

# High Accuracy CNC Coordinate Measuring Machine

# XYZAX AXCEL



## NEW

**High speed, high accuracy and high resistance to environment. A new global standard that leads the new age.**

### ■ Class highest level accuracy

Maximum permissible length measurement error

$$E_{0, MPE} : 1.8 + 3L/1000 \mu\text{m}^*$$

A newly developed highly rigid bridge delivers the highest level accuracy in class.

### ■ Amazing speed is achieved by review of the drive mechanism

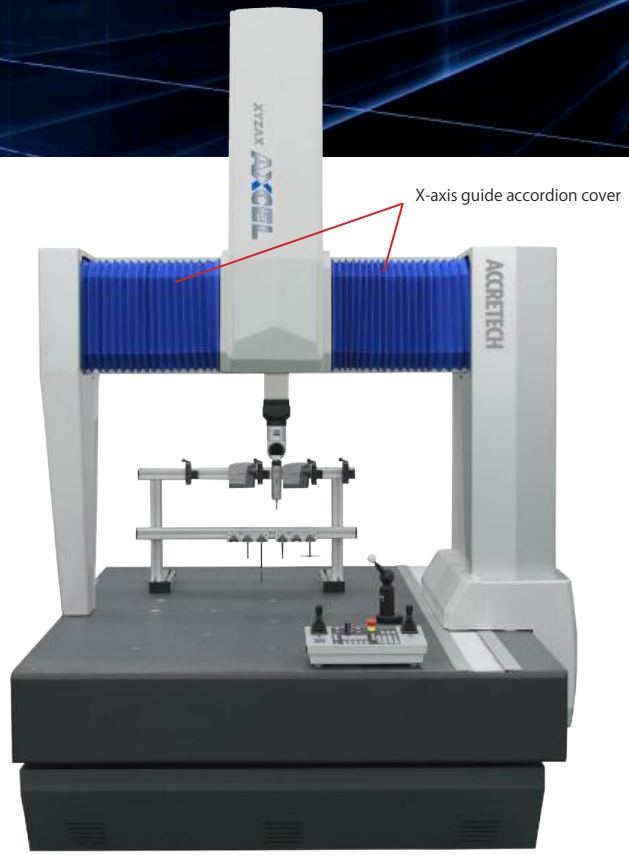
A maximum drive speed of 700 mm/sec and maximum acceleration of 2300 mm/sec<sup>2</sup>

The drive mechanism of the axes were thoroughly reviewed, and 64% increase in driving speed and 35% increase in acceleration (compared with our conventional machines) were achieved. Measurement efficiency increases significantly.

## Specification

Item	Model	XYZAX AXCEL RDS		
		9/6/6	9/10/6	
Measuring range	X-axis (mm)	850		
	Y-axis (mm)	600	1000	
	Z-axis (mm)	600		
Measuring accuracy VAST XXT	Maximum permissible error for length measurement $E_{0, MPE}$ ( $\mu\text{m}$ )	1.8 + 3L/1000 (18 ~ 22°C) 1.8 + 4L/1000 (16 ~ 26°C) 1.8 + 5L/1000 (15 ~ 30°C)		
	Maximum permissible error for length measurement $E_{150, MPE}$ ( $\mu\text{m}$ )	2.3 + 3L/1000 (18 ~ 22°C) 2.3 + 4L/1000 (16 ~ 26°C) 2.3 + 5L/1000 (15 ~ 30°C)		
	Maximum permissible limit for repeatability range $R_{0, MPL}$ ( $\mu\text{m}$ )	1.3		
	Maximum permissible error for single stylus form $P_{FTU, MPE}$ ( $\mu\text{m}$ )	1.8		
	Maximum permissible error for scanning probe $MPE_{THP}$ ( $\mu\text{m}$ )	2.9		
Table	Usable width (X) (mm)	1050		
	Usable depth (Y) (mm)	1500	1900	
Workpiece	Max. height (mm)	790		
	Max. weight (kg)	800	1000	
Driving speed	Max. acceleration (mm/sec <sup>2</sup> )	2300		
	Variable speed range (mm/sec)	0.01 ~ 700		
Outer diameter dimension	Dimensions	Width (mm)	1715	
		Depth (mm)	1550	1950
		Height (mm)	2578	
	Weight (kg)	2100	2550	

\* Temperature condition: 18 ~ 22°C



### Enhanced resistance to environment

Temperature to guarantee accuracy: 15 to 30°C .

An accordion cover protects the X-axis guide and a new design cover is provided to the Y-axis carriage. This structure prevents deformation of the guide and carriage due to temperature changes, increasing resistance to environment (XYZAX AXCEL RDS standard).

### Equipped with 2-axis rotating head RDS and scanning probe

#### VAST XXT

2-axis rotating head RDS rotates  $\pm 180^\circ$  horizontally or vertically at a pitch of  $5.0^\circ$ , enabling 5,184 positioning patterns at maximum. By combining with scanning probe VAST XXT, XYZAX AXCEL can perform high accuracy oscillating scanning measurement at many different angles. Non-contact type line laser sensor LineScan 2 is also available (optional). It is useful when you want to shorten lead time of profile by surface measurement or conduct reverse engineering by obtaining mass point group data.

LineScan2 Specification



RDS + VAST XXT



RDS + LineScan2

	LineScan 2-25	LineScan 2-50	LineScan 2-100
Z measuring range (mm)	25	50	100
Work distance (mm)	63	94	220
Measuring width (center of measuring range) (mm)	25	50	80
Maximum obtaining points	700,000 points/second	250,000 points/second	700,000 points/second
MPE <sub>Pf</sub> (ISO 10360-8:2013) (μm)	12	20	50
Accuracy (1 σ) (μm)	4	5	12

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