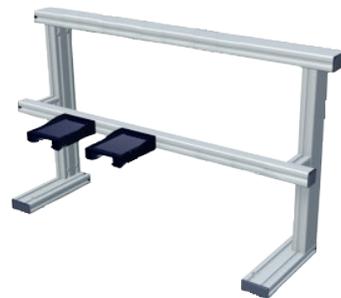


ZEISS SPECTRUM plus active

NEW

"Active scanning" entry model with small footprint and high-accuracy

Compact coordinate measuring machine with active scanning sensor VAST XT gold for high-accuracy scanning measurement

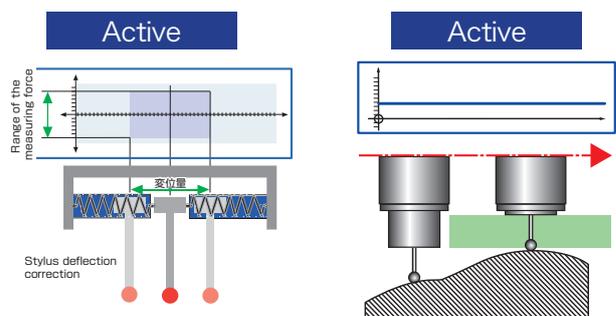


Automatic stylus change system (standard)

Active scanning technology enabling high-accuracy scanning measurement

The VAST XT gold probe, which is a standard feature, keeps the measuring force constant in the direction normal to the workpiece surface by the electromagnetic measuring force controller. This superb measuring force control technology enables high-accuracy scanning measurement.

Reduced stylus deflection error and minimized Z-axis movement for High-accuracy measurement



- Constant measuring force makes the stylus deflection constant.
- As the stylus deflection is constant, the stylus deflection error can be minimized by correction.
- Wide control range of the probe in Z direction
- As the movement of the Z-axis of the measuring machine is minimized during scanning measurement of an undulated shape, high-accuracy scanning measurement is achieved.

Compact body eliminating space constraints in installation

Mounting controller on the back of the machine and adoption of no-waste design for the machine reduced the footprint as compared to previous machines with an equivalent measurement range.

Use of floating method for scale retention same as high grade model

Glass ceramic scale with low thermal expansion and contraction is mounted on each axis. Moreover, as with the high grade model, floating method is used for scale retention to avoid the impact of guide expansion or contraction caused by temperature changes on the scale.

Specification

Model			ZEISS SPECTRUM plus active							
			5/5/6	7/7/6	7/10/6	10/12/6	10/16/6			
Measuring range		X	(mm)		500	700		1000		
		Y	(mm)		500	700	1000	1200	1600	
		Z	(mm)		600	600		600		
Measuring accuracy ^{*1}	VAST XT gold	Max. permissible error of length measurement	E_0, MPE, E_{150}, MPE		(μm)		$1.8 + L/300$		$1.8 + L/300$	
		Max. permissible limit of the repeatability range	R_0, MPL		(μm)		1.7		1.8	
		Max. permissible single-stylus form error	$PFTU, MPE$		(μm)		1.8		1.9	
		Max. permissible scanning probing error	$MPETHP$		(μm)		$2.5 (\tau = 40)$		$3.0 (\tau = 40)$	
Measuring length scale			Glass ceramic scale							
Resolution			(μm)		0.2					
Table	Material		Gabbro							
	Usable width		(mm)		715	915		1220		
	Usable depth		(mm)		830	1030	1335	1535	1935	
	Height from floor to table surface		(mm)		650					
Workpiece	Height to stylus mounting surface (VAST XT gold specification)		(mm)		620					
	Height to X guide bottom edge		(mm)		845					
	Maximum loading weight		(kg)		400	560	730	1150	1500	
Guide system			Air bearing							
Driving speed	Joystick mode		(mm/sec)		0 to 70					
	CNC mode		Vector direction		(mm/sec)					
Driving acceleration			Vector direction		(mm/sec^2)					
Accuracy guarantee environmental temperature conditions	Environment temperature		$(^{\circ}C)$		18 to 22					
	Temperature change		$(^{\circ}C/day)$		1.5					
	Temperature change		$(^{\circ}C/hour)$		1.0					
	Temperature gradient		$(^{\circ}C/m)$		1.0					
Air supply	Supply pressure		(MPa)		0.6 to 0.8					
	Consumption		(NL/min)		120					
Power supply	Supply voltage		$(V/%)$		$AC100 \pm 10$					
	Frequency		$(Hz/%)$		$50/60 \pm 3.5$					
	Consumption		(VA)		800					
Dimensions / Weight	External dimension ^{*2}		Width	(mm)		1219	1419		1720	
			Depth	(mm)		1283	1483	1783	1983	2383
			Height	(mm)		2640				
	Measuring part weight		(kg)		910	1180	1410	2200	2700	
	Minimum ceiling height		(mm)		2840					
	Machine height at transport ^{*3}		(mm)		2000					

*1 The testing and evaluation methods for E0, MPE, E40, MPE, E150, MPE and R0, MPL conform to JIS B 7440-2: 2013 (ISO 10360-2: 2009).
The testing and evaluation methods for PFTU, MPE conform to JIS B 7440-5: 2013 (ISO 10360-5: 2010).

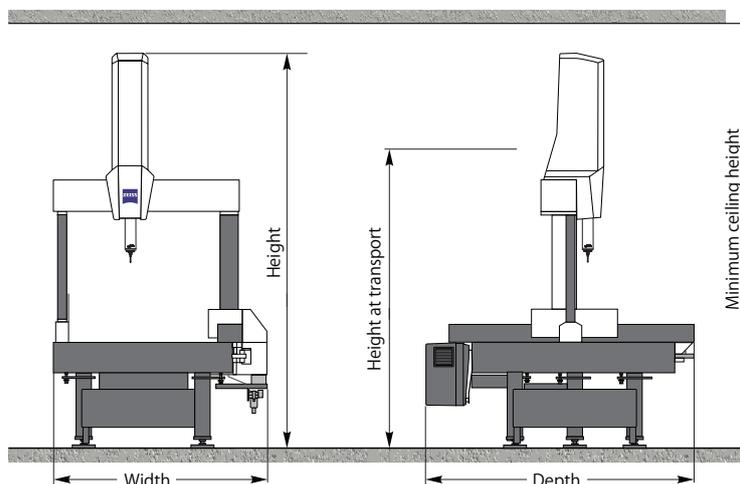
The testing and evaluation methods for MPETHP conform to JIS B 7440-4: 2003 (ISO 10360-4: 2000).

The above accuracy is the numerical value when used the following stylus. L (mm) represents an arbitrary measuring length.

VAST XT gold... Tip diameter 8 mm, length 60 mm

*2 External view includes only measuring part (including controller at the back). PC rack (W × D × H: 800 × 700 × 700) is provided in addition to measuring part.

External view SPECTRUM plus active



*3 When carrying-in the measurement machine, please confirm the height of the carry-in route in particular the frontage and height of the entrance etc. Height of opening needs to be actual delivery height plus approx. 200mm for the carriage to move each measurement machine.