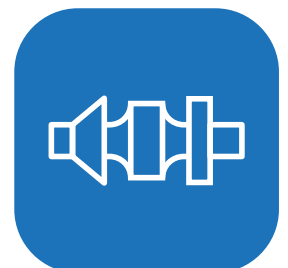


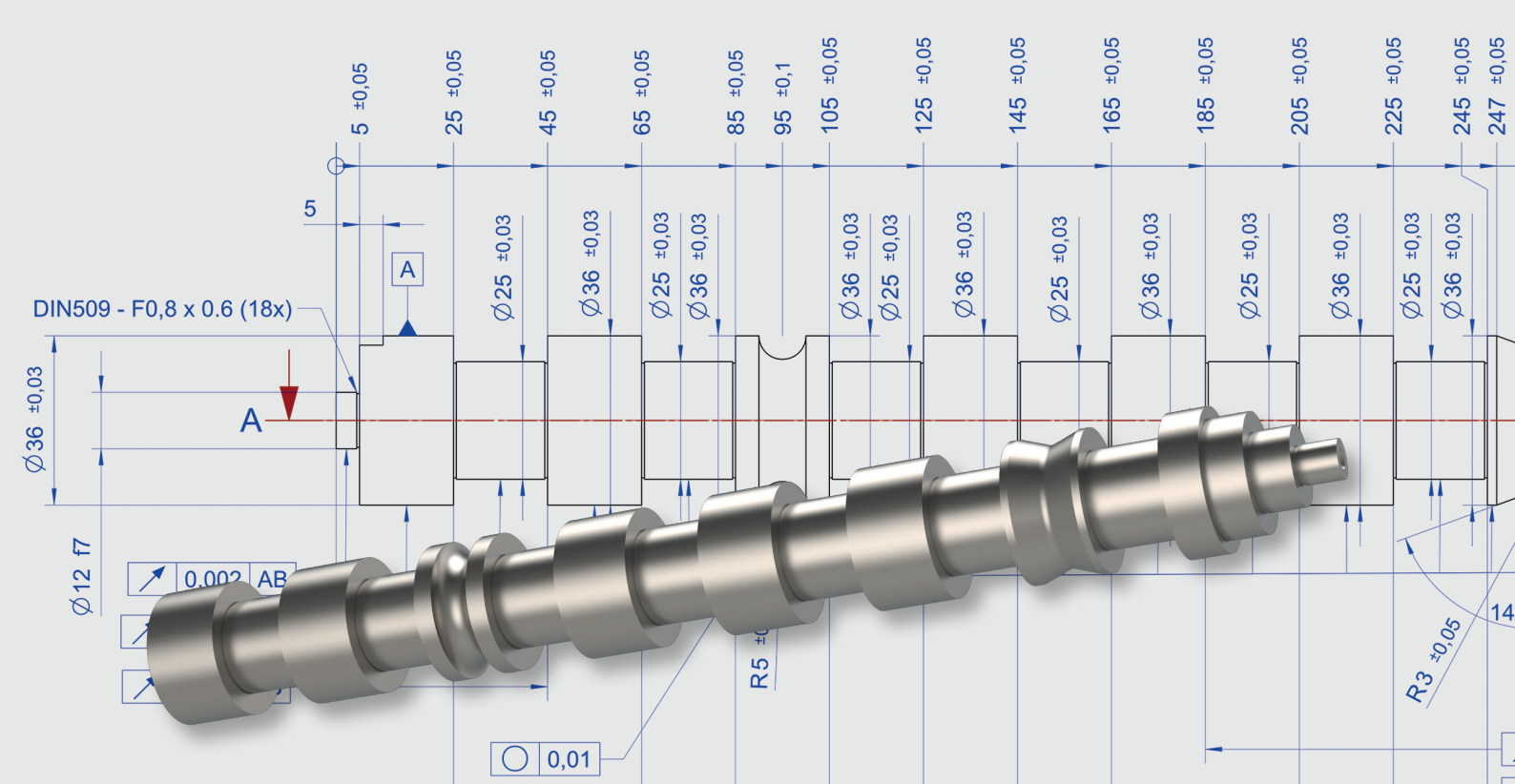
SIMPLY PRECISE



WMX Series

Optical X_{press} shaft measurement machines





WMX Series – fast optical 3D shaft measurement

Speed and accuracy as a powerful team

Dr. Heinrich Schneider Messtechnik combines more than 75 years of experience in the sector for length Measurement with state-of-the-art matrix camera technology in an innovative, lightning fast shaft measurement machine from the new WMX series.

