

**botek**<sup>®</sup>

DEEP HOLE DRILLING SYSTEMS  
SOLID CARBIDE TOOLS



botek

Partner to the aerospace industry

Safety in precision





We are **botek**.  
We develop tools  
that take you  
higher.

Welcome to a world of quality without compromise.

# Welcome to **botek**.

In our fast-paced times as technology advances in leaps and bounds, globalisation and cost pressure in the aerospace business, **experienced partners** are more important than ever.

New materials demand new production strategies and new tools. **Development expertise** is the most important skill on board.

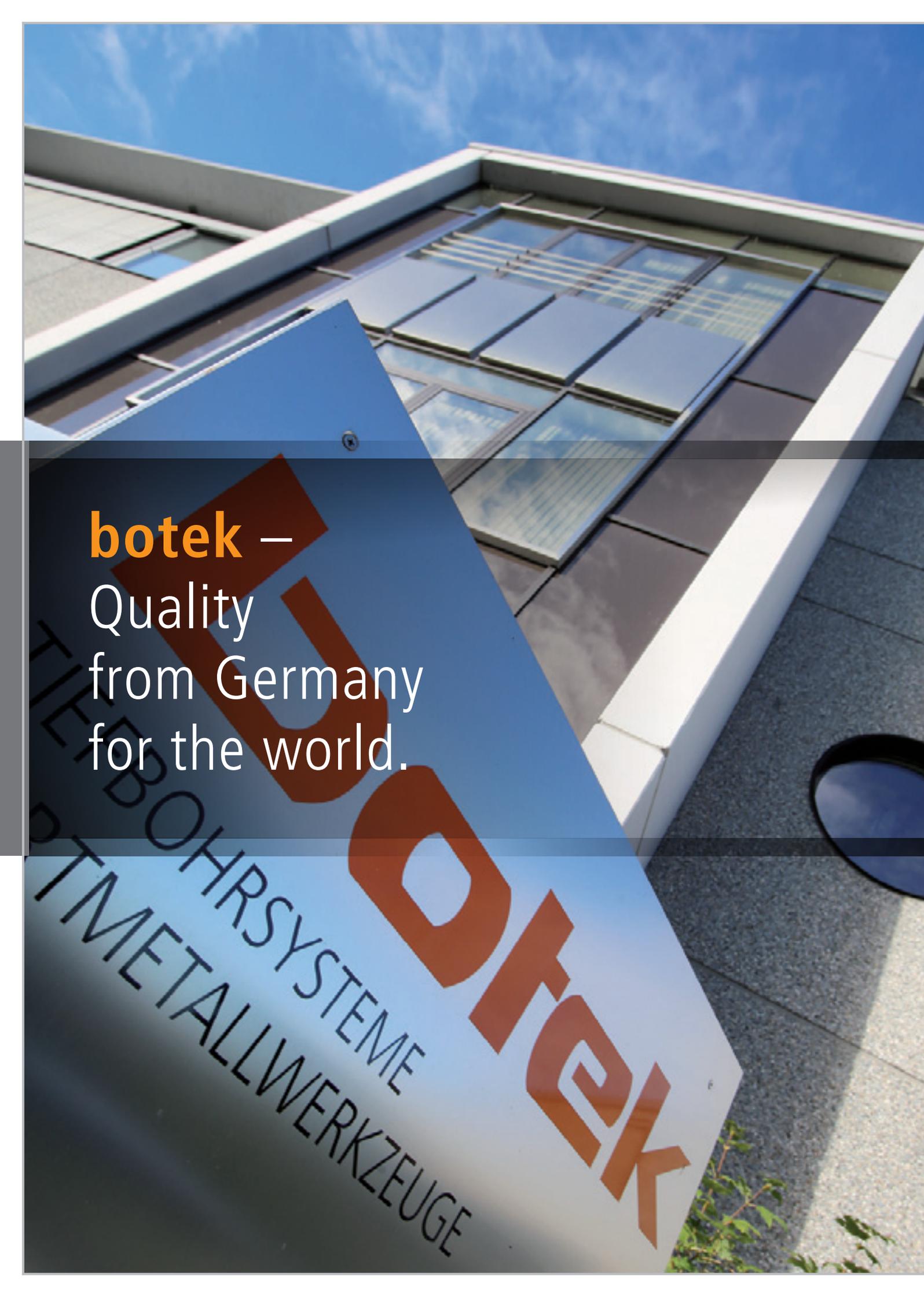
The properties of new materials make high demands on machining. Success hinges on the use of **high-precision tools**.

