

Roundness Measuring Instrument

RMI-D560C



Measuring & Control System



Step Motor Drive System



Air Bearing & Pressure System



DIN00 Granite Structure



Manufacture 、 Assembly 、 Inspection



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RMI-D560C



The Cylindricity measuring instrument adopt multi-factor process, the measurement results are much accurate. And can do assessment of the tapered cylinder profile. On the operation achieve the CNC (computer numerical control), reduce the artificial operation error effectively.

Measurement Capability:

Evaluation item:

Cylindricity module: Radial full jump, concentricity, taper, radius;

Roundness module: Concentricity, radial single jump, wall thickness difference;

Straightness module: Parallelism, verticality;

Single section flatness module: Axial single jump, verticality and parallelism;

Multi-section flatness module: parallelism, Axial full jump, verticality;

Commutator module: Single contacts jump, Adjacent contacts jump, intermittent difference of contacts.

Analytical ability:

Cylindricity function: 2~15 section, 3 kinds of evaluation method

Reference base of Evaluation cylinder: LSCY MZCY MICY MCCY OSCY

Roundness assessment reference circle: LSC MZC MIC MCC

Straightness: vertical direction

Jump: radial single jump, radial full jump, axial single jump

Concentricity: axis elements

Taper: Diameter variations in the range of sensor range

Measurement wave band: 1-15upr,1-50upr,1-150upr,1-250upr,1-500upr,15-100upr,
15-500upr,2-15upr

Gap measurement: YES

Technical data:

RMI-D560C	Item	Parameter
Rotary table	Bearing Type	Gas bearing
	Rotation accuracy	$(0.025+6H/10000) \mu m$
	Rotating speed	4,6,8,10rpm
	Adjust table diameter	180mm
	Table loading capacity	25kg
	Rotation diameter	560mm
	Max measure diameter	280mm
	Min measure inner diameter	1mm probe (Optional)
Column (Z-axis)	Column transverse travel	320mm
	Max detection depth	100mm (min inner diameter): 30mm)
	Column straightness	$0.3 \mu m / 100mm$
horizontal arm (X-axis)	Horizontal movement	165mm
	Protrusion amount	25mm
Detector	Acquisition device	Circle grating
	Circumference of sampling	16384 points
	Sensor type	Inductive Sensor
	Sensor range	$\pm 300 \mu m$
	Sensor resolution	$0.001 \mu m$
	X raster	RENISHAW grating scale
	Z raster	RENISHAW grating scale

Technical feature:

- *Flotation motion shaft: Maintain long-term accuracy, good stability
- *Adopt X direction and Z direction double feed inlet RENISHAW raster, not only improve the degree of automation, achieve automatic contact of sensor, but also add small taper and diameter measurement accessibility
- *The main parts adopt special destressing alloy materials and special destressing treatment technology, maintain long-term accuracy
- *Module design decrease which decrease the users maintenance cost
- *Most advanced compensation algorithm, compensation for each axis accuracy.
- *Software aided self-aligning leveling, improve efficiency and save time.
- *A variety of measurement methods, solve the demand of all kinds of component.
- *Software measurement raw data automatically saved.
It' s switch type, while open this function, all the measurement files automatically saved to plot the current content and the current list, convenient for the measurement data automatically saved.
- *Software support XP、win7、win8 system.
- *Software support Chinese and English language.

Operational environment:

Vibration source : Without vibration source

Power : AC 220V±10% 50Hz Separate ground

Temperature : in site temperature : 12℃—26℃ ideal temperature 20±2℃

Relate humidity : < 85%

Air supply : Air compressor air pressure : 0.5-0.8Mpa

Air compressor air flow : $\geq 0.2\text{m}^3/\text{min}$

Air pressure dew point at instrument inlet $\leq 10^\circ\text{C}$

Oil mist detector $\leq 0.5\text{mg}/\text{m}^3$, SOLID $\leq 3\mu\text{m}$

Content of solid particles $\leq 5\text{mg}/\text{m}^3$

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