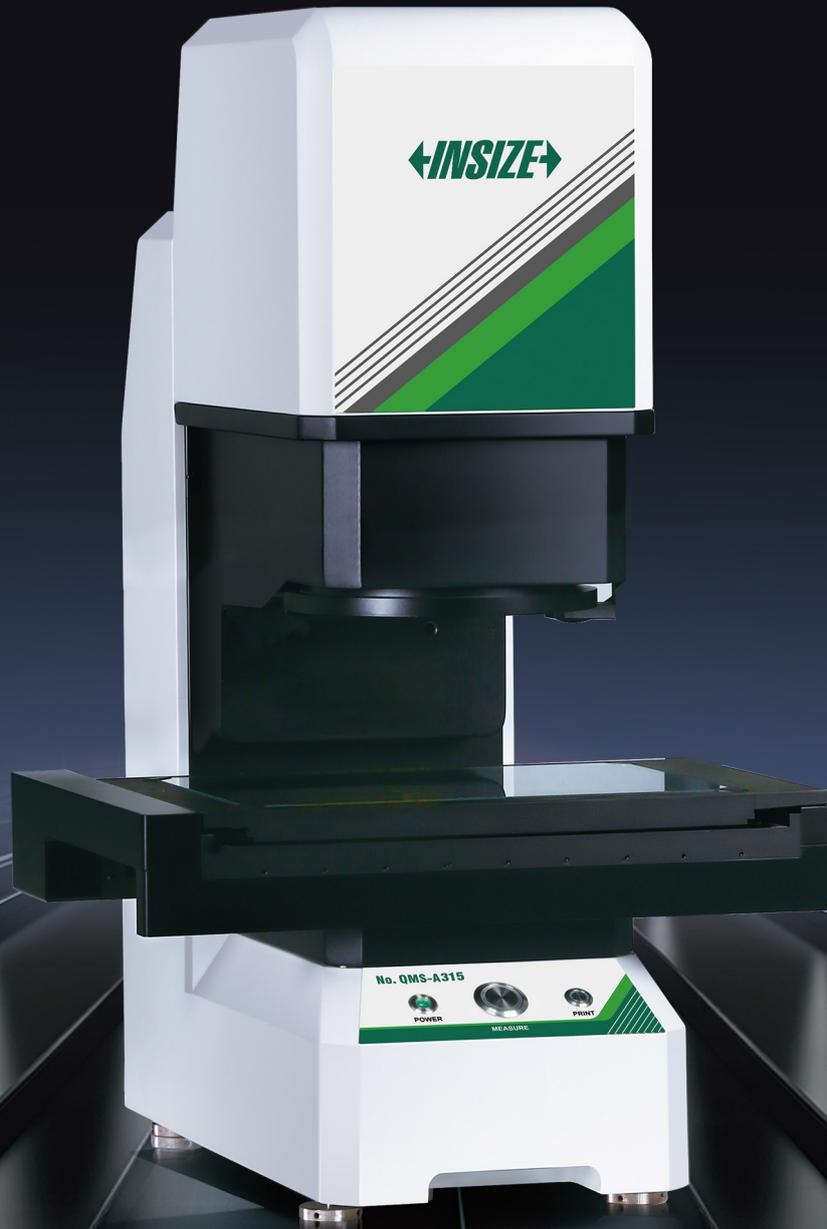




MEASUREMENT SOLUTION PROVIDER



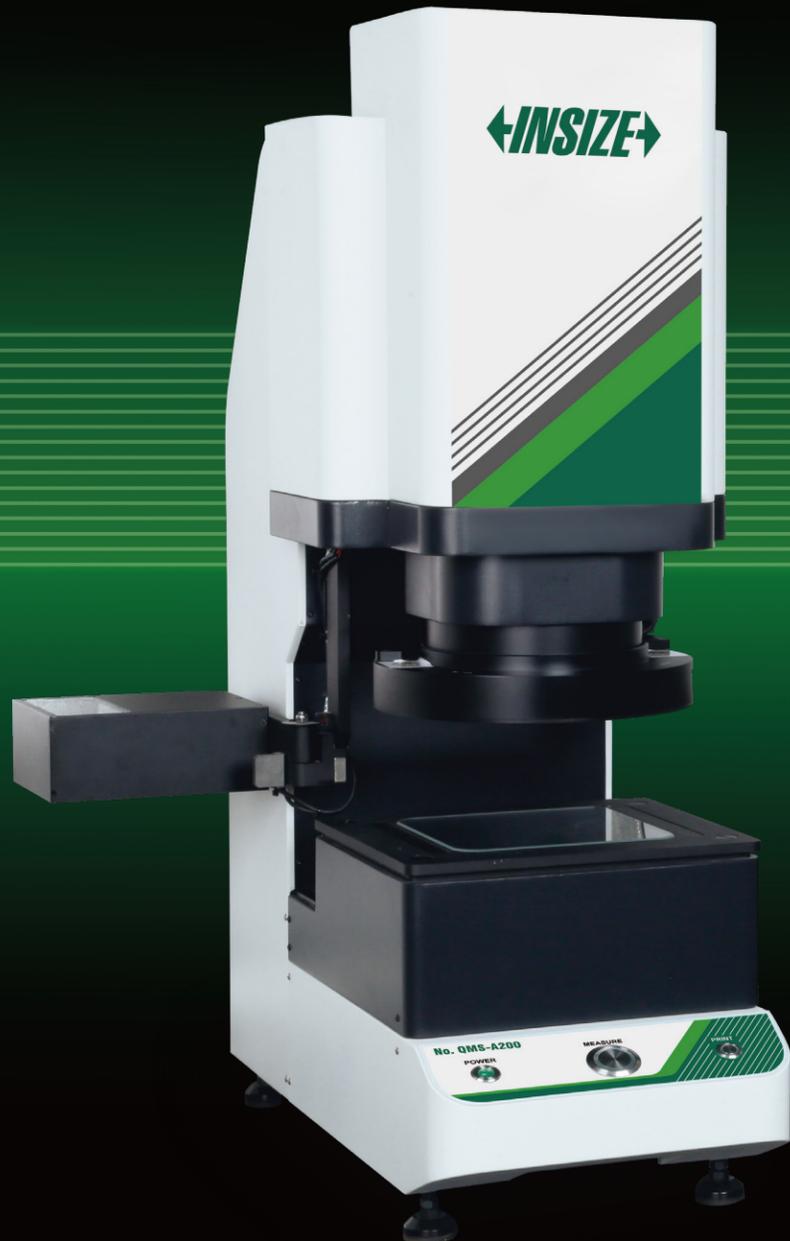
QUICK MEASUREMENT SYSTEMS

CATALOGUE NO. QMS-E01

01

| One Button

- ◆ Double telecentric lens, one button measurement of multiple workpieces.
- ◆ Measurement accuracy up to $0.7\mu\text{m}$.
- ◆ **initiate** The software has OCR character recognition function.
- ◆ Several measurement ranges, max support 500x400(mm).
- ◆ Automatic measurement, extract elements automatically.
- ◆ Can customize reports, industry-specific software modules and operators.



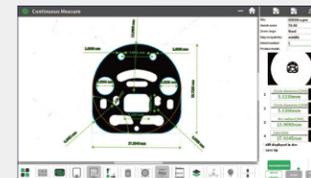
effect with body display (optional)



02

Product Advantages |

Practical measurement functions

**Geometric tolerance**

Straightness, roundness, perpendicularity, parallelism, position, concentricity, symmetry, profile.

Continuous measurement

Continuous measurement results will automatically be judged OK or NG.

Build a coordinate system

Supports five coordinate system establishment methods, such as point and line, line and line, can translate the coordinate system, and can also establish multiple coordinate systems.

Special application tools

Circumference, automatic measurement, screw measurement, fillet, csurface, curve length, slot, point position, circle diameter cross, ellipse, area.

Rich statistical forms



The measurement results are saved automatically

