

Mitutoyo



Crysta-Apex C1600/2000 Series 191-Standard CNC CMM

Series 191

FEATURES

Engineered and constructed utilizing Mitutoyo's innovative CNC CMM technology, Crysta-Apex features lightweight materials and a stable structure. The result is a design that provides high travel stability, high accuracy, and affordability. The temperature correction function 60.8°F to 75.2°F (16°C to 26°C) can yield accurate measurements even on the shop floor. In addition to the point-to-point measurement, the MPP-100 and a Laser Probe provide contact/non-contact scanning function.

Technical Data

Length standard	Linear encoder
Guide system	Air bearing
Max. Drive speed (3D)	20.43" (519mm)/second
Max. Acceleration	0.17G
Air pressure	0.4MPa
Air consumption	150L/min

ISO10360 Test Parameters

SP25M Probe, Ø 4mm x L 50mm

Main Unit

Startup System

This machine incorporates a startup system (relocation detection system), which disables operation when an unexpected vibration is applied or the machine is relocated. Be sure to contact your nearest Mitutoyo prior to relocating this machine after initial installation.

Model	Crysta-Apex C163012	Crysta-Apex C163016	Crysta-Apex C164012
Order No	191-262-2	191-262H-2	191-272-2
Type	Large Bridge Type Standard	Large Bridge Type Standard	Large Bridge Type Standard
Image	-	-	-
X-axis	62.9" (1600mm)	62.9" (1600mm)	62.9" (1600mm)
Y-axis	118.1" (3000mm)	118.1" (3000mm)	157.4" (4000mm)
Z-axis	47.2" (1200mm)	62.9" (1600mm)	47.2" (1200mm)
Resolution	0.000004" (0.0001mm)	0.000004" (0.0001mm)	0.000004" (0.0001mm)
ISO10360-2:2009 (E₀,MPE) 64.4-71.6°F (18-22°C)₁ 60.8-75.2°F (16-24°C)₂	(3.3+4.5L/1000)μm ₁ (3.3+5.5L/1000)μm ₂	(4.5+5.5L/1000)μm ₁ (4.5+6.5L/1000)μm ₂	(3.3+4.5L/1000)μm ₁ (3.3+5.5L/1000)μm ₂
ISO 10360-4(MPE_{THP}/MPT_{THP})	5.0μm / 150 seconds	5.0μm / 150 seconds	5.0μm / 150 seconds
ISO10360-5:20100 (PFTU,MPE)	5.0μm	6.0μm	5.0μm
Material	Granite	Granite	Granite
Work Table Size	70.86"x165.55" (1800mmx4205mm)	70.86"x165.55" (1800mmx4205mm)	70.86"x204.92" (1800mmx5205mm)
Tapped Insert	M8x1.25mm	M8x1.25mm	M8x1.25mm
Max Workpiece Height	55.11" (1400mm)	70.86" (1800mm)	55.11" (1400mm)
Max Workpiece Weight	7716lbs (3500kg)	7716lbs (3500kg)	9920lbs (4500kg)
Mass (including stand and controller)	23368lbs (10600kg)	23479lbs (10650kg)	32628lbs (14800kg)
Machine Dimensions WxDxH	106.29"x181.10"x162.99" (2700mmx4600mmx4140mm)	106.29"x181.10"x194.49" (2700mmx4600mmx4940mm)	106.29"x220.47"x164.96" (2700mmx5600mmx4190mm)

Model	Crysta-Apex C164016	Crysta-Apex C165012	Crysta-Apex C165016
Order No	191-272H-2	191-282-2	191-282H-2
Type	Large Bridge Type Standard	Large Bridge Type Standard	Large Bridge Type Standard
Image	-	-	-
X-axis	62.9" (1600mm)	63.18" (1605mm)	62.9" (1600mm)
Y-axis	157.4" (4000mm)	197.04" (5005mm)	197.0" (5000mm)
Z-axis	62.9" (1600mm)	47.44" (1205mm)	62.9" (1600mm)
Resolution	0.000004" (0.0001mm)	0.000004" (0.0001mm)	0.000004" (0.0001mm)
ISO10360-2:2009 (E₀,MPE) 64.4-71.6°F (18-22°C)₁ 60.8-75.2°F (16-24°C)₂	(3.3+4.5L/1000)μm ₁ (3.3+5.5L/1000)μm ₂	(4.5+5.5L/1000)μm ₁ (4.5+6.5L/1000)μm ₂	(3.3+4.5L/1000)μm ₁ (3.3+5.5L/1000)μm ₂
ISO 10360-4(MPE_{THP}/MPT_{THP})	5.0 / 150 seconds	5.0μm / 150 seconds	5.0μm / 150 seconds
ISO10360-5:20100 (P_{F_{TU}},MPE)	6.0μm	5.0μm	6.0μm
Material	Granite	Granite	Granite
Work Table Size	70.86"x204.92" (1800mmx5205mm)	70.86"x244.29" (1800mmx6205mm)	70.86"x244.29" (1800mmx6205mm)
Tapped Insert	M8x1.25mm	M8x1.25mm	M8x1.25mm
Max Workpiece Height	70.86" (1800mm)	55.11" (1400mm)	70.86" (1800mm)
Max Workpiece Weight	9920lbs (4500kg)	11023lbs (5000kg)	11023lbs (5000kg)
Mass (including stand and controller)	37738lbs (14850kg)	42990lbs (19500kg)	43100lbs (19550kg)
Machine Dimensions WxDxH	106.29"x220.47"x196.46" (2700mmx5600mmx4990mm)	106.29"x259.84"x166.93" (2700mmx6600mmx4240mm)	106.29"x259.84"x198.43" (2700mmx6600mmx5040mm)

Model	Crysta-Apex C203016	Crysta-Apex C204016
Order No.	191-362-2	191-372-2
Type	Large Bridge Type Standard	Large Bridge Type Standard
Image	-	-
X-axis	78.7" (2000mm)	78.7" (2000mm)
Y-axis	118.1" (3000mm)	157.4" (4000mm)
Z-axis	62.9" (1600mm)	62.9" (1600mm)
Resolution	0.000004" (0.0001mm)	0.000004" (0.0001mm)
ISO 10360-2:2009 (E₀,MPE)	(4.5+5.5L/1000)μm ₁ (4.5+6.5L/1000)μm ₂	(4.5+5.5L/1000)μm ₁ (4.5+6.5L/1000)μm ₂
ISO 10360-4(MPETHP/MPTTHP)	6.0μm / 150 seconds	6.0μm / 150 seconds
ISO10360-5:20100 (PFTU,MPE)	6.0μm	6.0μm
Material	Granite	Granite
Work Table Size	86.61"x165.55" (2200mmx4205mm)	86.61"x204.92" (2200mmx5205mm)
Tapped Insert	M8x1.25mm	M8x1.25mm
Max Workpiece Height	70.86in 1800mm	70.86in 1800mm
Max Workpiece Weight	8818lbs (4000kg)	11023lbs (5000kg)
Mass (including stand and controller)	31085lbs (14100kg)	42990lbs (19500kg)
Machine Dimensions WxDxH	122.04"x181.10"x196.45" (3100mmx4600mmx4990mm)	122.05"x220.47"x198.42" (3100mmx5600mmx5040mm)