

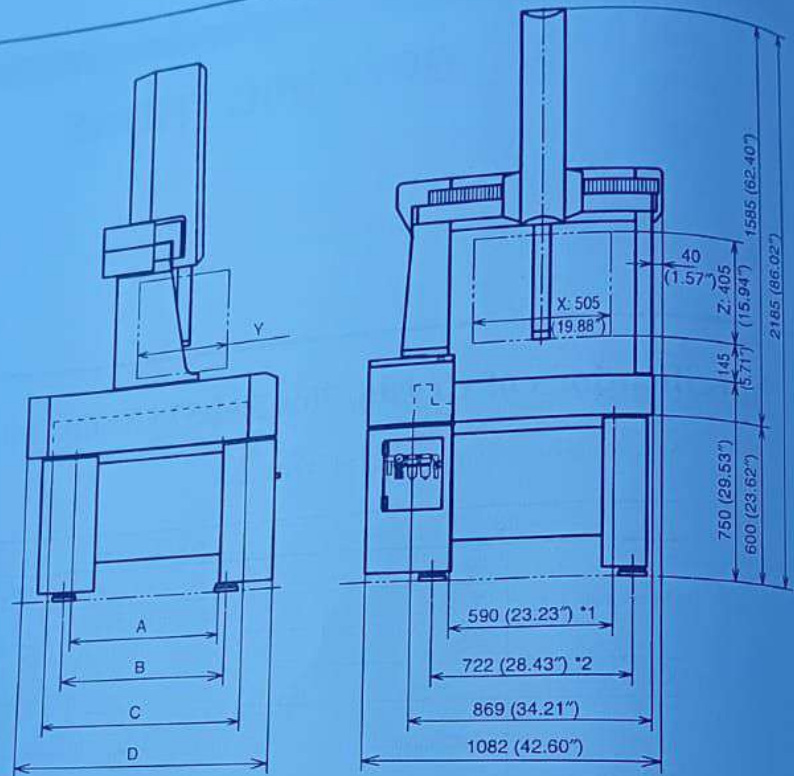
# 5

## SPECIFICATIONS

### 5.1 Specifications of Crysta-Plus 544/574 Main Unit

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Item		Crysta-Plus 544	Crysta-Plus 574
Measuring range	X	505 mm (19.88")	
	Y	405 mm (15.94")	705 mm (27.76")
	Z	405 mm (15.94")	
Guide method		Air bearings of each axis	
Drive speed	CNC mode	Moving speed of each axis: 8 ~ 250 mm/s (31 ~ 9.84"/s) (maximum composite speed: 430 mm/s (16.93"/s))	
		Measuring speed: 1 ~ 3 mm/s (.04 ~ .12"/s)	
	Joystick mode	High speed: 0 ~ 80 mm/s (0 ~ 3.15"/s)	
		Low speed: 0 ~ 3 mm/s (0 ~ .12"/s) Fine speed: 0.05mm/s (.002"/s)	
Driving acceleration		980 mm/s <sup>2</sup> (38.58"/s <sup>2</sup> ) for each axis (maximum composite acceleration: 1697 mm/s <sup>2</sup> (66.81"/s <sup>2</sup> ))	
Measuring system		Linear encoder	
Resolution		0.0001 mm (.000004")	
Measuring table	Material	Granite	
	Size (workpiece mounting plane)	638 × 860 mm (25.12" × 33.86")	638 × 1160 mm (25.12" × 45.67")
	Workpiece clamping	M8 × 1.25	
Workpiece	Maximum height	545 mm (21.46")	
	Maximum mass	180 kg (397 lbs)	
Dimensions (Main unit)	Height	2185 mm (86.02")	
	Width	1082 mm (42.60")	
	Depth	1078 mm (42.44")	1458 mm (57.40")
Machine mass (including stand and controller)		515 kg (1134 lbs.)	660 kg (1454 lbs.)
Air supply conditions	Pressure requirement	0.4 MPa	
	Air consumption	50 L/min (at normal condition) (Air source: 100 L/min or more)	



\*1: Supporting point pitch for measuring table  
 \*2: Supporting point pitch

Unit: mm (inch)

	Y	A	B	C	D
Crysta-Plus 544	405 (15.94")	648 (25.51")	713 (28.07")	860 (33.86")	1078 (43.44")
Crysta-Plus 574	705 (27.76")	948 (37.32")	1013 (39.88")	1160 (45.67")	1458 (57.40")

Crysta-Plus 544/574 Main Unit External Dimension

## 5.2 Accuracy of Crysta-Plus 544/574 Main Unit

Unit:  $\mu\text{m}$

	Axial length measuring accuracy (Linear displacement accuracy)	Volumetric length measuring accuracy	Repeatability	Ball bar performance	Probing error (Probe used)
ISO 10360-2		$E=2.9+4L/1000$			R=3.0(TP2)
JIS B 7440-2					R=2.9(TP200)
VDI/VDE2617	$U_1=2.9+3L/1000$	$U_3=2.9+4L/1000$			
CMMA	$G=2.9+3L/1000$	$M=2.9+4L/1000$	R=3.0		
ANSI/ASME B89.1.12M			3.0	9.0	
Former JIS B 7440	$U_1=2.9+3L/1000$	$U_3=2.9+4L/1000$			

- Ball bar length: 500mm (19.7")
- Accuracy determined with TP2(TP200) and Standard Stylus ( $\phi 3 \times 10\text{mm} / \phi .12" \times .39"$ ).

