USDV
Universal Standard Vision

TIMI Intelligent Shaft Dimensional Inspection System

Precise◆Fast◆Effective

Rapid full-size measurement during the manufacturing process

Measurement data streaming enterprise ERP/MES system

◆Micron-level measurement Precision.

◆User-friendly interface. Simple Automatic Programing.

◆Automatically measure full sizes with a large field of view.

◆Rotational position and measure with speed and precision

◆Integrated measuring system with multiple gauging functions.

◆Transcription-free with TIMI measurement database system.

◆The TIMI system is compatible with any ERP system.

◆Machine with a robot arm to automatically load and unload shafts.

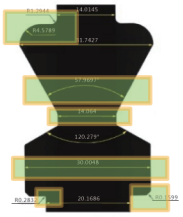
Precision and Versatile Measurement

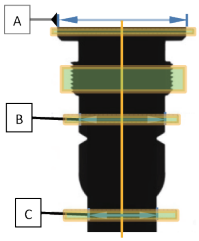
Basic Measurement
Diameter , Segment Height , Groove Width , Arc radius , Angle , Chamfer

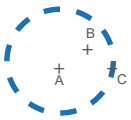
Angular Positioning & Measurement
Width / I.D. based Positioning
Measurement of circumferential sizes

Mechanical Thread
O.D. / I.D. / P.D. / Thread / Angle / Helix Angle

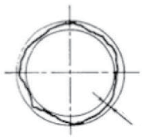
Geometric Measurement
- **Position tolerance**
  Thread Concentricity
  Coaxiality
- **Form tolerance**
  Straightness,Roundness,Cylindricity
- **Directional tolerance**
  Parallelism, Verticality, Slope
- **Deflection tolerance**
  Run-Out







Center position of concentricity

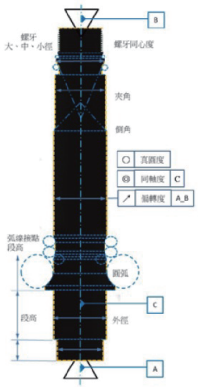


Diameter change of roundness

U.S.Patent

Full Dimension Measurement

Measure 40+ items in 30 seconds, such as diameter, segment difference, angle, arc radius, chamfer and machanical thread.



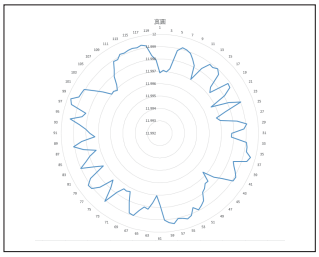
Runout Measurement

Specify any position C, rotate and scan it for one circle, and runout can be measured in as fast as 3 seconds with respect to A,B axis.

Concentricity Measurement

TIMI can automatically detect the center coordinates of any two cross-sections of a shaft and calculate the axial diviation.

Center Coordinates and Pitch Diameter



Roundness

Roundness Measurement

TIMI system can rotate the shaft to measure the roundness without centering the axis, and the measuring resolution reaches 0.1μm.

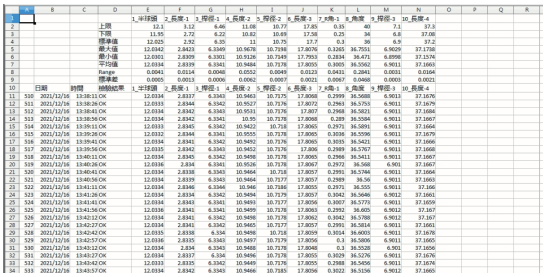
Management Database: Complete production history / quality assurance

◆Access data analysis of measurements at any point during the process, and export it for process capability analysis and fault tracing.

MDB Database Application Software (Standard)

Manually enter product inspection information.

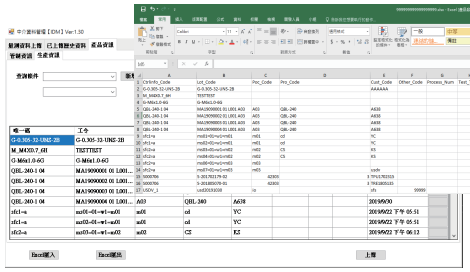
Measuring data is saved in real-time.