**Drilling systems** by botek help aircraft construction to reach new heights and ensure uncompromising safety of operation.



We go **deeper**  
to let you  
go **higher.**





**botech** –  
Quality  
from Germany  
for the world.

BOHRERSYSTEME  
METALLWERKZEUGE  
**botech**

In 1974 Lothar Herrmann, Gotthold Schur and Karl-Heinz Wenzelburger teamed up to develop deep hole drilling tools designed to satisfy the customers' specific requirements: Machining of deep and precise holes.

The company's team of six has now increased to more than 750 employees. It is a family business, still owner-managed up to the present day: a **global player and full-range supplier** of precision drilling tools and the best of working atmospheres.

Based in Riederich (Germany), the company has factories in France, Hungary and India, where highly trained specialists develop and produce single and two fluted drills, BTA and Ejector deep hole drill systems and special tools. And botek is always just a call away with 50 sales and support partners. **Worldwide.**

The highest standards in development and production together with consistently high quality: this tenet has held true for 40 years at the parent factory in Riederich and beyond.



**botek** –  
Tools  
that provide  
safety.

## First priority at botek

**Maximum process efficiency for customers.**

**botek ranks among the world's leading suppliers of deep hole drilling systems.**

We get going where others give up.  
Every application is different, every process  
calls for a customized solution.

Our **development department** is already working  
to meet tomorrow's requirements.  
This unshakeable determination to take things to the  
next level has made us what we are today.

Innovative advanced technology is routine at botek.  
Expertise, experience, commitment and creativity  
are our greatest assets.

Our customers' processes make their debut in our  
**test department**. This is where success is engineered.  
No product leaves the factory before it is approved.



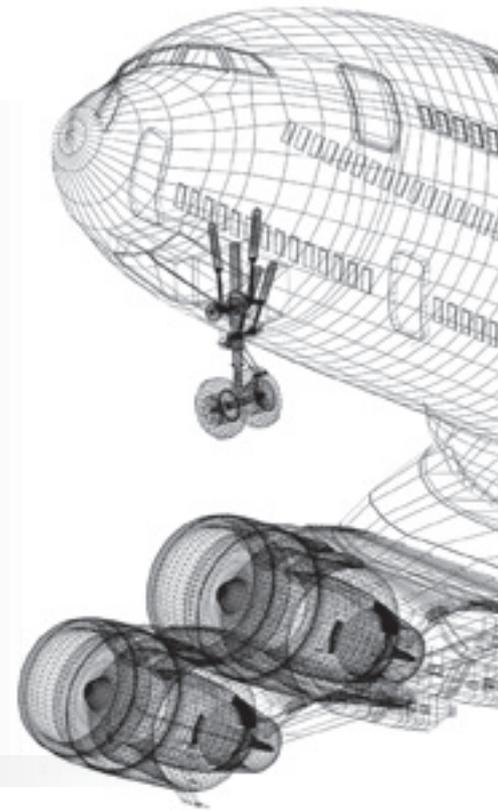
**botek** aerospace —  
Taking things higher  
with customized  
precision drilling technology.

