

Expert in Thread Measurement TIMI Optical Measuring Machine

Profession · Precision · Efficiency



TIMI Optical Measuring Machine for Thread

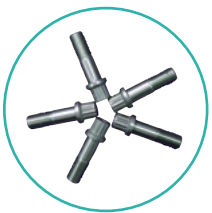
Integration of the advanced technology of hardware and software, the TIMI system can quickly and accurately measure the physical dimensions of various fasteners and tools. It is professional and particularly suitable for the thread measurement of pitch diameter, screw concentricity, and trilobular screw.



Scope of Applications

- Suitable for the full-dimension measurement of screws and tools below 40mm in diameter.
- Replace traditional gauge such as ring gauge, three-wire gauge, caliper, and optical projector, etc.
- Suitable for in-line sampling inspection or mass inspection in the shop floor.

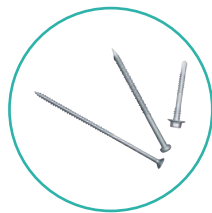
Applicable Fasteners and Tools



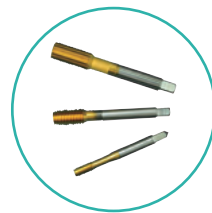
Aerospace
Fasteners



Automotive
Fasteners



Construction
/Furniture
Fasteners



Screw Tap

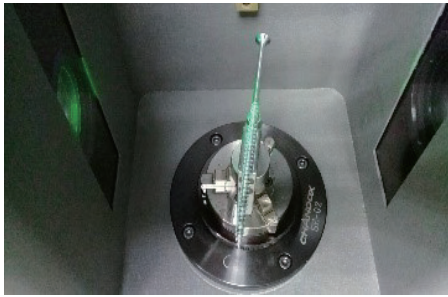


Punch

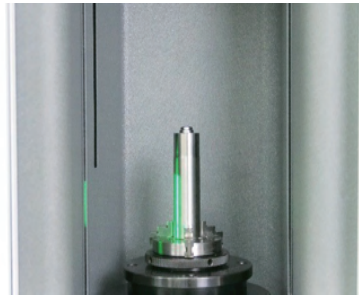


Other Fasteners

Features

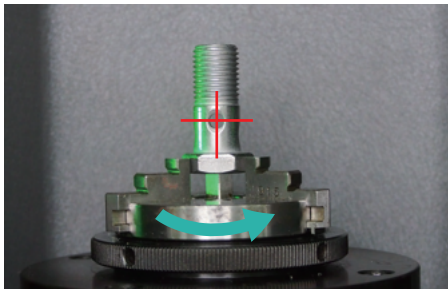


Horizontal



Vertical

The parts can be measured vertically or horizontally, which makes broader applications.

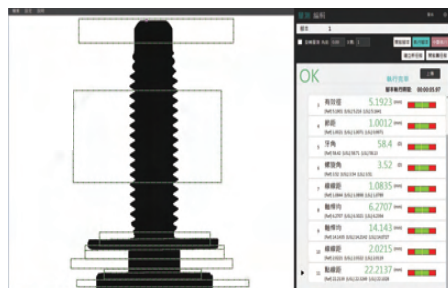


Rotational Positioning

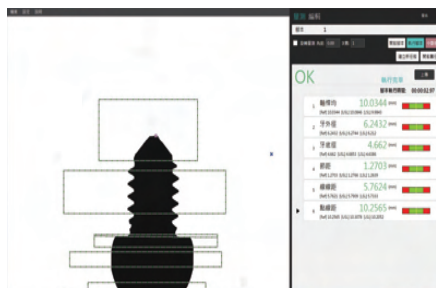


Rotate and perform geometry measurement

The Parts can be rotated and measured, which is comparable to CMM measurement.



Large Field of View



Auto All-size Measurement

Quick All-size Measurement



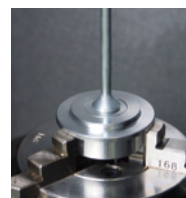
Easily Place the part



Three-jaw Chuck



Centering Cone



Magnetic Fixture

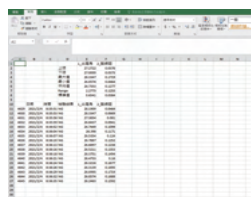
Complete measuring functions with quick function keys.
Simple operation and easy to get started.



