

ZEISS PRISMO®

Specifications

Version: 2024-10



Seeing beyond

System description

Type as per ISO 10360-1:2000	Bridge-type CMM with a moveable bridge						
Operating mode	Motorized/CNC						
Sensor mounts	Fixed installation						
Software	ZEISS CALYPSO, ZEISS GEAR PRO						
			ZEISS PRISMO 5+7 X=700 und X=900	ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 X=1600	ZEISS PRISMO ultra	
Travel speeds	Motorized	in mm/s	0 to 70	0 to 70	0 to 70	0 to 70	
	CNC	Axis	in mm/s	max. 300	max. 300	max. 300	max. 300
		Vector	in mm/s	max. 520	max. 520	max. 520	max. 520
Scanning speed (with navigator technology)		in mm/s	max. 300	max. 300	max. 300	max. 300	
Acceleration	Axis	in m/s ²	max. 1.2	max. 0.8	max. 0.8	max. 0.38	
	Vector	in m/s ²	max. 2.07	max. 1.38	max. 1.38	max. 0.67	

ZEISS PRISMO ultra: sensor and accuracy ⁵⁾

The CMM specifications are only valid 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 gold ¹⁾



Active scanning and multi-point sensor.

Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

**ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.
With navigator and performance technology to increase measuring performance.**

				ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 12/18/7	ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 X=1600
Length measurement error ²⁾ MPE complies with ISO 10360-2:2009	E0	in µm	20°C - 22°C	0.5 + L/500 µm	0.9 + L/500	1.2 + L/500 µm	1.9 + L/400 µm
			-	-	-	1.0 + L/500 ⁶⁾	1.6 + L/400 ⁷⁾
	E150	in µm	20°C - 22°C	0.8 + L/500 µm	1.2 + L/500	1.5 + L/500 µm	2.5 + L/400 µm
Repeatability range of E0 MPL complies with ISO 10360-2:2009	R0	in µm		0.4	0.5	0.7	0.8
Scanning error MPE complies with ISO 10360-4:2000	THP	in µm		0.9	0.9	1.1	1.6
Required measuring time MPT	τ	in s		40	40	40	45
Form measurement error ³⁾ MPE for roundness complies with ISO 12181:2011 (VDI/DE 2617, sheet 2.2:2000)	RONt (MZCI)	in µm		0.5	0.6	0.7	0.9
Single stylus form probing error MPE complies with ISO 10360-5:2010	PFTU	in µm		0.5	0.6	0.8	1.1
Multi-stylus form probing error MPE complies with ISO 10360-5:2010	PFTM ⁴⁾	in µm		1.9	2.0	2.2	2.3
Multi-stylus dimension probing error MPE complies with ISO 10360-5:2010	PSTM ⁴⁾	in µm		0.6	0.7	0.9	1.1
Multi-stylus location probing error MPL complies with ISO 10360-5:2010	PLTM ⁴⁾	in µm		1.2	1.3	1.5	1.7

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm and dia. 12 x 92 mm were tested with PRISMO ultra.

2) Measuring length L in mm.

3) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.

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

5) Accuracy in combination with the reference standard for the PRISMO ultra and the reference sphere bending correction.

6) In the limited measuring range 800/1000/600.

7) In the limited measuring range 800/1200/600.

ZEISS PRISMO verity sensors and accuracy

The CMM specifications are only valid 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 ¹⁾

ZEISS VAST gold ¹⁾

ZEISS VAST XTR gold ¹⁾



Active scanning and multi-point sensor.

Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

ZEISS VAST XT gold: max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.

ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.

ZEISS VAST XTR gold: max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.

With navigator and performance technology to increase measuring performance.

	ZEISS PRISMO verity x=700 and x=900			ZEISS PRISMO verity 12/18/10		
Length measurement error ²⁾	E0	in µm	19°C - 22°C	0.7 + L/400	19°C - 22°C	1.3 + L/400
MPE complies with ISO 10360-2:2009	E150	in µm		0.9 + L/400		1.5 + L/400
Repeatability range of E0	R0	in µm		0.6		0.8
MPL complies with ISO 10360-2:2009						
Scanning error	THP	in µm		0.9		1.3
MPE complies with ISO 10360-4:2000						
Required measuring time MPT	τ	in s		40		40
Form measurement error ³⁾	RONt	in µm		0.7		0.9
MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000)	(MZCI)					
Single stylus form probing error	PFTU	in µm		0.9		1.0
MPE complies with ISO 10360-5:2010						
Multi-stylus form probing error	PFTM ⁴⁾	in µm		2.0		2.4
MPE complies with ISO 10360-5:2010				2.6 ⁵⁾		3.0 ⁵⁾
Multi-stylus dimension probing error	PSTM ⁴⁾	in µm		0.8		1.1
MPE complies with ISO 10360-5:2010						
Multi-stylus location probing error	PLTM ⁴⁾	in µm		1.4		1.8
MPL complies with ISO 10360-5:2010				1.5 ⁵⁾		1.9 ⁵⁾

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with PRISMO verity (in conjunction with the reference standards belonging to the CMM).

