



RONDCOM 44DX3/44SD3

Designed to Deliver the World's Highest Standard of Performance



RONDCOM 44DX3



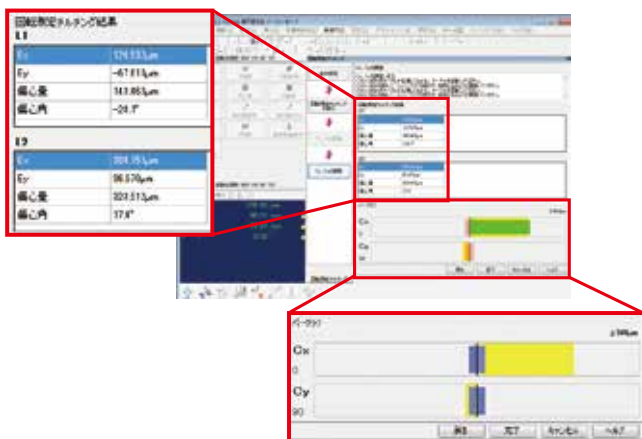
RONDCOM 44SD3
* Anti-vibration table, PC rack and printer are optional.

Compact, High-Accuracy Manual Roundness Measuring Instrument

With rotation accuracy of $(0.02 + 3.7H/10000) \mu\text{m}$, this instrument supports measurement of high-precision components. Assured R-axis indication accuracy improves the reliability of diameter measurements.

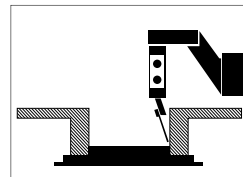
Centering/Tilting/Leveling Support Functions (patented)

Easily adjust eccentricity and tilt between the center of rotation and the center of the workpiece simply by adjusting the displacement to zero as indicated on the bar graph in the alignment display.



Offset Type CNC Detector Holder (patented) (option)

Various workpieces can be measured easily without interference from the R-axis arm. You can switch between outside diameter measurement and top flatness measurement just by tilting the detector holder.



Example of effective workpiece measurement with the offset type detector holder



Upgradeable from Manual to CNC

A simple upgrade procedure lets you easily convert the manual type RONDCOM 44 into the CNC type RONDCOM 54. The original footprint remains unchanged so there is no disruption to your workspace. So even when a manual machine has been installed because only a small number of workpieces need to be measured, you can upgrade it at any time as needed.

● Conventional measuring instrument



● RONDCOM 44 and 54 series



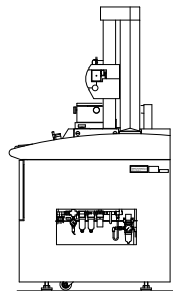
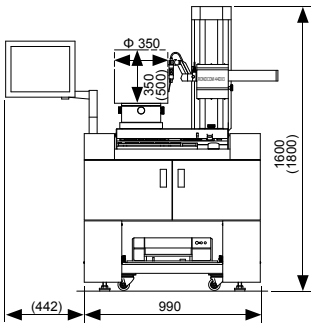
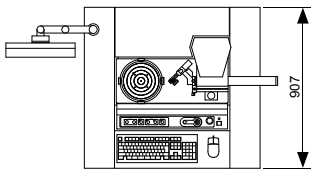
IMR engine achieving fastest alignment

The newly developed high-resolution I. M. R (Infinite Magnification Range) board ensures resolution of 2 nm (2/1000 μm) in the measurement range of ±1000 μm. This is equivalent to a conventional measuring magnification of 10000x. In combination with the centering/tilting support functions, these instruments make possible a tremendous leap in working efficiency.

