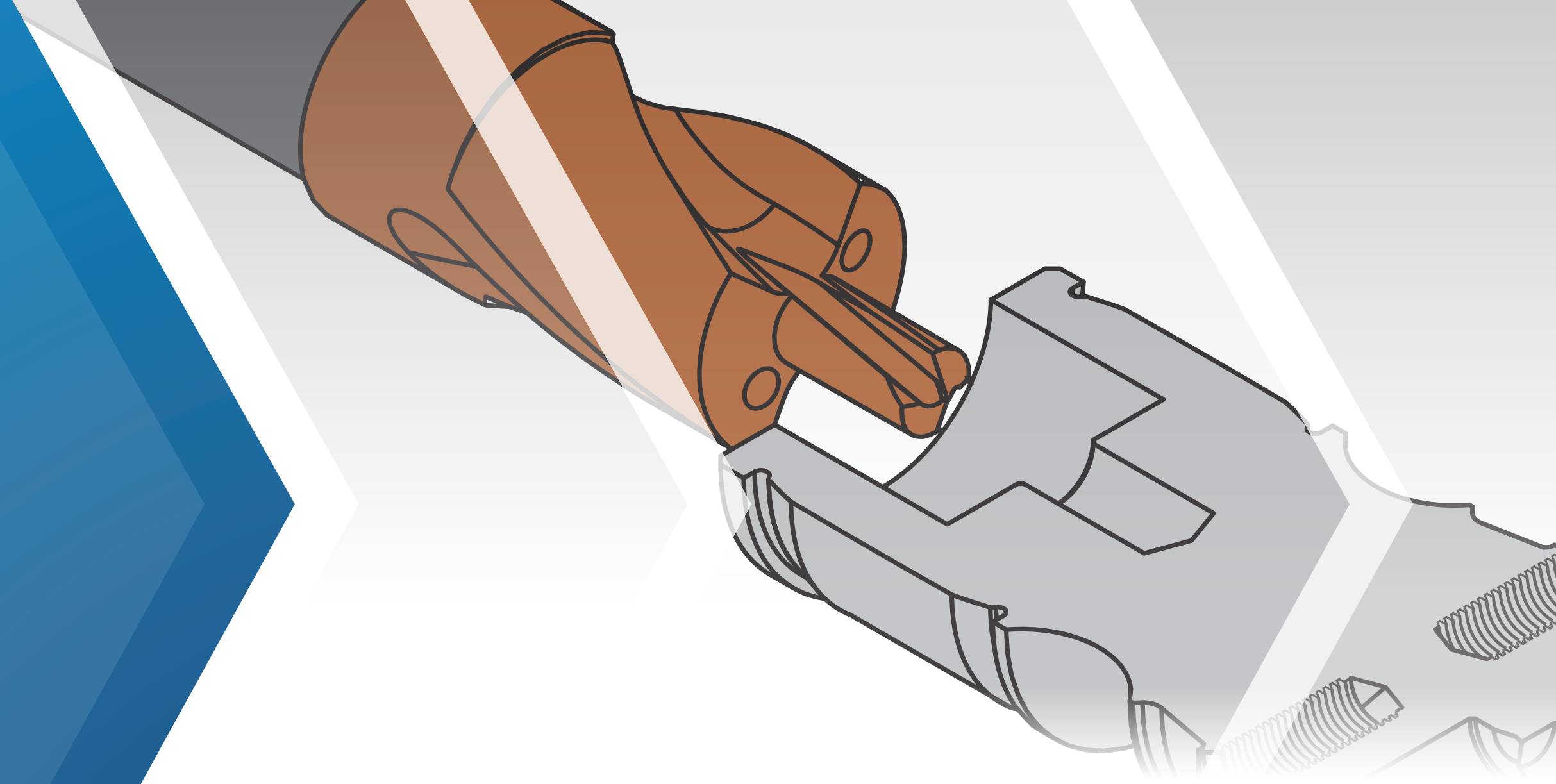


Form tools

Form cutting with fully ground simturn decolletage cutting tool. Thanks to cutting widths of up to 66,0 mm, complex individual contours can be produced with one tool, saving time and money.



