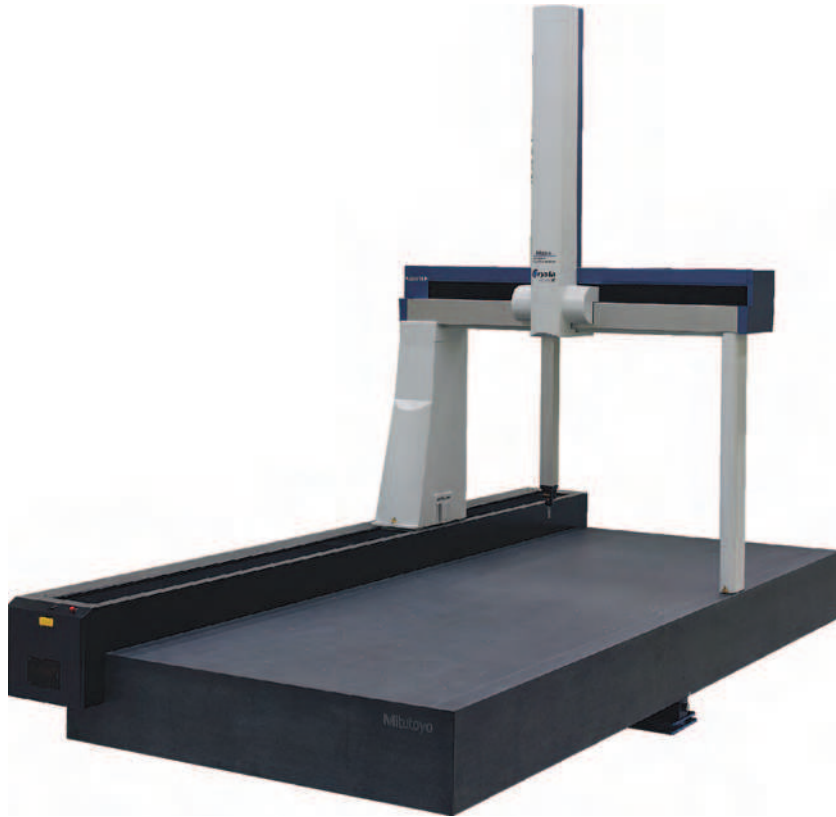


CRYSTA-APEX C2000 Series

Series 191 - Standard CNC CMM

Designed and constructed using Mitutoyo's wealth of experience in CNC CMM technology, CRYSTA-APEX C features lightweight materials and an innovative machine structure, providing high motion stability, high accuracy, and affordability. The temperature compensation function (16°C to 26°C) can yield accurate measurements even on the shop floor. Compatible vision and scanning probe technologies are employed to provide flexible and effective measurement capabilities.



CRYSTA-Apex C205016

Model	Crysta-Apex C203016	Crysta-Apex C204016	Crysta-Apex C205016
No.	191-362-2	191-372-2	191-382-2
Range X x Y x Z axis	2005 x 3005 x 1605 mm	2005 x 4005 x 1605 mm	2005 x 5005 x 1605 mm
Work table size	2200 x 4205 mm	2200 x 5205 mm	2200 x 6205 mm
Workpiece	Max. height : 1800 mm Max. loading : 4000 kg	Max. height : 1800 mm Max. loading : 5000 kg	Max. height : 1800 mm Max. loading : 6000 kg
Mass (main unit)	14100 kg	19400 kg	28000 kg

Model	Crysta-Apex C203020	Crysta-Apex C204020	Crysta-Apex C205020
No.	191-362H-2	191-372H-2	191-382H-2
Range X x Y x Z axis	2005 x 3005 x 2005 mm	2005 x 4005 x 2005 mm	2005 x 5005 x 2005 mm
Work table size	2200 x 4205 mm	2200 x 5205 mm	2200 x 6205 mm
Workpiece	Max. height : 2200 mm Max. loading : 4000 kg	Max. height : 2200 mm Max. loading : 5000 kg	Max. height : 2200 mm Max. loading : 6000 kg
Mass (main unit)	14150 kg	19450 kg	28050 kg

Specifications

Digital step	0,1 μm
Accuracy ⁽¹⁾ (191-362-2/-372-2/-382-2)	$E_{0,MPE} : \pm(4,5+0,8L/100)\mu\text{m}$, $\pm(4,5+0,9L/100)\mu\text{m}$ ⁽²⁾ $P_{FTU,MPE} : 6,0 \mu\text{m}$ $MPE_{THP} : 6,0 \mu\text{m}$ (150s)
Accuracy ⁽¹⁾ (191-362H-2/-372H-2/-382H-2)	$E_{0,MPE} : \pm(6+0,8L/100)\mu\text{m}$, $\pm(6+L/100)\mu\text{m}$ ⁽²⁾ $P_{FTU,MPE} : 7,5 \mu\text{m}$ $MPE_{THP} : 7,5 \mu\text{m}$ (150s)
Work table material	Black granite
Work table tapped insert	M8x1.25mm
Scales	High accuracy linear encoder
Guide system	Air bearings on each axis
Max. drive speed	520 mm/sec
Max. acceleration	Each axis : 1333 mm/s ² (0,13G) Max. combined acceleration : 2309 mm/s ² (0,23G)

⁽¹⁾ According to ISO 10360-2 (2010) methods when using the SP25M probe system module SM25-1, with a $\phi 4 \times 50$ mm stylus. L= measured length (mm).

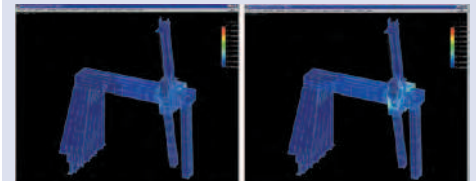
⁽²⁾ Specified accuracy for temperature range: 16° - 26°C.



Temperature compensation system (photo : temperature sensors)



Joystick controller



The machine structure has been optimized using FEM (Finite-Element Method) and modal analysis

Accuracy is specified for the following environmental conditions for the CMM*:

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

*When using temperature compensation system