

Roundtest RA-120/120P

Series 211 - Form Measuring Instrument

The Roundtest RA-120/120P instruments are compact, affordable, and simple-to-use devices for measuring roundform geometry on the shop floor. They provide the outstanding data analysis capabilities required of a laboratory roundness measuring instrument having a $\pm 1000 \mu\text{m}$ wide-range detector and a precision turntable with excellent rotational accuracy.

- The RA-120 has a dedicated processor and control panel incorporated in the main unit for control of operations.
- The RA-120P is a PC based model with all operations controlled via ROUNDPAK software (option).



RA-120



Z-axis scale unit (optional)



X-axis stop



RA-120P

Specifications

Turntable

Rotational accuracy radial	Radial : $(0,04+6H/10000)\mu\text{m}$ H: Probing height (mm) Axial : $(0,04+6X/10000)\mu\text{m}$ X: Probing radius (mm)
Rotational speed	6 rpm
Turntable diameter	150 mm
Centering range	$\pm 3 \text{ mm}$
Levelling range	$\pm 1^\circ$
Max. probing diameter	280 mm
Max. workpiece diameter	440 mm
Max. turntable loading	25 kg

Vertical column (Z-axis)

Vertical travel	280 mm
Max. probing height	280 mm above turntable surface 480 mm in reverse position
Max. probing depth	100 mm (minimum ID: 30 mm)

Horizontal arm (X-axis)

Horizontal travel	165 mm (-25 mm to 140 mm)
Measuring range	$\pm 1000 \mu\text{m}$
Measuring force	70 to 100 mN
Standard stylus	12AAB681 , carbide ball, $\phi 1.6 \text{ mm}$
Measuring direction	Bi-directional
Stylus angle adjustment	$\pm 45^\circ$ (with graduations)

Data analysis unit

Processing unit	Built-in (PC with Roundpak-120P)
Data analysis items	Roundness, Coaxiality, Flatness, Runout (radial), Runout (axial), Thickness deviation, Parallelism, Perpendicularity
Type of roundness evaluation	LSC, MZC, MIC, MCC
Printer	Built-in thermal line printer
Recording magnification	X5 to X200.000, Auto (X1 to X500.000)
Filter	Low pass filter, Band pass filter
Filter types	2CRPC75, 2CPC50 (phase corrected)
Cutoff values	15 upr, 50 upr, 150 upr, 500 upr, 15-50 upr, 15-500 upr, 50-500 upr, manual setting

Air supply

Air pressure	390 kPa
Air consumption	30L/min

Power supply

100-240 VAC, 50/60 Hz

Dimensions (WxDxH)

450 x 360 x 636 mm

Mass

32 kg (main unit), 2 kg (air regulator)