2) Measuring length L in mm.

3) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.

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

5) Applies to ZEISS VAST XTR gold.

ZEISS PRISMO sensors and accuracy

The CMM specifications are only valid 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 ¹⁾

ZEISS VAST gold ¹⁾

ZEISS VAST XTR gold ¹⁾



Active scanning and multi-point sensor.

Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

ZEISS VAST XT gold: max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.

ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.

ZEISS VAST XTR gold: max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.

With navigator and performance technology to increase measuring performance.

			ZEISS PRISMO 5 + 7 X=700 and X=900		ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 X=1600		ZEISS PRISMO 14 X=1600		
			19°C - 21°C	0.9 + L/350 ³⁾	18°C - 22°C	1.5 + L/350	18°C - 22°C	2.0 + L/300	18 °C - 22 °C	2,7 + L/300
Length measurement error ²⁾ MPE complies with ISO 10360-2:2009	E0/E150	in µm	15°C - 30°C	1.2 + L/250	18°C - 28°C	1.8 + L/300 ⁴⁾	18°C - 28°C	3.4 + L/270 ⁴⁾	MPE (E150)	3,0 + L/250
Repeatability range of E0 MPL complies with ISO 10360-2:2009	R0	in µm		0.8		1.1		1.5		2,0
Scanning error MPE complies with ISO 10360-4:2000 Required measuring time MPT	THP	in µm	19°C - 21°C	1.3 (PRISMO 5)	18°C - 22°C	1.7	18°C - 22°C	2.5	18 °C - 22 °C	2,9
				1.7 (PRISMO 7)						
				40		40		40		50
Form measurement error ⁵⁾ MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000)	RONt (MZCI)	in µm		1.0		1.3		1.9		2,3
Single stylus form probing error MPE complies with ISO 10360-5:2010	PFTU	in µm		1.0		1.3		1.9		2,3
Multi-stylus form probing error MPE complies with ISO 10360-5:2010	PFTM ⁶⁾	in µm		2.1 (PRISMO 5)		2.7		2.9		3,3
				2.7 ⁷⁾		3.3 ⁷⁾		3.5 ⁷⁾		
				2.4 (PRISMO 7)						
				3.0 ⁷⁾						
Multi-stylus dimension probing error MPE complies with ISO 10360-5:2010	PSTM ⁶⁾	in µm		1.0 (PRISMO 5)		1.4		1.6		1,8
				1.2 (PRISMO 7)						
Multi-stylus location probing error MPL complies with ISO 10360-5:2010	PLTM ⁶⁾	in µm		1.6 (PRISMO 5)		2.0		2.1		2,4
				1.7 ⁷⁾		2.1 ⁷⁾		2.2 ⁷⁾		
				1.8 (PRISMO 7)						
				1.9 ⁷⁾						

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with PRISMO (in conjunction with the reference standards belonging to the CMM).

2) Measuring length L in mm.

3) 1.2 + L/350 at 18°C - 22°C.

4) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.

5) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.

6) Measuring location near the calibration position to document sensor properties.

7) Applies to ZEISS VAST XTR gold.

ZEISS PRISMO fortis sensors and accuracy

The CMM specifications are only valid 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 gold ¹⁾

Active scanning and multi-point sensor.

ZEISS VAST XTR gold ¹⁾

Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.



ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.

ZEISS VAST XTR gold: max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.

With navigator and performance technology to increase measuring performance.

