



CRYSTA-Apex V574

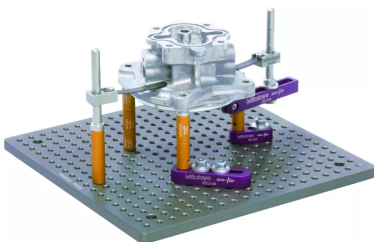
Item number: 191-126

Images



Accuracy is specified for the following environmental conditions for the ChMI:

Temperature range		18°C - 22°C	16°C - 26°C
Temperature change	Per hour	2°C	2°C
	Per 24 hours	2°C	5°C
Temperature gradient	Vertical	1°C/m	1°C/m
	Horizontal	1°C/m	1°C/m





Description

The latest generation CRYSTA-Apex coordinate measuring machines, the new CRYSTA-Apex V Series, is packed with state of the art technology, necessary for performing very accurate measurements at high speed. All new, using Mitutoyo's world-renowned ABS scales, the CRYSTA-Apex V series has a high resistance to environmental conditions and does not require to perform homing upon start-up. SMS capability enables status and service monitoring, ready for use in a Smart Factory environment.

A future proof investment, the CRYSTA-Apex V is capable of tackling any task you might have in the future thanks to its ability to change or add probe systems and software with ease.

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 26°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 V574
Range:	500 x 700 x 400 mm
Accuracy:	E0, MPE from: (1,7+3L/1000) µm
Width:	1,082 mm
Depth:	1548 mm
Height:	2,185 mm
Mass:	955 kg

E₀,MPE:	With SP25M: (1,7+4L/1000) μm; With TP200: (1,9+4L/1000) μm; With TP20: (2,2+4L/1000) μm; L = measured length [mm]
Max. drive speed:	519 mm/s (3-axis)
3D Acceleration:	2309 mm/s ²
Air supply:	Pressure = 0,4 MPa
Loading Height:	545 mm
Digital step:	0.1 μm

Dimensions

Accuracy

Probe	SP25M	SP200	MPF200*	TP20	TP20	PN20
Probe configuration	SP25-1 SP25-2	—	—	—	—	—
Module	SP25-1 SP25-2	—	—	—	—	—
Probe length	400±10	400±10	400±10	400±10	400±10	400±10
Length measurement	Temperature environment 1†	1.7 + 4L/1000	1.9 + 4L/1000	1.7 + 4L/1000	1.9 + 4L/1000	2.2 + 4L/1000
Length measurement	Temperature environment 2†	1.7 + 4L/1000	1.9 + 4L/1000	1.7 + 4L/1000	1.9 + 4L/1000	2.2 + 4L/1000
Length measurement	Temperature environment 3†	1.7 + 4L/1000	1.9 + 4L/1000	1.7 + 4L/1000	1.9 + 4L/1000	2.2 + 4L/1000
Length measurement	Temperature environment 4†	1.7 + 4L/1000	1.9 + 4L/1000	1.7 + 4L/1000	1.9 + 4L/1000	2.2 + 4L/1000
Repeatability 1μm [μm]	1.5	1.5	1.5	1.5	1.5	1.5
Counting mode form error on sphere (Pachometer square [μm])	2.0	2.0	2.0	1.8	1.8	2.2
Counting mode form error on sphere (Pachometer square [μm])	2.0	2.0	2.0	1.8	1.8	2.2
Counting mode form error on sphere (Pachometer square [μm])	1.7	1.9	1.7	1.5	1.5	2.2

Setting and evaluation methods for form, function and position (ISO 10360-2:2009/ISO 10360-2:2015)

1. Temperature environment 1: 20±0.5°C, 2. Temperature environment 2: 20±0.5°C, 3. Temperature environment 3: 20±0.5°C, 4. Temperature environment 4: 20±0.5°C

*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	10 to 25 °C	10 to 25 °C
Rate of change	1 °C per hour	1 °C per hour
Gradient	1 °C per meter	1 °C per meter

External dimensions/Measuring table clamping hole arrangement

CRYSTA-Apex V500 Series

CRYSTA-Apex V544

CRYSTA-Apex V574

Model	CRYSTA-Apex V544	CRYSTA-Apex V574
X	450	500
Y	450	500
Z	280	315
A	173	193
B	173	193