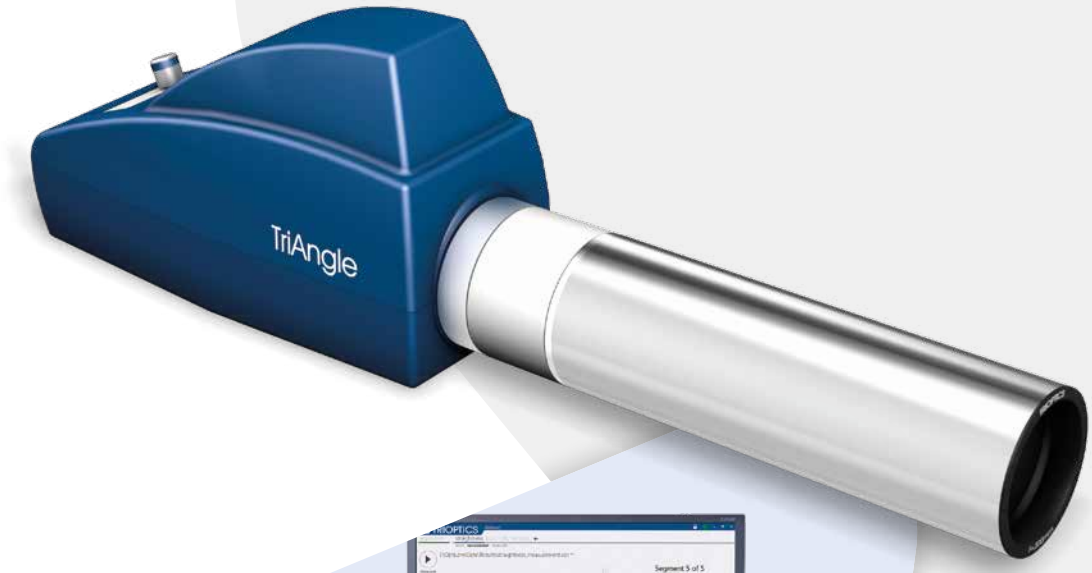
TRIOPTICS

See the Difference.

TriAngle

Electronic Autocollimator for the Mechanical Engineering Industry



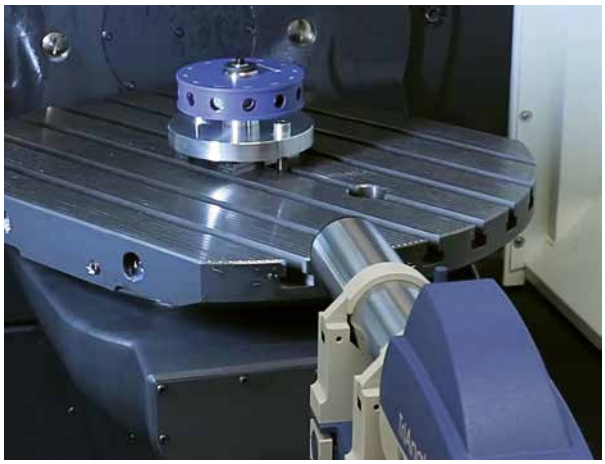
Rotary Table Calibration

Required Equipment

- Referenced polygon
- TriAngle with “OptiCal” software

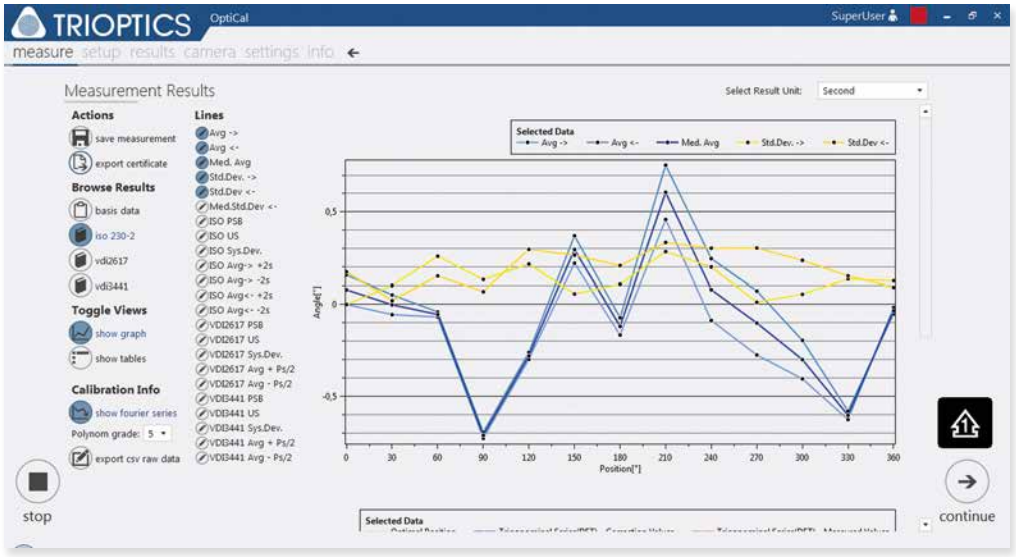
Measuring Process

- Place the referenced polygon on the rotary table
- Select the right measuring mode (manual or automatic) and the referenced polygon in the software
- Align the polygon to the autocollimator and push “Start”
- The measurement results are shown in graphs and tables and a measurement certificate is generated



Measuring Accuracy

The measuring accuracy is up to 0.25 arc seconds, depending on the TriAngle model selected.



