



NEW

Roundness
and Cylindrical Profile
Measuring Instruments

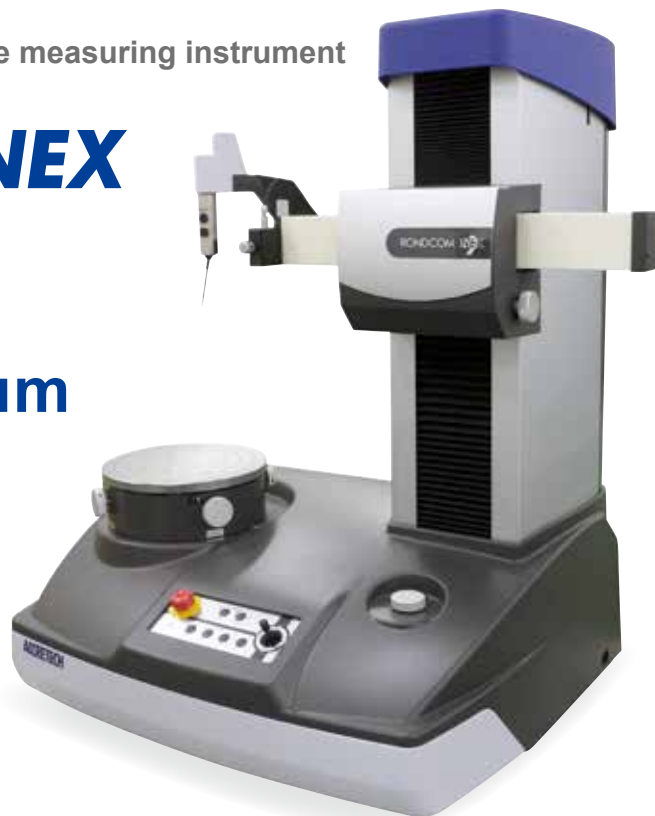
RONDCOM NEX

Top class high accuracy roundness cylindrical profile measuring instrument

RONDCOM NEX

**Rotation accuracy
(0.02 + 3.2 H/10000) μm**

Equipped with full new function and meets a need of machined parts high accuracy measurement. It is a top class high accuracy roundness cylindrical profile measuring instrument.



RONDCOM NEX SD type



ACCTee Integrated Analysis Software

Innovative approach to measurement with new concept All-in-one software for measurement and analysis based on electronic form system.

Rust proof by adopting SUS table

Adopting SUS for the table frees from rust.
Unnecessity of oil coating,
Maintenance-free.

Extension of centering stroke

Extend the centering stroke to ± 5 mm by extending the table diameter to $\Phi 235$ mm.

Spiral cylindricity measuring function

Spiral cylindricity measurement by combining table rotation with rectilinear movement. Unnecessity of Z positioning saves 30% of cylindricity measurement time compared to conventional manner.

Full-covered main body and column

Minimization of effect of disturbance from air-conditioner and others by functional design.

Automatic lubrication function mounted on Z-axis column

Almost maintenance-free by automatic lubrication to column.

Weight saving and high rigidity by employing ceramics for R-axis arm

The linear expansion coefficient of Ceramic is smaller than iron.
The material of ceramic is hardly affected by environmental changes.

Storage part for personal computer

Printer

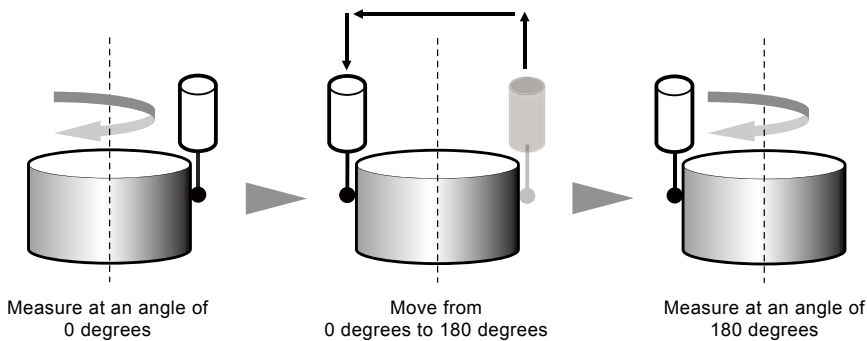
With drawer mechanism.



