

R250

Laboratory roundness tester

Code 4.102



R250 roundness tester was conceived from the need to characterise pieces with circular and even complex geometries with utmost accuracy, and it is the ideal instrument to satisfy multiple measurement needs in the mechanical, motor, aerospace and machine manufacturing industries.

Thanks to its solid structure consisting of a base made in diabase and pneumostatically supported plate, it can accurately measure pieces of also considerable weight.

The device is matched to Circom software that was conceived to be extremely user-friendly and easy to use, thus allowing to train an operator within a short period of time, reducing training and testing costs.

The software allows to analyse the following geometric tolerances: roundness, linearity, cylindricity, conicity, cone shape, concentricity, parallelism, coaxiality, run out, total run out, thickness variation. For complex surfaces where gaps are present, Circom is able to eliminate them automatically or the operator can intervene manually, removing inconsistent profile sections.

Integrative packages can be added to the basic application, such as for example harmonic analysis that, through FFT algorithm, allows to analyse each single sinusoidal component of the measured profile, essential with regards to bearings.

CHARACTERISTICS:

Axis of C plate

Plate diameter	250 mm
Maximum load	500N
Maximum measured diameter	500mm
Centring and levelling	$\pm 3\text{mm} \text{ -- } \pm 2^\circ$

Axis of Z column

Useful traverse length	300 mm
Motorized and measurement	
Linearity error on 400 mm	0,8 μm
Measurement speed	0,5 - 1-2 mm/s
Positioning speed	0 - 15 mm/s

Axis of R arm

Useful traverse length	300 mm
Motorized, positioning	Internal/external 20 - 150 mN
Positioning speed	0 - 15 mm/s

Calculated parameters

roundness, linearity, cylindricity, conicity, cone shape, concentricity, parallelism, coaxiality, run-out, total run out, thickness variation.

Pick-up

Useful traverse length	300 mm
Motorized, positioning	Internal/external 20 - 150 mN
Positioning speed	0 - 15 mm/s

Sizes	1500 x 750 mm (LxP)
Weight	280 kg
Power voltage	110-240 V 50-60 Hz

ACCESSORIES:

Expansion platform Code 4.400	It allows to expand the plate up to a diameter of 250 mm in case of extremely large pieces
6-jaw mandrel Code 4.406	Fitted directly on the plate, external holding diameter 1÷35mm, internal holding diameter 25÷95mm.
3-jaw mandrel Code 4.402	Fitted directly on the plate, internal/external reversible jaws, external holding diameter 1÷32mm, internal holding diameter 18÷80mm.
(Flick) Guizzo calibration sample Code 6.201	It allows to calibrate and check the sensitivity of the pick-up and electronics, with nominal gradient 17 µm
Roundness sample Code 6.200	Sample hemisphere made in optical glass, typical error < 0.05 µm, it allows to check the oscillation of the plate..
Extension end fittings:	The pick-up's ends are easily interchangeable thanks to the threaded joint. - End fitting L= 32 mm Codice 4.300 - End fitting L= 72 mm Codice 4.301 - End fitting L= 112 mm Codice 4.302 - End fitting T L= 72 mm Codice 4.303