All measurement results are saved into project file automatically. The number of OK and NG, NG rate, σ , 2σ , 3σ can be calculated automatically according to the saved results. Meanwhile, date, time and lot-number can be saved automatically, so as to facilitate the extraction of measurement results in the past period.



Tendency chart

The abnormality of the production equipment and production process can be monitored through the regular change trend of the measured value, such as the monotonic change of the measured value, the periodic change.



Histogram

It can reflect the status and distribution of product quality fluctuations, and transmit information about process quality more intuitively, which can be used to judge and test product quality and failure rate.

Simple

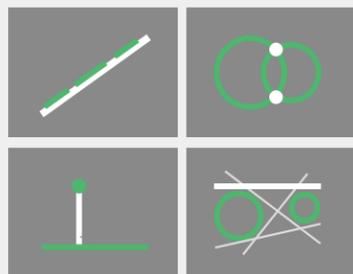


Simple operation process

Place workpiece → One-key measurement.

Automatic measurement

The self-developed automatic measurement operators can realize simultaneous measurement of width, hole, ring, included angle and other elements, so it is easy to operate and fast in measurement.



Practical auxiliary tools for measurement

27 auxiliary operators can fit for intersection points, vertical line, tangent line and tangent circle, and simplify complicated measurement according to the auxiliary elements such as edge.

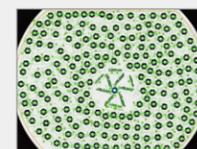
When adding auxiliary elements, it can draw directly, simple to operate, and improve the programming speed greatly.