- Qualified advice by an experienced team of aerospace application engineers.
- Customized tool and process design by our in-house R&D and test department.
- Optimally equipped test department with semi-automated ADUs and EDUs, CNC machining centres, deep hole drilling machines and modern measurement technology.
- Varied portfolio for top drilling quality in wet. MQL and dry machining.
- One-shot machining for small and large diameters and drilling depths possible.
- High vertical range of manufacture.
- Fast reaction times.

**botek drills tackle all these areas:**

- Fuselage
- Power unit
- Wings
- Main and nose landing gear
- Drive shafts
- Compressor discs
- Cylinder for flight control
- Hydraulic valve blocks for flight control
- Distributors for air conditioning
- Turbine for air conditioning

**botek**  
aerospace —  
Taking quality  
to new heights.



**The botek leading edge:**

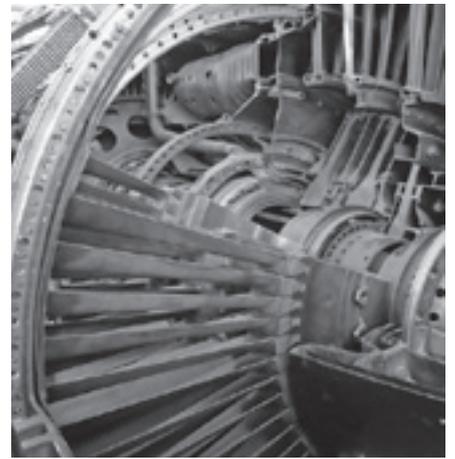
- Highest machining quality in solid drilling, boring, countersinking and drilling of forms.
- Large drilling diameters and depths possible in one shot.
- Low costs per hole due to regrindable and indexable tools.
- Modern cutting materials and coatings for efficient machining of challenging materials like Inconel, titanium and stainless steel.
- PCD and diamond coating for drilling and countersinking of CFRP and CFRP stacks.



