

# CRYSTA-APEX S900 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.



CRYSTA-Apex S9106

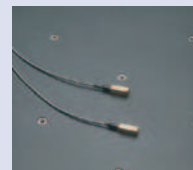
Model	CRYSTA-Apex S9106	CRYSTA-Apex S9108	CRYSTA-Apex S9166	CRYSTA-Apex S9168	CRYSTA-Apex S9206	CRYSTA-Apex S9208
No.	191-292	191-292H	191-294	191-294H	191-296	191-296H
Range X x Y x Z axis	905 x 1005 x 605 mm	905 x 1005 x 805 mm	905 x 1605 x 605 mm	905 x 1605 x 805 mm	905 x 2005 x 605 mm	905 x 2005 x 805 mm
Work table size	1080x1720mm	1080x1720mm	1080x2320mm	1080x2320mm	1080x2720mm	1080x2720mm
Workpiece	Max. height : 800mm Max. loading : 1200kg	Max. height : 1000mm Max. loading : 1200kg	Max. height : 800mm Max. loading : 1500kg	Max. height : 1000mm Max. loading : 1500kg	Max. height : 800mm Max. loading : 1800kg	Max. height : 1000mm Max. loading : 1800kg
Mass (main unit)	2231 kg	2261 kg	2868 kg	2898 kg	3912 kg	3942 kg

### 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	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 <sup>2</sup> (0,13G) (1000 mm/s <sup>2</sup> 9108, 9168 and 9208) Max. combined acceleration : 2309 mm/s <sup>2</sup> (0,23G) (1732 mm/s <sup>2</sup> 9108, 9168 and 9208)

<sup>(1)</sup> According to ISO 10360-2 (2010) methods when using the SP25M probe system module SM25-1, with a ø 4x50 mm stylus. L= measured length (mm).

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



Temperature compensation system (photo : temperature sensors)



### Refer to the CRYSTA-APEX S brochure

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