LARGE SIZE QUICK MEASUREMENT SYSTEMS

VIDEO

laser sensor
(**optional**)

coaxial light illumination
(**optional**)

automatic stage

computer (included)

software (included)

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically

QMS-A430

SPECIFICATION

Code		QMS-A430		QMS-A450	
Optical lens		Dual-field dual-telecentric low-distortion lens			
Measurement range		wide view field	small view field	wide view field	small view field
		440×300mm	370×250mm	500×400mm	430×350mm
Measurement Accuracy *	without splicing	±3µm ①	±1µm②	±3µm ①	±1µm②
	with splicing	±(5+0.02L)µm ③	±(3+0.02L)µm④	±(5+0.02L)µm ⑤	±(3+0.02L)µm ⑥
Repeatability	without splicing	±1µm	±0.5µm	±1µm	±0.5µm
	with splicing	±2µm	±1.5µm	±2µm	±1.5µm
Travel range (X×Y×Z)		350×250×200mm			
Magnification		3.6X	14.2X	3.6X	14.2X
Depth of field		4mm	0.7mm	4mm	0.7mm
Single pixel size		16.9µm	5µm	16.9µm	5µm
Illumination system	surface light	vertical illuminator, high angle ring white light vertical illuminator, 4-zone low and medium angle ring white light (eletric) vertical illuminator, circular (directional) green light (eletric)			
	transmission light	telecentric illuminator, green light			
	coaxial light (optional)	vertical illuminator, white light			
Glass stage size		520×420mm			
Max. weight of workpiece		25kg			
Measurement time		<2s			
Measurement data		2D measurement			
Computer		I7-6700, 64G memory, 480G SSD			
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz			
Power supply		220V, 50Hz, 1200W			
Dimension (L×W×H)		532×497×766mm		1060×824×1818mm	
Weight		800kg			

* The optimum temperature is 20°C±1°C
① Within 73×49mm, on focal position and environment temperature at +20°C±1°C
② Within 16×12mm, on focal position and environment temperature at +20°C±1°C
③ Within 396×270mm, on focal position and environment temperature at +20°C±1°C
④ Within 333×225mm, on focal position and environment temperature at +20°C±1°C
⑤ Within 450×360mm, on focal position and environment temperature at +20°C±1°C
⑥ Within 387×315mm, on focal position and environment temperature at +20°C±1°C

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STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A1
Data transimission function of software	QMS-23-D
CAD import function of software	QMS-23-C
Laser sensor	QMS-43-SJ
Foot-switch	QMS-43-FS

Software (included)

■ Automatically measure widths, holes, rings, angles at the same time, simple and efficient.
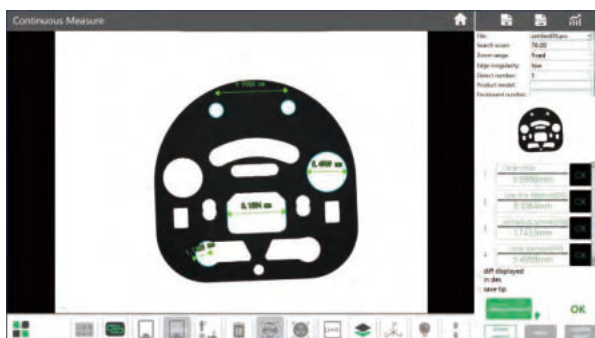
■ Measuring result can be stored automatically. OK items and NG items can be counted automatically.

QUICK MEASUREMENT SYSTEMS

VIDEO

laser sensor
(**optional**)

coaxial light illumination
(**optional**)

automatic stage

computer (included)

software
(included)

QMS-A315

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically

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SPECIFICATION

Code		QMS-A110	QMS-A315	
Optical lens		Low-distortion lens, single-field telecentric	Dual-field dual-telecentric low-distortion lens	
			wide view field	**small view field**
			100×80mm	25×20mm
Measurement range		100×80mm	300×200mm	230×130mm
Measurement Accuracy *	without splicing	±3µm ①	±3µm ②	±1µm ③
	with splicing		±(5+0.02L)µm ④	±(3+0.02L)µm ⑤
Repeatability	without splicing	±1µm	±1µm	±0.5µm
	with splicing		±2µm	±1.5µm
Magnification		3.5X	1.9X	5.75X
Depth of field		5.3mm	40mm	4mm
single pixel size		17.3µm	38.5µm	12.8µm
Travel range (X×Y×Z)		Z axis 75mm	205×125×75mm	
Glass stage size		150×150mm	318×268mm	
Max. weight of workpiece		5kg		
Measurement time		<2s		
Measurement data		2D measurement		
Power supply		220V, 50Hz, 600W		
Illumination system	surface light	vertical illuminator, high angle ring white light vertical illuminator, 4-zone low and medium angle ring white light (eletric) vertical illuminator, circular (directional) green light (eletric)		
	transmission light	telecentric illuminator, green light		
	coaxial light (optional)	vertical illuminator, white light		
Environmental requirement		Temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz		
Dimension (L×W×H)		560×234×685mm	532×497×766mm	532×497×766mm
Weight		45kg	60kg	60kg