Straightness, Squareness and Parallelism Measurement

Electronic autocollimators from the TriAngle series are ideal for high-precision, non-contact measurements of straightness, squareness and parallelism, such as machine guides.

Required Equipment



	Pentaprism in Mount	Mirror in Mount	Tripod
Straightness Measurement	–	•	•
Parallelism Measurement	•	•	•
Squareness Measurement	•	•	•

The user-friendly "OptiLevel" software supports the user in his measurement tasks.

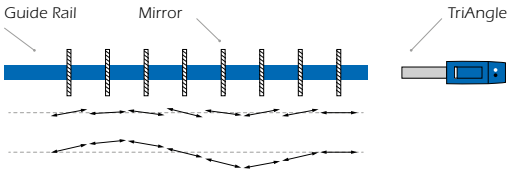
Measuring Process for Straightness Measurement

- Align the autocollimator to the mirror
- Move the mirror by the distance predefined in the software
- The software measures and calculates the height profile along the direction of movement
- The software analyzes the measurement results and shows the height profile as graphs and tables
- Additionally the flatness of surfaces can be measured

Measurement of Squareness and Parallelism

- For squareness measurement after straightness measurement a pentaprism for deflection of the beam is positioned at the end of the measured reference section
- Guided by the software the squareness of the second section is measured using the pentaprism
- Also for parallelism measurement a pentaprism is required. At first, the mirror is moved away from the pentaprism
- The first line is used as reference for the measurement of additional lines in order to measure parallelism

Straightness Measurement



Squareness Measurement

Parallelism Measurement

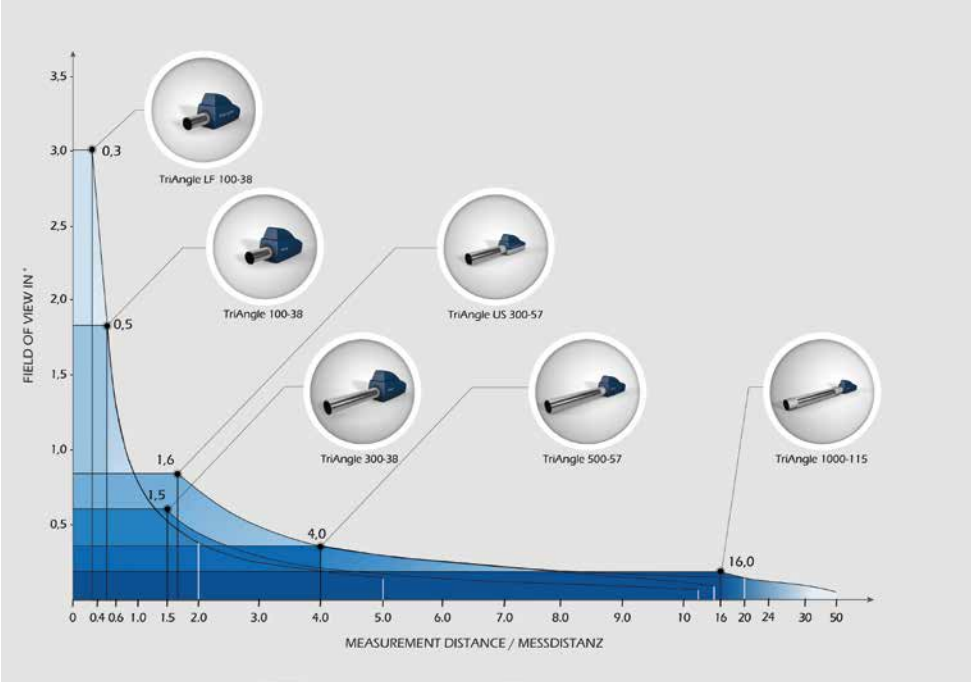
93-015-102-EN Version 001

Technical Data

Product	Resolution	Resolution	Accuracy	Accuracy	Measurement frequency
	Arc seconds	µm/m	Arc seconds	µm/m	Hz
TA 100-38	0.10	0.50	2.50	12.00	30 (up to 50 Hz depending on settings)
TA 150-38	0.07	0.35	1.70	8.00	
TA 200-38	0.05	0.25	1.30	6.00	
TA 300-38	0.03	0.15	0.75	4.00	
TA 300-57	0.03	0.15	0.75	4.00	
TA 500-57	0.02	0.10	0.40	2.00	
TA 1000-115	0.01	0.05	0.20	1.00	
TA 1000-140	0.01	0.05	0.20	1.00	
TA US 300-57	0.005	0.025	< 0.25	< 1.00	15
TA US 500-57	0.003	0.015	< 0.25	< 1.00	15

This is a small selection from our extensive product range.

To see all available TriAngle products, visit our homepage at www.trioptics.com



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