RONDCOM NEX DX type

Diameter measurement function (Opposite Pair Method) **PATENTED**

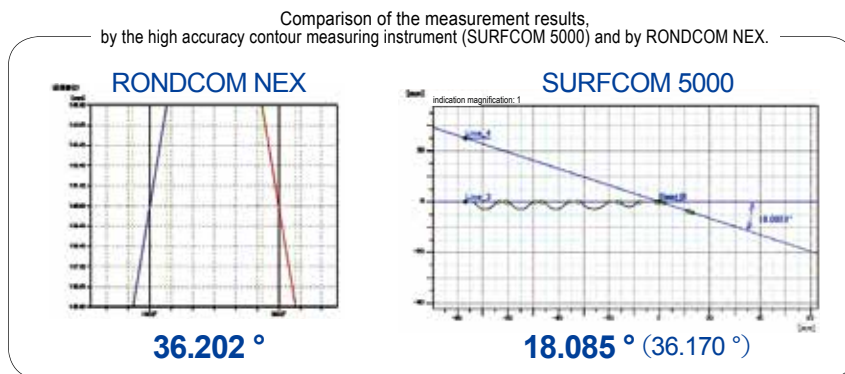
Superior feature to measure inner/ outer diameter with high repeatability. Measure a workpiece at angles of 0 and 180 degrees on the table. The evaluation algorithm implemented as the standard to correct the errors by temperature change and generatrix line shifting, performs highly-precise diameter measurement.



Example of the measurement

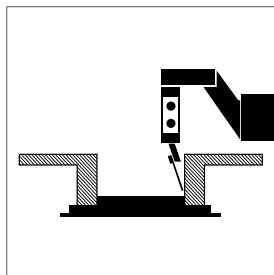
R-axis taper following function

The straightness of tapered surface can be measured by the function. Taper angle and straightness can be measured even if it exceeds the range of the detector.



Example of the measurement

Offset type CNC and manual detector holder **PATENTED**



Standard function on R-NEX allows to measure wide variety of workpieces not to interfere with R-axis.

This function (manual type) provided to NEX100 system enables to measure outer diameter and flatness on upper face by tilting the folder.

CNC type detector equipped in NEX200/300 provides the fully automated detector position control to switch the inner/outer diameters, upper/lower faces, taper face etc. for enhancing extremely the measurement efficiency.

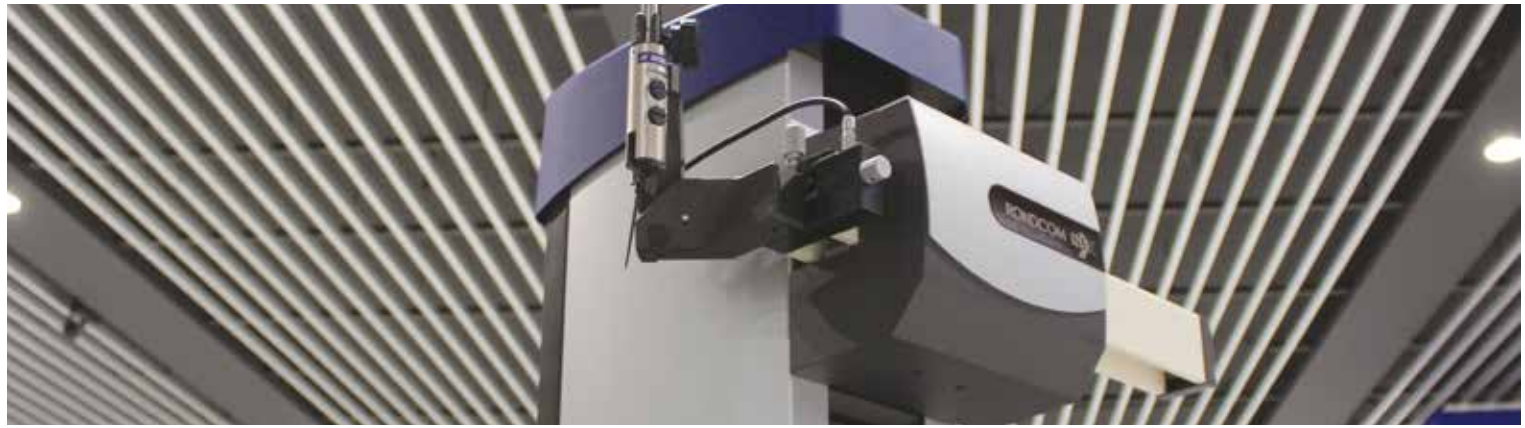
Conformance to standards
NEX Rs model, one and only one machine enabling the high-precision roughness measurement, is added on product line-up.



