

# CRYSTA-APEX S700 Series

## Series 191 - Standard CNC CMM

Designed and constructed using Mitutoyo's wealth of experience in CNC CMM technology, CRYSTA-APEX S 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.

### Specifications

Digital step	0,1 µm
Accuracy <sup>(1)</sup>	$E_{0,MPE} : \pm(1,7+0,3L/100)\mu\text{m}$ , $\pm(1,7+0,4L/100)\mu\text{m}$ <sup>(2)</sup> $P_{FTU,MPE} : 1,7 \mu\text{m}$ $MPE_{THP} : 2,3 \mu\text{m}$ (50s)
Work table material	Black granite
Work table tapped insert	M8 x 1.25 mm
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 <sup>2</sup> (0,13G) Max. combined acceleration : 2309 mm/s <sup>2</sup> (0,23G)

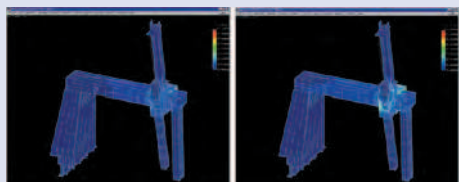
<sup>(1)</sup> According to ISO 10360-2 (2010) methods when using the SP25M probe system module with a  $\phi 4 \times 50$  mm stylus.

L= measured length (mm).

<sup>(2)</sup> Specified accuracy for temperature range: 16° - 26°C.



Temperature compensation system (photo : temperature sensors)



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



Refer to the CRYSTA-APEX S brochure



CRYSTA-Apex S776

Model	CRYSTA-APEX S776	CRYSTA-APEX S7106
No.	191-252	191-254
Range X x Y x Z axis	705 x 705 x 605 mm	705 x 1005 x 605 mm
Work table size	880 x 1420 mm	880 x 1720 mm
Workpiece	Max. height : 800 mm Max. loading : 800 kg	Max. height : 800 mm Max. loading : 1000 kg
Mass (main unit)	1675 kg	1951 kg