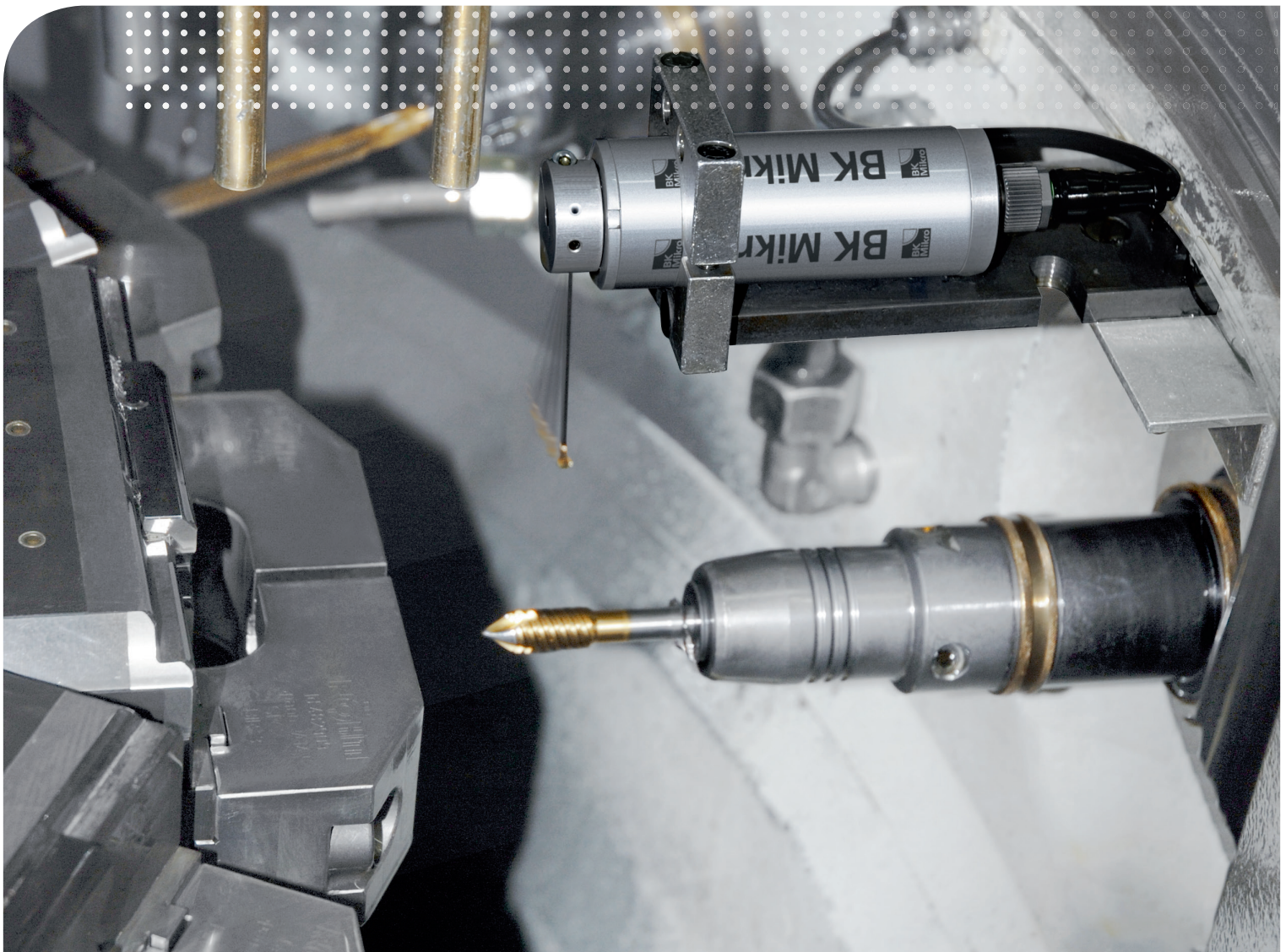


# It simply works!



**Safe process monitoring.**  
A solution that simply works.





## It simply works!

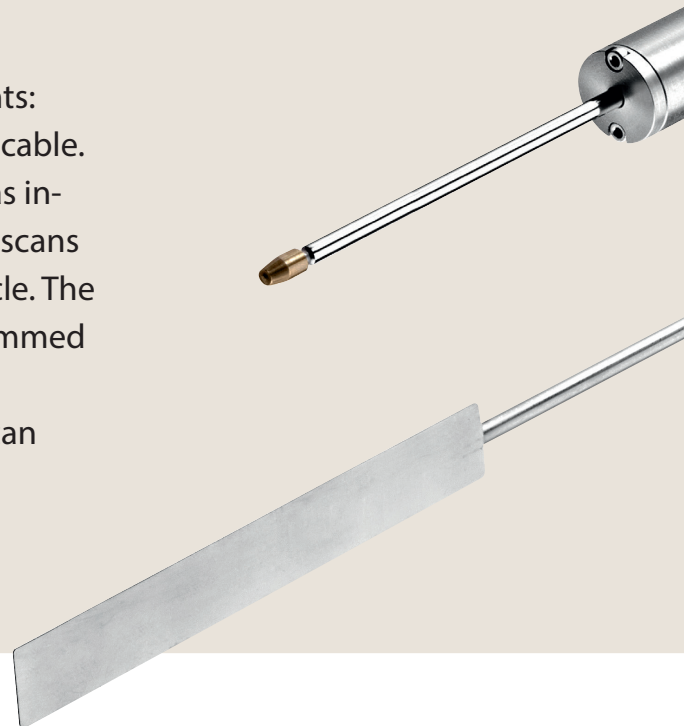
In technology the simplest solution is often the best. The more comprehensible the less complicated to work with. And this is exactly what is true for the tool and process monitoring of BK Mikro.

At first sight BK Mikro does not seem to be a high-tech product, the scanning being tactile and electromechanical. But that is exactly why it is so reliable, maintenance-friendly and above all resistant to oils, fine dust and coolants. It is the continuously process-optimized functionality that accounts for its particular innovation.

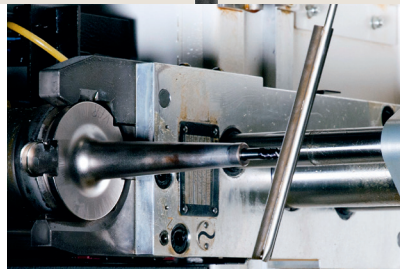
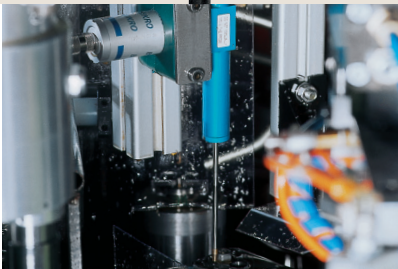
The space-saving installation of the components, the custom-fit connection options, the specially designed desktop software and not least the targeted systems are decisive for the highly flexible adaptability, making BK Mikro a real integration talent.

# BK Mikro is safety that always works.

The BK Mikro system consists of three components: the scanner, the control unit and the connection cable. The operating principle of BK Mikro is as simple as intelligent. The wand is moved by the scanner and scans the object position according to the machine cycle. The control unit compares the result with the programmed parameters and passes on an "o.k." or "k.o." signal to the machine control. Any deviation detected can trigger an instantaneous machine stop.



