

RONDCOM 76A



World No.1 rotational accuracy is achieved in this class.

The driving speed of each axis is improved to three times.

The straightness accuracy of each axis is guaranteed.

Flagship model of detector rotation type.



■ Features

- Rotation accuracy: $0.1\mu\text{m}$ (JIS B7451)
- Column Straightness accuracy: $1.3\mu\text{m}/700\text{mm}$
(When a 700mm long-shaft measuring tool is used.)
- Industry's first high-accuracy air bearings for the X, Y, Z, and θ axis.
- Gabbro used in the column and base guarantees no variation over time.
Top-class high accuracy guaranteed for years.
- Fully automatic 7-axis control
- The straightness accuracy of the XY table and R axis is guaranteed, and Measurement of Parallelism is possible.
- Measurement time is shortened by Maximum driving speed : 100mm/sec, and the efficiency improves.
- Automatic measuring of multiple workpieces
- Automatic part program call function (option)

Example Applications

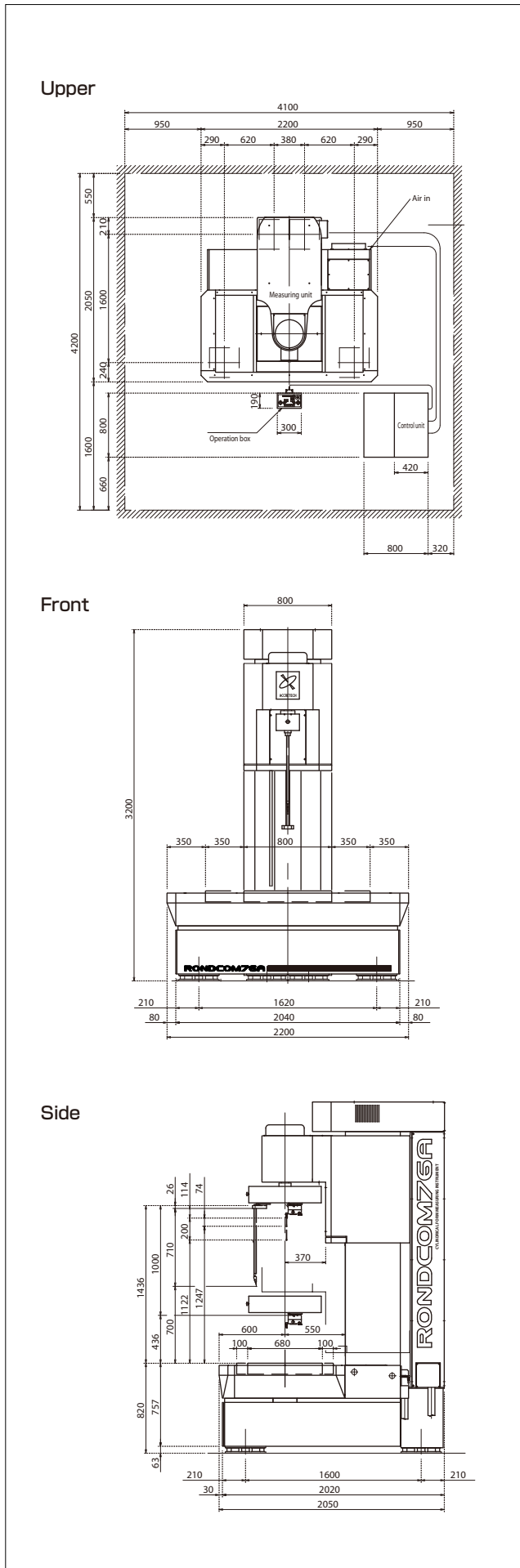


Crankshaft



Cylinder block

External View



Specifications

Model		R76A	
		Z1000	
Measuring system		CNC and manual	
Measuring range	Max. measuring diameter	Φ500	
	Min. measuring ID	Stylus tip width + 2mm or more	
	Left/right feed range	700	
	Forward/back feed range	200	
	Up/down feed range (Z-axis)	1000	
	R-axis feed range	290	
Max. load diameter		Φ980mm	
Rotation accuracy	Radius direction JIS B 7451-1997	0.04+3H/10000μm (H=Height from the measuring point to the detector holder mounting surface.) (mm)	
	Axial direction JIS B 7451-1997	0.1+8R/10000μm R=Distance(Radius) from the table rotation center to the measuring point. (mm) 0.14μm(R=189), 0.18μm(R=314), 0.22μm(R=736)	
	Resolution of angle display	0.025°	
Straightness accuracy	Up/down direction (Z-axis)	(0.2+8L/10000)×(1+S/1000)μm (L=Measuring length, S=H=Height from the measuring point to the detector holder mounting surface. (mm))	
	Radius direction (R-axis)	0.5+L/300μm (L=Measuring length) 0.83μm(L=100), 1.47μm(L=290)	
	Work table (X-axis)	0.5μm/100mm, 1.6μm/700mm	
	Work table (Y-axis)	0.5μm/100mm, 0.6μm/200mm	
Resolution of position display	X,Y,Z axis	0.001mm	
Parallelism accuracy	Up/down direction (Z-axis and θ-axis)	0.8μm/200mm	
	Radius direction (R-axis)	1.0μm/200mm	
R-axis diameter measuring accuracy		3+5(L+S)/1000μm (L=radius length, S=H=Height from the measuring point to the detector holder mounting surface. (mm))	