				ZEISS PRISMO fortis 7/12/7, 9/15/7	ZEISS PRISMO fortis 12/18/10, 12/18/10 U-stone
Length measurement error ²⁾ MPE complies with ISO 10360-2:2009	E0	in µm	22 °C	0.7 + L/400	1.3 + L/400
	E150	in µm		0.9 + L/400	1.5 + L/400
TVA ²⁾ (Temperature Variable Accuracy)	TVA MPE_E0	in µm	15 °C - 40 °C	0.7 + (0.3 Δθ) + L/(400 - (18 Δθ)) Δθ = deviation in K from +22°C ³⁾	1.3 + (0.08 Δθ) + L/(400 - (17.5 Δθ)) Δθ = deviation in K from +22°C ³⁾
Length measurement error ²⁾ MPE nach ISO 10360-2:2009	E0	in µm	at 26 °C	1.9 + L/330	1.6 + L/330
			at 30 °C	3.1 + L/260	1.9 + L/260
			at 37 °C	5.2 + L/130	2.5 + L/140
			at 40 °C	6.1 + L/80	2.7 + L/80
Repeatability range of E0 MPL complies with ISO 10360-2:2009	R0	in µm		0.6	0.8
Scanning error MPE complies with ISO 10360-4:2000 Required measuring time MPT	THP	in µm	19 °C - 21 °C	0.9	1.3
	τ	in s		40	40
Form measurement error ⁵⁾ MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000)	RONt (MZCI)	in µm		0.7	0.9
Single stylus form probing error MPE complies with ISO 10360-5:2010	PFTU	in µm		0.9	1.0
Multi-stylus form probing error MPE complies with ISO 10360-5:2010	PFTM ⁵⁾	in µm		2.0	2.4
				2.6 ⁶⁾	3.0 ⁶⁾
Multi-stylus dimension probing error MPE complies with ISO 10360-5:2010	PSTM ⁵⁾	in µm		0.8	1.1
Multi-stylus location probing error MPL complies with ISO 10360-5:2010	PLTM ⁵⁾	in µm		1.4	1.8
				1.5 ⁶⁾	1.9 ⁶⁾

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with ZEISS PRISMO fortis (in conjunction with the reference standards belonging to the CMM).

2) Measuring length L in mm.

3) Explanation: Amount value |Δθ|: z. B. on 20 °C |Δθ| = 2, on 24 °C |Δθ| = 2.

4) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.

5) Measuring location near the calibration position to document sensor properties.

6) Applies to ZEISS VAST XTR gold.

ZEISS PRISMO, ZEISS PRISMO verity, ZEISS PRISMO fortis and ZEISS PRISMO ultra sensors and accuracy

The CMM specifications are only valid 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 RDS-D



Dynamic ZEISS RDS-D articulating unit for optical and contact sensors.
Lateral swivel axis offers more benefits than articulating systems with front-to-back and lateral tilt axis; front-to-back and lateral tilt range of $\pm 180^\circ$, large measuring range, rotation increments of 2.5° , CAA correction to automatically qualify measuring multi-point sensors of all potential 20,736 angular positions.

ZEISS VAST XXT ¹⁾



Scanning and multi-point sensor on ZEISS RDS-D. Scanning measurement rate of up to 500 points/s, max. sensor extension = 100 mm
Stylus length with module: TL1 and TL3 = 30 - 150 mm, TL4 = 125 - 250 mm
Max. sensor weight = 15 g, min. stylus tip diameter = 0.3 mm

				ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 X=1600	ZEISS PRISMO 14 X=1600
Length measurement error ²⁾ MPE complies with ISO 10360-2:2009	E0/E40	in μm	18°C - 22°C 18°C - 26°C	1.6 + L/350 μm 2.1 + L/300 μm	2.2 + L/300 μm 2.9 + L/250 μm	3.2 + L/250 μm 3.7 + L/200 ³⁾	4.0 + L/250
Repeatability range of E0 MPL complies with ISO 10360-2:2009	R0	in μm		0.8	1.1	1.5	2.5
Scanning tolerance MPE complies with ISO 10360-4:2000	THP	in μm		2.5	3.5	3.5	4.3
Required measuring time MPT	τ	in s		50 ⁴⁾	68	68	68
Form measurement error ⁴⁾ MPE for roundness complies with ISO 12181 (VDI/VDE 2617, sheet 2.2)	RONt (MZCI)	in μm		1.7	1.9	3.0	3.0
Single stylus form probing error MPE complies with ISO 10360-5:2010	PFTU	in μm		1.7	1.9	3.0	4.0

1) Specifications for ZEISS VAST XXT, TL1: l = 50, dia. 3 mm; TL3: l = 60, dia. 5 mm; TL4: l = 125, dia. 3 mm.
2) Measuring length L in mm. Measured with RDS angle position A=0° and B=0°
3) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.
4) Roundness in Scanning Mode for V-Scan = 5 mm/s, filter 50 UPR

ZEISS PRISMO, ZEISS PRISMO verity, ZEISS PRISMO fortis und ZEISS PRISMO ultra Sensoren und Genauigkeit

ZEISS ViScan ⁵⁾



Optical 2D image sensor with autofocus on ZEISS RDS-D.
Working distance (depending on lens): 75 - 90 mm.

			ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 +14 X=1600
Length measurement error ¹⁾ MPE complies with ISO 10360-7:2011	EU (XY)	in µm	10 ³⁾ + L/350	10 ³⁾ + L/300	10 ³⁾ + L/250
Image processing system probing error MPE complies with ISO 10360-7:2011	PFV2D	in µm	10 ⁶⁾	10 ⁶⁾	10 ⁶⁾

ZEISS LineScan ⁵⁾⁸⁾



Optical laser triangulation scanner on ZEISS RDS-D.

			ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 10 X=1200	ZEISS PRISMO 10 +14 X=1600
8 mm working range 32 mm working distance					
Probing dispersion ⁷⁾ MPL complies with ISO 10360-8:2013	P[Form.Sph.D95 %:Tr:ODS]	in µm	2.9	2.9	2.9
Dispersion on sphere	1 Sigma	in µm	0.9	0.9	0.9
25 mm working range 63 mm working distance					
Probing dispersion ⁷⁾ MPL complies with ISO 10360-8:2013	P[Form.Sph.D95 %:Tr:ODS]	in µm	12	12	12
Dispersion on sphere	1 Sigma	in µm	4	4	4
50 mm working range 94 mm working distance					
Probing dispersion ⁷⁾ MPL complies with ISO 10360-8:2013	P[Form.Sph.D95 %:Tr:ODS]	in µm	20	20	20
Dispersion on sphere	1 Sigma	in µm	5	5	5
100 mm working range 220 mm working distance					
Probing dispersion ⁷⁾ MPL complies with ISO 10360-8:2013	P[Form.Sph.D95 %:Tr:ODS]	in µm	50	50	50
Dispersion on sphere	1 Sigma	in µm	12	12	12

1) Specifications for ZEISS VAST XXT, TL1: l = 50, dia. 3 mm; TL3: l = 60, dia. 5 mm; TL4: l = 125, dia. 3 mm.

2) Measuring length L in mm. Measured with RDS angle position A=0° and B=0°

3) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.

4) Roundness in Scanning Mode for V-Scan = 5 mm/s, filter 50 UPR

5) The use of optical probes requires calibration with a contact probe ZEISS VAST XXT (e.g. VAST XXT TL1).

6) All specifications measured with ZEISS ViScan 1x lens.

7) Probing dispersion in the center of the measuring range on a suitable sphere (30 mm diameter) with a matte surface.
The working distance information is based on the center of the measuring range.

8) Laser class 2M: the accessible laser beam is in the visible spectral range. It is safe for the eye as long as the exposure time is short (0.25 s) and the cross section is not reduced by optical instruments (e.g. magnifiers, lens elements, telescopes).

9) 68 s for ZEISS PRISMO ultra.

ZEISS DotScan ¹⁾
Measuring range 1 mm



Optical confocal white light distance sensor on ZEISS RDS-D CAA,
 Scanning measuring rate up to 1000 points/s,
 Working distance 10,5 mm, resolution 28 nm,
 measurable surface inclination to beaming direction 90° ±30° ¹⁾, measuring spot diameter 8 µm

				ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 7 + 10 X=1200	ZEISS PRISMO 10 X=1600	ZEISS PRISMO 14 X=1600
Unidirectional length measurement error MPE complies with ISO 10360-8:2013	E[Uni:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	1.6 + L/350	2.2 + L/300	3.2 + L/250	4,0 + L/250
Dimension probing error MPE complies with ISO 10360-8:2013	P[Size.Sph.1x25:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	5	5	5	5

ZEISS DotScan ¹⁾
Measuring range 3 mm



Optical confocal white light distance sensor on ZEISS RDS-D CAA,
 Scanning measuring rate up to 1000 points/s,
 Working distance 21,5 mm, resolution 36 nm,
 measurable surface inclination to beaming direction 90° ±24° ¹⁾, measuring spot diameter 9 µm

				ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 7 + 10 X=1200	ZEISS PRISMO 10 X=1600	ZEISS PRISMO 14 X=1600
Unidirectional length measurement error MPE complies with ISO 10360-8:2013	E[Uni:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	1.9 + L/350	2.5 + L/300	3.5 + L/250	4,3 + L/250
Dimension probing error MPE complies with ISO 10360-8:2013	P[Size.Sph.1x25:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	5	5	5	5