Processing 21

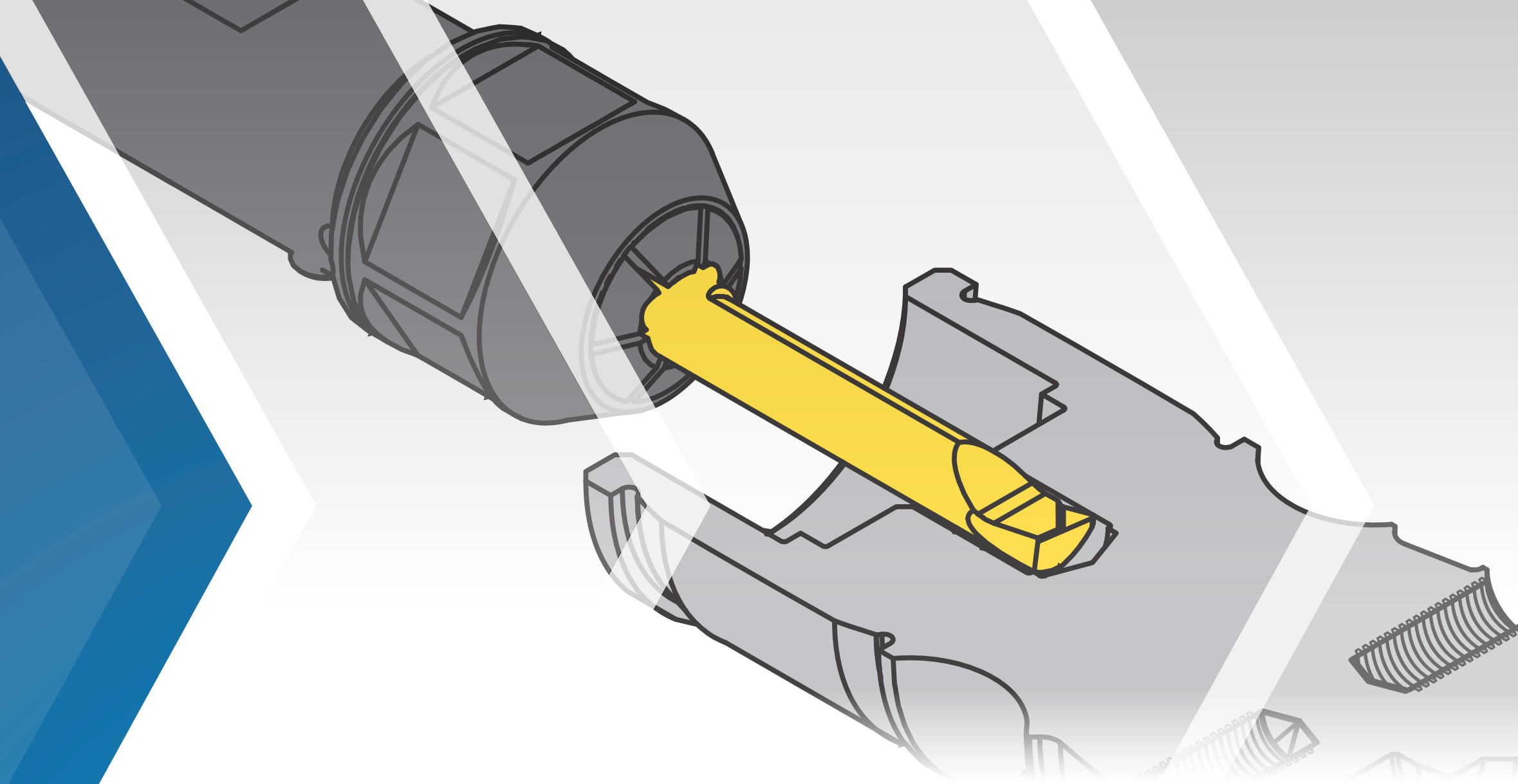


Step drilling

Production of the entire bore contour with two diameters and internal coolant supply.
Kaestner-Tools is a specialist for large step changes with individually attached cooling channels.

