



# RONDCOM 65A-LH

**Maximum load capacity: 250kg**

**Maximum measurement diameter:  $\phi$  580 mm**

**Maximum measurement height 900 mm (standard specification)**

**Optimum for measurement of large spindles and other applications  
requiring ultrahigh precision measurement**

RONDCOM 65A-LH is a reference machine for instruments of this size, boasting the world's highest level accuracy. It is a large roundness measuring instrument based on the design concept of R65A having the world's highest class accuracy equipped with a platform redesigned from scratch.



RONDCOM 65A-LH

## World best precision (Large-size table rotating type)

|                       |  |
|-----------------------|--|
| Rotation accuracy     | $0.08 + 6H/10,000 \mu\text{m}$   |
| Straightness accuracy | $Z = 1.0 \mu\text{m}/900 \text{ mm}$<br>$Z = 0.2 \mu\text{m}/100 \text{ mm}$ |

## Newly Developed Air Bearing Used for $\theta$ axis

## Mobile Operation Panel for Easy Operability

The operation panel, which is independent of the instrument body, can be arranged in a variety of layouts, making it especially convenient for measurement of large workpieces.

## Built-In Vibration Isolation Stand

## Gabbro is used for the base, column and R axis.

As its secular change is very little, it can maintain the capability for a long period of time.

## Offset CNC Detector Holder (Patented)

The offset CNC detector holder can change the detector direction automatically, which results in complete CNC measurement, enabling continuous automatic measurement of inner and outer diameters and top and bottom surfaces. The holder is an offset type and detector is long stylus specification, it does not have the interference to R-axis arm, and it becomes easy to measure even in frange or a thickness work.

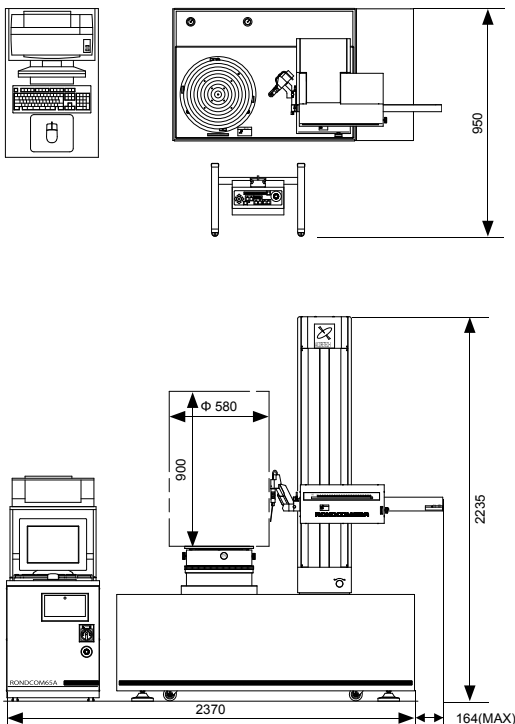




## Specifications

| Model                              |   | RONDCOM 65A-LH   |
|------------------------------------|---|--|
| Measuring system                   |   | CNC and manual   |
| Measuring range                    | Max. measuring diameter                           | Φ 580 mm   |
|                                    | Right/left feed range (R-axis)                    | 343 mm   |
|                                    | Up/down feed range (Z-axis)                       | 900 mm   |
|                                    | Max. loading diameter                             | Φ 900 mm   |
|                                    | Max. measuring height                             | 900 mm   |
| Rotation accuracy                  | Max. measuring depth (Throat height)              | 190 mm   |
|                                    |   | (Limited by size of measuring diameter and combination of detector and stylus)   |
| Straightness accuracy              | Radial direction JIS B 7451-1997                  | (0.08 + 6H/10,000) μm<br>(H: Height from table top to measuring point mm)  |
|                                    | Up/down (Z-axis) direction                        | Narrow range: 0.2 μm/100 mm<br>Wide range: 1.0 μm/900 mm   |
|                                    | Radial direction (R-axis)                         | 1.0 μm/200 mm  |
| Parallelism accuracy               | Up/down direction (Z-axis)                        | 3.6 μm/900 mm  |
|                                    | Radial direction (R-axis)                         | 2 μm/200 mm  |
| Scale indication accuracy          | Radial direction (R-axis)                         | (2 + L/220) μm L: Moving length mm   |
| Measuring speed                    | Rotational speed (θ-axis)                         | 0.6 to 6/min<br>(At moving: Max 6/min)   |
|                                    | In automatic centering/tilting                    | 2, 4, 6/min  |
|                                    | Up/down speed (Z-axis)                            | 0.6 to 6 mm/s (At moving: Max 30 mm/s)   |
|                                    | Radial direction speed (R-axis)                   | 0.6 to 6 mm/s (At moving: Max 20 mm/s)   |
| Auto stop accuracy                 | Z-axis/R-axis                                     | ±5 μm  |
| Rotary table                       | Table outside diameter                            | Φ 400 mm   |
|                                    | Adjustment range of centering/tilting             | ±5 mm/±1°  |
|                                    | Load  | 250 kg   |
| Detector                           | Measuring force                                   | 30 to 100 mN (steplessly variable)   |
|                                    | Stylus shape                                      | Φ 1.6 mm carbide ball, Length 90.5 mm  |
| Number of sampling                 |   | 14,400 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, 1500 peaks/rotation, settable any value in range 15 to 1500 peaks/rotation<br>Band pass: 1 to 1500 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 |   | MZC (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 240 V ±10%, 50/60 Hz (grounding required)   |
|                                    | Power consumption                                 | Approx. 800 VA (except printer)  |
|                                    | Air supply  | Supply pressure: 0.6 to 0.8 MPa  |
|                                    |   | Working pressure: 0.5 MPa  |
|                                    |   | Air consumption volume: 49 NL/min  |
|                                    | Installation dimensions (W x D x H) mm            | 2300 x 950 x 2235  |
|                                    | Weight (except options)                           | 1480 kg  |

## External view



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