

Roundtest RA-H5200

Series 211 - High-precision Form Measuring Instrument

- A roundness/cylindricity measuring system developed to combine world-class accuracy with high maneuverability/analytical capability.
- This system can perform many other functions as well, such as tracking measurement and automatic OD/ID measurement.
- Available with the standard column specification (Z-axis traverse of 350 mm) or an extended specification (Z-axis traverse of 550 mm) for handling taller workpieces.



Highly accurate, automatic centering/leveling turntable

The performance of this turntable has been achieved through exceptional manufacturing accuracy of the critical components, in addition to a high-accuracy air-bearing that provides superior rigidity. The resulting rotational accuracy, the heart of a roundness/cylindricity measuring system, is world-class at $0.02+3.5H/10000 \mu\text{m}$.



Sliding detector-unit holder provided as a standard feature

The detector-unit holder is equipped with a sliding mechanism, enabling one-touch measurement of a workpiece with a deep hole having a thick wall, which has been difficult with the conventional standard arm. Sliding distance : 112 mm.

Specifications

Turntable

Rotational accuracy radial	$(0.02+3.5H/10000) \mu\text{m}$ H : Probing height (mm)
Rotational accuracy axial	$(0.02+3.5X/10000) \mu\text{m}$ X : Distance from rotation center (mm)
Rotational speed	2, 4, 6, 10 rpm (Auto centering 20 rpm)
Effective turntable diameter	300 mm
Centering range	$\pm 5 \text{ mm}$ (with AAT function)
Leveling range	$\pm 1^\circ$ (with AAT function)
Max. probing diameter	400 mm
Max. workpiece diameter	680 mm
Max. turntable loading	80 kg (Auto centering 65 kg)

Vertical column (Z-axis)

Traverse speed	Max. 60 mm/s (Measurement : 0,5/1,0/2,0/5,0 mm/s)
Max. probing depth with standard stylus	85 mm for $\phi 32$ or more, 50 mm for $\phi 7$ or more
Straightness	$0.4 \mu\text{m}/200 \text{ mm}$
Perpendicularity to rotation center	$0.5 \mu\text{m}/200 \text{ mm}$
Traverse range	225 mm (- 25 mm to 200 mm)
Travel speed	Max. 50 mm/s (Measurement 0,5, 1,0, 2,0, 5,0 mm/s)

Detector

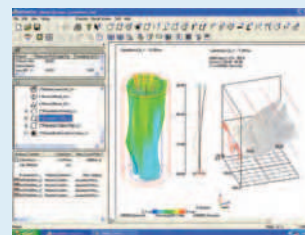
Measuring force	10-50 mN (5-level switching)
Air pressure	0.39 MPa
Air consumption	45L/min. (standard state)
Measuring range	standard $\pm 400 \mu\text{m}/\pm 40 \mu\text{m}/\pm 4 \mu\text{m}$, follow : $\pm 5 \text{ mm}$ Tip shape, material : $\phi 1.6 \text{ mm}$ tungsten carbide ball

Power supply	100-240V AC, 50/60 Hz
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Power consumption	80 W
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Dimensions (WxDxH)	890 x 490 x 840 mm
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Mass	Vibration isolator : 170 kg
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Roundpak

The roundness/cylindrical form analysis program

*1 when using an optional auxiliary stage for measuring a workpiece whose height is 20 mm or less.