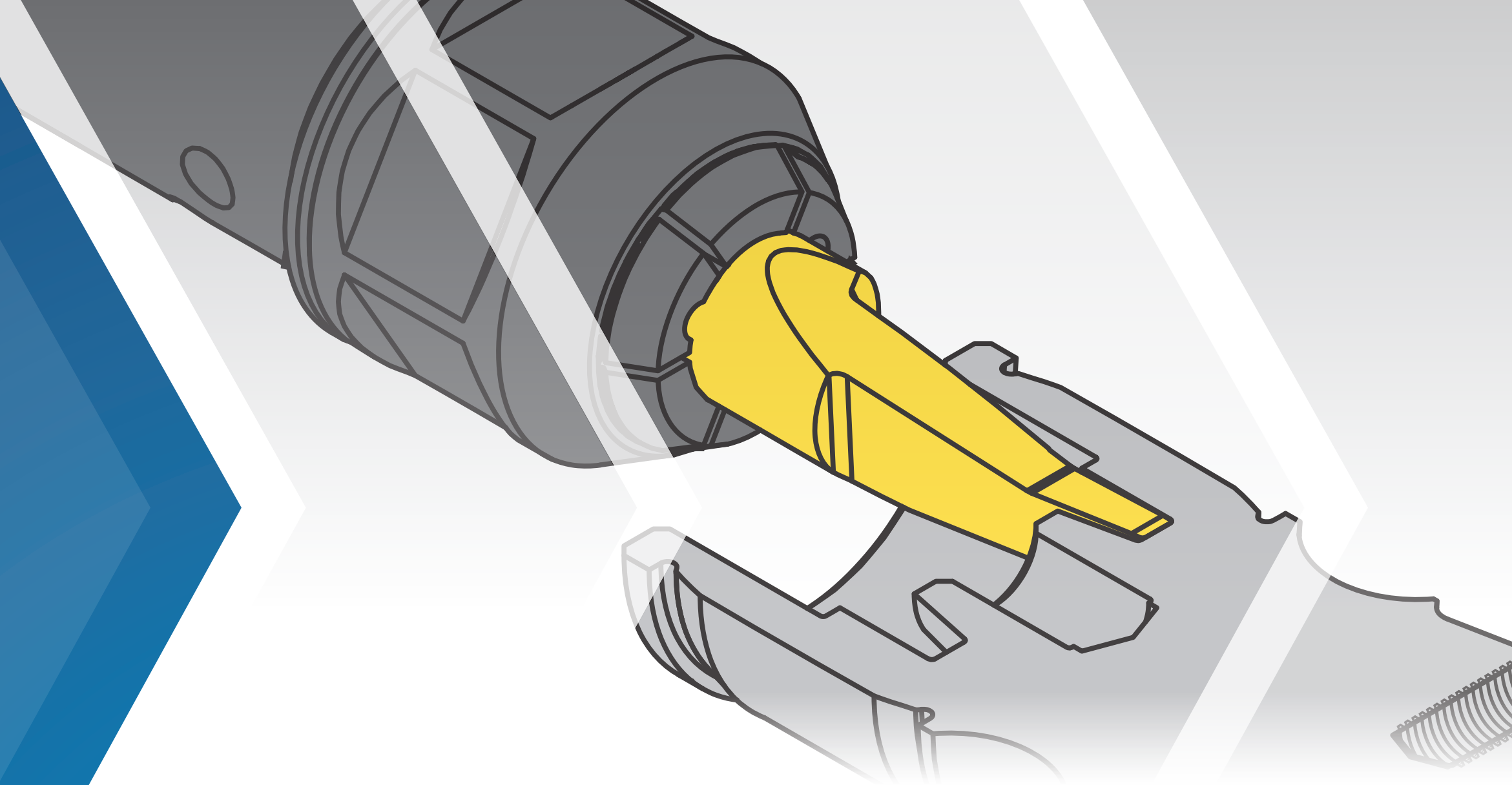
