



Seeing beyond

ZEISS Metrology Expert Tip



**Measurements of Parts with an
Insertion Depth of over 800 Millimeters.**

ZEISS REACH CFX® 3, MMZ for Measurements of Parts with an Insertion Depth of more than 800 Millimeters.

The special design of the ZEISS REACH CFX® 3, MMZ extensions makes it possible to use extensions that exceed the specified load capacity of the measuring head. These ZEISS REACH CFX® 3, MMZ extensions are directly combined with the adapter plate and are available in lengths up to 1,200 mm. The special design means that the lightweight and length-stable material also benefits large machines. Any tilting moments that occur can be compensated by the integrated, adjustable counterweight. The large devices in the ZEISS MMZ series are suitable for large-volume and heavy components that are fed at ground level. They are primarily used in the aerospace industry for structural components, but also in other industries such as mechanical engineering, vehicle construction and shipbuilding. ZEISS REACH CFX® 3, MMZ extensions with adapter plates are only approved for use on ZEISS MMZ and large ZEISS ACCURA machines.

The extensions are available in two versions:

One-sided styli holder and adjustable counterweight



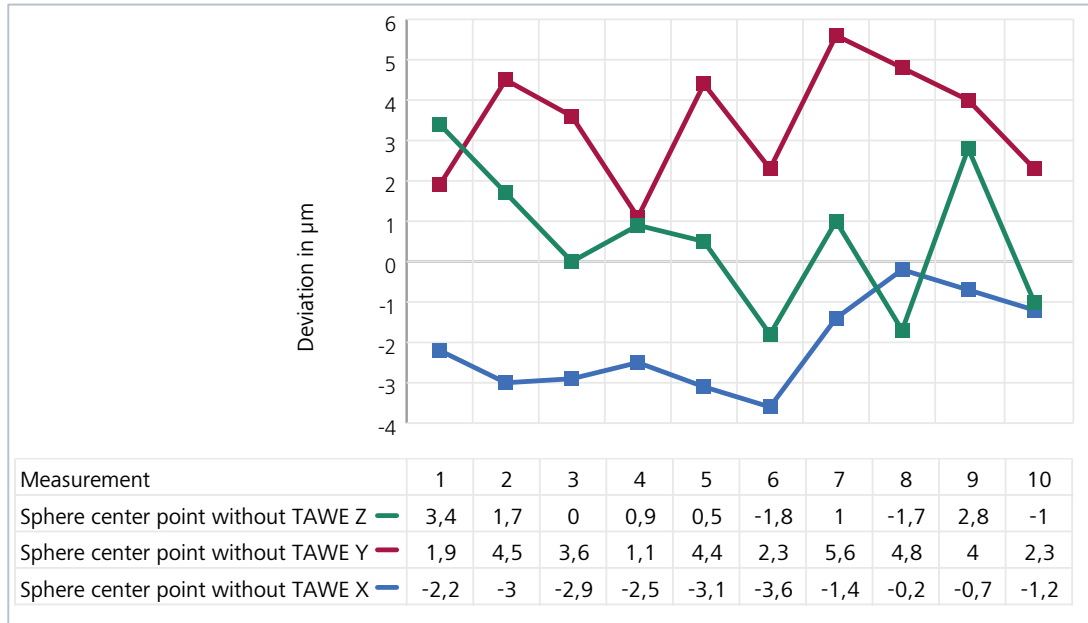
Two-sided styli holders



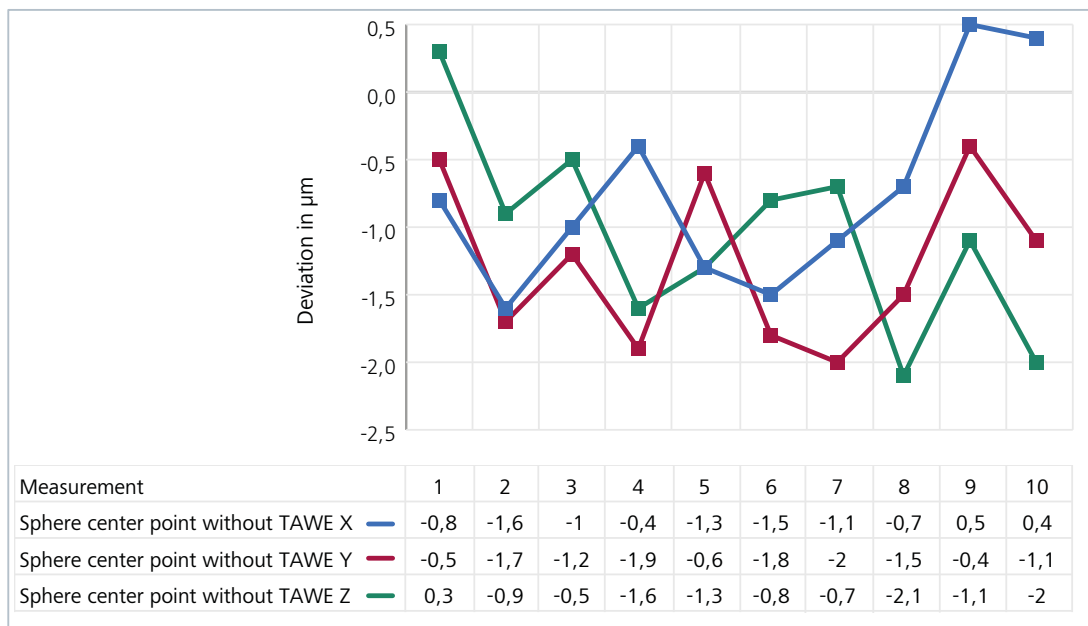
To illustrate the difference between a standard ZEISS REACH CFX® 3 extension and a ZEISS REACH CFX® 3 MMZ, various comparative tests are shown on the next pages.

Comparison 1: Reference measurement on the sphere with a combined ZEISS REACH CFX® 3 and a ZEISS REACH CFX® 3, MMZ extension