ZEISS DotScan ¹⁾
Measuring range 10 mm



Optical confocal white light distance sensor on ZEISS RDS-D CAA,
 Scanning measuring rate up to 1000 points/s,
 Working distance 55 mm, resolution 60 nm,
 measurable surface inclination to beaming direction 90° ±17° ¹⁾, measuring spot diameter 16 µm

				ZEISS PRISMO 5 + 7 X=700 and X=900	ZEISS PRISMO 7 + 10 X=1200	ZEISS PRISMO 10 X=1600	ZEISS PRISMO 14 X=1600
Unidirectional length measurement error MPE complies with ISO 10360-8:2013	E[Uni:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	2.9 + L/350	3.5 + L/300	4.5 + L/250	5,3 + L/250
Dimension probing error MPE complies with ISO 10360-8:2013	P[Size.Sph.1x25:Tr:ODS] in sensor direction	in µm	18 °C - 22 °C	5	5	5	5

Sensor overview

	VAST XT gold	VAST XTR gold ²⁾	ROTOS	VAST gold	ZAS	VAST XXT	ViScan	LineScan	DotScan	RDS
Multi-point	■	■		■		■	■			
Min. probing force		50 mN		50 mN						
Measuring rate										
Passive scanning						■				
Active scanning	■	■		■						
Optical scanning							■	■	■	
Roughness measurement			■							
Rotatable/ tiltable			■		■ ⁶⁾	■	■	■	■	
Max. stylus length ⁴⁾	500 mm	350/500 mm ⁵⁾		800 mm	200 mm	250 mm ³⁾				
Max. stylus weight (incl. adapter plate) ⁴⁾	500 g	500 g		600 g		15 g				
Smallest stylus tip diameter ⁴⁾	0.5 mm	0.5 mm		0.3 mm	1 mm	0.3 mm				

- 1) The use of optical probes requires calibration with a contact probe (e.g. VAST XXT).
- 2) Only for PRISMO - not for ZEISS PRISMO ultra
- 3) ZEISS VAST XXT: depending on module (TL1, TL3 or TL4).
- 4) Depending on the application, limiting the parameters for a stylus configuration may be useful.
- 5) Length ≤ 350 with rotation axis, length ≤ 500 without rotation axis
- 6) The ZEISS Articulating Stylus is with a rotation axis in XZ and YZ available. He has no second rotation axis.