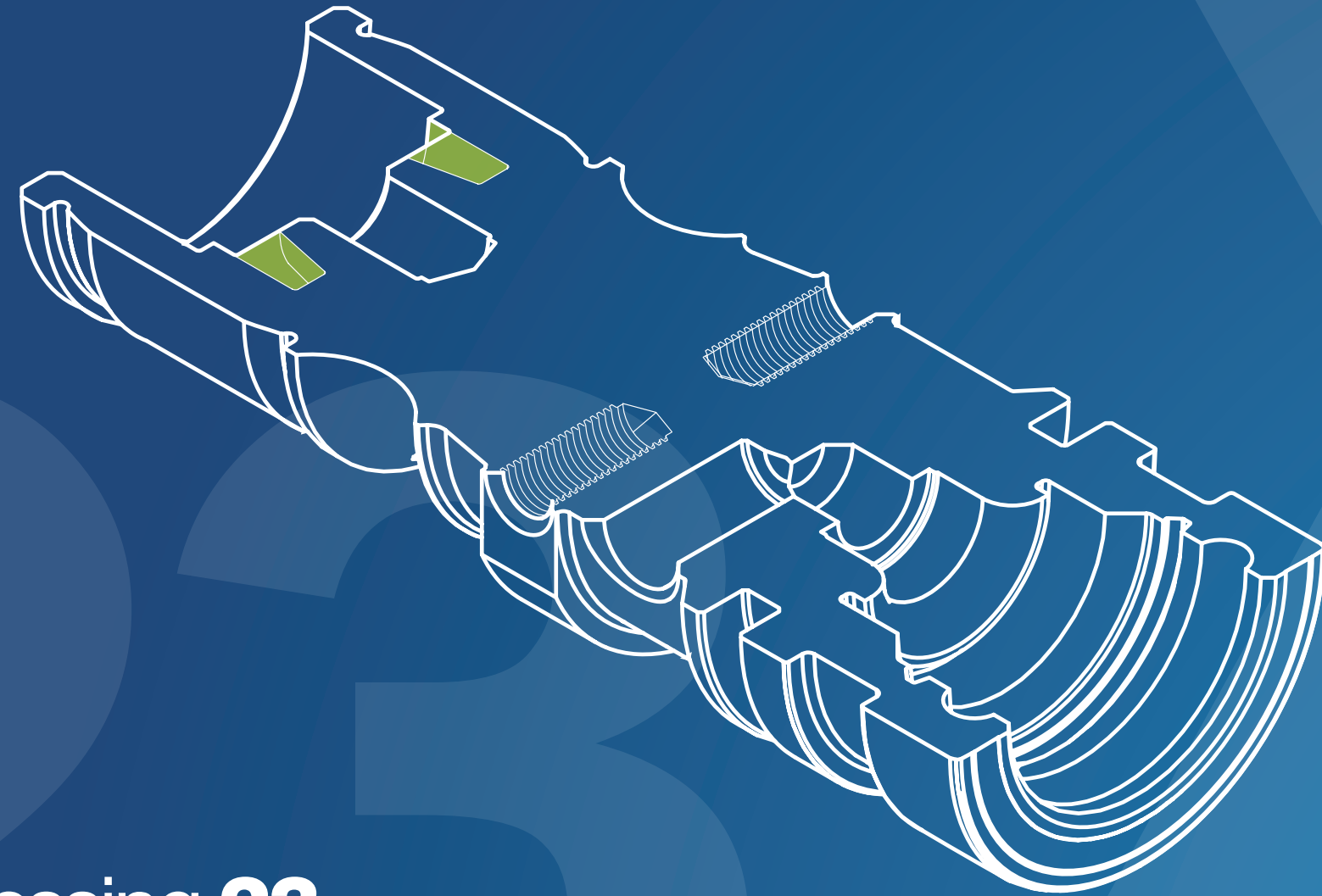


