



# RONDCOM 65A

## On Track to Become No. 1 in the World

Our customers want the best and at ACCRETECH we are committed to giving it to them, always striving to achieve the world's highest level of accuracy. The RONDCOM 65A, our flagship model, is a table-rotating type roundness measuring instrument that features reference guideways made of gabbro with minimal susceptibility to age-related deterioration. In addition, a sliding surface with air bearings to lessen friction resistance and advanced correction technology enable this precision instrument to realize nanometer-level accuracy.



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RONDCOM 65A

\* CNC detector holder is optional.

## Highest Rotation Accuracy In its Class: 0.01 $\mu\text{m}$

## Industry's First High-Accuracy Air Bearings for Z-, R-, and $\theta$ -axes.

Gabbro is used in the column, base, and R-axis, guaranteeing the top-class high accuracy over time.

## World's Highest Throughput

within 60 seconds for alignment

## Air Type Anti-Vibration Table Provided as Standard

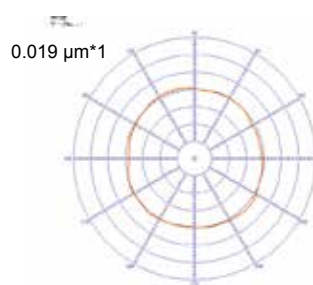
## Detector with All Orientation Safety Function

If stylus overload is detected, the emergency stop function is automatically activated to prevent damage to stylus and detector.

## Offset Type Detector Holder Available as an Option (patented)

Various workpieces can be measured easily without interference from the R-axis arm.

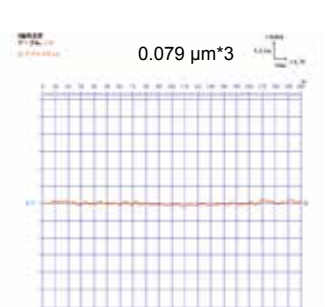
## World's Top Class Accuracy for Each Axis



Roundness (Using a master ball)  
\*1 Value after separation of master ball accuracy



Vertical direction straightness  
(Using a straight edge)  
\*2 Value after separation of straightedge accuracy

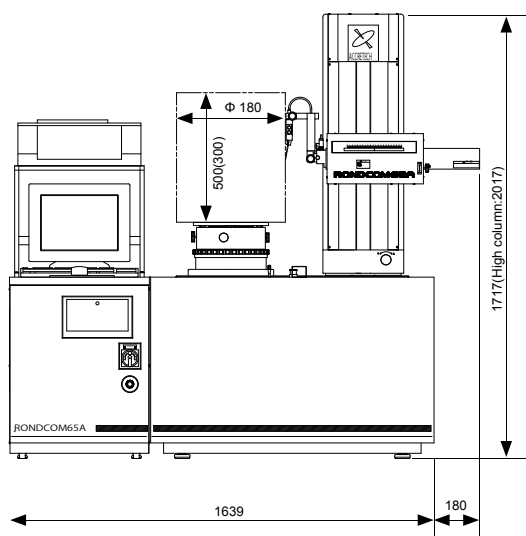
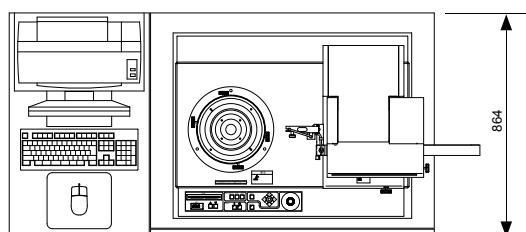


Horizontal direction straightness  
(Using an optical flat)  
\*3 Data including optical flat errors.



