

Roundtest Extreme RA-H5200CNC

SERIES 211 – CNC Roundness/Cylindricity Measuring System

- Mitutoyo offers innovative roundness/cylindricity measuring systems capable of automated measurement with independent/simultaneous multi-axis CNC control. In addition to high measuring accuracy and reliability, these CNC models provide excellent inspection productivity.
- Roundness and surface roughness measurements are both available from a single measuring system so workpiece resetting for roughness measurement is not required.
- Roughness measurement is possible in the axial and circumferential directions.

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Technical Data

Turntable	
Rotational accuracy	
Radial:	(0.02+3.5H/10000) μm
H: probing height (mm)	
Axial:	(0.02+3.5X/10000) μm
X: distance from the turntable axis (mm)	
Rotational speed:	2, 4, 6, 10 rpm (20 rpm: auto-centering)
Table diameter:	300 mm
Centering range:	±5 mm
Levelling range:	±1°
Max. probing diameter:	356 mm
Max. workpiece diameter:	680 mm
Max. table loading:	80 kg (65 kg: auto-centering)
Vertical column (Z-axis)	
Vertical travel:	350 mm (550 mm)*
Straightness (λc2.5):	0.05 μm/100 mm, 0.14 μm/350 mm (0.2 μm/550 mm)*
Parallelism with turntable axis:	
	0.2 μm/350 mm (0.32 μm/550 mm)*
Positioning speed:	Max. 60 mm/s
Measuring speed:	0.5, 1, 2, 5 mm/s
Max. probing height:	350 mm (OD), 350 mm (ID) [550 mm (OD / ID)]*
Max. probing depth:	104 mm (ø32 mm or more) 26 mm (12.7 mm or more)
Horizontal arm (X-axis)	
Horizontal travel:	225 mm
Straightness (λc2.5):	0.4 μm/200 mm
Squareness with turntable axis:	0.5 μm/200 mm
Positioning speed:	Max. 50 mm/s
Measuring speed:	0.5, 1, 2, 5 mm/s
Probe and stylus	
Measuring range:	±400 μm/±40 μm/±4 μm (±5 mm: tracking range)
Measuring force:	40 mN
Standard stylus:	12AAE301, carbide ball, ø1.6 mm
Measuring direction:	Bi-directional
Stylus angle adjustment:	Fixed
Air supply	
Air pressure:	0.39 MPa
Air consumption:	45 L/min.
Power supply:	100V AC - 240V AC, 50/60Hz
Dimensions (WxDxH):	1260 x 710 x 1700 mm (1260 x 710 x 1900 mm)*
Mass:	650 kg (670 kg)* with vibration isolation stand: 170 kg

*Tall-column type



SPECIFICATIONS

Model	RA-H5200CNC	
Code No. (with vibration isolation stand)	211-533E	211-534E
Column travel	350 mm (standard column)	550 mm (tall column)