* The optimum temperature is 20°C±1°C
　①② Within 80×64mm, on focal position and environment temperature at +20°C±1°C
　③ Within 20×16mm, on focal position and environment temperature at +20°C±1°C
　④ Within 270×180mm, on focal position, environment temperature at +20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
　⑤ Within 207×117mm, on focal position, environment temperature at +20°C±1°C, and workpiece is less than 2kg, L is the travel of stage

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A1
Data transimission function of software	QMS-23-D
CAD import function of software	QMS-23-C
Laser sensor (only for QMS-A315)	QMS-43-SJ
Foot-switch	QMS-43-FS

Software (included)

■ Automatically measure widths, holes, rings, angles at the same time, simple and efficient.
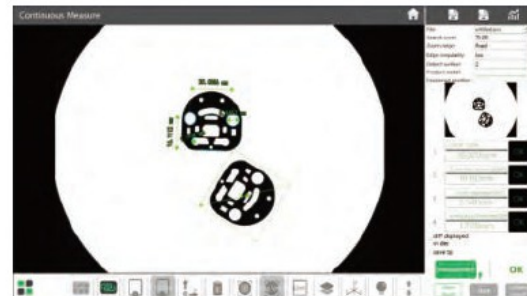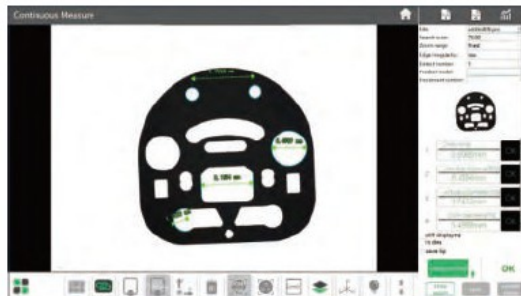
■ Measuring result can be stored automatically. OK items and NG items can be counted automatically.

CNC VISION MEASURING SYSTEMS

INSPECTION CERTIFICATE

MOTORIZED ZOOM LENS IS OPTIONAL

software CD
(included)

VIDEO

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement
- Measuring software is included (page 399~400)

lens with coaxial
light (included)

programmable
segmented ring
light (included)

ISD-V220CNCA

**computer
is included**

controller

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Computer	1 pc
24" Display	1 pc
Len with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc

stylus — calibration
ball
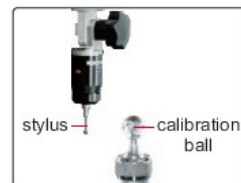
probe (**optional**), includes
Ø2mm and Ø3mm styli,
Ø25mm calibration ball,
measuring accuracy is 10µm

To be continued

Continued from previous page

SPECIFICATION

Code	ISD-V220CNCA**	ISD-V270CNCA**	ISD-V370CNCA**
Measuring range (X×Y×Z)	220×120×150mm	270×170×150mm	370×270×150mm
Stage size	450×280mm	500×330mm	606×466mm
Glass stage size	306×196mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5µm		
Accuracy of X/Y axis	≤(2.5+L/100)µm (L is the measuring length in mm)		≤(3.5+L/100)µm (L is the measuring length in mm)
Repeatability of X/Y axis	2µm		
Objective	0.7X~4.5X (zoom)		
Working distance	92mm		
Magnification	33.0X~208.6X (on 24" monitor)		
Camera	Giga-bit network camera		
Illumination — surface	coaxial light, programmable segmented ring light		
Illumination — contour	adjustable LED light		
View field (diagonal length)	1.5~10.8mm		
Max. height of workpiece	150mm		
Max. weight of workpiece	30kg		
Operation system	Windows 7/8/10		
Drive method	Automatic		
Power supply	220V, 50/60Hz**		
Dimension (L×W×H)	760×600×900mm	760×600×900mm	970×670×940mm
Weight	146kg	168kg	266kg