The accuracy specifications shown above are certified at any position within the measuring range, as far as the conditions mentioned in Section 1.2.1, "Environmental conditions" are met.

## 5.3 Specifications of Controller "CMMC-J"

### (1) Operation modes

- CNC mode
- Joystick mode

### (2) Drive speed

- In CNC mode
    - Moving speed : 8 ~ 250 mm/s (.31 ~ 9.84"/s) for each axis and 430 mm/s (16.93"/s) as maximum composite speed
    - Measuring speed : 1 ~ 3 mm/s (.04 ~ .12"/s)
- Each speed can be set by the host computer.

[When the controller "CMMC-J" is powered: Moving speed 250 mm/s (9.84"/s) for each axis, Maximum composite speed 430 mm/s (16.93"/s), Measuring speed 3 mm/s (.12"/s)]

- In Joystick mode

- Drive speed : 0 ~ 80 mm/s (0 ~ 3.15"/s)
- Measuring speed (MEAS) : 0 ~ 3 mm/s (0 ~ .12"/s)

### (3) Feedback method

- Speed feedback : By pulse generator
- Position feedback : By linear encoder (closed loop method)

### (4) Power supply

- AC IN : 100, 120, 220, or 240 VAC  $\pm 10\%$  (selective), 50/60 Hz
- Power consumption : 700 W
- Maximum duration of momentary power failure : 40 ms (100 VAC, 50 Hz)

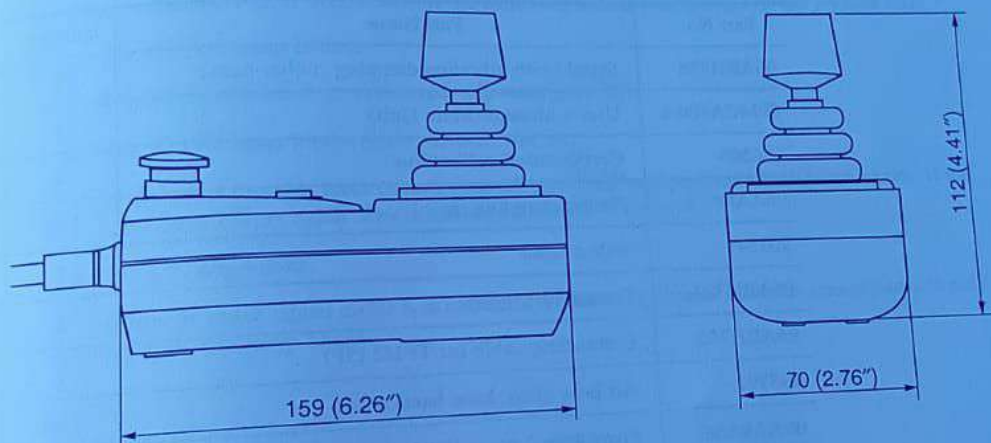
### (5) Safety

- Insulation resistance : 100 M $\Omega$  or more (between AC and FG)
- Dielectric strength : 1000 VAC, 1 minute (between AC and FG)
- Leakage current : 1.0 mA (100 VAC)

## 5. SPECIFICATIONS

### (6) Dimensions and mass of joystick box

- External dimensions : See the below
- Mass : 0.36 kg (0.79 lbs)



Unit: mm (inch)

External Dimensions of Joystick Box

## 5.4 Standard and Optional Accessories for Crysta-Plus 544/574

Part No.	Part Name	Quantity	Note
06ABH286	Stand (with vibration damping rubber pads)	1	○
99MCA900A	User's Manual (Main Unit)	1	○
156509	Certificate of calibration	1	○
06AAD671	Plastic clamping set	1 set	△
901349	Side cabinet	1	△
06ABH724	Dummy plug (5P)	1	○
06ABH725	Connecting cable for TP1/2 (5P)	1	○
935792	Air hose (5m), hose band (two)	1 set	○
06AAR166	Spare fuse 2 pcs. (250V, 10A)	1 set	○
937179T	Foot switch	1	△
06AAV499	Ceramic master ball	1	△
06AAY862	Extension arm set	1	△
06AAW158	COMUC-PCI	1	○
	Power cord	1	○
06ABH631B	Host harness	1	○
159719	Lubricating grease	1	○
	Temperature compensation unit	1	△

Note: ○ : Standard accessory  
 △ : Option