

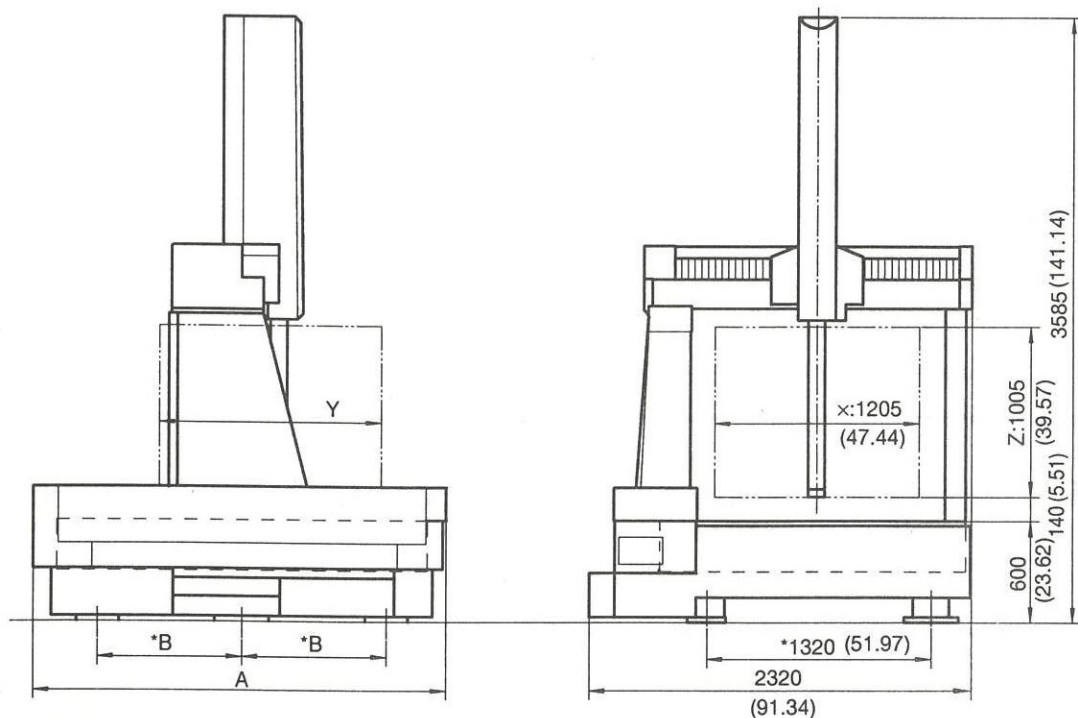
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SPECIFICATIONS

5.1 Specifications of BRT Apex 1200 Series Main Unit

Specifications of BRT Apex 1200 Series Main unit

Item		BRT Apex 1212	BRT Apex 1220	BRT Apex 1230
Measuring range	X	1205 mm (47.44")		
	Y	1205 mm (47.44")	2005 mm (78.94")	3005 mm (118.31")
	Z	1005 mm (39.57")		
Guide method		Air bearings of each axis		
Drive speed	CNC mode	Moving speed of each axis: 8 ~ 300 mm/s (.31 ~ 11.81"/s)		
		Maximum composite speed: 500 mm/s (19.69"/s)		
		Measuring speed: 1 ~ 3 mm/s (.04 ~ .12"/s)		
	Joystick mode	Moving speed: 0 ~ 80 mm/s (0 ~ 3.15"/s)		
		Measuring speed: 0 ~ 3 mm/s (0 ~ .12"/s)		
Driving acceleration		750 mm/s ² (29.53"/s ²) for each axis (maximum composite acceleration: 1299 mm/s ² (51.14"/s ²))		
Measuring system		Linear encoder		
Resolution		0.0001mm (.000004")		
Measuring table	Material	Granite		
	Size (workpiece mounting plane)	1400 × 2180 mm (55.12" × 85.83")	1400 × 2980 mm (55.12" × 117.32")	1400 × 3980 mm (55.12" × 156.69")
	Workpiece clamping	M8 × 1.25		
Workpiece	Maximum height	1140 mm (44.88")		
	Maximum mass	2000 kg (4405 lbs)		
Dimensions (Main unit)	Height	3585 mm (141.14")		
	Width	2320 mm (91.34")		
	Depth	2430 mm (95.67")	3230 mm (127.17")	4430 mm (174.41")
Machine mass (including stand)		4068 kg (8960 lbs)	5388 kg (11868 lbs)	9188 kg (20238 lbs)
Air supply conditions	Pressure requirement	0.4 Mpa (4kgf/cm ²)		
	Air consumption	100 L/min (at normal condition) (Air source: 150 L/min or more)		



*: Supporting point pitch

Unit: mm (inch)

Unit : mm (inch)

	BRT Apex 1212	BRT Apex 1220	BRT Apex 1230
A	2430 (95.67)	3230 (127.17)	4430 (174.41)
B	850 (33.46)	950 (37.40)	1250 (49.21)
Y	1205 (47.44)	2005 (78.94)	3005 (118.31)

