



XYZAX FUSION NEX

Dedicated catalog is available.

Coordinate Measuring Machine that has accomplished internal evolution to further demonstrate its overwhelmingly high actual accuracy and active scanning technology

FUSION NEX 9/10/6



Highest-in-class guaranteed accuracy

Maximum Permissible Indication Error (MPE_E) 1.6 + 3L/1000 μm

Greatly improved probing stability

Maximum Permissible Probing Error (MPE_P) 1.6 μm

Active Scanning Probe

Incorporates VAST XT gold

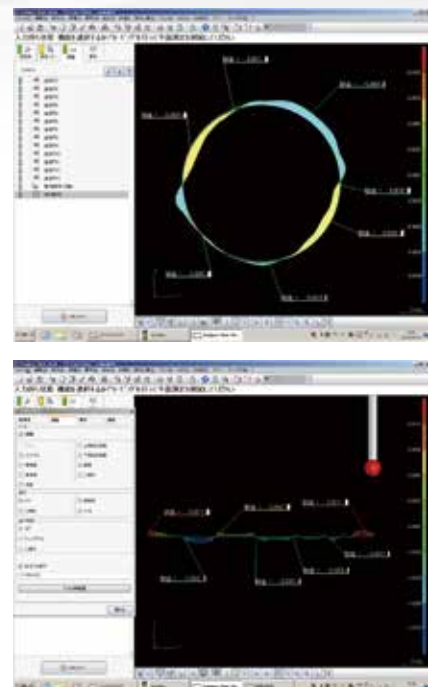
Incorporates stylus auto change function as a standard feature

Light weight with optimized A.V.D* mechanism and FRP cover

*Anti Vibration Drive

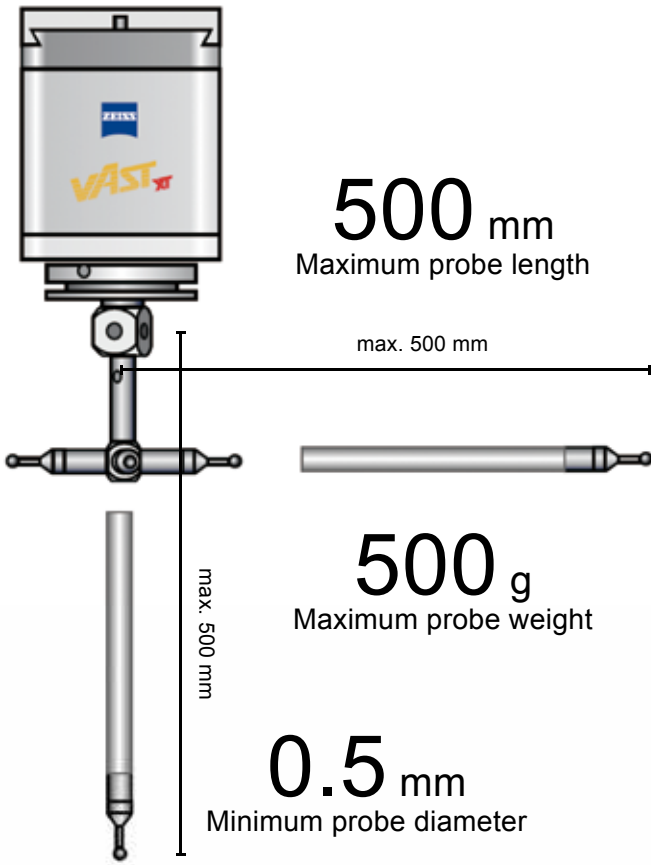
Rotary probe PH10T/M provided as an option

Evolving software Calypro



Some workpieces cannot be measured without the active scanning technology

The active scanning system is highly appreciated with many application track records, such as measurement of high-precision workpieces that require coaxiality, concentricity, flatness or straightness, evaluation of free-form surface of precision dies, high-precision measurement of deep holes that require long stylus, circumference measurement of tapered parts that requires scanning measurement, evaluation of V grooves, ball screw grooves and rack grooves and high-precision geometrical evaluation.



Incorporates active scanning probe VAST XT gold as a standard feature

The active scanning probe enables high-accuracy measurement of areas that were previously difficult to measure, because it can be fitted with a long and heavy stylus.

