



ZEISS MICURA

Specifications

Stand: 2025-04



Seeing beyond

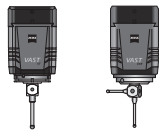
System description

| | | | |
|------------------------------------|-------------------------------|--------|-----------------------------|
| Type according to ISO 10360-1:2000 | Moving bridge CMM | | |
| Operating mode | motorized / CNC | | |
| Sensor mounts | mass | | |
| Software | ZEISS CALYPSO, ZEISS GEAR PRO | | |
| Travel speed | motorized | Axes | 0 to 70 mm/s |
| | CNC | Vector | max. 475 mm/s |
| Acceleration | | Vector | max. 1850 mm/s ² |
| Scanning speed ¹⁾ | | | max. 150 mm/s |

ZEISS MICURA active sensors and accuracy

The functionality of the device and its specifications are only achievable when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

ZEISS VAST XT gold
ZEISS VAST XTR gold



Active scanning and multipoint sensor. Scanning measuring rate up to 500 points/s.
Variable measuring force (50-1000 mN) for data acquisition.

ZEISS VAST XT gold: stylus: max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.

ZEISS VAST XTR gold: max. length (rigid) = 500 mm, max. length (during rotation) = 350 mm, max. weight = 500 g, including stylus adapter, min. stylus tip diameter = 0.5 mm.

| 5/7/6 | | | | |
|---|--------------------|------------------|-------------|-------------|
| Length measurement error ^{1) 2)} MPE complies with ISO 10360-2:2009 | E0 | in μm | 19°C - 22°C | 0.7 + L/400 |
| | E150 | in μm | 19°C - 22°C | 0.9 + L/450 |
| Repeatability range of E0 MPL complies with ISO 10360-2:2009 | R0 | in μm | | 0.55 |
| Scanning error MPE complies with ISO 10360-4:2000 | THP | in μm | | 0.9 |
| Required measuring time MPT | τ | in s | | 40 |
| Form measurement error ³⁾ MPE for roundness complies with ISO 12181 (VDI/VDE 2617 sheet 2.2) | RONt (MZCI) | in μm | | 0.7 |
| Single stylus form probing error MPE complies with ISO 10360-5:2010 | PFTU | in μm | | 0.8 |
| Multi-stylus form probing error MPE complies with ISO 10360-5:2010 | PFTM ⁴⁾ | in μm | | 2.3 |
| Multi-stylus dimension probing error MPE complies with ISO 10360-5:2010 | PSTM ⁴⁾ | in μm | | 0.6 |
| Multi-stylus location probing error MPL complies with ISO 10360-5:2010 | PLTM ⁴⁾ | in μm | | 1.6 |

1) Acceptance test with stylus length of 60 mm and tip diameter of 8 mm. Also valid for other styli. $\emptyset 3 \times 33 \text{ mm}$, $\emptyset 5 \times 50 \text{ mm}$, $\emptyset 8 \times 114 \text{ mm}$ and $\emptyset 12 \times 92 \text{ mm}$ were tested with ZEISS PRISMO (in conjunction with the reference standards belonging to the CMM).

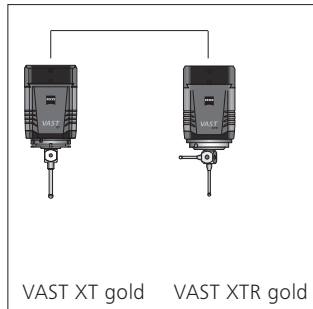
2) Measuring length L in mm.

3) Roundness in Scanning Mode on a 50 mm ring gauge for Vscan = 5 mm/s, filter 50 UPR.

4) Measuring location near the qualification position to document sensor properties.