In order to ideally meet the respective requirements of the CNC-control applied various control devices are available which differ according to their functional range and interface characteristics. Simple solutions, e.g. with few monitoring functions, are covered by the model with digital inputs and outputs. The modification for PROFIBUS networking resp. Device-Net is tailor-made for controlling a variety of objects. And the real-time capable communication via PROFITNET IO interface offers the advantages of modern fieldbus technology such as the simultaneous transmission of requirement data and parameters, diagnoses, alarms or IT-functions.



### TK9LIN50

Linear and precise: With its enormous repeatability the TK9LIN is ideally suited for uses where highly precise results are required.

- Repeatability up to 0.05 mm
- Position detection
- Depth measurement of drillings

### TK91A

Powerful and highly precise: The TK91A is predestined for the scanning of long tools and the detection of smallest deviations.

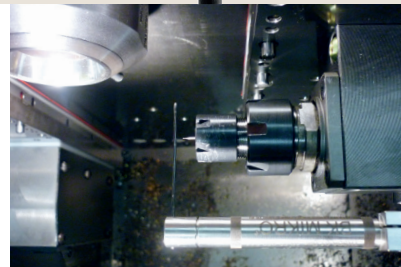
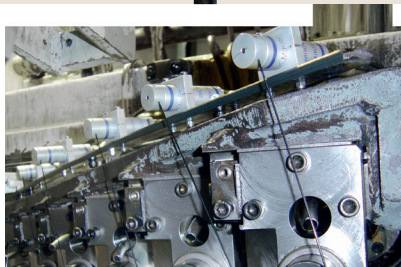
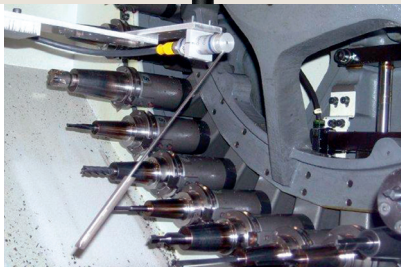
- Axial monitoring in one direction
- For different tool lengths
- Measuring range up to 700 mm
- Ideal for monitoring in tool magazine

### TK94A / TK94RL

Robust and high-speed: The TK94 components are ideal for testing applications which require particularly robust rotary scanners for extremely short scanning cycles.