ZEISS PRISMO Sizes	Dimensions in mm													Weight in kg	
	Measuring range			Overall CMM dimensions			Working range (max. workpiece size)				Table height	Assembly space	Trans- port height	Machine	Work- piece
	X axis	Y axis	Z axis	Width	Length	Height	Width	Length	Height	Height	Height	Height	Height		
	G104	G105	G106 ⁴⁾	B6 ¹⁰⁾	B5 ⁹⁾	B7	B17	B16	B18 ⁵⁾	h	B23 ¹⁾	c1	T		
ZEISS PRISMO ultra and PRISMO fortis															
7/10/5 ultra	700	1000	500	1541	2040	2930	896	1520	605	720	850	150	2560	3120	1000
7/12/7 fortis	700	1200	650	1541	2040	3040	896	1520	705	820	850	150	2660	3220	1000
9/13/7 ultra	900	1300	650	1717	2340	3040	1070	1820	705	820	850	150	2410	2950	1000
9/15/7 fortis	900	1500	650	1717	2340	3040	1070	1820	705	820	850	150	2410	2950	1000
12/18/7 ultra	1200	1800	650	2034	2940	3060	1416	2420	705	820	600	150	2660	6000	1500
12/18/10 ultra, fortis	1200	1800	1000	2034	2940	3520	1416	2420	1079	1228	600	200	2660	6000	1500 ⁷⁾
12/18/10 fortis U-stone						3720				1420			2860	6540	2000 ⁸⁾
12/24/10 ultra	1200	2400	1000	2034	3540	3550	1416	3220	1079	1228	600	200	2660	7250	2000
16/24/10 ultra	1600	2400	1000	2434	3540	3860	1700	3020	1147	1293	872	200	3050	13360	4000
16/30/10 ultra	1600	3000	1000	2434	4140	3860	1700	3620	1147	1293	872	200	3050	15750	4000
ZEISS PRISMO (all sizes) and PRISMO verity (7/9/5, 9/15/7 and 12/18/10)															
7/9/5	700	900	500	1552	1750	2960	885	1220	585	720	860	150	2210	1700	1200
7/9/7	700	900	650	1552	1750	3040	885	1220	695	820	860	150	2360	1800	1200
9/12/7	900	1200	650	1727	2050	3060	1060	1520	695	820	860	150	2360	2300	1300
9/15/7	900	1500	650	1727	2350	3060	1060	1820	695	820	860	150	2410	2950	1500
9/18/7	900	1800	650	1727	2650	3060	1060	2120	695	820	860	150	2410	3460	1500
9/24/7	900	2400	650	1727	3250	3060	1060	2720	695	820	860	150	2410	4740	2000
12/18/10	1200	1800	1000	2044	2950	3520 ²⁾	1406	2420	1069	1228	600 ²⁾	200	2660	6100	2000
														6200 ³⁾	5000 ³⁾
12/24/10	1200	2400	1000	2044	3550	3520 ²⁾	1406	3020	1069	1228	600	200	2660	7350	2500
														7450 ³⁾	5000 ³⁾
12/30/10	1200	3000	1000	2044	4150	3560	1406	3620	1069	1228	650	200	2660	9600	3500
														9700 ³⁾	5000 ³⁾
12/42/10	1200	4200	1000	2044	5350	3560	1406	4820	1069	1228	650	200	2660	13000	3500
														13100 ³⁾	5000 ³⁾
16/24/10	1600	2400	1000	2444	3540	3860	1690	3020	1369	1515	650	200	3050	11000	3500
														11100 ³⁾	5000 ³⁾
16/30/10	1600	3000	1000	2444	4150	3860	1690	3620	1369	1515	650	200	3050	13000	3500
														13100 ³⁾	5000 ³⁾
16/42/10	1600	4200	1000	2444	5350	3860	1690	4820	1369	1515	650	200	3050	17000	3500
														17100 ³⁾	5000 ³⁾
16/24/14	1600	2400	1400	2454	3540	4259	1690	3020	1369	1515	650	200	3050	11020	3500
														11120	5000 ³⁾
16/30/14	1600	3000	1400	2454	4150	4259	1690	3620	1369	1515	650	200	3050	13020	3500
														13120	5000 ³⁾
16/42/14	1600	4200	1400	2454	5340	4259	1690	4820	1369	1515	650	200	3050	17020	3500
														17120	5000 ³⁾

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

1) Deviations from the given values can occur depending on the subsoil properties.

2) Optional table height is 830 mm with base. The total height increases by 230 mm.

3) CMM with increased permissible workpiece weight option (NSP).

4) Specifications apply to ZEISS VAST gold with a stylus length of 60 mm and tip diameter of 8 mm.

5) Specifications apply to ZEISS VAST gold without adapter plate.

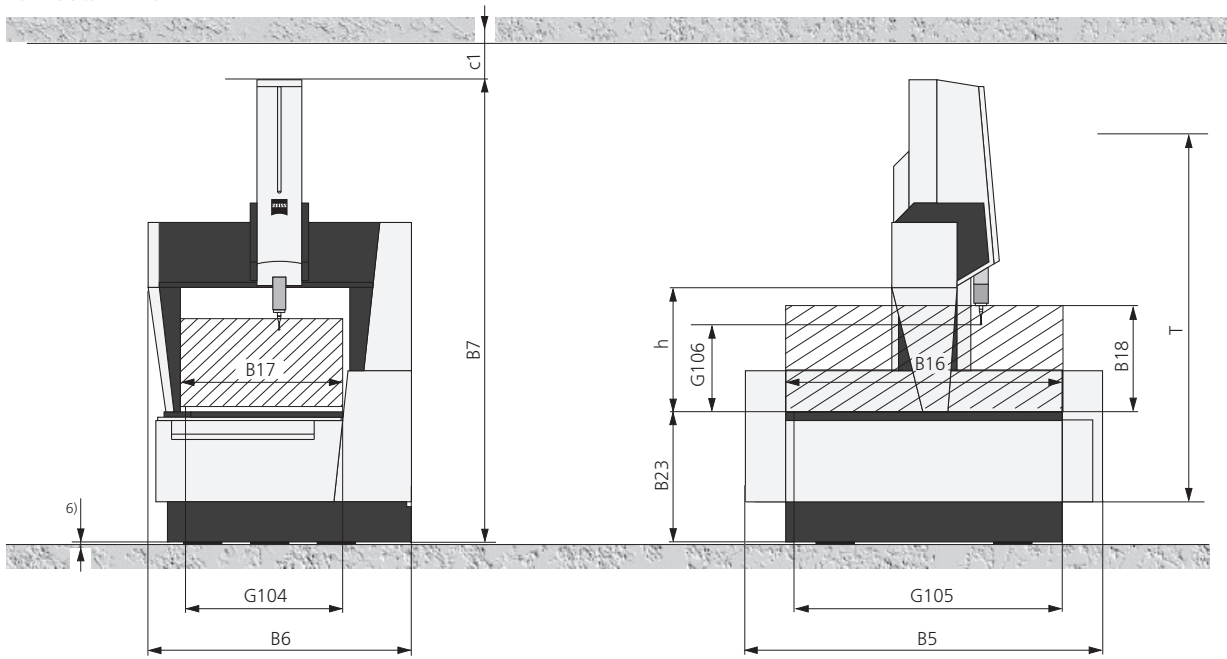
6) 5, 8 or 10 mm depending on the installation (mounted or embedded steel plates). You will find more information in the installation instructions.