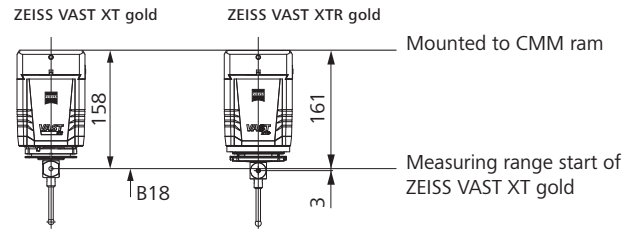
Sensor overview

active

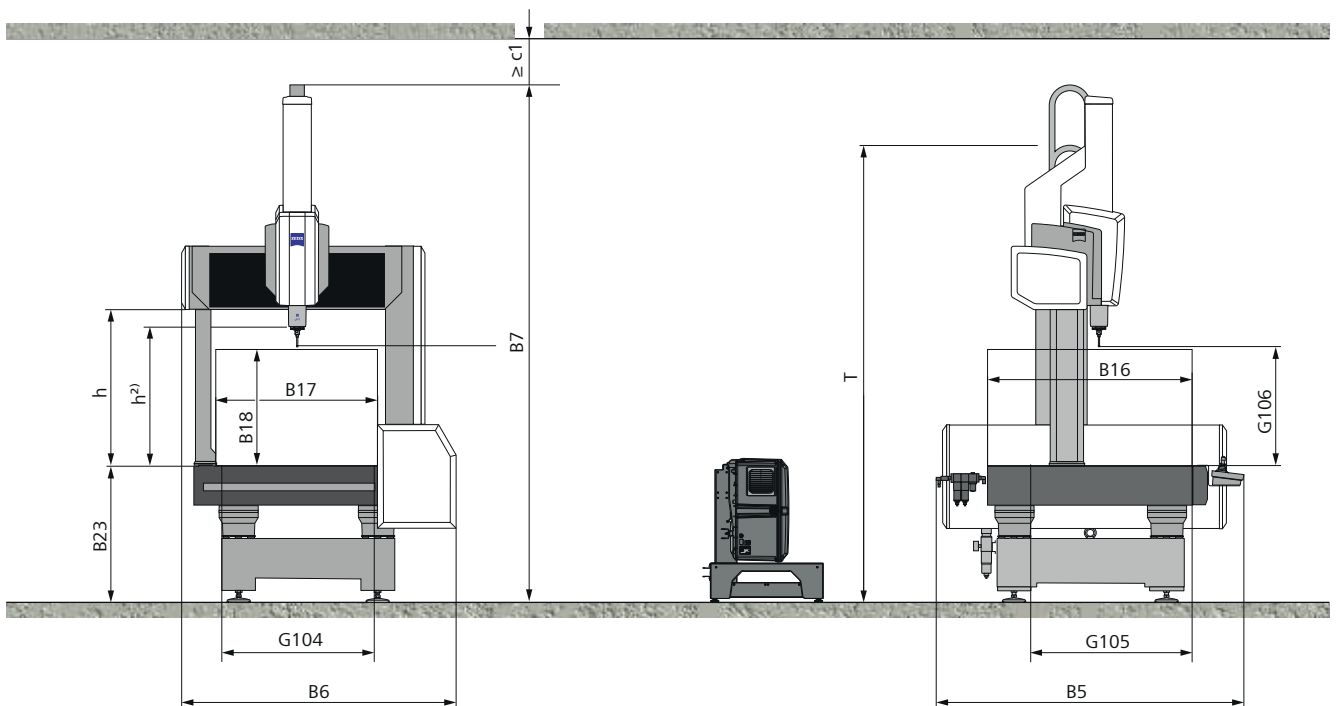


VAST XT gold VAST XTR gold

| | | |
|----------------------------------|--------|------------|
| Multipoint | ■ | ■ |
| Passive scanning | | |
| Active scanning | ■ | ■ |
| Optical scanning | | |
| Rotatable / tiltable | | |
| Max. stylus length ¹⁾ | 500 mm | 350/500 mm |
| Max. stylus weight ¹⁾ | 500 g | 500 g |
| Navigator | ■ | ■ |



| ZEISS MICURA | Dimensions in mm | | | | | | | | | | | | Weight in kg | | |
|-----------------|------------------|--------|--------|------------------------|-------|--------|--|-------|--------|--------------|------------------------|--|------------------------|---------------------------|------|
| | Measuring range | | | Overall CMM dimensions | | | Working range (Max. workpiece size) | | | Table height | As- sembly space | Trans- port height ¹⁾ | Max. work- piece | Mea- suring machine | |
| | X axis | Y axis | Z axis | Length | Width | Height | Length | Width | Height | Height | Height | Height | Height | Height | |
| | G104 | G105 | G106 | B5 | B6 | B7 | B16 | B17 | B18 | h | B23 | c1 | T | | |
| 5/7/6 | 500 | 700 | 600 | 1603 | 1411 | 2658 | 1050 | 827 | 600 | 804 | 700 | ≥200 | 2348 | 730 | 1200 |



Note: the given dimensions and weights are approximate values. Subject to change. Dimensioning based on DIN 4000-167:2009.

- 1) Applies to ZEISS VAST XT gold. The measuring range (G106) and the maximum workpiece height (B18) are reduced by at least 50 mm when other probes are used.
- 2) Transport height of the secured machine group without pallet or Z mast.

Technical features

| | |
|-------------------------|--|
| Length measuring system | Photoelectric reflected light system, 0.08 µm resolution |
| Controller | Type: ZEISS C99m Protection type: IP54 |
| Accessories (optional) | Multi-sensor Rack for storage of stylus systems |

Environmental requirements ¹⁾

| | |
|-------------------|--|
| Relative humidity | 40 % - 70% (without condensation) 19 °C - 22 °C |
| | Per day: 1.0 K/d |
| | Per hour: 0.5 K/h |
| | Spatial: 0.5 K/m |

Floor vibrations ZEISS MICURA is equipped with passive vibration damping. Optionally, the machine can be equipped with active vibration damping. In both cases limit values available on request. Upon request, we can assist you with your vibration analyzes.

Readiness for operation

| | |
|---------------------|--|
| Relative humidity | 40 % - 70 % (without condensation) |
| Ambient temperature | 17 °C - 35 °C |
| Power rating | ZEISS C99m 100-240V VAC ~ (±10 %); 50-60 Hz (±3.5 %) Max. power consumption: 800 VA Typical power consumption: 200 W Amount of heat generated: max. 2200 kJ/h |

Compressed air supply Supply pressure min. 6 bar, max. 8 bar, pre-cleaned.
Max. consumption 80NI/min for ZEISS MICURA.

The use of the AirSaver included with delivery ensures that compressed air is not used during ZEISS MICURA downtimes, thus enabling environmentally friendly operations.

Air quality complies with ISO 8573-1:2010 [6:4:4], Particle: class 6; Water/Oil: class 4

Particle, class 6: max. particle size 15 µm, max. dirt particle concentration ≤ 5 mg/m³

Water, class 4: max. compressed air dew point +3°C

Oil, class 4: max. oil concentration of 5 mg/m³

If the air supply does not comply with the above requirements, an additional air filter unit and, if necessary, a membrane dryer must be inserted in the compressed air line.

Approvals

Regulations ZEISS MICURA complies with EC machine directive 2006/42/EC, the EMC directive 2014/30/EU and the RoHS directive 2011/65/EU.



Disposal ZEISS products and packaging returned to us are disposed of in accordance with applicable legal provisions.

Certification/accreditation

| | |
|---|-----------------|
| Quality management system | ISO 9001:2015 |
| Environmental management system | ISO 14001:2015 |
| Occupational health & safety management systems | ISO 45001:2018 |
| Accredited | ISO / IEC 17025 |

1) To ensure specified accuracies.

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