**Add "-U" on code No. when power supply is 110V, 50/60Hz
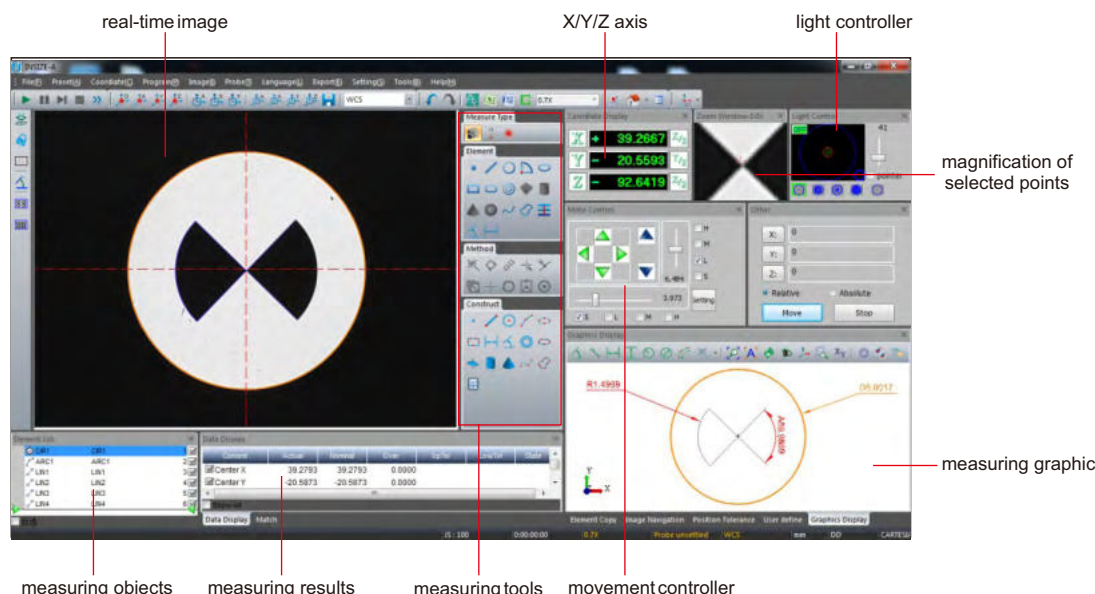
OPTIONAL ACCESSORY

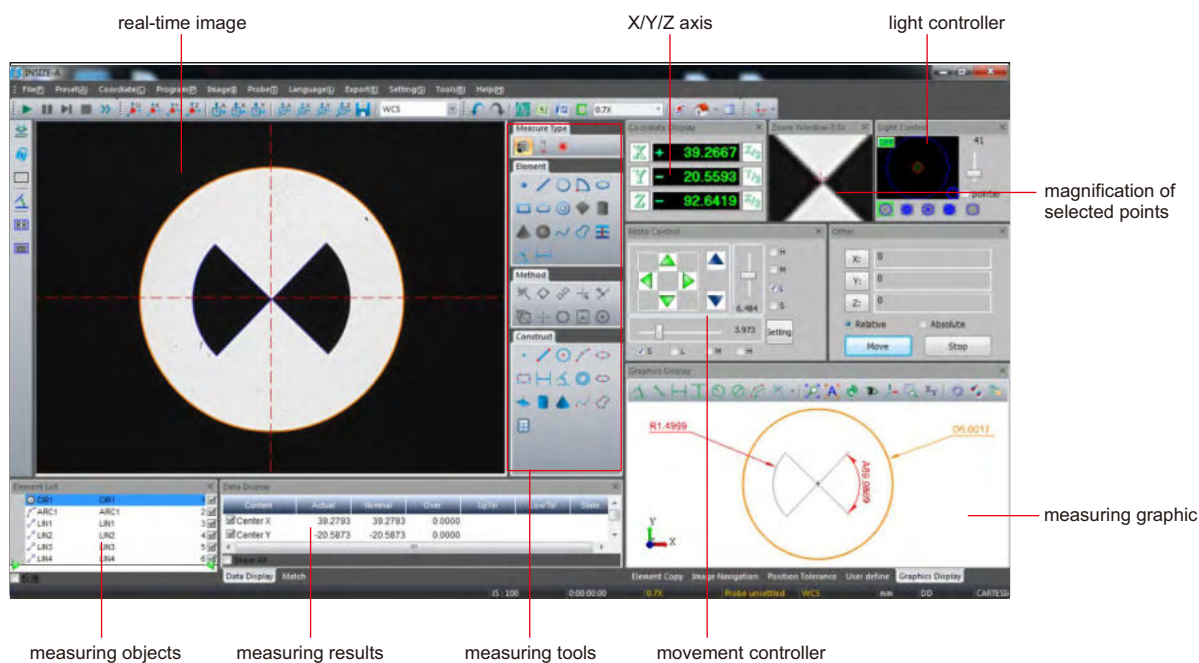|	
0.5X auxiliary objective	Code: **ISD-V-OB05X** Working distance: 175mm Magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	Code: **ISD-V-OB2X** Working distance: 36mm Magnification: 66~417.2X (on 24" monitor)
Probe	Code: **ISD-V-PROBE** Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	Code: **7313-OFFICE**
Desk	Code: **ISD-V-DESK**

desk (**optional**)

SOFTWARE (INCLUDED)

