

Roundtest RA-10

SERIES 211 – Roundness Measuring Instruments

- Compact roundness tester combines outstanding cost and performance with full measurement capabilities and user-friendly operation.
- The control panel has large keys and an intuitive layout for easy operation.
- One-touch setup recall function: Complex setups can be stored in advance and recalled with a single keystroke.
- Zero-set function: The detector level can be set to zero (0) with a single keystroke, thus relieving the user of the need for meticulous detector positioning.
- The positioning handles for vertical direction (Z axis) and radial direction (X axis) adjustments have been placed on the slider for best operability.
- Despite being a low-priced model, the turntable with air bearings offers rotational accuracy as high as $(0.04+6H/10000) \mu\text{m}$, thus assuring a precision that compares well with that of higher-priced models.
- Measurement results and recorded profiles are easy-to-view with the large LCD panel display.
- The machine has a compact body with integrated electronics and printer making it ideal for tight inspection areas.

Roundtest RA-10 with optional X-axis stop and Z-axis scale unit.



SPECIFICATIONS

Model	RA-10
Code No.	211-601E



Optional X-axis stop



Optional Z-axis scale unit

Technical Data

Turntable

Rotational accuracy: $(0.04+6H/10000) \mu\text{m}$
H: probing height (mm)

Rotational speed: 6 rpm

Table diameter: 150 mm

Max. probing diameter: 100 mm

Max. workpiece diameter: 320 mm

Max. table loading: 10 kg

Vertical column (Z-axis)

Vertical travel: 117 mm

Max. probing height: 152 mm from the turntable surface

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

Horizontal arm (X-axis)

Horizontal travel: 75 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

Data sampling points: Max. 3600 points/rotation

Data analysis items: Roundness, Coaxiality, Concentricity, Flatness, Circular runout (radial)

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-step)

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

Number of

measuring sections: 1-section to 5-section: Roundness, Coaxiality, Flatness
1-section to 3-section: Circular runout (radial)
2-section: Concentricity

Air supply

Air pressure: 390 kPa

Air consumption: 30 L/min.

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

Dimensions (W x D x H): 450 x 360 x 486 mm

Mass: 26 kg

Consumables

12AAH181: Printer paper (10 rolls/set)
£60.40

358592: Element for air filter (1 pc./set)
£39.40

358593: Element for air regulator (10 pcs./set)
£55.80