BRT Apex 1200 Series Main Unit External Dimension

5.2 Accuracy of BRT Apex 1200 Series Main Unit

Unit: μm

	Axial length measuring accuracy (Linear displacement accuracy)	Volumetric length measuring accuracy	Repeatability	Ball bar performance	Probing error (Probe used)
ISO 10360-2		$E=4.9+5L/1000$			$R=5.2(\text{TP2})$
JIS B 7440-2					$R=5.0(\text{TP200})$
VDI/VDE2617	$U_1=3.9+4L/1000$	$U_3=4.9+5L/1000$			
CMMA	$G=3.9+4L/1000$	$M=4.9+5L/1000$	$R=6.0$		
ANSI/ASME B89. 1. 12M			6.0	12.0	
Former JIS B 7440	$U_1=3.9 +4L/1000$	$U_3=4.9+5L/1000$			

- 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 “UC220 Apex”

(1) Operation modes

- CNC mode
- Joystick mode

(2) Drive speed

- In CNC mode

Moving speed : 8 ~ 300 mm/s (.31 ~ 11.81"/s) for each axis and 500 mm/s (19.69"/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 “UC220 Apex” is powered: Moving speed 300 mm/s (11.81"/s) for each axis, Maximum composite speed 500 mm/s (19.69"/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

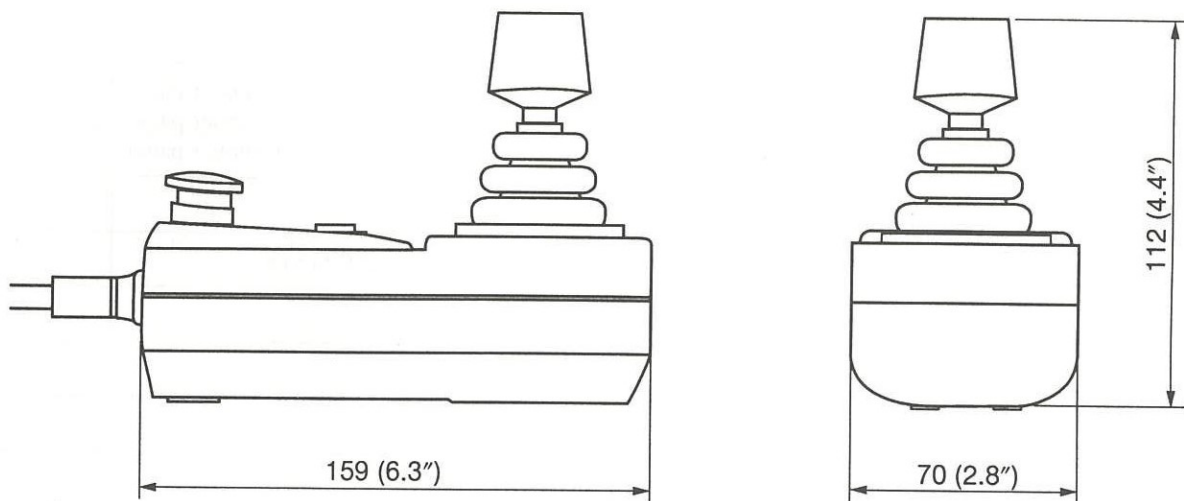
- AC IN : 100, 120, 220, or 240 VAC $\pm 10\%$ (selective), 50/60 Hz
- Power consumption : 1k VA
- Maximum duration of momentary power failure : 40 ms (100 VAC, 50 Hz)

(5) Safety

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

(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, Handy Type

5.4 Standard and Optional Accessories for BRT Apex 1200 Series

Part No.	Part Name	Quantity	Note
06AAQ915	Stand (BRT Apex 1212) (with vibration damping rubber pads)	1 set supplied according to the main unit.	○
06AAQ916	Stand (BRT Apex 1220) (with vibration damping rubber pads)		
06AAQ917	Stand (BRT Apex 1230) (with vibration damping rubber pads)		
99MCA026A	User's Manual (Main Unit)	1	○
156509	Certificate of calibration (BRT Apex 1200 Series)	1	○
06AAD671	Plastic clamping set	1 set	○
901349	Side cabinet	1	△
908464	Dummy plug (12P)	1	○
908462	Connecting cable for TP1/2 (12P)	1	○
935792	Air hose (5m), hose band (two)	1 set	○
06AAR160 (06AAR162)	Spare fuse (250V, 15A) "Part No. 06AAR162" is for Canada.	2 pieces supplied according to the destination.	○
937179T	Foot switch	1	△
06AAF107	Master ball	1	△
541944	Extension arm	2	△
06AAG125	COM-UC board	1	○
	Power cord	1	○
06AAQ473	UC Apex Host harness (5m)	1	○
159719	Lubricating grease	1	○
	Temperature compensation unit (BRT Apex 1200 Series)	1	△
06AAR356	UC ACCONT-BOX	1	△

Note: ○ : Standard accessory
△ : Option