- Simple orthogonal monitoring
- Tool diameter up to 0.5 mm
- TK94A for scanning in one direction
- TK94RL for bidirectional scanning

Unequaled reliability: The scanner has an extremely rugged design and is absolutely impermeable to aggressive coolants and chips. The smooth body provides for easy mounting without adjusting aids. BK Mikro offers a large selection of scanners and wands for a wide range of restrictions.



### TK8A

Compact and precise: The TK8 is particularly suitable for precise scanning results with relatively short scanning cycles and a larger distance from the object.

- Axial monitoring in one direction
- For different tool lengths
- Measuring range up to 380 mm
- Ideal for monitoring in tool magazine

### TK7A / TK7RL

Compact and fast: The TK7 is established in the price sensitive segment and is particularly suitable for quick and simple monitoring tasks.

- Simple orthogonal monitoring
- Tool diameter up to 0.3 mm
- TK7A for scanning in one direction
- TK7RL for bidirectional scanning

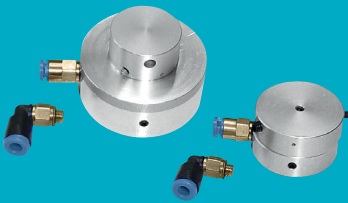
### TK96A / TK96RL

Small and dynamic: The TK96 is the ideal monitoring solution for use in smallest, narrow process zones with highest system availability in a robust environment.

- Simple orthogonal monitoring
- Tool diameter up to 0.1 mm
- TK96A for scanning in one direction
- TK96RL for bidirectional scanning

# It simply works: BK Mikro

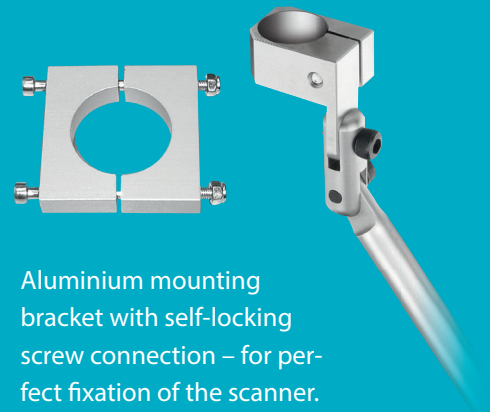
## Selection of accessories for optimum adaptation of BK Mikro to all requirements and monitoring options.



Air barrier adapters for use of scanners under extremely adverse ambient conditions.

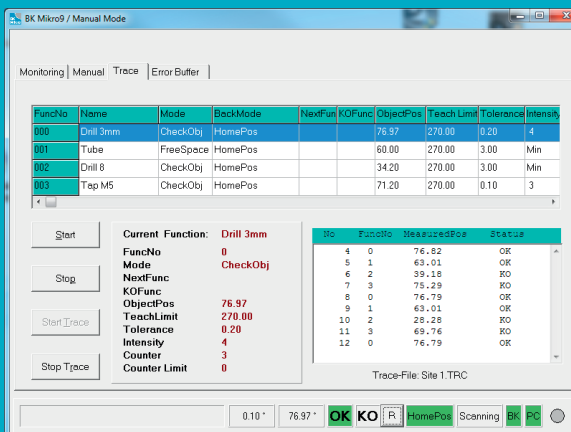


Wands in various lengths and types, with different tips for specific scanning.



Aluminium mounting bracket with self-locking screw connection – for perfect fixation of the scanner.

## Configuration software for easy generation and administration of monitoring cycles.



The software was especially developed for BK Mikro. It serves to generate, integrate and administer workpiece and tool monitoring cycles in CNC machining programmes. The programming is done in dialog-supported selection by interactive input. The programme distinguishes between two operating modes: the premium mode allows for the complete functional range whereas the basic mode presents the most important functions in reduced form. The system settings offer, among other things, to define the parameters of up to 512 tools or long-term recording.

# It simply works: BK Mikro

All safely under control: In automated manufacturing there is an enormous range of possible uses for the BK Mikro systems. Below you find just a few examples of typical monitoring functions.



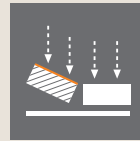
## Tool Monitoring

- Stationary and rotating tools
- Single and double spindles
- Breakage detection
- Radial scanning of spiral / cutting edge



## Object Inspection

- Inspection of feeding / ejection / free space
- Correct tool storage in magazine
- Inspection of length resp. diameter
- Radial or linear scanning



## Position Recognition

- Detection of deviations
- Monitoring of tolerances
- Checking material thickness
- Radial or linear scanning



## Measuring of Hidden Geometries

- Bores / cavities
- Testing functions with narrow process zones
- Application-specific wand types
- Linear scanning



## Testing of Outline / Profile

- Checking of shapes for defects
- Detection of irregularities
- Monitoring of material feeding
- Radial or linear scanning



# It simply works!



## You want to find out more about BK Mikro?

The easiest way:

[www.bkmikro.de](http://www.bkmikro.de)

By phone:

+49 7467 9497 200



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