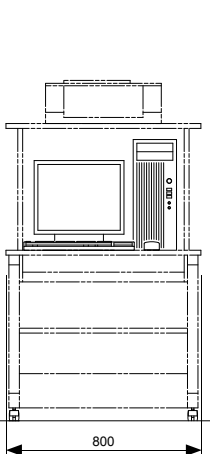
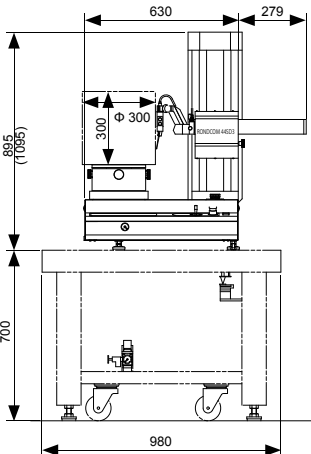
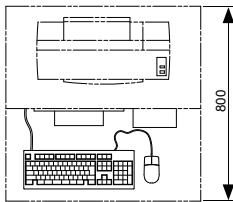
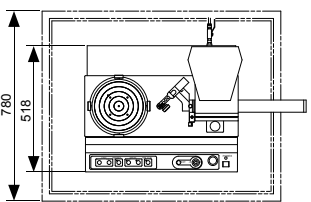


External view

RONDCOM44DX3



RONDCOM44SD3



Options
Anti-vibration table: E-VS-R16B (H=700)
System rack: E-DK-S24A

Specifications

Model		RONDCOM 44			
		DX3		SD3	
		High column		High column	
Measuring system		Manual			
Measuring range	Max. measuring diameter	OD:Φ 300 mm, ID: Φ 360 mm			
	Right/left feed range (R-axis)	180 mm			
	Up/down feed range (Z-axis)	300 mm	500 mm	300 mm	500 mm
	Max. loading diameter	Φ 580 mm			
	Max. measuring height (OD/ID* measurement)	300 mm	500 mm	300 mm	500 mm
Rotation accuracy	Max. measuring depth (Throat height)	150 mm (Limited by size of measuring diameter and combination of detector and stylus)			
	Radial direction JIS B 7451-1997	(0.02 + 3.7 H/10,000) μm (H: Height from table top to measuring point mm)			
	Axial direction JIS B 7451-1997	(0.02 + 3.7 R/10,000) μm (R: Distance from table rotational center mm)			
Straightness accuracy	Up/down direction (Z-axis)	0.11 μm/100 mm			
	Narrow range	0.17 μm/290 mm	0.23 μm/490 mm	0.17 μm/290 mm	0.23 μm/490 mm
	Radial direction (R-axis)	0.7 μm/150 mm			
Parallelism accuracy	Up/down direction (Z-axis)	0.7 μm/290 mm	1.04 μm/490 mm	0.7 μm/290 mm	1.04 μm/490 mm
	Radial direction (R-axis)	1.0 μm/150 mm			
Indication accuracy	Radial direction (R-axis)	(2 + L/180) μm L: Moving length mm			
Measurement speed	Rotational speed (θ-axis)	2 to 10/min (At moving: Max20/min)			
	Up/down speed (Z-axis)	0.5 to 6 mm/s (At moving: Max50 mm/s)			
	Radial direction speed (R-axis)	0.5 to 6 mm/s (At moving: Max25 mm/s)			
Auto stop accuracy	Z-axis/R-axis	±5 μm			
Rotary table	Table outside diameter	Φ 220 mm			
	Adjustment range of centering/tilting	±2 mm/±1°			
	Load	30 kg			
Detector	Measuring force	30 to 100 mN (steplessly variable)			
	Stylus shape	Φ 1.6 mm carbide ball, Length: 53 mm			
Number of sampling	14,400 points/rotation				
Type of filter	Digital filter	Gaussian/2RC/Spline/Robust (Spline)			
Measuring range	±1000 μm, ±200 μm				
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		
		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), cylindricity, squareness, parallelism, diameter deviation, axis straightness			
Analysis processing functions	Centering/tilting support function, 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), semiautomatic measuring function, wide-range function				
Special functions	Offset type detector holder (standard equipment) Upgrade to RONDCOM 54 is possible				
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. 460 VA (except printer)			
	Air supply	Supply pressure	0.35 to 0.7 MPa		
		Working pressure	0.3 MPa		
		Air consumption volume	30 NL/min		
	Installation dimensions (W x D x H) mm	1500 x 900 x 1600	1500 x 900 x 1900	2050 x 900 x 1700	2050 x 900 x 1900
Weight (except options)	500 kg	510 kg	194 kg	204 kg	

Dedicated catalog is available.