In conjunction with the tried and tested SAPHIR measurement and analysis software, the new machine represents a versatile testing tool that will give your quality assurance processes a decisive edge over the competition.

+ High process safety

Matrix camera technology combined with the fully integrated rotation axis allows the measurement of 3D features with enormous point density for high reproducibility at impressive speeds.

+ Highest efficiency with X_{press} measurements

Flash-supported images taken while the camera is moving creates a complete rendering of the entire workpiece in seconds. The exact timing of camera exposure and flash guarantees sharpest images for robust measurement results.

+ Smart solutions for more versatility

The various measurement ranges in terms of length and diameter, as well as a sophisticated and use-related selection of clamping tools guarantees readiness for any measurement task.

+ Certified software for more confidence

The measurement machines of the WMX series come with the PTB-certified measurement and analysis software SAPHIR. SAPHIR combines a wide range of measurement functions with an intuitive learning-based programming for the stitched image or 3D model – SAPHIR has it all.

The most valuable extra – as we see it

As a Schneider customer, you will always have a direct contact to discuss any issues. Your representative will know the ins and outs of your business and will be able to offer targeted advice and assistance quickly and economically. The fastest, most individualised and effective customer service you could ever ask for. We are waiting to hear from you!

- + Matrix camera for fast measurement data capture with high dot density
- + Same-step analysis of 2D and 3D features
- + Intuitive user concept based on the SAPHIR measurement and analysis software



- **Overarm**
Quick insertion and attachment of the shaft using an innovative clamping device

- **Sensor system**
High-resolution matrix camera and lighting using double telecentric optics

- **Rotation axis**
Fully integrated rotation axis with MK 2 mount for various clamping tools

- **Control elements**
All key functions are available at a push of a button

- **Granite base plate**
High inherent rigidity and temperature stability

Measurement volume: Here, 300 mm long and a 40 mm diameter.
Optionally up to 600 mm long and an 80 mm diameter.

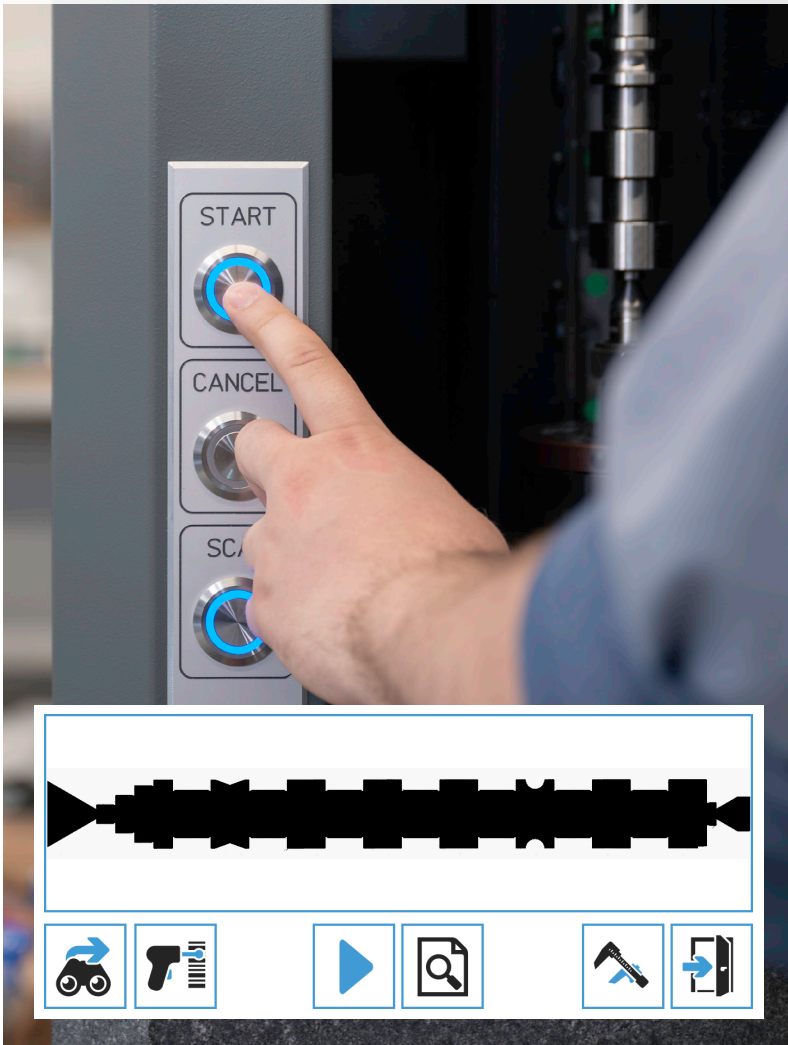
Step 1

Clamping the workpiece



Step 2

Press START



High flexibility

Appropriate clamping tools for various applications

The MK 2 mount ensures that the WMX has the right clamping tool for any application. The overarm offers a quick-clamping function and is easily set with just one hand. The process is convenient and safe.