ZEISS REACH CFX® 3



ZEISS REACH CFX® 3 MMZ

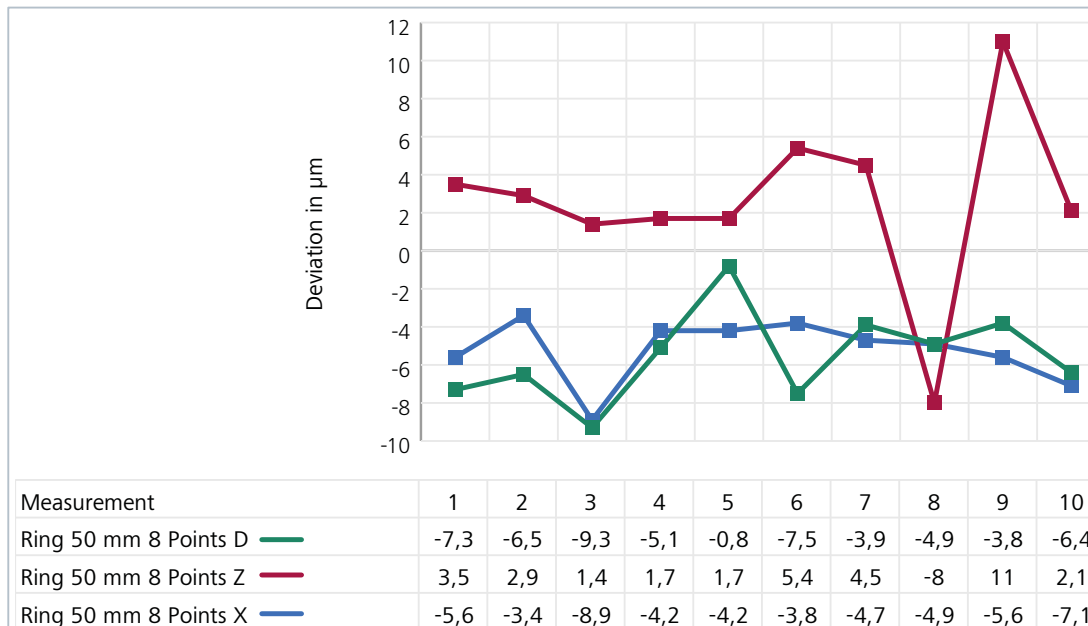


Comparison of evaluation results

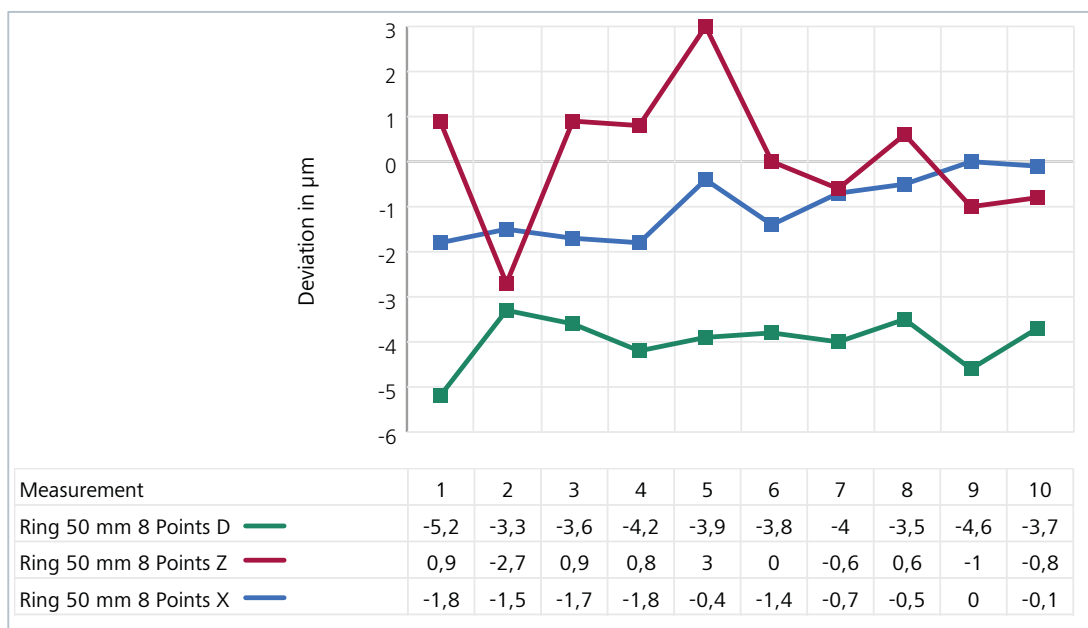
min. -max deviation	ZEISS REACH CFX® 3	ZEISS REACH CFX® 3, MMZ
X	3,4 µm	2,1 µm
Y	4,5 µm	1,6 µm
Z	5,2 µm	2,4 µm

Comparison 2: Single point measurement on the ring (ring center and diameter) with a combined ZEISS REACH CFX® 3 and a ZEISS REACH CFX® 3, MMZ extension