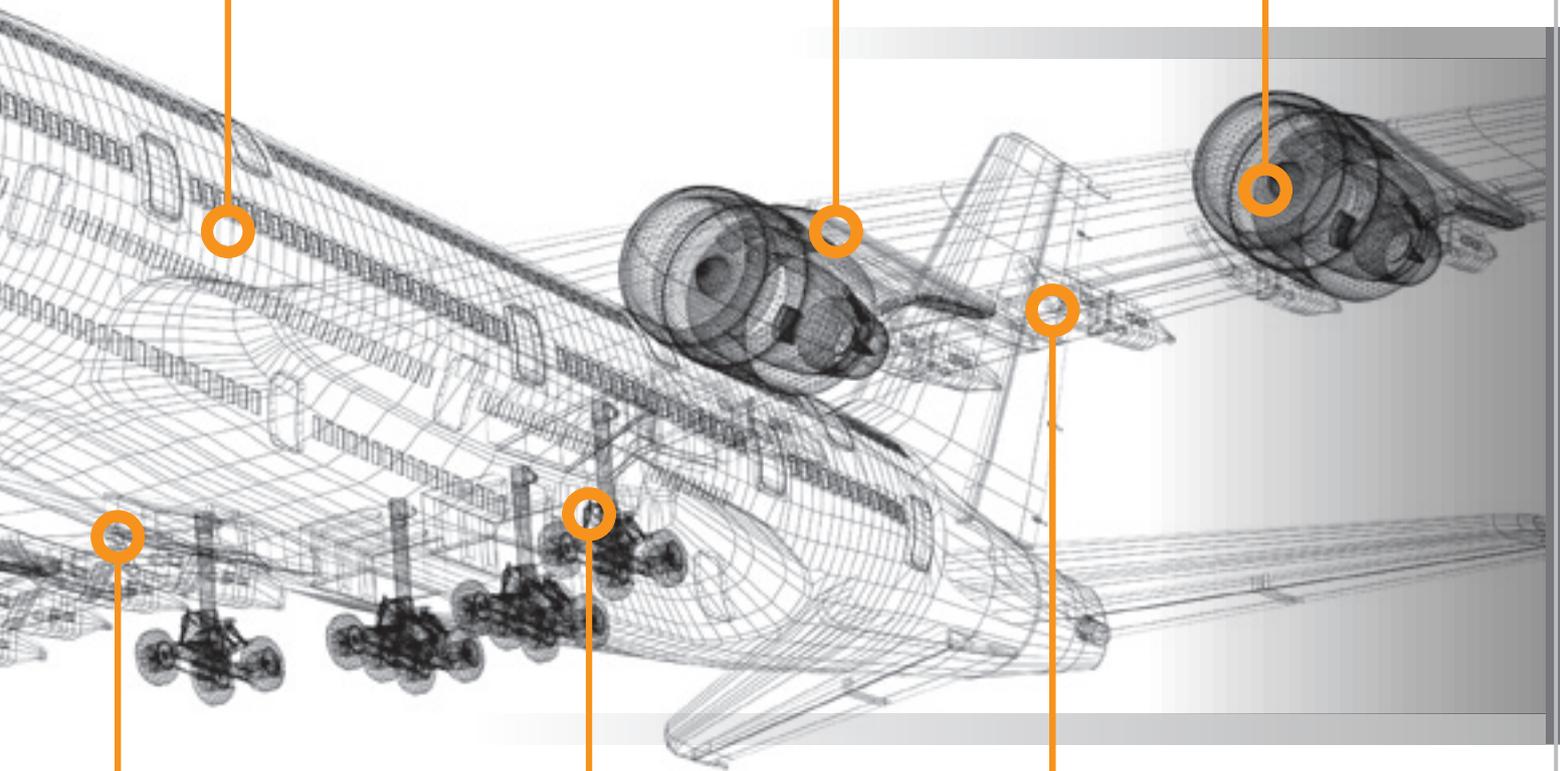
Fuselage



Turbine-Wing-Joint



Turbine shaft/  
Compressor disc



Wing-Fuselage-Joint

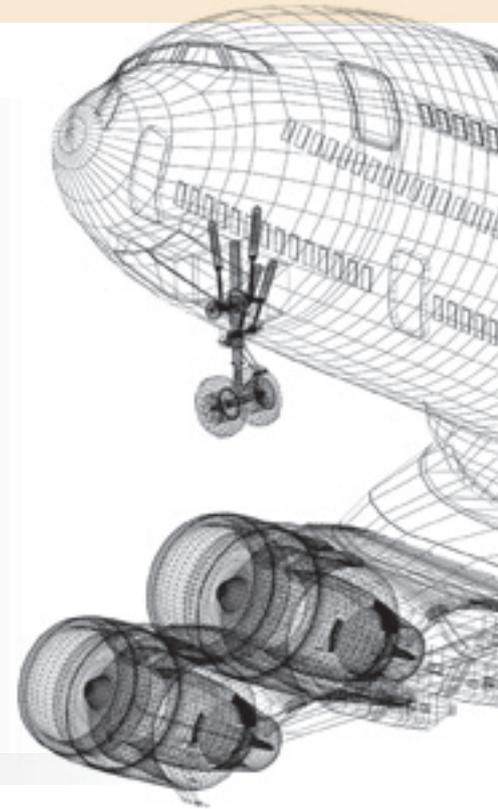
Landing gear

Hydraulics

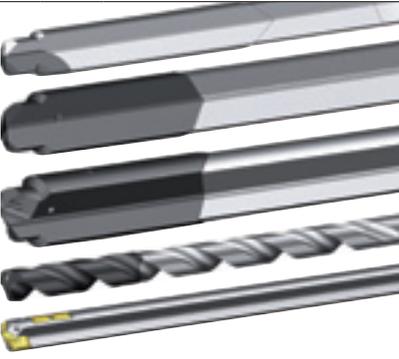


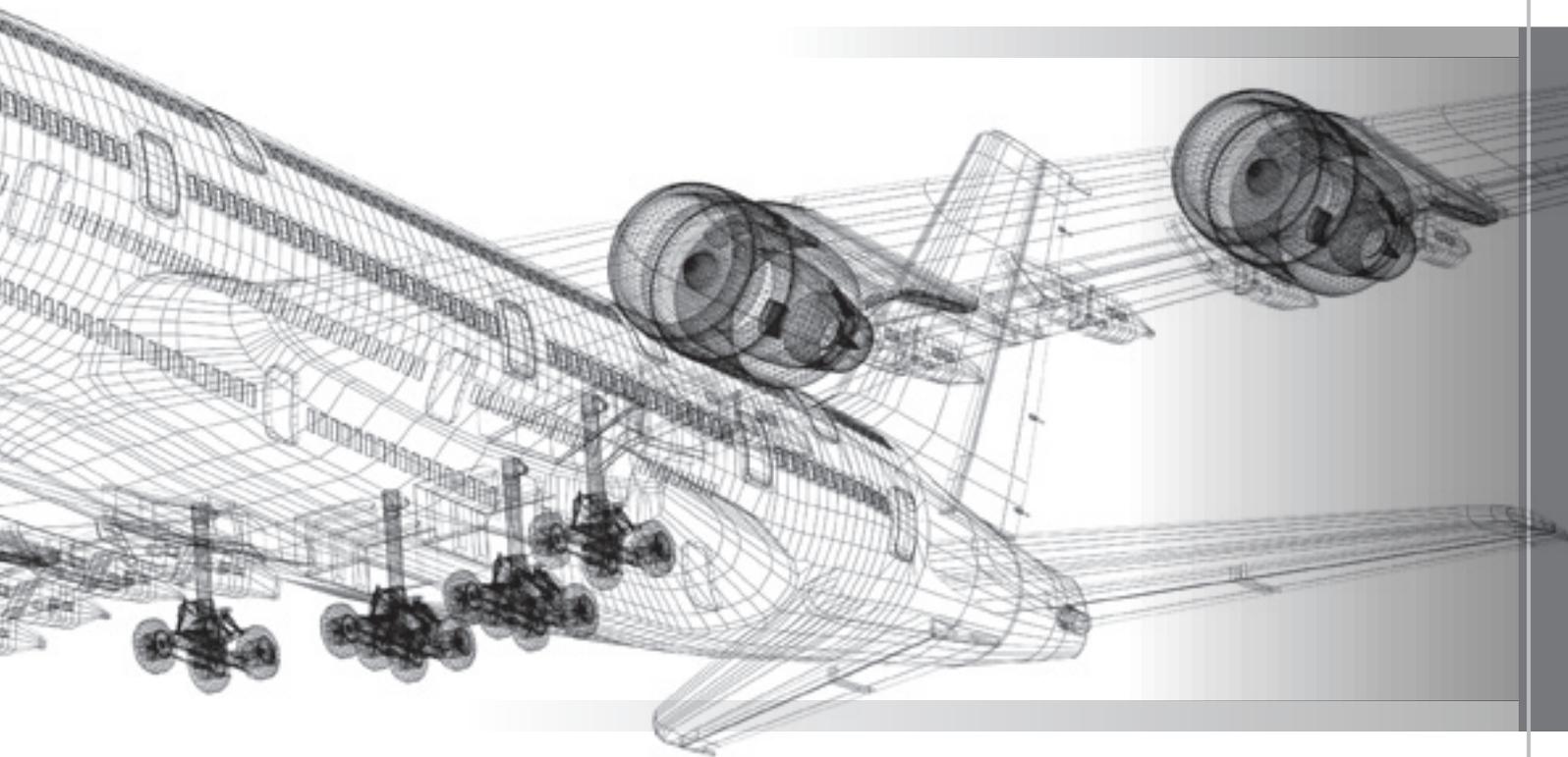
Part	Main and nose landing gear	Drive shafts	Cylinder for flight control
<b>Materials (Examples)</b>	35NCD16, 300M, titanium alloys, aluminium	Inconel/Maraging 250	17-4PH/15-5PH/PH13-8Mo/titanium
<b>Tools</b>	BTA and Ejector standard and special tools		
<b>Tools (Example images)</b>	Type 34  Type 99-34 	Type 12  Type 99-12 	Type 43  Type 99-34 