RNDCOM NEX Rs model is on product line-up to meet the demand of "Wish to measure the roughness with the roundness measuring instrument".

NEX Rs equipped with the high-precision scale on all axes and the low vibration air bearing enables high-accuracy roughness measurement towards R-axis, T-axis, and Z-axis directions.

*1 An in-company investigation: with optional detector E-DT-R290A



Specification

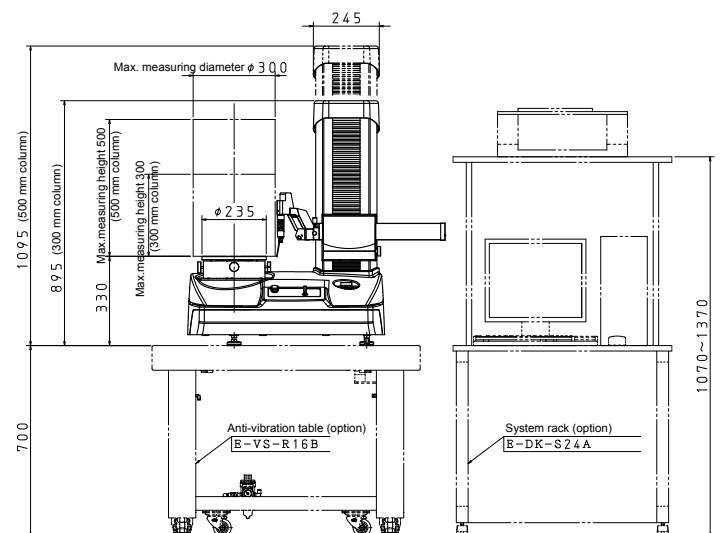
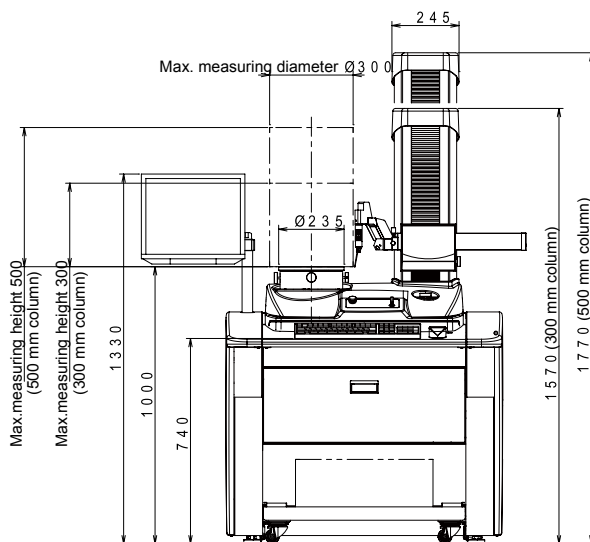
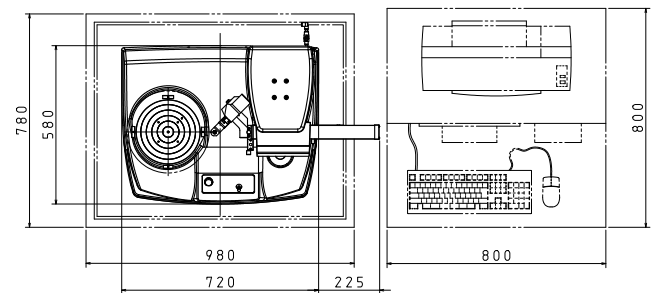
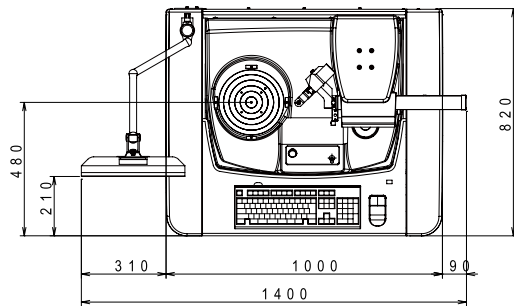
Model Item			ROND COM NEX												
			1 0 0				2 0 0				3 0 0				
			S D		D X		S D		D X		S D		D X		
			11	12	11	12	11	12	11	12	11	12	11	12	
Alignment			Manual				CNC								
Offset type detector holder			Manual								CNC				
Measuring range			Max.measuring height (mm)		300	500	300	500	300	500	300	500	300	500	
			Max. measuring diameter (mm)		Φ 300										
			Radial feed range (R-axis)(mm)		180										
			Up/down feed range (Z-axis)(mm)		300/500 (for 500mm column)										
			Max. loading diameter (mm)		Φ 580										
			Max. measuring depth (Throat height)(mm)		150										
Precision	Rotation accuracy	Radial direction (μm)		(0.02 + 3.2H/10000)											
		Axial direction (μm)		(0.02 + 3.2R/10000)											
	Straightness accuracy	Up/down direction (Z-axis)(μm/mm)		0.10/100											
		Radial direction (R-axis)		0.15/300	0.23/500	0.15/300	0.23/500	0.15/300	0.23/500	0.15/300	0.23/500	0.15/300	0.23/500		
	Parallelism accuracy	Z-axis/T-axis (μm/mm)		0.7/300	1.0/500	0.7/300	1.0/500	0.7/300	1.0/500	0.7/300	1.0/500	0.7/300	1.0/500		
	Squareness accuracy	R-axis/T-axis (μm/mm)		1.0/150											