High Efficient



999+ positions can be measured at a time

As shown in the figure, different features of workpiece can be measured simultaneously, and 999+ positions can be measured for once programming.



200+ workpieces can be measured at a time

As shown in the figure, multiple workpieces can be arranged and measured with one key simultaneously, and each workpiece can be measured at different positions.

New, integrated barcode operator, support multi-workpiece 1D or 2D code measurement, while measuring the size, the scanning result can be bound to the data, simplifying the manual scanning process.



1s to complete a measurement

Measurement can be completed in 1s.

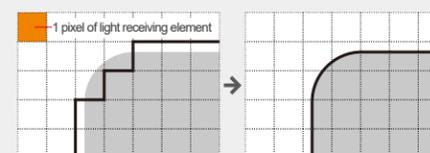
The measurement result is clear, the measurement working hours can be reduced greatly, and the efficiency can be improved.

Precise



Automatic adjustment of focus

"Automatic focusing" can adjust the height of Z axis, so that the measurement object can be clear and easy to measure.



• No subpixel processing • With subpixel processing

Identify the edge intelligently and eliminate the deviation

Sub-pixel processing

1 pixel can be divided into less than 0.01, which can be applied to the edge detection and measurement in wide-field and high-precision mode.

Fitting processing

More than 100* measurement edge points can be extracted, fitting processing can be realized with the minimum multiplication, so that the "line", "circle" or "arc" can be identified.

* According to different to-be-measured profiles, there may be less than 100 measurement edge points

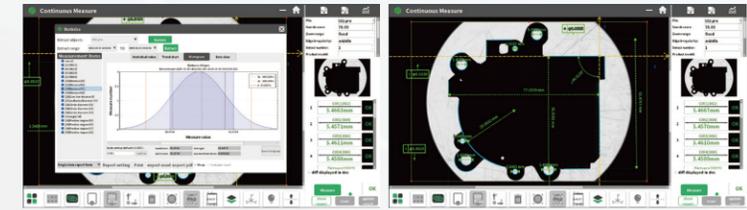


• Fitting processing

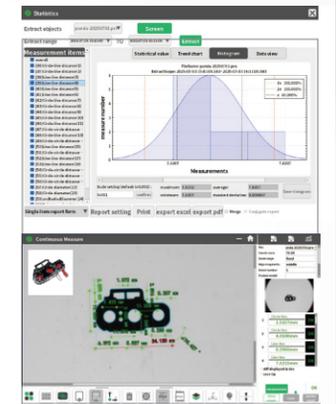
03

| Measurement Cases

• Automobile industry



• 3C metal structural member



• Abundant industry application



Electronics industry



Tool, die cutting



Cables & wires



Vehicle industry



Solar energy



Semiconductor



Clock parts



Hydraulic hinge



Precision parts



Forgings



Fastener



Plastic parts



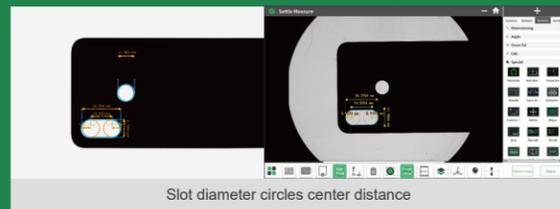
UK plastic plug

Diameter and center distance between two holes

Testing requirements: measure the diameter of the slot of the mobile phone case

Advantage: Use a special slot operator to automatically detect all dimensions of the entire slot once

Solution: Recommend QMS-A315 series, choose slot operator



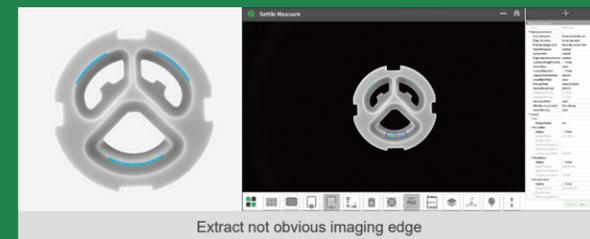
Mobile back covers, phone cases, etc. have slot size test requirements. This slot operator can automatically measure all circles and distances of the entire slot at one time, greatly reducing programming time.

Edge extract

Testing requirements: Test ceramic parts edge precisely

Difficulty: The edge imaging and edge transition is not that obviously

Solution: Choose edge extract operator to catch the edge precisely



Suitable for parts which has not obvious edge imaging or edge transition, this operator can easily help to catch the edge precisely. Eg. Ceramic parts, light color parts, matte parts.

Measurement Typical Case

Batch measurement

Testing requirements: Lots of workpieces batch measurement quickly

Solution: Smart series, one-key measurement, deal with 999+ dimension, 200+ workpieces batch measurement in few seconds



Lots of workpieces to test together by one-key measurement, each workpiece includes many dimension, the result will show in 1s, greatly shorter measure time, increase the efficiency, can count test qty. automatically.

