



R500

Code: 4.105

R500 roundness tester



R500 roundness tester is located at the top of machines for the characterization of revolution surfaces in the world panorama for what concerns the maximum dimensions of the object that can be

measured; born from the thirty year experience that SM has in this field, it has been designed to measure bulky and heavy pieces, maintaining high accuracies.

R500 features 3 metrological axes, pneumostatically supported, for measurement and positioning, which ensure fluent movements without frictions and remarkable sturdiness of the entire system.

The flagship application of R500 is the characterization of bulky particulars in the energy sector (turbines, compressors, bearings) where all the essential characteristics for the final quality of the product must be determined.

The motorized plate allows the automatic centering of the piece, executed with a procedure inside the Circom software.

CHARACTERISTICS:

Pneumostatic plate

Platform diameter:	650 mm
Expansion diameter:	1200 mm
Maximum measureable diameter:	1300 mm
Axial bearing capacity:	1500 kg
Radial run-out (at plate level):	$\leq 0,1 \mu\text{m}$
Speed:	0,25 - 3 rpm (measurement) 0 - 6 rpm (positioning)
Friction:	Pneumostatic due to manual rotation
Centring range:	$\pm 5 \text{ mm}$ with automatic cycle
Levelling range:	$\pm 1^\circ$
Resolution:	$0,009^\circ$ (40k pts/rev)

Pneumostatic R axis

Useful traverse length:	650 mm
Linearity:	$\leq 0,5 \mu\text{m}$ su 500 mm
Speed:	0,2 - 10 mm/s
Resolution:	$1 \mu\text{m}$

C axis (Column with recirculating ball guides)

Useful traverse length:	900 mm
Maximum height :	600 mm (from plate surface)
Linearity error:	$\leq 0,5 \mu\text{m}$ on 500 mm
Speed :	0,5 - 15 mm/s

Resolution	0,1 μm
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Pick-up

Measurement positioning:	In three positions (internal, external, lateral)
Measurement strenght :	Internal/external 20 - 150 mN
Measurement range :	$\pm 1000 \mu\text{m}$
Supplied pick-ups :	N° 3 two-directional with 8 mm ruby sphere