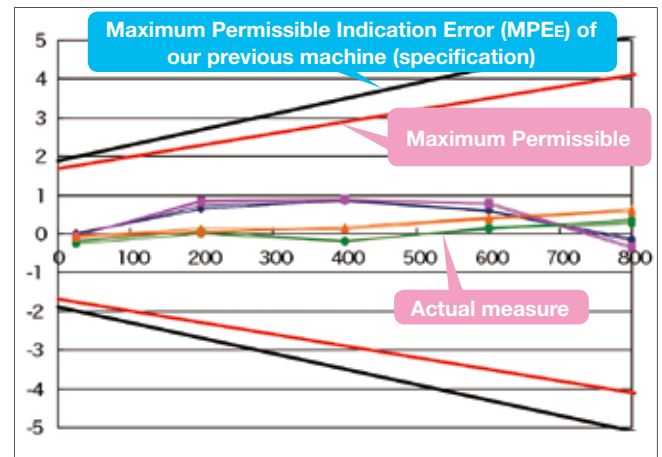
Also, as the measuring pressure is controllable, probe deflection can be accurately eliminated.

These features make it the only one probe system capable of quick and accurate measurement of not only known forms but also unknown forms.

Outstanding actual accuracy comparable to high-end machine

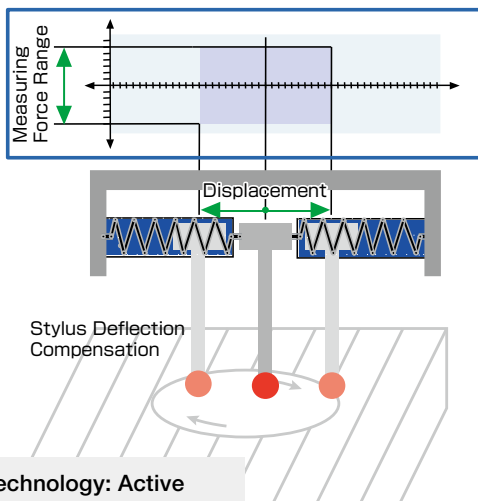
Guarantees maximum permissible indication error (MPE_E) to be $1.6 + 3L/1000 \mu\text{m}^*$ with the actual value as small as $\pm 1 \mu\text{m}$

*It is the accuracy of the size of the 9/10/6 below.



Active Scanning Technology

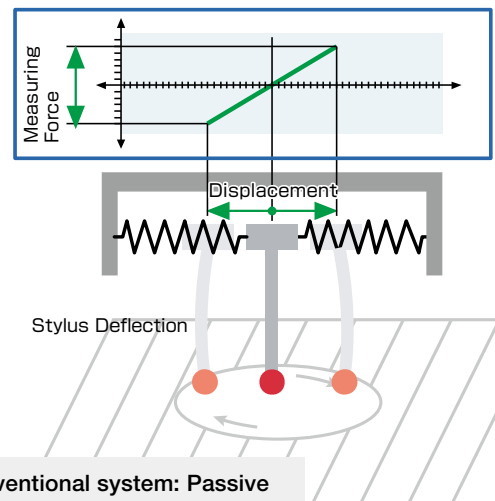
Active Scanning System



VAST Technology: Active
With measuring force control

Magnetic force generates uniform small measuring force, which is applied in the workpiece normal direction. Because of this, stylus deflection is minimized and uniform, and accuracy is improved.

Passive Scanning System



Conventional system: Passive
Without measuring force control

Since a mechanical spring is used, measuring force is uneven, stylus deflection fluctuates, and accuracy cannot be improved.



FUSION NEX

Active Scanning

Is the scanning active or passive?