	Speed	Measuring speed	Rotation speed (θ-axis)/(min)		1 to 10										
Up/down direction (Z-axis)(mm/s)			0.5 to 10												
Radial direction (R-axis)(mm/s)			0.5 to 10												
Moving speed		Rotation speed (θ-axis)/(min)		max. 20											
		Up/down direction (Z-axis)(mm/s)		5 to 30											
		Radial direction (R-axis)(mm/s)		5 to 60											
Table		Table diameter (mm)		Φ 235											
		Centering range (mm)		±5											
		Tilting range (°)		±1											
		Max. loading weight (N)		300											
Detector		Measuring force (mN)		30 to 100											
		Linear characteristic range (μm)		±1000											
		Function		Switching outer or inner diameter, Front/over travel adjustment function, Emergency stop function											
Stylus		Stylus edge form (mm)		Φ 1.6											
		Length (mm)		53											
		Stylus edge material		Carbide											
Installation dimensions		Width (mm)		720	1095	1570	1770	720	1095	1570	1770	720	1095	1570	1770
		Depth (mm)		580		820		580		820		580		820	
		Height (mm)		895	1095	1570	1770	895	1095	1570	1770	895	1095	1570	1770
Weight		Measuring section (kg)		Approx. 170	Approx. 180	Approx. 330	Approx. 340	Approx. 170	Approx. 180	Approx. 330	Approx. 340	Approx. 170	Approx. 180	Approx. 330	Approx. 340
		Data processing part (kg)		Approx. 10				Approx. 10				Approx. 10			
Power supply		Voltage (V), Frequency (Hz)		AC100 to 240、50/60 (grounding required)											
Air Supply		Supply pressure (MPa)		0.35 to 0.7											
		Working pressure (MPa)		0.3											
		Air consumption volume (NL/min)		30											
Setting envitonment		Temperature of operation guarantee (°C)		10 to 30											
		Temperature of accuracy guarantee (°C)		20±2											