CAD import function (*Option)

Testing requirements: The all dimension of the workpiece

Difficulty: Lots of dimensions to be programmed which will takes long time

Solution: Choose CAD import function. Import the CAD file, only need few procedures to program all dimensions of the workpiece easily



CAD import function adapt to Auto CAD and zhong-Wang different version files. The fast and convenient import function increase the programming efficiency greatly and reduce the technical reliance on the operation staff.

2D+3D flash measuring equipment

High efficiency, Precise, Simple

As shown in the figure, different features of workpiece can be measured.

simultaneously, and 999+ positions can be measured for once programming.

- **Optional:** 3D sensor for height, steps and flatness measurement
- **3D measurement**
Measurement accuracy: $\pm(5+L/200)\mu\text{m}$, repetitive accuracy: $\pm 1\mu\text{m}$
Measuring range: $70 \pm 10\text{mm}$
light spot diameter: $\varnothing 50\mu\text{m}$
- Suitable for fastener, stamping, injection, die cutting, 3C, machining industries
- **Suitable model:** QMS-A315, QMS-H210, QMS-A450



Product model		 QMS-A110	 QMS-A200	 QMS-A220	 QMS-A315	 QMS-H210	 QMS-A450	
Measurement range (mm)	Wide field	98x78	148x108	200x200	300x200	210x130	500x400	
	Small field	/	48x33	130x130	230x130	200x100	430x350	
Measurement accuracy (μm)	No Splicing ¹	Wide field	±3* ^①	±3* ^①	±3* ^①	±2* ^⑨	±3* ^⑬	
		Small field	/	±2* ^③	±1* ^④	±1* ^④	±0.07* ^⑩	±1* ^⑭
	With Splicing ²	Wide field	/	/	±(5+0.02L)* ^⑤	±(5+0.02L)* ^⑦	±(4+0.02L)* ^⑪	±(5+0.02L)* ^⑮
		Small field	/	/	±(3+0.02L)* ^⑥	±(3+0.02L)* ^⑧	±(2.7+0.02L)* ^⑫	±(3+0.02L)* ^⑯
Repetition accuracy (μm)	No Splicing	Wide field	±1	±1	±1	±1	±1	
		Small field	/	±0.5	±0.5	±0.5	±0.25	±0.5
	With Splicing	Wide field	/	/	±2	±2	±2	±2
		Small field	/	/	±1.5	±1.5	±1.25	±1.5
Product dimension (mm)		580x235x790	638x336x885	532x428x766	532x497x766	460x515x740	1060x860x1890	
Optical lens		Single-field dual-telecentric lens	Dual-field dual-telecentric, lowdistortion lens			dual-field dual-telecentric low-distortion lens	Dual-field dual-telecentric lens	
Weight of platform (kg)		40	60	50	60	45	650	
Load-bearing (kg)		5					25	
Illumination system		Transmission light: Telecentric Parallel Illumination (Green light) Surface light: 4-zone medium and low angle ring lighting (Whiteht light)			Surface light: Ring (low angle) illumination (green light) Coaxial light (optional): Epi-illumination (white light)		Transmission light: Telecentric Parallel illumination (Green light) Surface light: High angle lighting (white light) Surface light: 4-zone medium and low angle ring lighting (white light) Surface light: Ring (low angle) illumination (green light) Coaxial light (optional): Epi-illumination (white light)	
Measurement data		2D measurement						
Output data		With he function of report output and statistics						
Placement of workpiece		Allow free placement of single or multiple workpieces, and realize one-key measurement						
Power requirement		220V, 50Hz, 600W				220V, 50Hz, 1200W		
Environmental requirement		Temperature: 20°C±2°C, relative humidity: 30%-80%, vibration: <0.002g, less than 15Hz						

【Remark】

*¹ Based on focal position and environment temp.at 20±1°C*² Based on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage*^① Within Φ80x64mm*^④ Within 16x13mm*^⑦ Within 270x180mm*^⑨ Within 35x28mm*^⑪ Within 174x121mm*^⑭ Within 16x12mm*^② Within Φ120x88mm*^⑤ Within 180x180mm*^⑧ Within 207x117mm*^⑩ Within 10x6mm*^⑫ Within 146x97mm*^⑮ Within 450x360mm*^③ Within Φ40x28mm*^⑥ Within 117x117mm*^⑬ Within 73x49mm*^⑯ Within 387x315mm

Optional: Foot-switch, Coaxial light illumination, CAD import function of software, MES transmission function, Glass calibration plate, Rotary table (for QMS-A450、QMS-A220、QMS-A315、QMS-H210), 11.6" LCD (for QMS-A110、QMS-A200、QMS-A220、QMS-A315、QMS-H210), Laser sensor (for QMS-A315、QMS-A450、QMS-H210)



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