Clear operating concept

Measurement starts at the push of a button

Start the measurement program by pressing a button on the machine or by your selection from the program menu in the new SMART design.

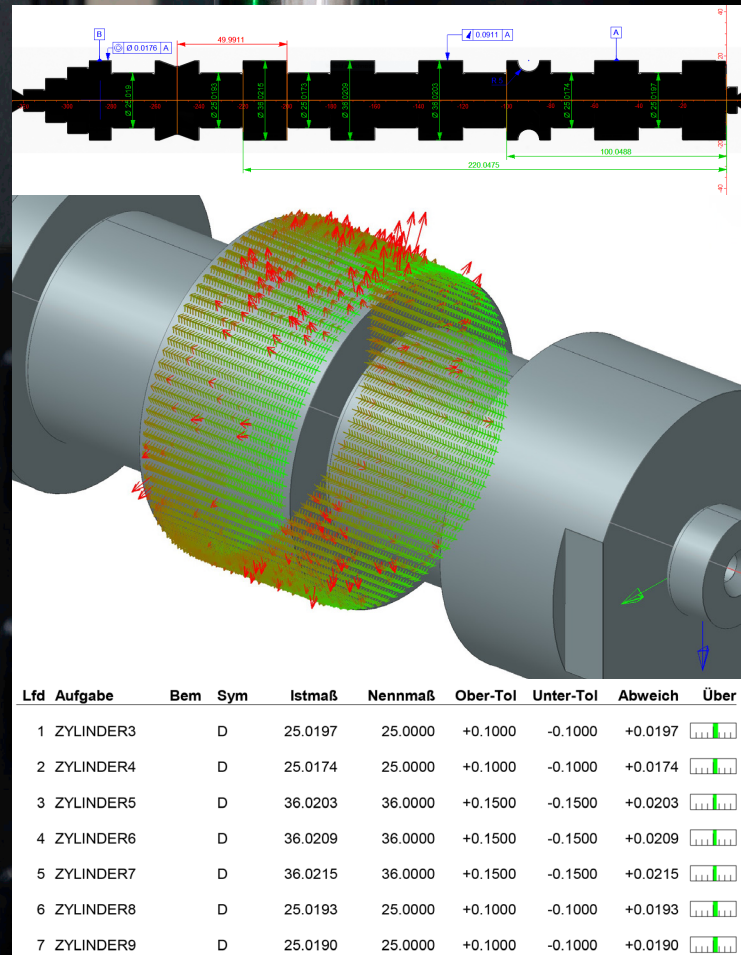
Step 3

Measurement process is running



Step 4

Evaluation & Measurement log



Fully automated measurement

Analysis of 2D and 3D features in seconds

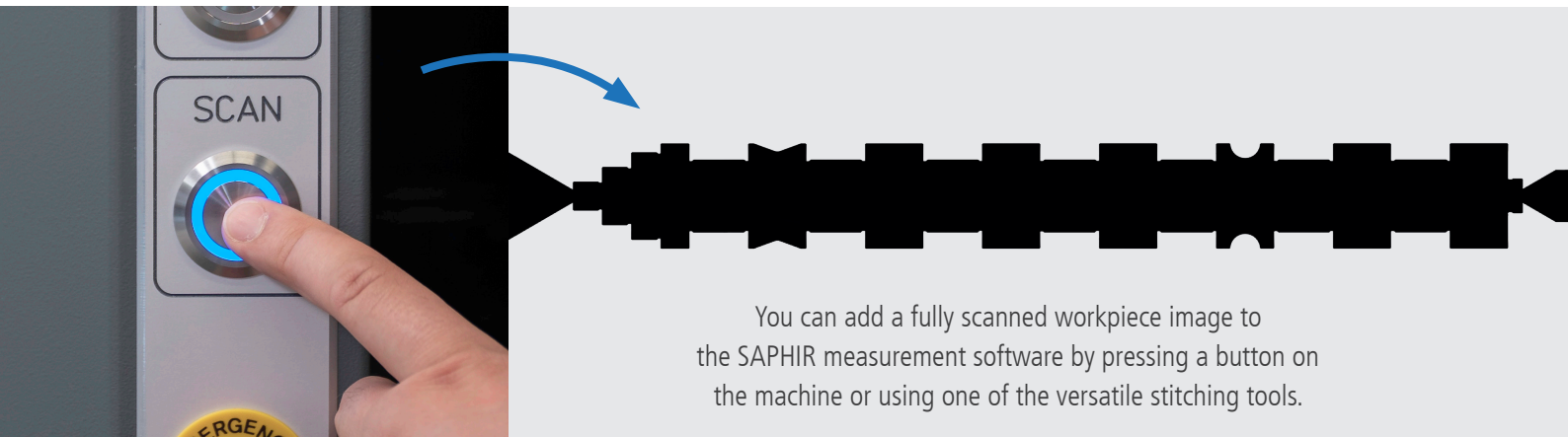
The measurement program from the intuitive learning programming runs fully automated. It measures all elements and analyses all features to ensure your product quality. The high dot density guarantees extremely exact, reproducible results.

Complete documentation

The right results display for any requirement