Measuring speed (auto centering speed)	Rotation direction (θ-axis)	2 to 4 /min (10 /min)	
Measurement speed (drive speed)	Up/down direction (Z-axis)	6 to 10 mm/s (Max 100 mm/s)	
	Left direction (X-axis)	6 to 10 mm/s (Max 100 mm/s)	
	Front/rear direction (Y-axis)	6 to 10 mm/s (Max 100 mm/s)	
	Radius direction (R-axis)	6 to 10 mm/s (Max 100 mm/s)	
Auto stop		± 5μm (less than 5mm/s)	
Rotation table	Table diensions (WxD)	800×680	
	Centering/tilting Adjustment	1/3 or less of the measuring diameter ±1°	
	Load	200 kg	
Detector	Detection range	±500μm(Arm a), ±1000μm(Arm b)	
	Measuring force	130mN(Arm a), 65mN(Arm b)	
	Stylus shape	R0.25mm sapphire	
Sampling points		14400 points/rotation	
Filter types		Digital filter Gaussian / 2RC / Spline / R-Spline	
Cutoff values	Rotation	(low pass)	15, 50, 150, 500 peaks/rotation
		(band pass)	15 to 150, 15 to 500 peaks/rotation
	Rectilinear	(low pass)	0.025, 0.08, 0.25, 0.8, 2.5, 8 mm
Display magnification		10 to 200k (22 steps), Auto, measuring magnification	
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, squareness, non-uniformity, run-out, parallelism(axis)	
	Rectilinear	Straightness(Z), straightness(R,X,Y), taper ratio, cylindricity, squareness, parallelism	
Analysis processing functions		CNC measuring function, auto centering function, auto tilting function, notch function (level, angle, cursor), combination of roundness evaluation methods, nominal value collation, cylinder 3D display (line drawing, shading, contour line), real-time display, profile characteristic graph display (load curve, amplitude distribution graph, power spectrum)	
Display items		Measuring conditions, measuring parameters, printer output conditions, profile drawing (expansion plan, 3D plan), comments, error messages, etc.	
Recording system		Color printer or laser printer	
Dimensions and weight	Power source (voltage specification required)	AC100V to 240V, 50/60Hz	
	Power consumption	Approx. 1KVA (not including printer)	
	Air source	Supply pressure: 0.5 to 0.7 MPa, Usage pressure: 0.4 Mpa	
	Air consumption	160 Nl/min	
	Dimensions	(W)	Main unit: 2200mm, Control unit: 800mm
		(D)	Main unit: 2050mm, Control unit: 800mm
		(H)	Main unit: 3200mm, Control unit: 1400mm
Weight	Main unit: 6700kg, Control unit: 100kg		