External View

ROND COM NEX DX type

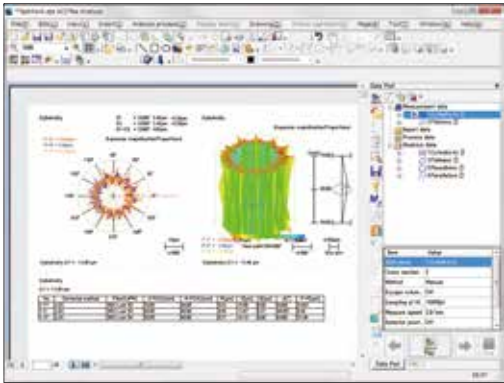
ROND COM NEX SD type



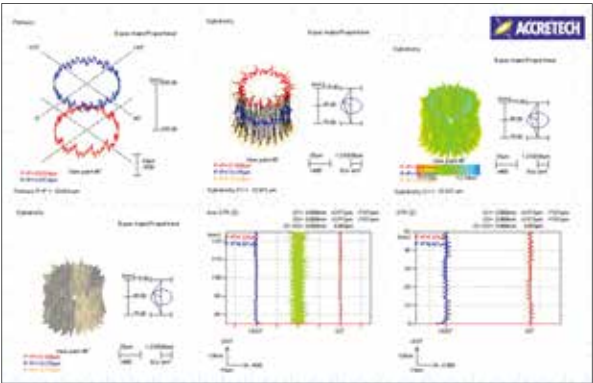
Integrated Analysis Software ACCTee

Easy-to-Use Interface for Leading-Edge Operability

ACCTee is equipped with a Windows style user interface that is easy for anyone to understand and use. User-friendly and intuitive icons guide you through a series of operations from measurement to the printing of analysis results.



Example of measurement/analysis window



Example of printing

Type naming convention based on the system configuration and selection

Product name

RONDCOM NEX

1 System

SD/DX

2 Type

—

○○

3 Column

1 System selection
RONDCOM NEX *** SD/DX- ○○

***	Alignment	Detector holder
1 0 0	Manual	Manual detector holder
2 0 0	Automatic	Manual detector holder
3 0 0	Automatic	CNC detector holder

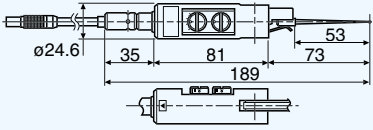
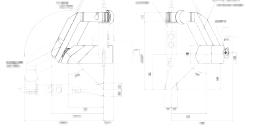
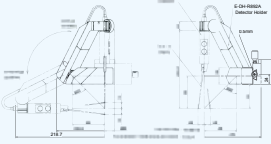
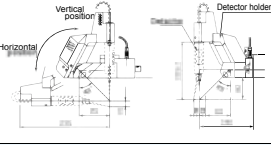
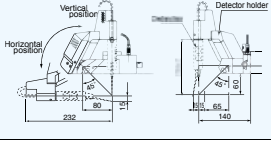
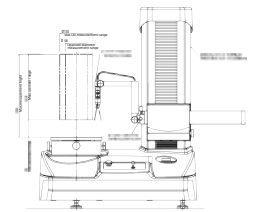
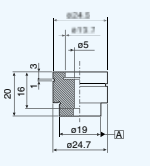
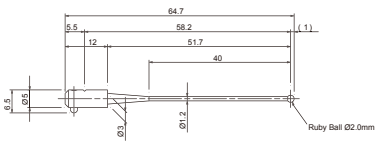
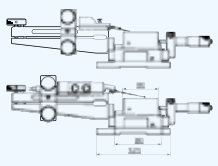
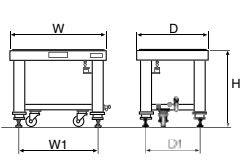
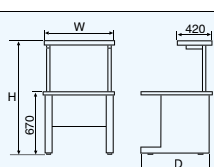
2 Type selection
RONDCOM NEX *** SD/DX- ○○