The SAPHIR measurement and analysis software offers comprehensive documentation options. Configurable measurement log or measurement scale directly on the workpiece image – your quality assurance will always have the right documentation tool at hand.

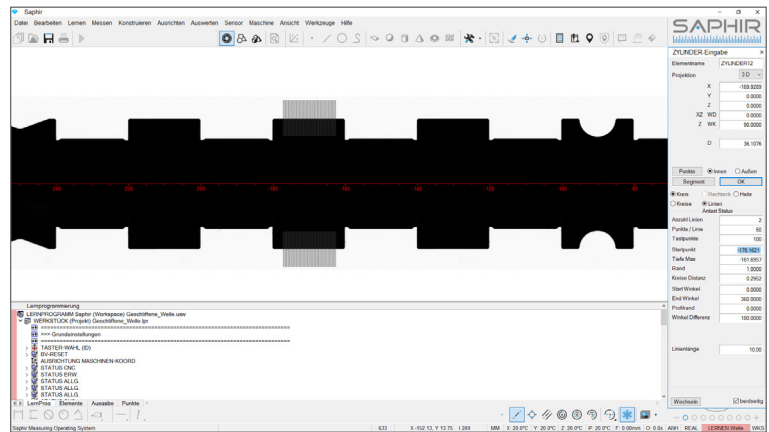
Easy measurement and learning programming



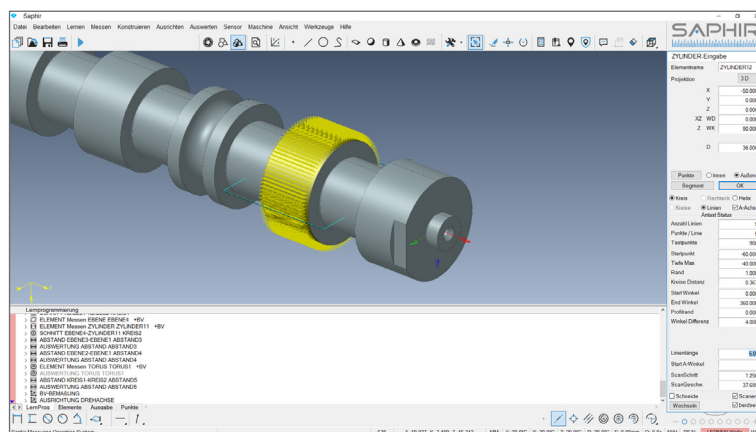
You can add a fully scanned workpiece image to the SAPHIR measurement software by pressing a button on the machine or using one of the versatile stitching tools.

Just a few simple steps for a repeatable measurement program

- 2D features can be measured and analysed directly in the image.
- The convenient macro function allows you to start the measurement of 3D features with activated rotation axis directly on the workpiece image.



- The learning programming in SAPHIR notes each step and automatically creates a learning program.

