

Crysta-Apex C Series

SERIES 191 — Standard CNC CMM

Designed and constructed with Mitutoyo's experienced CNC CMM technology, Crysta-Apex C features lightweight materials and innovative machine structure, providing high travel stability, high accuracy, and affordability. The temperature correction function (16°C to 26°C) can yield accurate measurements even on the shop floor. In addition to the point-to-point measurement, the MPP-100 and Metris Laser Probe provide contact/non-contact scanning function.

*Z-axis = 800mm models (9108/9168/9208) are available.



Crysta-Apex C544



Crysta-Apex C776



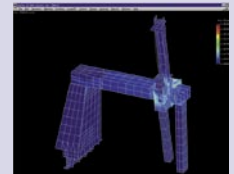
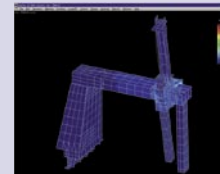
Crysta-Apex C9106



Temperature compensation system (photo: temperature sensors)



Joystick controller



Optimum machine structure has been determined through the FEM (Finite-Element Method) and modal analysis.

Technical Data

Length standard:	High accuracy linear encoder
Guide system:	Air bearing
Max. drive speed:	520mm/sec
Max. acceleration:	0.17G
Air pressure:	0.4MPa
Air consumption:	50L/min (500 series) 60L/min (700, 900 series) 100L/min (1200 series) 150L/min (1600, 2000 series)

Guaranteed accuracy temperature environment*

Temperature range		18°C - 22°C	16°C - 26°C
Temperature change	Per hour	2.0K	2.0K
	Per 24 hours	2.0K	5.0K
Temperature gradient	Vertical	1.0K/m	1.0K/m
	Horizontal	1.0K/m	1.0K/m

*When using temperature compensation system.

Main Unit Startup System

This machine incorporates a startup system (relocation detection system), which disables operation when an unexpected vibration is applied or the machine is relocated. Be sure to contact your nearest Mitutoyo prior to relocating this machine after initial installation. Refer to the page 9 for details.

SPECIFICATIONS

Model No.		Crysta-Apex C544	Crysta-Apex C574	Crysta-Apex C776	Crysta-Apex C7106	Crysta-Apex C9106 [Crysta-Apex C9108]	Crysta-Apex C9166 [Crysta-Apex C9168]	Crysta-Apex C9206 [Crysta-Apex C9208]
Range	X-axis	505mm	505mm	705mm	705mm	905mm	905mm	905mm
	Y-axis	405mm	705mm	705mm	1005mm	1005mm	1605mm	2005mm
	Z-axis	405mm	405mm	605mm	605mm	605mm [805mm]	605mm [805mm]	605mm [805mm]
Resolution		0.1µm	0.1µm	0.1µm	0.1µm	0.1µm	0.1µm	0.1µm
Accuracy*	MPE _E	(1.7+3L/1000)µm, (1.7+4L/1000)µm**		(1.7+3L/1000)µm, (1.7+4L/1000)µm**		(1.7+3L/1000)µm, (1.7+4L/1000)µm**		
	MPE _P	1.7µm		1.7µm		1.7µm		
	MPE _{THP}	2.3µm		2.3µm		2.3µm		
Work table	Material	Granite	Granite	Granite	Granite	Granite	Granite	Granite
	Size	638 x 860mm	638 x 1160mm	880 x 1420mm	880 x 1720mm	1080 x 1720mm	1080 x 2320mm	1080 x 2720mm
	Tapped insert	M8 x 1.25mm	M8 x 1.25mm	M8 x 1.25mm	M8 x 1.25mm	M8 x 1.25mm	M8 x 1.25mm	M8 x 1.25mm
Workpiece	Max. height	545mm	545mm	800mm	800mm	800mm [1000mm]	800mm [1000mm]	800mm [1000mm]
	Max. load	180kg	180kg	800kg	1000kg	1200kg	1500kg	1800kg
Mass (main unit)		515kg	625kg	1675kg	1951kg	2231kg [2261kg]	2868kg [2898kg]	3912kg [3942kg]

* The machine is equipped with the temperature compensation system.
Conformed standard: ISO10360-2 Used probe system: SP25M with ø4 x 50mm stylus L: Measuring length (mm)
**Guaranteed accuracy temperature range: 16°C - 26°C.