7) ZEISS PRISMO ultra

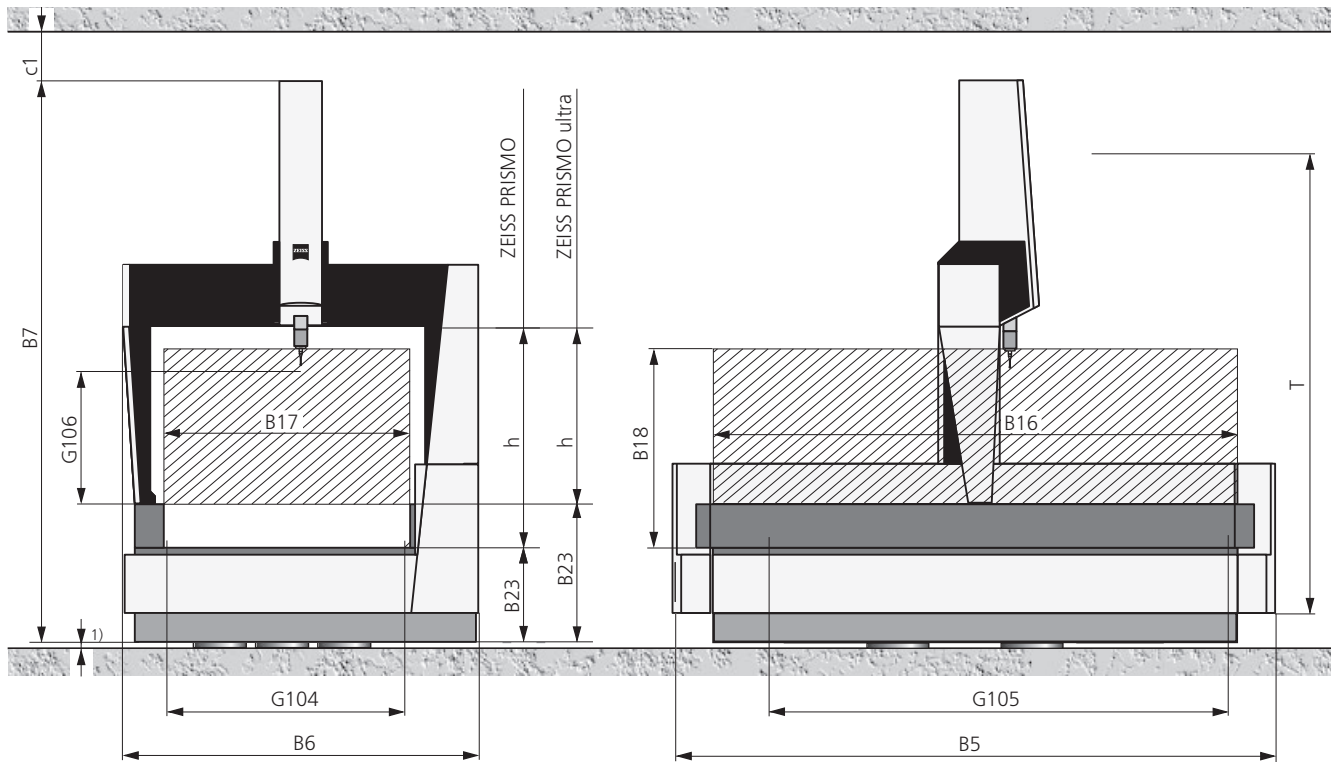
8) ZEISS PRISMO fortis

9) When safety laser scanners are mounted, 68 mm must be added to the dimension up to Y<2400 mm. For machines with Y≥ 2400, a dimension of 136 mm must be added.

