

Roundtest RA-1600

Series 211 - Form Measuring System

- The RA-1600 Series Roundtest is a form measuring system equipped with a highly accurate turntable that enables simple and accurate centering and leveling of the workpiece.
- Incorporates flexible data analysis software Roundpak.
- Compact, but with top-end precision and includes a function to prevent damaging collisions in the Z-axis.
- Equipped with DAT mechanism to boost measurement efficiency.
- Includes a remote control box for easy operation.

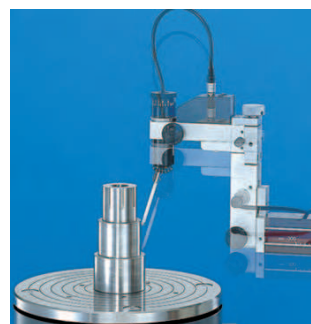


RA-1600



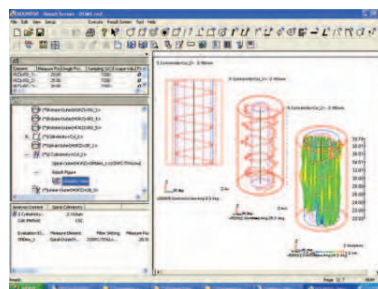
Spiral Measurement/Analysis (RA-1600)

Provided with a spiral measurement function that combines turntable rotation and rectilinear motion allowing cylindricity, coaxiality and other form characteristics to be measured in continuous data stream mode.



Positioning function of turntable (RA-1600)

Automatic measurement that incorporates rectilinear motion is possible at any position (angle) in relation to turntable rotation.



Spiral-mode cylinder measurement

Specifications

Turntable

Rotational accuracy radial	(0,02+6H/10000) μm H : Measuring height with reference to turntable surface (mm) JIS B7451-1997
Rotational accuracy axial	(0,02+6X/10000) μm X : Radial distance with reference to rotational center
Rotational speed	4, 6, 10 rpm
Turntable diameter	Effective turntable diameter : 150 mm
Centering range	± 3 mm (with DAT function)
Effective turntable diameter	150 mm
Leveling range	$\pm 1^\circ$ (with DAT function)
Max. probing diameter	280 mm
Max. workpiece diameter	560 mm
Max. turntable loading	25 kg

Vertical column (Z-axis)

Straightness (over wide range)	0,30 $\mu\text{m}/300$ mm
Straightness (over narrow range)	0,20 $\mu\text{m}/100$ mm
Max. probing height	(ID, OD) 300 mm*1
Max. probing depth	over $\phi 32$: 91 mm (with standard stylus), over $\phi 7$: 50 mm (with standard stylus)
Positioned speed	Max. 15 mm/s (Measurement : 0,5, 1, 2, 5 mm/s)

Horizontal arm (X-axis)

Straightness	2,7 $\mu\text{m}/140$ mm
Traverse range	165 mm (-25 mm to 140 mm)
Perpendicularity to rotation center	1,6 $\mu\text{m}/140$ mm
Positioned speed	Max. 8 mm/s (Measurement : 0,5, 1, 2, 5 mm/s)

Detector

Measuring force	10-50 mN (5-level)
Measuring range	standard $\pm 400 \mu\text{m}/\pm 4 \mu\text{m}/\pm 4 \mu\text{m}$, tracking ± 5 mm Tip shape, material : $\phi 1.6$ mm tungsten carbide

Air supply

Air pressure	0.39 MPa
Air consumption	22L/min. (standard state)

Power supply

	100-240 VAC, 50/60 Hz
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Dimensions (WxDxH)

	890 x 490 x 840 mm
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Mass

	Main unit (NET) : 170 kg
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*1 when using an optional auxiliary stage for measuring a workpiece whose height is 20 mm or less.