

R500 ROUNDNESS TESTER

When size makes difference



Pneumostatic table



USB connection



The R500 roundness tester is at the top of the machines for the characterization of surfaces of revolution in the world panorama as regards the maximum dimensions of the object to be measured; born from the thirty years of experience that SM has in this field, it has been expressly designed for the measurement of large and heavy parts while maintaining very high accuracy.

The R500 has 3 metrological axes of measurement and positioning with pneumostatic support that guarantee smooth movements without friction and great rigidity of the entire system.

The leading application of the R500 is the characterization of parts in the energy sector (turbines, compressors, bearings) of large dimensions where it is necessary to determine all those essential characteristics for the final quality of the product.

Thanks to the motorized platform of the table, the centering of the piece takes place automatically through a selectable procedure from Circom software.

Technical data

Product code:	R500 (codice: 4.105)
Axis C	Platform diameter: 650 mm
Pneumostatic table:	Expansion diameter: 1200 mm
	Maximum measurable diameter: 1300 mm
	Axial lift: 1500 kg
	Radial Run-Out (at table level): $\leq 0,1 \mu\text{m}$
	Speed: 0,25 - 3 giri/min (measuring) 0 - 6 giri/min (positioning)
	Clutch: Pneumostatic for manual rotation
	Centering range: $\pm 5 \text{ mm}$ with full automatic function
	Leveling range: $\pm 1^\circ$
	Resolution: $0,009^\circ$ (40k points / revolution)
Axis R	Useful stroke: 650 mm
Pneumostatic measuring arm:	Straightness: $\leq 0,5 \mu\text{m}$ on 500 mm
	Speed: 0,2 - 10 mm/s
	Resolution: $1 \mu\text{m}$
Z axis	Useful stroke: 900 mm
pneumostatic column:	Maximum reachable height: 600 mm (from table top)
	Straightness error: $\leq 0,5 \mu\text{m}$ su 500 mm
	Speed: 0,5 - 15 mm/s
	Resolution: $1 \mu\text{m}$
Probe:	Measurement position: In three positions (horizontal, vertical, lateral)
	Measuring force: Internal /external 20 - 150 mN
	Measuring range: $\pm 1000 \mu\text{m}$
Calculable parameters:	Roundness, flatness, straightness, cylindricity, taper, cone shape, concentricity, parallelism, orthogonality, angularity, coaxiality, run-out, total run-out, thickness variation, Fourier analysis
Power supply:	110-240 V ; 50-60 Hz