



CRYSTA-Apex V121210

Item number: 191-482

Images



Accuracy

Probe configuration	Probe	SP50M	MPP110Q ¹⁾	SPR1 ¹⁾	TP1001
Module		DMCS-1	—	—	STANDARD-FORCE
Style (mm)		ø4×50	ø4×18	ø4×50	ø4×10
Length measurement error (L mm) [μm]	Temperature environment 1 ¹⁾	2.3 + 3L/1000	—	2.3 + 3L/1000	2.3 + 3L/1000
	Temperature environment 2 ¹⁾	2.3 + 3L/1000	—	2.3 + 3L/1000	2.3 + 3L/1000
Length measurement error (L mm) [μm]	Temperature environment 1 ¹⁾	2.3 + 3L/1000	—	2.3 + 3L/1000	2.3 + 3L/1000
	Temperature environment 2 ¹⁾	2.3 + 3L/1000	—	2.3 + 3L/1000	2.3 + 3L/1000
Repeatability (L mm) [μm]		1.9	—	2.0	—
Scanning mode form error on sphere (P mm) [μm]		2.3	2.3	2.5	—
Scanning mode line (P mm) [μm]		50	80	50	—
Single stylus form error (P mm) [μm]		—	2.0	—	2.2

Testing and evaluation methods for form, function and force are as per ISO 10360-2:2009 (S 8 7440-2, 731 3).
Setting and evaluation methods for P mm measurement, P mm measurement and P mm measurement are as per ISO 10360-5:2020 (S 8 7440-5, 731 3).
L = Measuring length (mm).
1) Available by custom order only. *2) See below table for temperature environments 1 and 2.

Temperature environment

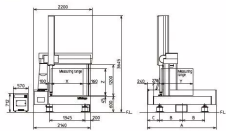
	Temperature environment 1	Temperature environment 2
Temperature range	18 to 25 °C	18 to 25 °C
Rate of change	2 °C per hour	2 °C per hour
Gradient	1 °C per meter	1 °C per meter

Both vertically and horizontally.

External dimensions/Measuring table clamping hole arrangement

CRYSTA-Apex V1200 Series

Unit: mm



CRYSTA-Apex V121210

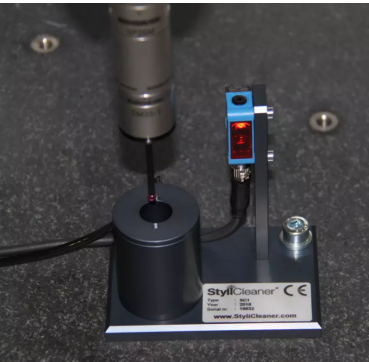
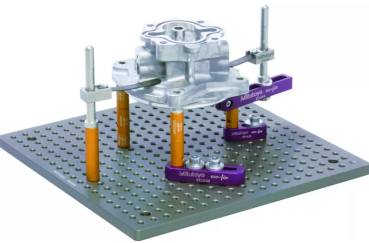
CRYSTA-Apex V122010

CRYSTA-Apex V123010

Technical drawing showing the external dimensions and measuring table clamping hole arrangement for the CRYSTA-Apex V121210, V122010, and V123010 models. The drawing includes three views: a top view, a side view, and a front view. Dimensions are provided in millimeters (mm). The top view shows the overall width and depth of the measuring table, with clamping holes arranged in a grid. The side view shows the height of the table and the position of the clamping holes. The front view shows the width of the table and the position of the clamping holes. The drawing also includes a table of dimensions for each model.

Model	CRYSTA-Apex V121210	CRYSTA-Apex V122010	CRYSTA-Apex V123010
X	1200	1200	3000
Y	1000	1000	1000
A	2000	1000	6000
B	1000	1000	1000
C	450	375	375

*1) Measuring length (mm).
*2) Available by custom order only.



Description

The CRYSTA-Apex V1200, 1600 & 2000 series offers you up to 12,8m³ measuring volume and still keeps an excellent 4,5 µm accuracy or better.

This series is developed for supporting quality evaluation of volumetric parts. This high performance, cost effective coordinate measuring machine, designed and constructed according to Mitutoyo's extensive experience in CNC CMM technology.

Ready for touch trigger probe, scanning probe, optical probe and laser scanner probe.

Main benefits:

- Proven lightweight bridge-type construction with high rigidity air-bearings on every axis
- High accuracy, high speed and high acceleration
- Temperature sensors for compensation of machine and workpiece from 16° to 24°C and monitoring of the environmental temperature.
- ABS linear scales provide high environmental resistance and saves time at start-up as homing is not necessary
- UC480 controller supporting Multi-sensor and SMS functionality (Smart Measuring System)

Specification

Model:	CRYSTA-Apex V121210
Model:	CRYSTA-Apex V121210
Range:	1200 x 1200 x 1000 mm
Accuracy:	E0, MPE from: V1200 (2,3+3L/1000) µm E0, MPE from: V1600 & V2000 (3,3+4,5L/1000) µm
Max. drive speed:	693 mm/s (3-axis)
Model:	CRYSTA-Apex V121210
Loading Weight:	2,000 kg
Loading Height:	1,000 mm
Digital step:	0.1 µm