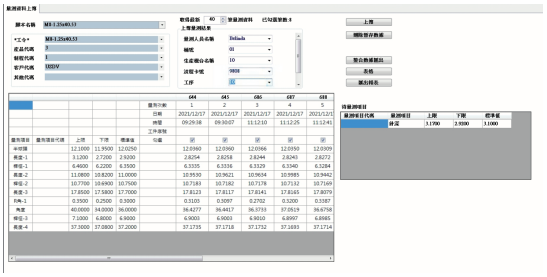
Collate measuring data.
Browse data for basic analysis.

Print inspection checklist and save as a PDF report.
Data can be exported in Excel format.

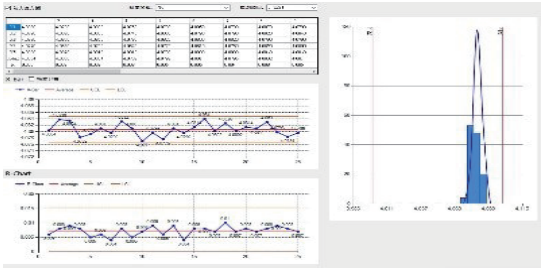
MDB database Application Software (Optional)



Link ERP/MES for import or export of prodcution/quality control information.



Hybrid data can be imported.
(including data from other gauges)



Query historical measurement data and analysis.
(e.g. X bar, R chart, Cpk)

Print and export inspection checklist as well as create your own.

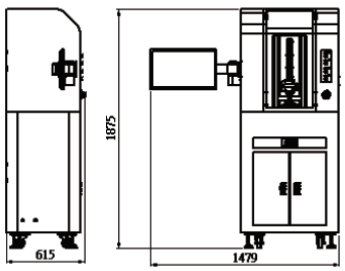
Specification

Spec \ Model	TIMI30P	TIMI40P	TIMI60P
Measuring Diameter (D)	ø30mm	ø40mm	ø60mm
Measuring Length(Z)	300mm	400mm	
Rotatable range (R)	360°		
Repeatability (D)[#1]	±0.2μm	±0.2μm	±0.3μm
Uncertainty (D)[#2]	±(2+D[mm]/100)μm		
Image Resolution	14μm	19μm	25μm
Minimum display unit	0.1μm		
Rotational Resolution (R)	≦0.1°		
Clamping Method	Center Tips		
Central Processing Unit (CPU)	Intel Core i5 or plus		
Memory Capacity	8GB RAM，128GB SSD，500GB HDD		
MonitorMonitor	22 ” LCD		
Operating System	Windows10		
Weight (without computer)	300Kgs	350~450Kgs	350~450Kgs
Power Supply	110~240V，50~60Hz，10A (single or three phase)		
Operating Ambient Temperature	0°~45°C		
Operating Ambient Humidity	≦ 80 %		

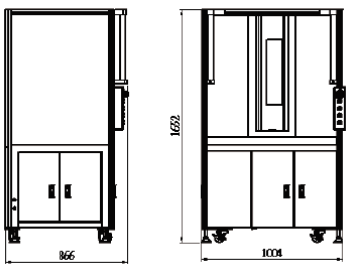
#1: Repeatability is calculated by measuring the fixed position of a standard gauge repeatedly without the connection of the motion mechanism and estimating the statistical value ±2σ.
#2: The measurement uncertainty is calculated by arbitrarily measuring a standard gauge without the connection of the linear motion mechanism and estimating the statistical value ±2σ.

Machine Size

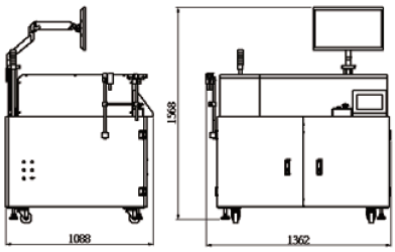
TIMI30P



TIMI40P/60P



TIMI40P/60P



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