**botek** —  
 Nothing is  
 too hard for us.



Part	Main and nose landing gear	Drive shafts	Cylinder for flight control
<b>Description, benefits, tool qualities</b>	<b>Benefits of our tools</b> <ul style="list-style-type: none"> <li>- High processing quality in terms of roundness, surface roughness, bore diameter, hole straightness, concentricity</li> <li>- Drilling of large diameters and depths</li> <li>- Solid drilling, counterboring, pull boring</li> <li>- Precision diameter adjustment of tools</li> <li>- Drilling of forms like flat bottom, full radius, steps, radius, cone and combinations of such</li> <li>- Tools with indexable inserts, no regrinding necessary</li> <li>- Various carbide grades for processing challenging materials</li> </ul>		

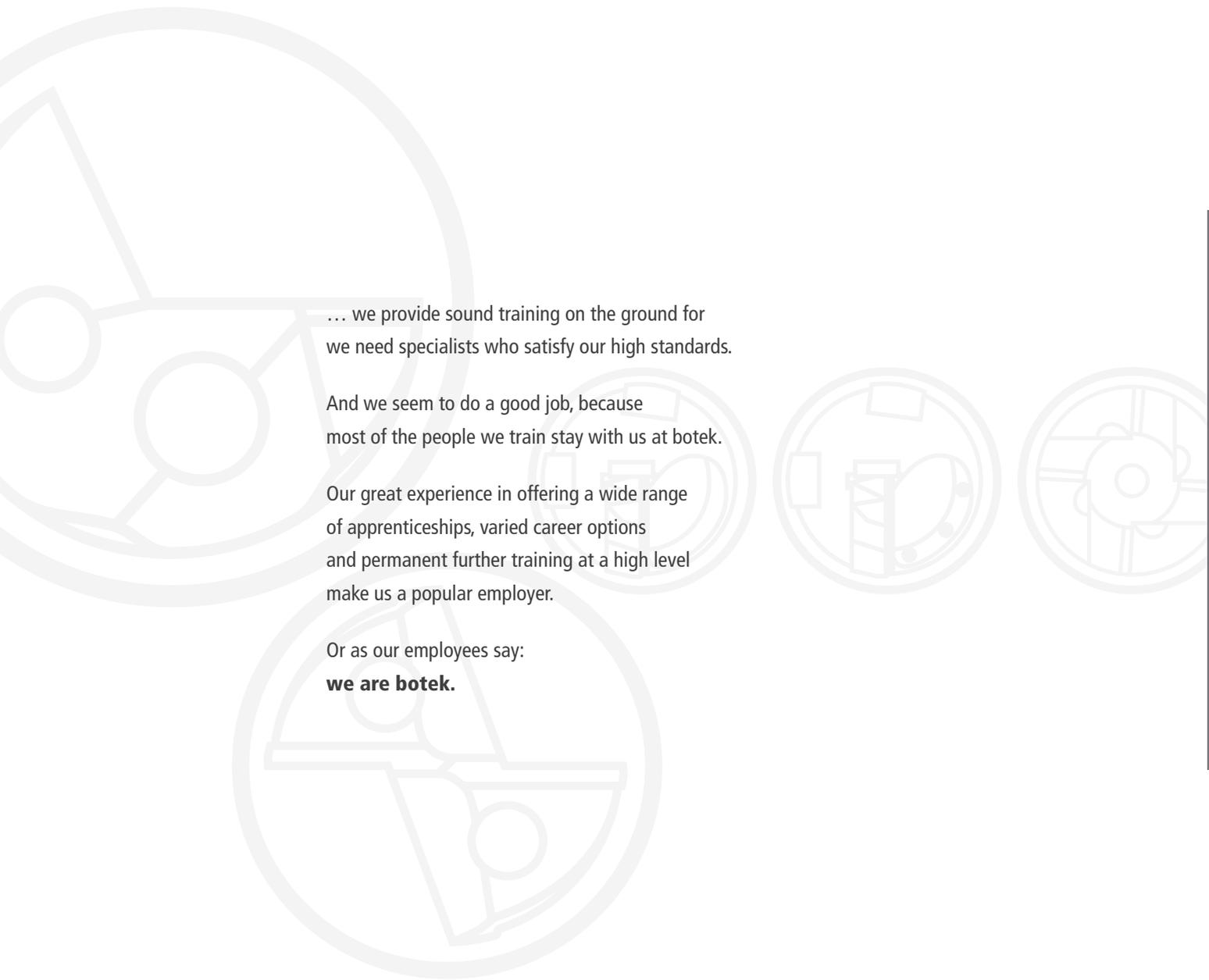
Structural component (fuselage)	Connection of large components (power unit, wings)	Compressor discs	Hydraulic valve blocks for flight control	Turbine for air conditioning (air management)	Distributors for air conditioning (air management)
Al, CFK, Al/CFK, Ti/CFK, Al/CFK/Ti		Inconel	Titanium		
Single flute gundrills/twin fluted drills		Single flute gundrills			
Type 112 PCD Type 112 Type 122 Type 158 New			Type 113 Type 01 Type 110		