Type	
SD	DX

3 Column selection
RONDCOM NEX *** SD/DX- ○○

○○	Column type
1 1	300 mm column
1 2	500 mm column

Specialized option for RONDCOM NEX

Name	Model	External view	Specifications
All position detector	E-DT-R120A		Measuring range: $\pm 1000 \mu\text{m}$ Measuring force: 30 to 100 mN Front adjustment mechanism ID/OD switch function
Offset type detector holder	E-DH-R845A		Standard equipment for RONDCOM NEX 100/200 System Throat height H: 153 mm Throat depth D: 65 mm
Offset type detector holder 1.5:1 type	E-DH-R892A		For RONDCOM NEX 100/200 System Throat height H: 191 mm Throat depth D: 65 mm Stylus sensitivity 1.5 : 1
Offset type CNC detector holder	E-DH-RB28B		Standard equipment for RONDCOM NEX 300 Throat height H: 153 mm Throat depth D: 65 mm
Offset type CNC detector holder 1.5:1 type	E-DH-RB30B		For RONDCOM NEX 300 System Throat height H: 191 mm Throat depth D: 65 mm Stylus sensitivity 1.5 : 1
Horizontal feed coupling	E-DH-RB08A		Shared use for RONDCOM NEX/NEX Rs
Holder for facing diameter measurement	E-DH-RB09A		Shared use for RONDCOM NEX/NEX Rs For max. outer diameter: $\Phi 100\text{mm}$ and under *Need horizontal feed coupling (E-DH-RB08A), when using this holder
Diameter master	E-MG-R88A		Outer diameter $\Phi 24.5 \text{ mm}$ Inner diameter $\Phi 13.7 \text{ mm}$ Actual measured value data attached *Master workpiece with the identical diameter to measured work- piece is producible. Please make inquiries about the production of custom-ordered master workpiece to the sales department.
Stylus	EM46000-S864		Facing diameter measurement recommended
Magnification calibration set	E-MC-R33A		Max. calibration range: 400 μm Min. scale interval: 0.2 μm Weight: 1.7 kg
Anti-vibration table	E-VS-R16B		Anti-vibration system: Diaphragm air spring Natural frequency: $V = 2 \text{ Hz}$, $H = 2.2 \text{ Hz}$ Load weight: 250 kg Air Source: 350 kPa to 700 kPa Dimensions: 980 mm (W) x 780 mm (D) x 700 mm (H) 760 mm (W1) x 560 mm (D1) Weight: 190 kg
System rack	E-DK-S24A		Dimensions: 800 mm x 800 mm x (1070 to 1370) mm Weight: 44.5 kg

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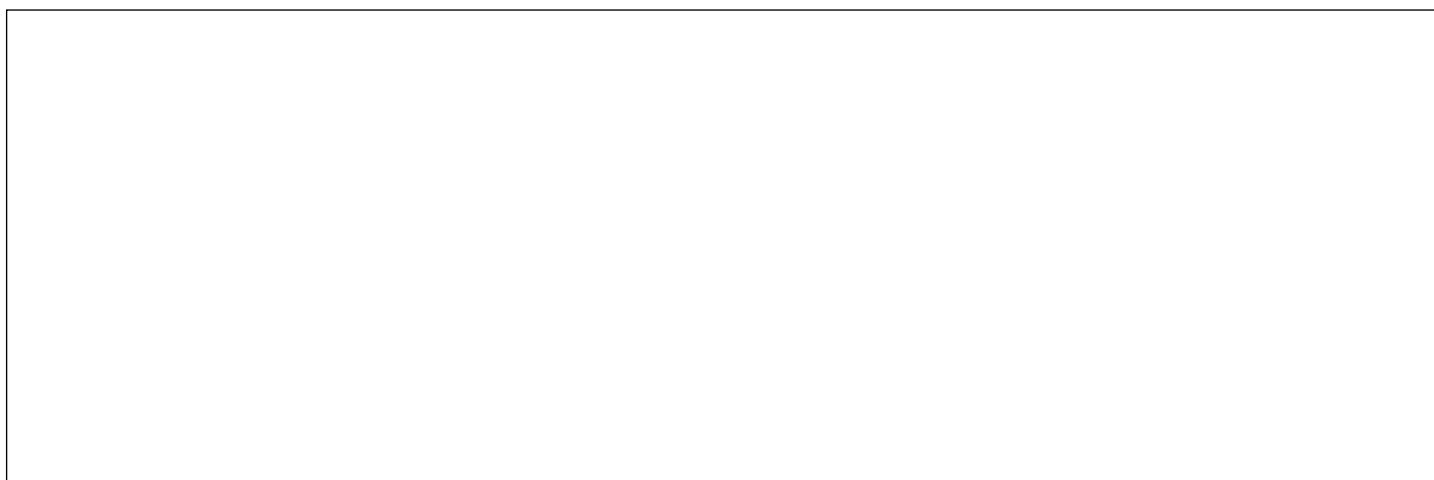
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