

Working Towards the World's Standard Machines

RONDCOM 54DX/54SD



All-in-one Type RONDCOM 54DX

Rotation accuracy of $0.02 \pm 4H/10000 \mu\text{m}$
 In full pursuit of compact high accuracy and high rigidity

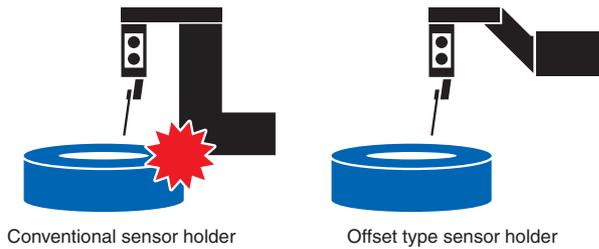
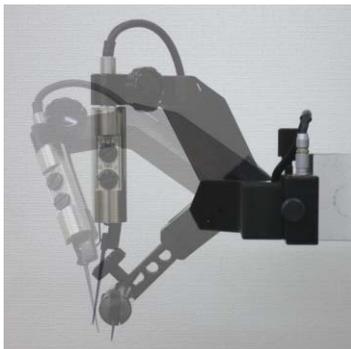


Separate Type RONDCOM 54SD

* The anti-vibration table, system rack and printer are options.

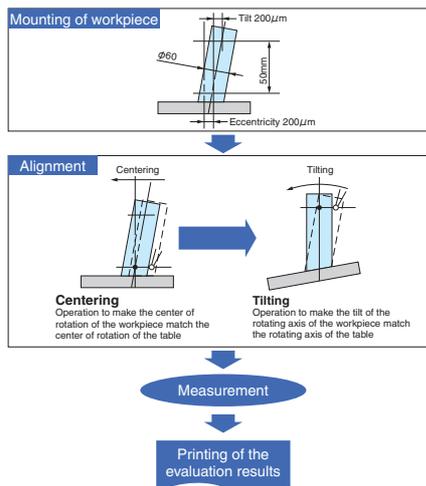
New Offset Type Sensor Holder (patent pending)

The RONDCOM 54DX/SD comes equipped with a newly developed offset type sensor holder as standard. This holder enables measurement without interference between the R-axis arm and the workpiece. (Patent pending)
 This holder simplifies the measurement of flanged workpieces, workpieces with thick walls between the ID and OD, and deep holes.



Auto-centering, Auto-tilting and Auto-leveling Function

This function fully automatically adjusts and corrects deviation between the workpiece shaft center and the center of rotation of the table in a short time.
 Combined use with full automatic measurement enables completely automatic operation.



Offset Type CNC Sensor Holder (option) (patent pending)

The RONDCOM 54 comes equipped with a newly developed offset type sensor holder as standard. This holder enables measurement without interference between the R-axis arm and the workpiece. (Patent pending)

This holder simplifies the measurement of flanged workpieces, workpieces with thick walls between the ID and OD, and deep holes. An offset type CNC sensor holder for enhancing RONDCOM 54's CNC functions is also available. Measurement personnel merely register the measurement procedure by teaching, and the orientation of the sensor is automatically aligned with the ID, OD, top or bottom surface, or taper surface to ensure full automatic measurement.



Specifications

Model		RONDCOM 54	
		DX	SD
Measuring system		CNC and manual	
Measuring range	Max. measuring diameter	φ300mm	
	Left/right feed (R-axis)	170mm	
	Up/down feed (R-axis)	300mm	
	Max. load diameter	φ580mm	
	Max. measuring height	OD measurement: 300mm, ID measurement: 300mm	
Rotation accuracy	Radial direction JIS 7451-1997	$(0.02+4H/10,000) \mu\text{m}$ H: Height from table surface to measuring point (mm)	
	Axial direction JIS B 7451-1997	$(0.02+4R/10,000) \mu\text{m}$ R: Distance from table center of rotation (mm)	
Straightness accuracy	Up/down direction (Z-axis)	0.12 $\mu\text{m}/100\text{mm}$, 0.2 $\mu\text{m}/300\text{mm}$	
	Radius direction (R-axis)	0.8 $\mu\text{m}/150\text{mm}$	
Parallelism accuracy	Up/down direction (Z-axis)	0.8 $\mu\text{m}/300\text{mm}$	
	Radius direction (R-axis)	1.0 $\mu\text{m}/150\text{mm}$	
Indication Accuracy	Radius direction (R-axis)	$(2+L/170) \mu\text{m}$ L: Drive distance (mm)	
Rotation speed (θ -axis)		2 to 10/min	
Up/down speed (Z-axis)	Measuring speed (drive speed)	0.5 to 6 mm/s (max. 50 mm/s)	
Radius speed (R-axis)	Measuring speed (drive speed)	0.5 to 6 mm/s (max. 25 mm/s)	
Auto-trigger function	Z-axis/R-axis	$\pm 5 \mu\text{m}$	
Rotating table	Table outer diameter	φ220mm	
	Adjustment range centering/tilting	$\pm 2\text{mm}/\pm 1^\circ$	
	Load	30kg	
Sensor	Measuring force	30 to 100 mN (variable)	
	Stylus shape	φ1.6mm carbide ball, length 53 mm	
Number of sampling points		14,400 points/rotation	
Filter types	Digital filter	Gaussian/2RC	
Cutoff values	Rotation	(low pass)	15, 50, 150, 500, 1500 peaks/rotation, any value in range 15 to 1500 peaks/rotation
		(band pass)	15 to 1500, 15 to 500, 15 to 1500 peaks/rotation
	Rectilinear	(low pass)	0.025, 0.08, 0.25, 0.8, 2.5, 8 mm, settable in 0.0001 mm units
Roundness evaluation of profile error		MZC (min. range centerline method), LSC (least square centerline method), MIC (max. inscribed circle centerline method), MCC (min. circumscribed circle centerline method), N.C. (no correction), Multi (multiple setting)	
Measuring items	Rotation	Roundness, flatness, parallelism, concentricity, coaxiality, cylindricity, diameter deviation, non-uniformity, squareness, thickness non-uniformity, run-out, diameter	
	Rectilinear	Straightness (Z), straightness (R), cylindricity, squareness, parallelism, diameter deviation, axis center straightness	
Processing functions		Centering/tilting support functions, notch processing function (level, angle, cursor, combination of roundness evaluation methods, nominal value collation, shading processing function, real-time display verification function CNC automatic measurement function, automatic centering/tilting function (for R54)	
Special functions		Offset type sensor holder provided as standard Offset Type CNC Sensor Holder (option) can be mounted	
Display (color monitor)		15" LCD	17" CRT
Display items		Measuring conditions, measuring parameters, printer output conditions, profile drawing (expansion plan, 3D plan), comments, error messages, etc.	
Recording system		Selection of color printer/laser printer	
Measuring range		$\pm 1000 \mu\text{m}$, $\pm 200 \mu\text{m}$	
Other	Power supply (voltage indication required)	AC 100 V to 240 V, 50/60 Hz	
	Power consumption	Approx. 470 VA (not including printer)	
	Air source	Supply pressure: 0.35 to 0.7 MPa, Usage pressure: 0.3 MPa	
	Air consumption volume	30Nℓ /min	
	Machine dimensions (mm)	990×925×1600	630×473×895
	Machine weight (kg)	500	220