Specifications

Model		XYZAX FUSION NEX													
		7/5/5	9/6/6	9/10/6	9/15/6	10/10/6	10/12/6	10/15/6	10/10/8	10/12/8	10/15/8	12/15/10	12/20/10	12/25/10	
Measuring range	X-axis (mm)	650	850			1000						1200			
	Y-axis (mm)	500	600	1000	1500	1000	1200	1500	1000	1200	1500	1500	2000	2500	
	Z-axis (mm)	450	600						800			1000			
Measuring length scale		Linear scale system													
Minimum display value (μm)		0.01 (0.1 when using TP200)													
Measuring accuracy with VAST XT gold	Max. permissible indication error MPEE (μm) L is the distance between any two points (mm)	1.6 + 3L/1000 (Temperature condition A)	2.1 + 3L/1000 (Temperature condition A)			2.1 + 5L/1000 (Temperature condition C)			2.6 + 5L/1000 (Temperature condition A)			3.2 + 5L/1000 (Temperature condition A)	4.0 + 5L/1000 (Temperature condition A)		
		1.6 + 4L/1000 (Temperature condition C)	2.1 + 4L/1000 (Temperature condition C)												
	Max. permissible probing error MPEP (μm)	1.6 (Temperature condition A and C)	2.1 (Temperature condition A and C)			2.1 (Temperature condition C)			2.4 (Temperature condition A)			2.9 (Temperature condition A)	4.0 (Temperature condition A)		
	Max. permissible scanning error MPETHP (μm)	2.1 (Note 1), 5.3 (Note 2) (Temperature condition A and C)				2.1 (Note 1) (Temperature condition C)			2.5 (Note 1) (Temperature condition A)			3.5 (Note 1) (Temperature condition A)	4.5 (Note 1) (Temperature condition A)		
Material		Gabbro													
Table	Usable width (X) (mm)	800	1000			1150						1370			
	Usable depth (Y) (mm)	1270	1370	1810	2410	1910	2110	2310	1910	2110	2410	3010	3510		
	Height from floor (mm)	725						600			650				
	Flatness	JIS Class 1													
Workpiece	Max. height (mm)	620	770						970			1170			
	Max. weight (kg)	400	800	1000	1500	1000	1200	1500	1000	1200	1500	1500	1000		
Driving speed	Max. acceleration (mm/s ²)	1200													
	Variable speed range (mm/sec)	CNC measurement mode: 0.01 to 425 (stepless variable) Joystick mode: 0 to 120 (stepless variable)													
Guide system of each axis		Air bearing													
Air supply	Supply pressure/working pressure (MPa)	0.49 to 0.69/0.39													
	Air consumption (NL/min)	40						60			65				
Power supply	Voltage (V%), consumption (VA)	AC100 ±10 (grounding required), 1500													

	Temperature condition: A	Temperature condition: B
Ambient temperature (°C)	18 to 22	16 to 26
	Common condition	
Temperature change (°C/hour)	1.0	
Temperature change (°C/day)	2.0	5.0
Temperature gradient (°C/m)	1.0	

*Measuring accuracy is evaluated based on MPEE and MPEP in accordance with JIS B 7440-2:2003 (ISO 10360-2:2001).
 *MPETHP is used for evaluation in accordance with JIS B 7440-4:2003 (ISO 10360-4:2001).
 *MPEE and MPEP are values when the following standard stylus is used.
 *VAST-XT-gold: A stylus with the tip diameter as 8 mm and the length as 63.5 mm.
 Note 1 : The accuracy is when a stylus diameter of Tip φ 3 mm, Length 32 mm is used.
 Note 2 : The accuracy is when a stylus diameter of Tip φ 3 mm, Length 32 mm and a thermofit extension length of 300 mm are used.

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Outer diameter dimension (mm)	Width	1415	1615			1765						1965			
	Depth	1440	1540	1980	2580	2080	2280	2480	2080	2280	2480	2580	3180	3680	
	Height	2458	2658						2933			3333	3383		
Machine height at transport (mm)		2050	2200						2260			2460	2510		
Weight (kg)		1450	1600	2700	3500	3150	3350	3500	3200	3400	3700	4500	6300	7700	

*Be sure to check the height of passageways, and, in particular, the height of doors and other openings to be used when the machine is delivered. The height of openings needs to be the machine height at transport plus about 200 mm to allow for the dollies used to move the machines.

*Controller and computer rack are also included.

- Models that can be modified to lower the stand or shorten the Z-axis stroke to reduce the installation height are also available. Contact us for details.

External View and Dimensions FUSION NEX