Structural component (fuselage)	Connection of large components (power unit, wings)	Compressor discs	Hydraulic valve blocks for flight control	Turbine for air conditioning (air management)	Distributors for air conditioning (air management)
<b>Benefits of our tools</b> - High machining quality in terms of roundness, surface roughness, bore diameter, delamination and fraying - Drilling of large diameters and depths - One shot drilling - Drilling and countersinking in one shot (Type 111, Type 154) - Highest quality counterboring, also for pre-holes with offset (Type 112/Type 115, Type 122/Type 125) - PCD and diamond coatings for long tool life in CFRP and CFRP stacks - PCD regrindable - Dry machining in Al, CFRP, Al/CFRP with high performance coating (Type 158)		<b>Benefits of our tools</b> - High processing quality in terms of roundness, surface roughness, bore diameter, hole straightness, concentricity - Drilling of large diameters and depths - Various carbide grades for processing challenging materials - Regrindable or indexable tools			

A photograph of two men in a factory setting. They are standing in front of a large industrial machine, likely a CNC lathe or mill. The man in the foreground is wearing a dark grey polo shirt with orange trim and is looking at the machine's control panel. The man behind him is also wearing a similar shirt and is looking at the machine. The machine is white and grey, with a large screen and a keyboard. The background shows a clean, industrial environment with blue walls and other machinery.

**botek** —  
Since specialists  
don't fall  
from the sky ...



... we provide sound training on the ground for  
we need specialists who satisfy our high standards.

And we seem to do a good job, because  
most of the people we train stay with us at botek.

Our great experience in offering a wide range  
of apprenticeships, varied career options  
and permanent further training at a high level  
make us a popular employer.

Or as our employees say:  
**we are botek.**



**botek** —  
always  
one step  
ahead.



# botek®

DEEP HOLE DRILLING SYSTEMS  
SOLID CARBIDE TOOLS

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## botek worldwide



- Please note our safety notes at [www.botek.de](http://www.botek.de).
- Our General Standard Terms and Conditions, which we assume as known, apply.
- We reserve the right to make modifications in the interests of technical improvement. Such modifications cannot, in principle, be accepted as justifiable reasons for complaint.
- Subject to change. The manufacturer accepts no responsibility for misprints and other errors.

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