ZEISS MICURA

Specifications

ZEISS

Seeing beyond

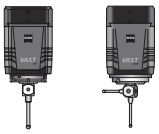
Stand: 2023-06

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

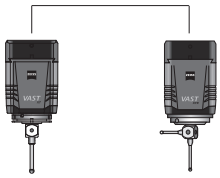


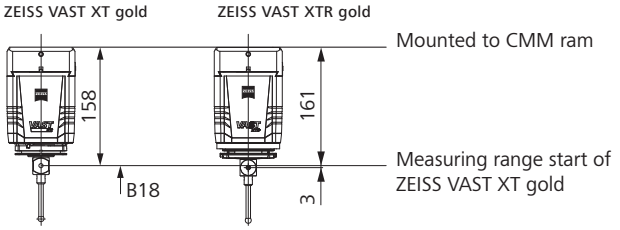
Active scanning and multipoint sensor. Scanning measuring rate up to 500 points/s.
Variable measuring force (50-1000 mN) for data acquisition.
ZEISS VAST XT gold: stylus: max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.
ZEISS VAST XTR gold: max. length (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 / E150 19°C - 22°C	in µm	0.7 + L/400
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

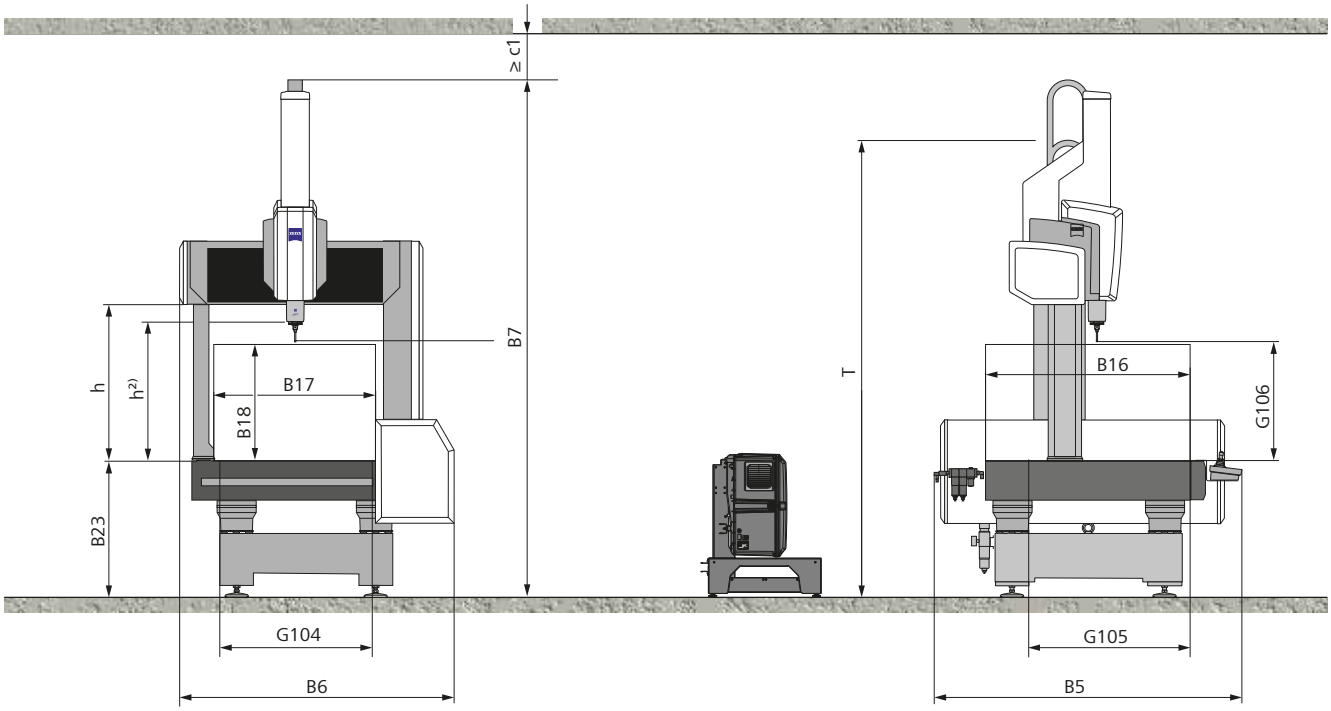
1) Acceptance test with stylus length of 60 mm and tip diameter of 8 mm. Also valid for other styli. Ø 3 x 33 mm, Ø 5 x 50 mm, Ø 8 x 114 mm and Ø 12 x 92 mm were tested with ZEISS PRISMO (in conjunction with the reference standards belonging to the CMM).
2) Measuring length L in mm.
3) Roundness in Scanning 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	Assembly space	Transport height[1]	Max. workpiece	Measuring machine
	X axis	Y axis	Z axis	Length	Width	Height	Length	Width	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: IP53
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 active vibration damping (limits upon request). Upon request, we can provide assistance for vibration studies.	

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 80Nl/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 concetration ≤ 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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