Sample of roundness measurement using a non-contact detector (option)

## External view



## Specifications

Model		RONDCOM 65A	
		R65A	
		High column model	
Measuring system		CNC and manual	
Measuring range	Max. measuring diameter	Φ 420 mm	
	Right/left feed range (R-axis)	220 mm	
	Up/down feed range (Z-axis)	500 mm	800 mm
	Max. loading diameter	Φ 680 mm	
	Max. measuring height	500 mm	800 mm
	Max. measuring depth (Throat height)	150 mm	
		(Limited by size of measuring diameter and combination of detector and stylus)	
Rotation accuracy	Radial direction JIS B 7451-1997	(0.01 + 6H/10,000) μm	
		(H: Height from table top to measuring point mm)	
Straightness accuracy	Up/down (Z-axis) direction	Narrow range	0.05 μm/100 mm
		Wide range	0.2 μm/500 mm
	Radial direction (R-axis)	0.5 μm/200 mm	
Parallelism accuracy	Up/down direction (Z-axis)	1.5 μm/500 mm	
	Radial direction (R-axis)	0.5 μm/200 mm	
Scale indication accuracy	Radial direction (R-axis)	(2 + L/220) μm L: Moving length (mm)	
Measuring speed	Rotational speed (θ-axis)	2 to 10/min (At moving: Max20/min)	
	In automatic centering/tilting	2, 4, 6, 10, 20/min	
	Up/down speed (Z-axis)	0.6 to 6 mm/s (At moving: Max30 mm/s)	
	Radial direction speed (R-axis)	0.6 to 6 mm/s (At moving: Max20 mm/s)	
Auto stop accuracy	Z-axis/R-axis	±5 μm	
Rotary table	Table outside diameter	Φ 290 mm	
	Adjustment range of centering/tilting	±5 mm/±1°	
	Load	60 kg	
Detector	Measuring force	30 to 100 mN (steplessly variable)	
	Stylus shape	Φ 1.6 mm carbide ball, Length: 53 mm	
Number of sampling		3600 points/rotation	
Type of filter	Digital filter	Gaussian/2RC/Spline/Robust (Spline)	
Measurement magnification		50 to 100 k	
Cutoff value	Rotational direction (θ-axis)	Low pass	15, 50, 150, 500 peaks/rotation, settable any value in range 15 to 500 peaks/rotation
		Band pass	1 to 500 peaks/rotation
	Rectilinear direction (Z-axis)	Low pass	0.025, 0.08, 0.25, 0.8, 2.5, 8 mm (any value in 0.0001 mm units)
Roundness evaluation of form error		MZO (min. zone circle method), LSC (least square circle method), MIC (max. inscribed circle method), MCC (min. circumscribed circle method), N.C. (no compensation), MULTI (multiple setting)	
Measuring items	Rotational direction	Roundness, flatness, flatness (compound), parallelism, concentricity, coaxiality, cylindricity, diameter deviation, squareness, thickness variation, run-out, radius measurement, partial circle	
	Rectilinear direction	Straightness (Z), straightness (R), taper ratio, cylindricity, squareness, parallelism, diameter deviation, axis straightness	
Analysis processing functions		Notch function (level, angle, cursor), combination of roundness evaluation methods, nominal value collation, cylinder 3D profile display (line drawing, shading, contour line), real-time display, profile characteristic graph display (bearing area curve, amplitude distribution function, power spectrum), CNC automatic measuring function, automatic centering/tilting adjustment function	
Special function		Offset type CNC detector holder (option)	
Display (color monitor)		17" LCD	
Display items		Measuring conditions, measuring parameters, comments, printer output conditions, profile graphics (expansion plan, 3D plan), error messages, etc.	
Recording system		Color or laser printer can be selected	
Other	Power supply (Voltage to be specified), frequency		AC100 to 240V ±10%, 50/60Hz (grounding required)
	Power consumption		Approx. 800 VA (except printer)
	Air supply	Supply pressure	0.5 to 0.7 MPa
		Working pressure	0.4 MPa
		Air consumption volume	49 NL/min
	Installation dimensions (W x D x H) mm		1900 x 950 x 1800      1900 x 950 x 2100
	Weight (except options)		790 kg      910 kg

We have experience in special customization in terms of load capacity, etc. Contact the sales personnel for details.