

Roundtest RA-2200

SERIES 211 – Roundness / Cylindricity Measuring System

- The RA-2200 provides high accuracy, high speed and high performance roundness measurement.
- The fully-automatic or DAT (Digital Adjustment Table) function aids manual workpiece centering and levelling, turning a once challenging task into something simple enough for even the untrained user and substantially reducing overall measurement time.
- The RA-2200 system comes with the powerful ROUNDPAK data analysis software, with enhanced functionality and easy operation through the use of the mouse and icon selection.

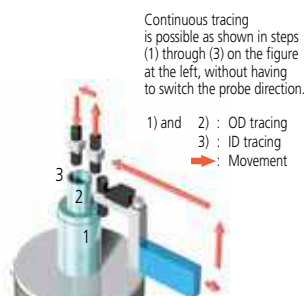
Roundtest RA-2200AS and vibration isolator with side table



Greater productivity by continuous measurement

Both the OD and ID of a workpiece* can be traced in succession without the need for changing the traverse direction of the stylus.

*Inside diameter up to 50 mm



Mitutoyo uses high accuracy, highly repeatable linear scales in the X/Z drive unit to guarantee the high-precision positioning vital for repetitive measurement.

Highly accurate and easy-to-use turntable

With extremely high rotational accuracy, both in the radial and axial directions, the turntable allows high-accuracy flatness testing to be performed in addition to roundness and cylindricity measurements.

Unique design allows system upgrading

The system can be upgraded to CNC operation by replacing and adjusting the detector unit. (This task should be performed by a Mitutoyo technician.)

Technical Data

Turntable	
Rotational accuracy	
Radial:	(0.02+3.5H/10000) μ m
H: Probing height (mm)	
Axial:	(0.02+3.5X/10000) μ m
R: probing radius (mm)	
Rotational speed:	2, 4, 6, 10 rpm
Table diameter:	235 mm (200 mm: DS, DH models)
Centering range:	± 3 mm (± 5 mm: DS, DH models)
Levelling range:	$\pm 1^\circ$
Max. probing diameter:	300 mm
Max. workpiece diameter:	580 mm
Max. table loading:	30 kg
Vertical column (Z-axis)	
Vertical travel:	300 mm (500 mm: AH, DH models)
Straightness ($\lambda \times 2.5$):	0.10 μ m/100 mm, 0.15 μ m/300 mm (0.25 μ m/500 mm: AH, DH models)
Parallelism with turntable axis:	
	0.7 μ m/300 mm (1.2 μ m/500 mm: AH, DH models)
Positioning speed:	Max. 50 mm/s
Measuring speed:	0.5, 1, 2, 5 mm/s
Max. probing height:	300 mm (OD), 300 mm (ID) [500 mm: AH, DH models]
Max. probing depth:	85 mm for $\phi 32$ mm or more, 50 mm for $\phi 7$ mm or more
Horizontal arm (X-axis)	
Horizontal travel:	175 mm (from table axis -25 mm ~ +150 mm)
Straightness ($\lambda \times 2.5$):	0.7 μ m/150 mm
Squareness with turntable axis:	1.0 μ m/150 mm
Positioning speed:	Max. 30 mm/s with joystick operation
Measuring speed:	0.5, 1, 2, 5 mm/s
Probe and stylus	
Measuring range:	± 400 μ m/ ± 40 μ m/ ± 4 μ m
Measuring force:	10 to 50 mN (5 level switching)
Standard stylus:	12AAL021, carbide ball, $\phi 1.6$ mm
Measuring direction:	Bi-directional
Stylus angle adjustment:	$\pm 45^\circ$ (with graduations)
Air supply	
Air pressure:	0.39 MPa
Air consumption:	30 L/min.
Power supply:	100V AC - 240V AC, 50/60Hz
Dimensions (W x D x H):	
	940 x 510 x 900 mm: AS models
	910 x 510 x 900 mm: DS models
	940 x 510 x 1100 mm: AH models
	910 x 510 x 1100 mm: DH models
Mass:	180 kg (200 kg: AH, DH models)

Printout