Select Area and Measure



One-button Start



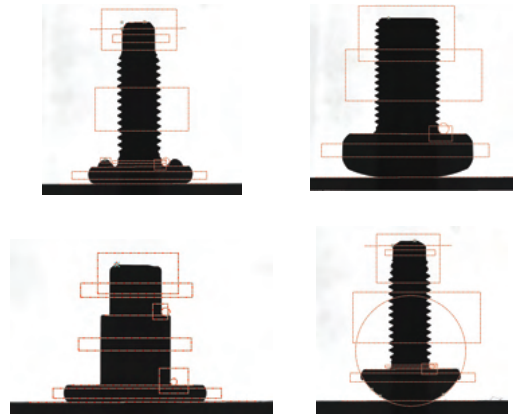
Auto-save all data

(Function Zone→ Image Zone→ Data Zone)

Fast and Precision Measuring

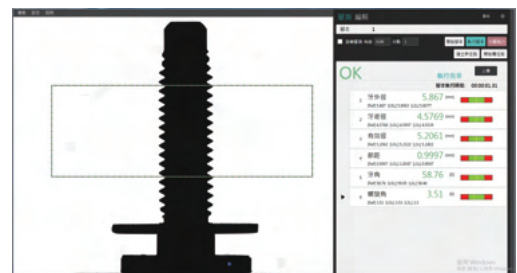
Quick Measurement of Screw

- Measure over 10 items for a 30mm-length screw in 2 seconds.
- Measure all the major sizes on the head and thread of a screw.



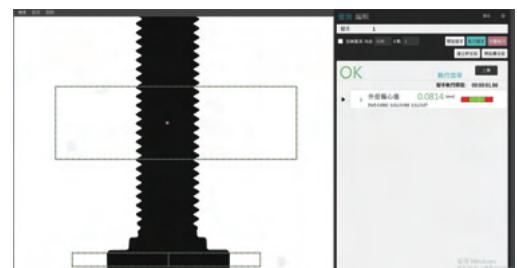
Quick Measurement of Mechanical Thread

- Simultaneously measure O.D., I.D., P.D., pitch, thread angle and helix angle in one second.
- No need for many gauges. Computerization makes measurement more objective. It is time-saving, labor-saving, fast and convenient.



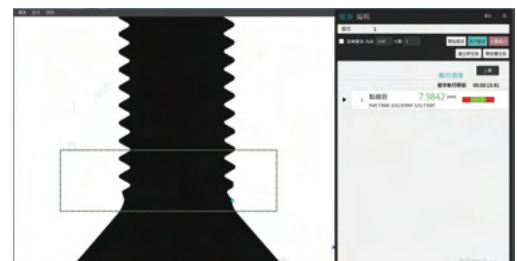
Quick Measurement of Screw Concentricity

- Automatically Measure the concentricity of a 30mm-length screw in 5 seconds.
- Be easier to operate and more reliable than probe-type concentricity meter.



Auto-Detect Thread Tips and First Thread

- Automatically search the initial bud of a thread and measure the effective length.
- Automatic search with a computer is more convenient and reliable than with a projector.



Special Measurement (Option)

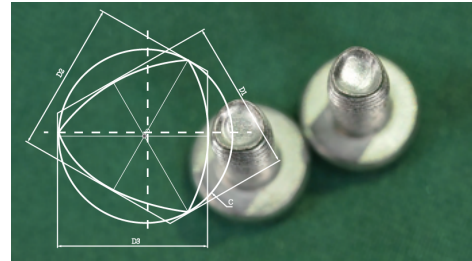
Super-precision measurement of tool-level mechanical thread

- The measuring uncertainty of the pitch diameter is only $\pm 1\mu\text{m}$.
- The measurement result can be traced back to the certified thread plug gauge.



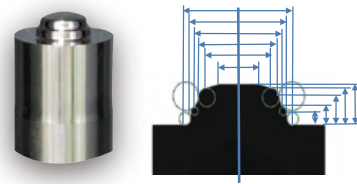
Measurement of trilobular screw

- Rotate and scan to get the C, D and E values without traditional gauges.
- Clamp-free and automatically measure C, D and E values in few seconds.

