



The Challenge: The No. 1 Precision in the World

ROND COM 65A

We continue to take up the challenge of providing the number one precision in the world to respond to the needs of our customers. This has resulted in the adoption of granite for the standard guide that features minimal change over years of use, air bearings with extremely small frictional drag and advanced correction technology to achieve nanometer level accuracy.



ROND COM 65A

■ Features

- World's top rotation accuracy: $0.01 \mu\text{m}$.
- TIMS next-generated analysis program (ACCRETECH integrated measuring program).
- World's highest throughput (within 60 seconds for auto centering/tilting).
- Proven air bearings adopted for measuring axes.
- Attractive and user-friendly new design.
- Standard air vibration isolation guarantees accuracy.
- New detector with safety mechanism.

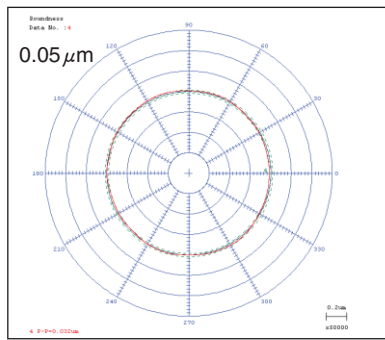


Fully Automatic Detector Holder (option)

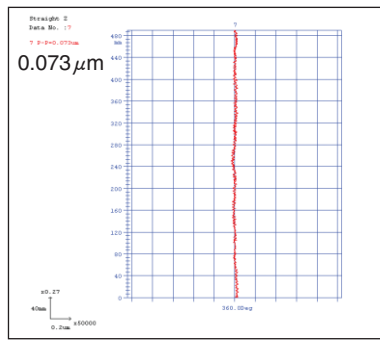
(Patent pending)

The fully automatic detector holder has two rotating axes: One for rotation in the horizontal plane (XY plane), and one for rotation in the vertical plane (YZ plane). In the past, the operator had to align the detector with the measuring point. This new holder fully automates this process, enabling automatic measurement of inner diameter, outer diameter, upper surface, lower surface and taper surface.

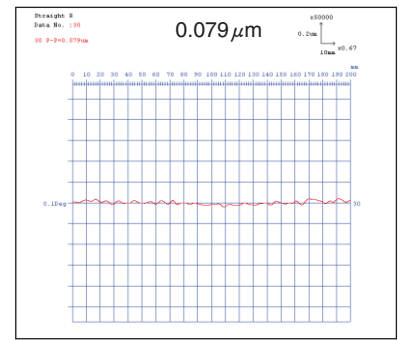
● World's Top Accuracy for Each Axis



Roundness (using master ball)



Up/down direction verticality (using straight edge)



Left/right direction verticality (using optical flat)

Specifications

Model		RONDCOM 65A
Measuring range	Max. measuring diameter	φ420 mm
	Left/right feed (R axis)	220 mm
	Up/down feed (Z axis)	500 mm
	Max. load diameter	φ680 mm
	Max. measuring height	Outer diameter: 500mm (825mm for roundness/concentricity measurement), Inner diameter: 500mm
Rotation accuracy	JIS B7451	(0.010 + 6H / 10000) μm H: Height from table surface to measuring point (mm)
	Max. deviation from min. square circle	(0.005 + 3H / 10000) μm
Straightness accuracy	Up/down direction (Z axis)	0.05μm/100mm, 0.2μm/500mm
	Radius direction (R axis)	0.5μm/200mm
Parallelness accuracy	Up/down direction (Z axis)	1.5μm/500mm
Indication accuracy	Radius direction (R axis)	(2 + L / 220) μm L: Movement distance (mm)
Rotation speed (θ axis)	Measurement	2 – 10/min
	Alignment	6, 10 or 20/min
Up/down speed (Z axis)	Measuring speed	0.6 – 6.0 mm
	Movement speed	0.6 – 30.0 mm
Up/down speed (R axis)	Measuring speed	0.6 – 6.0 mm
	Movement speed	0.6 – 20.0 mm
Auto stop	Function	Z axis, R axis
	Stop accuracy	Z axis: ±5μm, R axis: ±5μm
Table load conditions	Table outer diameter	φ290 mm
	Centering adjustment range	±5mm
	Tilting adjustment range	±1° (automatic/manual)
	Load	60 kg (for measurement and centering)
Detector	Measuring force	30 – 100 mN
	Stylus shape	φ1.6mm carbide ball
Roundness evaluation of profile error		MZC (min. range center line method), LSC (min. square center line method), MIC (max. inscribed circle center line method), MCC (min. circumscribed circle center line method), N.C. (no correction)
Measuring items	Rotation direction (θ)	Roundness, flatness, parallelness, concentricity, coaxiality, cylindricity, diameter deviation, non-uniformity, squareness, run-out, diameter
	Rectilinear direction (Z)	Straightness, taper, cylindricity, squareness, parallelness
	Radius direction (R)	Straightness
Functions		CNC measuring function, Notch function (level, angle, cursor), parameter design value collation
Types of filters		Digital filters (2RC, Gaussian)
Cut-off value	Rotation direction (θ)	15, 50, 150, 500, 15 – 150, 15 – 500 peaks/rotation
	Rectilinear direction (Z)	0.025, 0.08, 0.25, 0.8, 2.5 or 8mm
Display	Monitor	Color monitor
	Content	Measuring conditions, measuring parameters, profile drawing (expansion plan, 3D plan, shading) Printer output conditions, comments, error message, etc.
Recording unit	Method	Select color printer or laser printer
	Magnification	10 – 200 K (22 steps), auto, measuring magnification
Power source		AC 100V, 50/60 Hz
Power consumption		800 VA (not including printer)
Air source		0.5 – 0.7 MPa
Air consumption		49 ℓ/min.
Installation dimensions		1900 (W) × 950 (D) × 1800 (H) mm
Weight		700 kg