Processing **22**



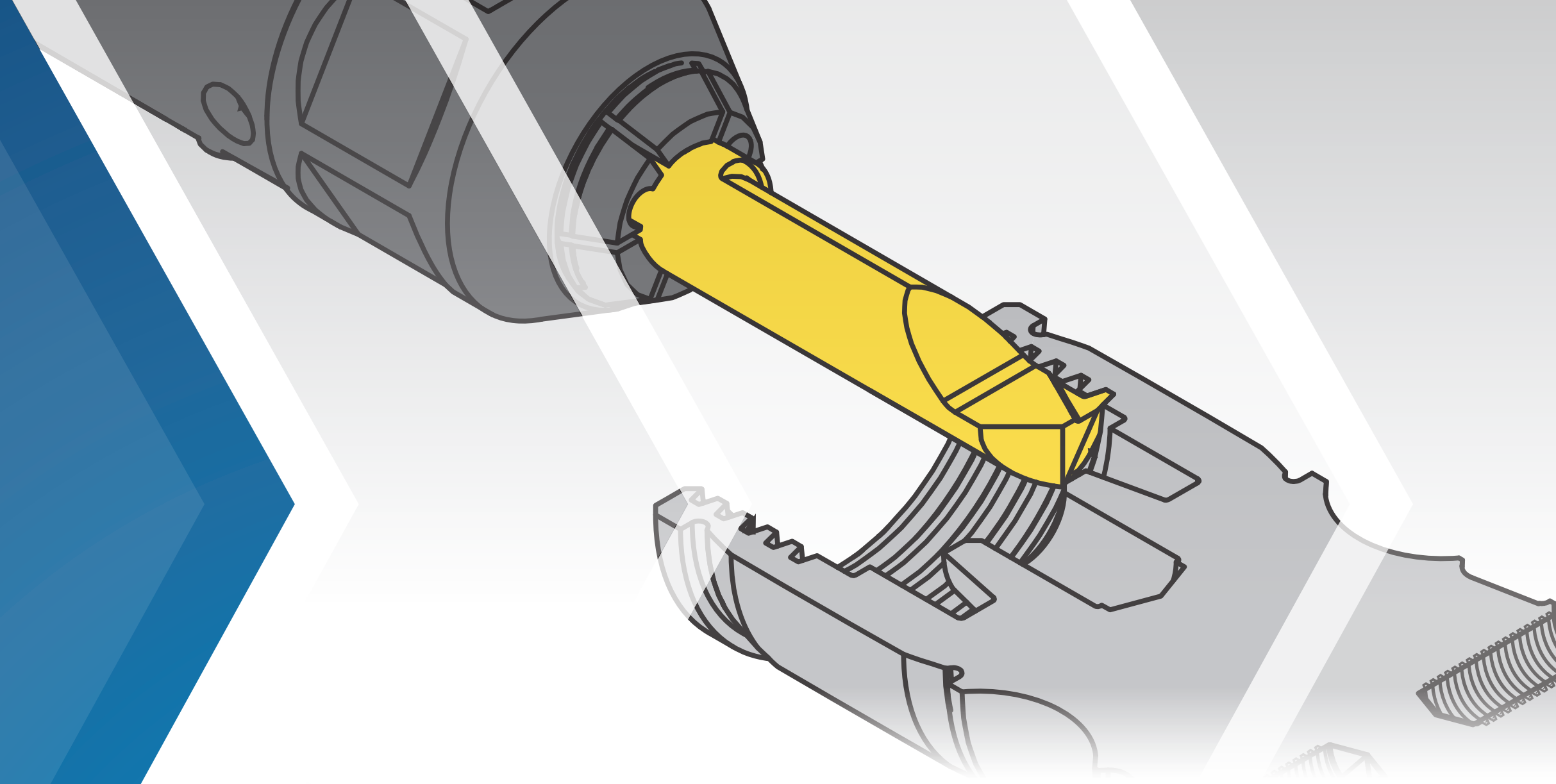
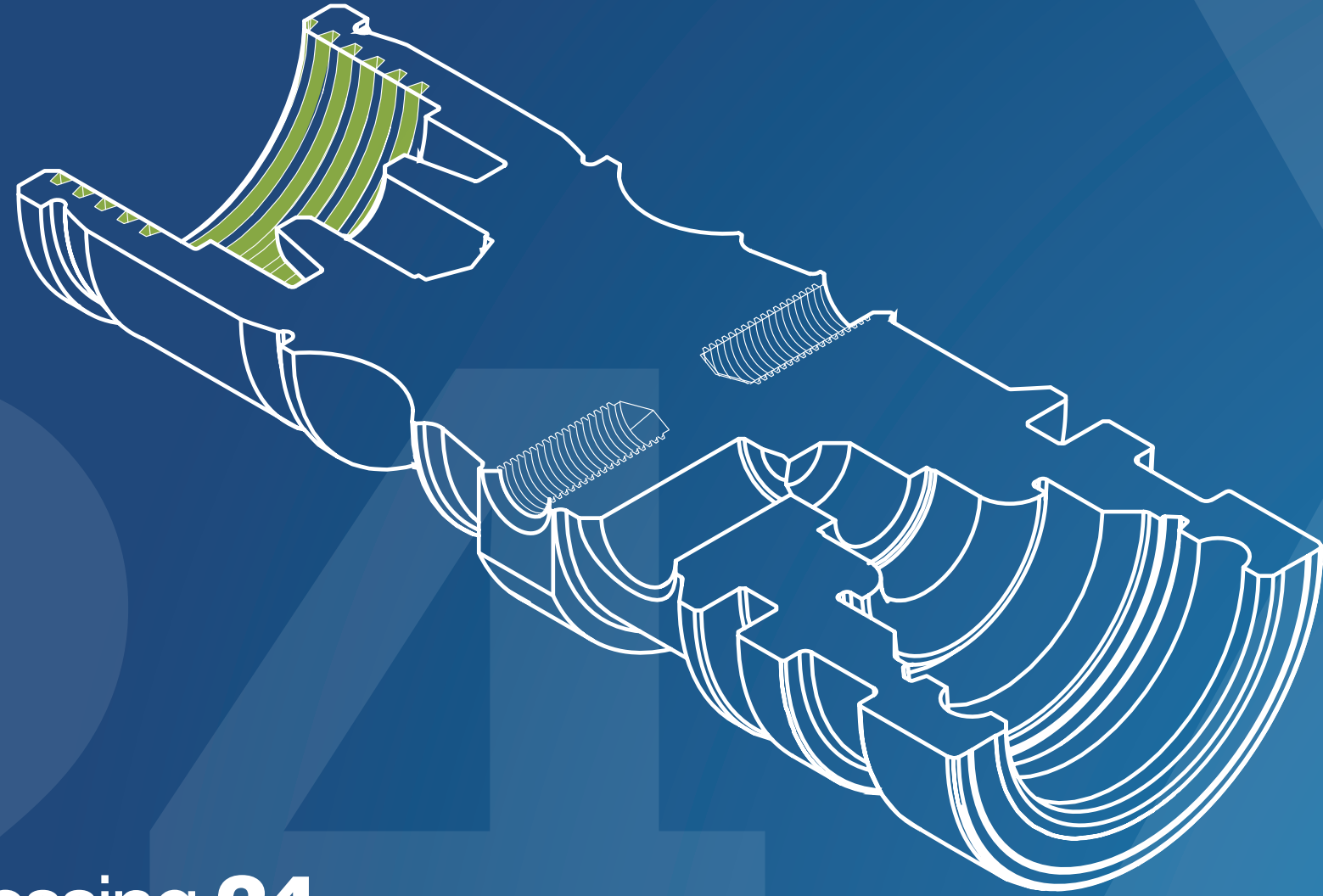
Boring with simturn AX

Especially in combination with toolholders with the innovative ME-clamping system for forced-fitted clamping, simturn AX is the first choice for internal machining from $\varnothing 0,3$ mm!



Face Grooving

simturn AX axial grooving tools already offer grooving depths of up to 30,0 mm in the standard version. For individual tools, different profiles and diameter/grooving depth combinations are also possible.



Threading

The tool system simturn AX offers a wide range of thread profiles and diameter/length combinations.

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simmill
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