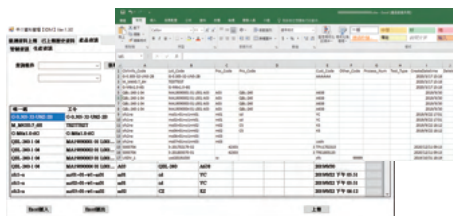


Quick measurement of the punch head

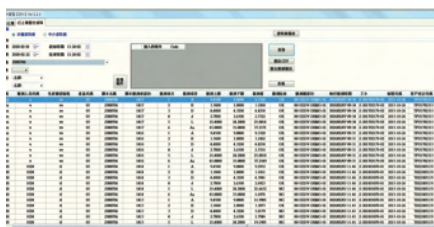
- Auto-inspect the consecutive arc and line along with the punch profile without a profilometer.
- Inspection for a punch head is only ten seconds. It is suitable for mass inspection.



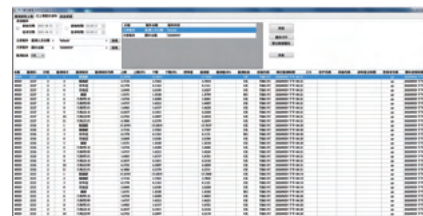
Management of Digitized Measuring Data(Optional)



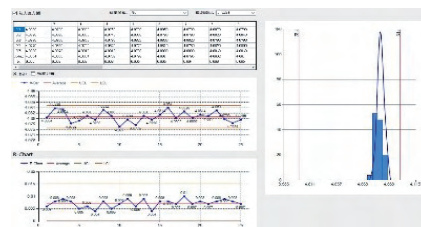
Easily corporate the production control information in the process of inspection even without ERP.



Browse and screen the historic measurement data for analysis, and output Excel report.































Real-time storage of measuring data takes the advantages of no handwriting, error-free and paperless.



Real-time control the average and range values in the shop floor.

Measurement Functions

| | |
|-------------------------------------|---|
| Static Measurement | Length  、Width  、Radius  、Diameter  、Angle  、Chamfer  、 Mechanical Thread  、Non- Mechanical Thread  |
| Dynamic Measurement | Precise Positioning  、Fast Positioning  、Rotational Measurement  、 Width of Two Hex Edges  、Width of Two Square Edges  |
| Basic Geometry Measurement | straightness  、Parallelism  、Perpendicularity  、Roundness  、Concentricity  、 Cylindricity  |
| Advanced Screw Measurement | Max./Min. O.D. Positioning  、Auto-detect Thread Tips  、Auto-detect 1st Thread Tip  、 Head Sizes  、Thread Sizes  、Thread Position Degree  |
| Special Measurement (Option) | Tool-level Mechanical Thread  、Trilobular Screw  、Punch Head  |

Specification

| Type | Model | Measuring Diameter (D) | Measuring Length(L) | Radial Measurement Uncertainty | Size | Weight | | |
|---------------------|------------|------------------------|---------------------|---|---|---|-----------------------------------|-------|
| Flash (Desktop) | TIMI12-10F | 12mm | 100mm | $\pm(2+D \text{ [mm]}) / 100 \mu\text{m}$ | 850mm(W) 340mm(D) 440mm(H) | 50kg | | |
| | TIMI30-10F | 30mm | | | | | | |
| | TIMI40-10F | 40mm | | | | | | |
| Auto (Desktop) | TIMI12_20A | 12mm | 200mm | | $\pm(2+D \text{ [mm]}) / 100 \mu\text{m}$ | 750mm(W) 600mm(D) 800mm(H) | 110kg | |
| | TIMI30_20A | 30mm | | | | | | |
| | TIMI40_20A | 40mm | | | | | | |
| Auto (Cabinet) | TIMI12_30A | 12mm | 300mm | | | $\pm(2+D \text{ [mm]}) / 100 \mu\text{m}$ | 850mm(W) 630mm(D) 1830mm(H) | 200kg |
| | TIMI30_30A | 30mm | | | | | | |
| | TIMI40_30A | 40mm | | | | | | |
| Precision (Cabinet) | TIMI12_30P | 12mm | 300mm | $\pm(2+D \text{ [mm]}) / 100 \mu\text{m}$ | | | 880mm(W) 720mm(D) 1800mm(H) | 250kg |
| | TIMI30_30P | 30mm | | | | | | |
| | TIMI40_30P | 40mm | | | | | | |

* Measurement Uncertainty is estimated as $\pm 2\sigma$ by measuring original master gauge. * Operating ambient temperature: 0°C~45°C

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