10) When safety laser scanners are mounted, 98 mm must be added to the dimension for the machine with X = 700 and X = 900 mm. For machines with X = 1200 and X = 1600 mm, 115 mm must be added to the dimension.

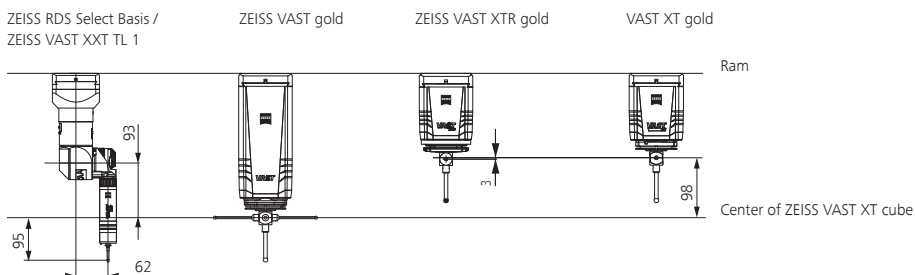


ZEISS PRISMO 12/18/10 fortis U-stone and all ZEISS PRISMO from 16/24/10 to 16/42/10



1) 5, 8 or 10 mm depending on the installation (mounted or embedded steel plates). You will find more information in the installation instructions.

Size comparison of the sensors



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

Technical features

Controller	Type	ZEISS C99m with USS 2.1 wiring
	Protection type	IP54
	Chiller	Fan
Accessories (optional)	Increased permissible workpiece weight, various controllers, multi-sensor rack, rotary table, form inspection package (PRISMO ultra)	
Scales	ZERODUR on ZEISS PRISMO ultra, ZEISS PRISMO verity and PRISMO fortis, Glass ceramic on ZEISS PRISMO. For Y >2400, steel scales (on ZEISS PRISMO) and automatic temperature capture are used.	
Resolution	0.02 µm for ZEISS PRISMO ultra, 0.08 µm ZEISS PRISMO verity and PRISMO fortis, 0.2 µm for ZEISS PRISMO	

Ambient requirements

Temperature conditions to guarantee specified accuracy

	ZEISS PRISMO				
	X=700 and 900	X=1200	X=1600	X=1200 and 1600	
Measuring reference temperature from	19°C - 21°C	15°C - 30°C	18°C - 22°C	18°C - 22°C	18°C - 28°C ¹⁾
Per day	1.8 K/d	5 K/d	1.8 K/d	2 K/d	5 K/d
Per hour	0.8 K/h	2 K/h	0.8 K/h	1 K/h	2 K/h
Spatial	0.8 K/m	1 K/m	0.8 K/m	1 K/m	1 K/m
	ZEISS PRISMO fortis	ZEISS PRISMO verity	ZEISS PRISMO ultra		
Measuring reference temperature from	15°C - 40°C	19°C - 22°C	20°C - 22°C		
Per day	5 K/d	2 K/d	1 K/d		
Per hour	2 K/h	1 K/h	0.5 K/h		
Spatial	1 K/m	0.5 K/m	0.5 K/m		

Floor vibrations

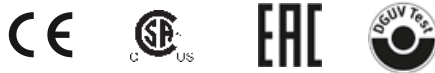
The ZEISS PRISMO ultra and PRISMO fortis are equipped with active vibration damping.
The ZEISS PRISMO and PRISMO verity are equipped with a vibration damping system featuring elastomer/viscous supports.
Limiting curves also available. We can also conduct a vibration analysis upon request.

Requirements for operational readiness

Relative humidity	40% to 70% (without condensation)
Ambient temperature	15°C - 35°C, 15°C - 40°C for PRISMO fortis
Power rating	1/N/PE 100/110/115/120/125/230/240 V ~ (±10%); 50-60 Hz (±3.5%) Max. power consumption: 2500 VA Typical power consumption: 280 W Amount of heat generated: max. 7000 kJ/h
Compressed air supply	Supply pressure min. 6 bar, max. 10 bar, pre-cleaned. Consumption approx. 50 NI/min. Air quality complies with ISO 8573, part 1: class 4. The use of the AirSaver included with delivery ensures that compressed air is not used during ZEISS PRISMO downtime, thus enabling environmentally friendly operation and saving resources.

Approvals

Directives ZEISS PRISMO 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 safety management system	ISO 45001:2018
Accredited	ISO/IEC 17025

1) ZEISS PRISMO 10 (Y >2400) 18°C-24°C with gradient: 1.8K/d, 0.8K/h, 0.8K/m.

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