ZEISS REACH CFX® 3



ZEISS REACH CFX® 3, MMZ

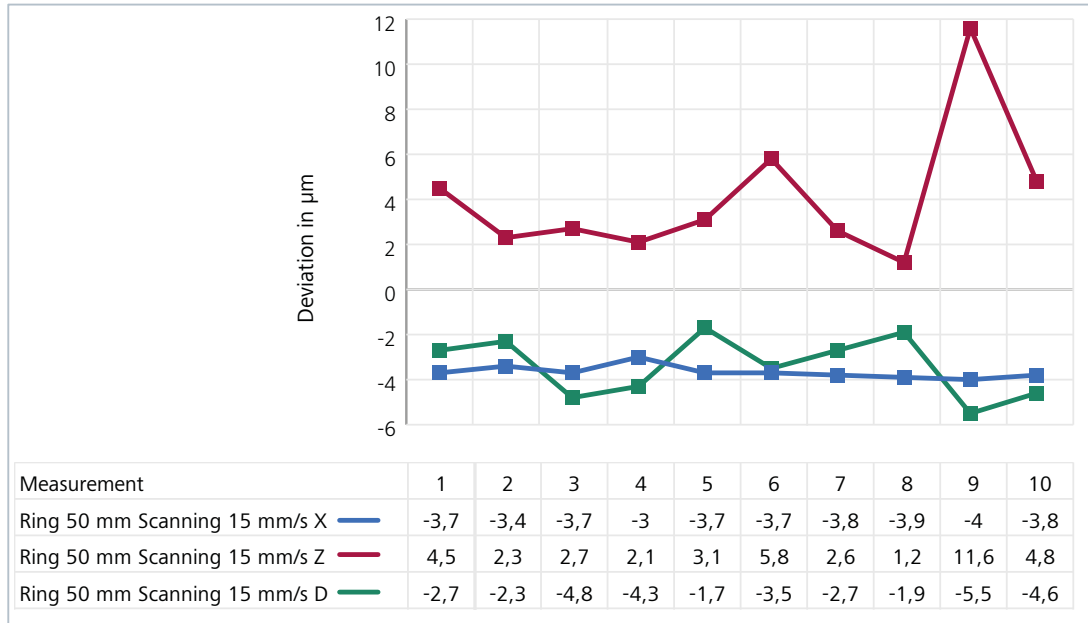


Comparison of evaluation results

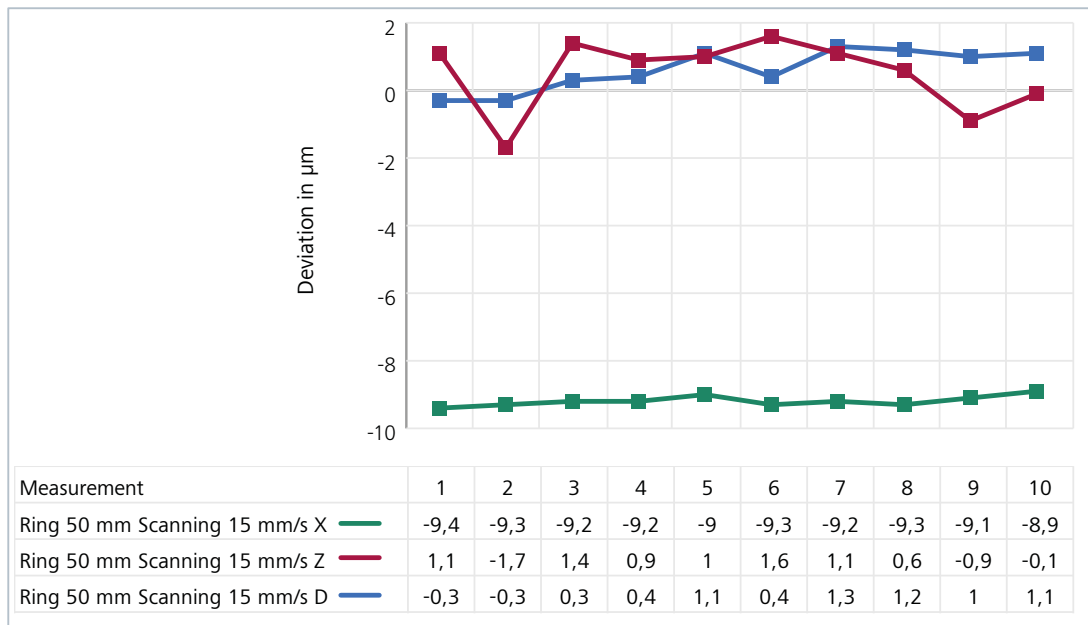
min. -max deviation	ZEISS REACH CFX® 3	ZEISS REACH CFX® 3, MMZ
X	5,5 µm	1,8 µm
Z	11,8 µm	5,7 µm
D	8,5 µm	1,9 µm

Comparison 3: Scanning on the ring (ring center and diameter) with a combined ZEISS REACH CFX® 3 and a ZEISS REACH CFX® 3, MMZ extension

ZEISS REACH CFX® 3



ZEISS REACH CFX® 3 MMZ



Comparison of evaluation results

min. -max deviation	ZEISS REACH CFX® 3	ZEISS REACH CFX® 3, MMZ
X	3,8 µm	1,6 µm
Z	10,4 µm	3,3 µm
D	0,7 µm	0,5 µm

Advantages of ZEISS REACH CFX® 3, MMZ Extensions

- Repeatability optimized: Variation with and without probe change clear.
- Improved measurements with probe change get an excellent evaluation.
- Repeatability by measuring a ring with 8 points about 50% improved.
- Repeatability by measuring a ring with scanning clearly improved.
- Oscillation optimized: Short contact time.
- Automatic probe change with balance weight possible.
- Weight optimized: Long adjustment times possible.

**ZEISS Original Accessories are available
in the
ZEISS Metrology Shop.**

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