

Roundtest RA-120

SERIES 211 – Roundness Measuring Instruments

- The Roundtest RA-120/120P are compact, affordable, and simple-to-use devices for measuring part geometry on the shop floor.
- They provide the outstanding data analysis capabilities required of a laboratory roundness measuring instrument having a $\pm 1000 \mu\text{m}$ wide range detector and a precision turntable with excellent rotational accuracy.
- The RA-120 model has a dedicated processor and control panel incorporated in the main unit for controlling operations.
- The RA-120P is a PC-based model with all operations controlled via ROUNDPAK software (optional).



Optional X-axis stop



Optional Z-axis scale unit

Roundtest RA-120



SPECIFICATIONS

Model	RA-120		
Code No.	211-621E	211-622E	211-623E
Remarks	With mechanical table	With DAT function (mm)	With DAT function (inch/mm)

Roundtest RA-120P



SPECIFICATIONS

Model	RA-120P		
Code No.	211-625E	211-626E	211-627E
Remarks	With mechanical table	With DAT function (mm)	With DAT function (inch/mm)

Technical Data

Turntable

Rotational accuracy

Radial:	(0.04+6H/10000) μm
H: Probing height (mm)	
Axial:	(0.04+6X/10000) μm
X: probing radius (mm)	

Rotational speed: 6 rpm

Table diameter: 150 mm

Centering range: $\pm 3 \text{ mm}$ Levelling range: $\pm 1^\circ$

Max. probing diameter: 280 mm (380 mm when the detector orientation is changed to the vertical position, only samples up to 50 mm from the table surface can be measured.)

Max. workpiece diameter: 440 mm

Max. table loading: 25 kg

Vertical column (Z-axis)

Vertical travel: 280 mm

Max. probing height: 280 mm from the turntable surface

Max. probing depth: 100 mm (min. ID: 30 mm)

Horizontal arm (X-axis)

Horizontal travel: 165 mm (Including a protrusion of 25 mm over the turntable axis)

Probe and stylus

Measuring range: $\pm 1000 \mu\text{m}$

Measuring force: 70 to 100 mN

Standard stylus: 12AAL021, carbide ball, $\phi 1.6 \text{ mm}$

Measuring direction: Bi-directional

Stylus angle

adjustment: $\pm 45^\circ$ (with graduations)

Data analysis unit

Processing unit: Built-in (PC with Roundpak-120P)*

Data sampling

points: Max. 3600 points/rotation

Types of roundness

evaluation: LSC, MZC, MIC, MCC

Recording device: Built-in thermal line printer (optional external printer)*

Recording

magnification: X5 to X200,000 (15-steps), Auto (X1 to X500,000)*

Roughness component

reduction: Low pass filter, band pass filter

Filter type: 2CR-75%, 2CR-50%, 2CRPC-75% (phase corrected), 2CRPC-50% (phase corrected), Gaussian, filter OFF

Cutoff values: 15 upr, 50 upr, 150 upr, 500 upr, 15-150 upr, 15-500 upr, 50-500 upr, Manual setting*

Number of

measuring sections: Max. 5-section (100-section)*

Air supply

Air pressure: 390 kPa

Air consumption: 30 L/min.

Power supply: 100V AC - 240V AC, 50/60Hz

Dimensions (WxDxH): 450 x 360 x 636 mm

Mass: 32 kg (main unit), 2 kg (air regulator)

*RA-120P

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