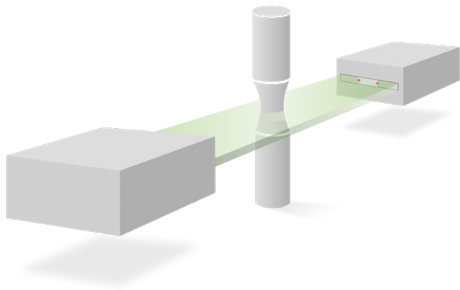


- Alternatively, you can import the structural data directly into SAPHIR. Measurements can then be programmed directly on the 3D model – even on an offline workplace.

- Individual elements can be analysed in terms of simple dimensions, as well as geometric and position tolerances.
- Measurement programs are fully editable at any time. Software options like parameter programming allow the convenient mapping of various workpiece variants or special analyses.

3D geometry analysis with matrix camera

3D geometries are measured via scanning using the fully integrated rotation axis. A high density of measurement points is essential for reliable 3D analyses. The matrix camera in WMX offers exactly that.



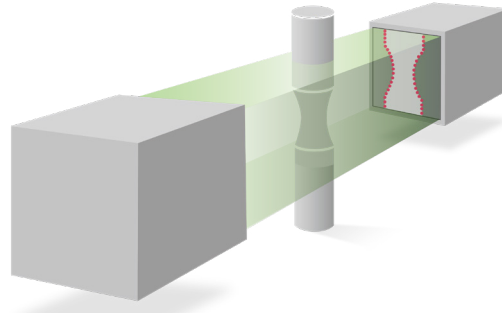
Line camera (conventional measurement devices)

- A line camera scans one single circle at each measurement point.
- Several circular scans are needed to analyse a shape, e.g. a cylinder.
- Localised shape deviations between the circles remain obscured.
- An interpolation will not offer any metrical information gain.
- Scanning a higher number of circles will improve the data situation, but also takes more time.



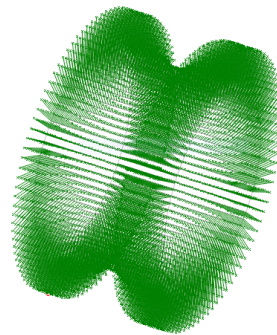
▲ A lot remains questionable

Important data can remain hidden between the measurement circles, as actual measurement points are missing.



Matrix camera in WMX

- + The matrix camera in WMX can scan more than a thousand individual circles in a single rotation of the workpiece – and that extremely quickly.
- + A cylinder can therefore be measured in a single rotation and within seconds.
- + An interpolation is not needed because of the consistently high measurement point density.
- + The measurement results are reproducible, as shape deviations are detected immediately and do not remain obscured.
- + Speed and accuracy combined.



▲ The matrix camera sees everything

Actual measurement points on the entire workpiece surface are recorded in the shortest time possible – a good basis for valid results.

To the point: That's what the matrix camera does for you

Only a measurement with the matrix camera offers insights into the actual shape of the workpiece. You can define greater tolerances at the same level of quality for your production line as needed, or can prevent costly complaints and recalls as a supplier.

Technical specifications of the WMX series

Model		WMX 300/40	WMX 600/40	WMX 300/80	WMX 600/80
Measurement range					
Length	mm	300	600	300	600
Diameter	mm	40	40	80	80
Image field					
	mm	37x45		74x90	
Resolution					
	mm	0.0001			
Max. workpiece weight (incl. clamping tool)					
	kg	10		25	
Diameter deviation¹⁾					
		E _{U, MPE} (1.4 + L / 200 mm) μm		E _{U, MPE} (2.8 + L / 200 mm) μm	
Length measurement error¹⁾					
optical (1D), DIN EN ISO 10370-7 ²⁾		E _{U, MPE} (3.0 + L / 200 mm) μm		E _{U, MPE} (6.0 + L / 200 mm) μm	
		L in mm		L in mm	
Dimensions (mm)					
	Width	660	660	920	920
	Depth	540	540	540	540
	Height	1,070	1,370	1,070	1,370
Weight					
	kg	340	390	390	450
Electric power supply					
220-240VAC, 50-60 Hz, 1 kW					

¹⁾ Permissible ambient conditions: 20°C ± 1 K, temperature gradient Δth = 0.5 K/h, Δtd = 4.0 K/d, measured using calibrated normal

²⁾ Length or diameter measurement, smoothed workpiece surface



Dr. Heinrich Schneider Messtechnik GmbH | Rotlay-Mühle | 55545 Bad Kreuznach | GERMANY
Phone +49 671 291 02 | Fax +49 671 291 200 | info@dr-schneider.de | www.dr-schneider.de

Subject to technical changes | 26042022/DHSM