■ Refer to page 399~400 for details

Refer to page 399~400 for details

real-time image — X/Y/Z axis — light controller — magnification of selected points — measuring graphic

measuring objects — measuring results — measuring tools — movement controller

VISION MEASURING SOFTWARE

real-time image   X/Y/Z axis   light controller

magnification of selected points

measuring graphic

measuring objects   measuring results   measuring tools   movement controller
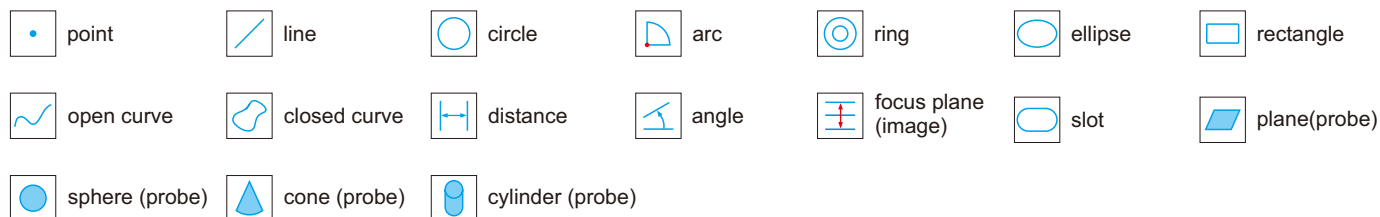
- Operation system: Windows 7/10
- Language: English
- Control features: assistant focus (manual machines), auto focus (CNC machines), auxiliary light control, motion controlled by mouse (CNC machines), auto zoom lens (CNC machines)
- Image measuring methods: intelligent automatic edge detect, select points of an area, select points from multiple parts, select points via mouse, select adjacent points, select points via cross line, magnify to select points, comparatively select points, select points via probe, edge point, contour point
- Constructable elements: point, line, circle, arc, ellipse, rectangle, distance, angle, ring, slot, plane, cone, open curve, closed curve
- Support fixture (CNC machines), scanning, image navigation, user define, pixel calibration
- Measuring by image and probe, image and probe can be synchronized
- Measuring data can export to Excel, Word, SPC, measuring elements can export to dxf

- Dimension measuring tools:

• point	line	circle	arc	ring	ellipse	rectangle
open curve	closed curve	distance	angle	focus plane (image)	slot	plane(probe)
sphere (probe)	cone (probe)	cylinder (probe)				

- Geometric measuring tools:

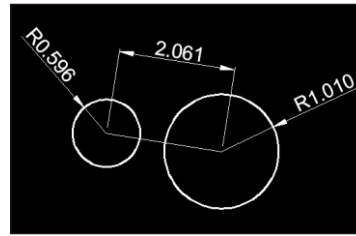|					
position	parallelism	squareness	angularity	symmetry	concentricity	coaxiality (probe)

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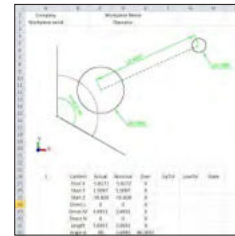
- Measuring and element construct methods:
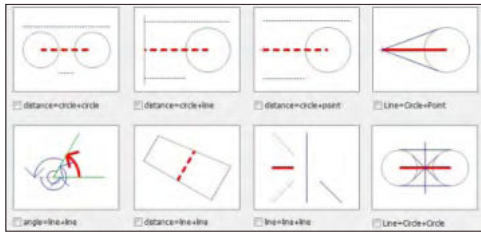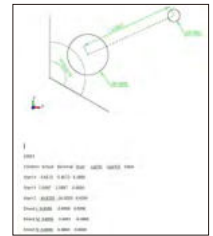

- Export to CAD, EXCEL, WORD
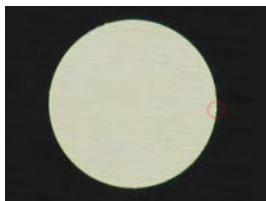

CAD   EXCEL   WORD
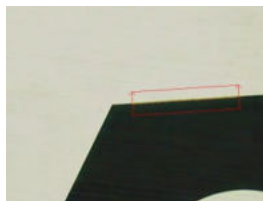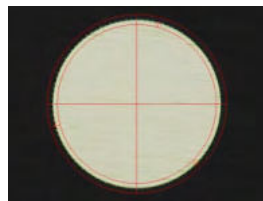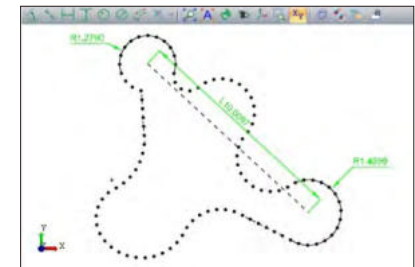
- Edge-detection:

point tool   box tool   circle tool
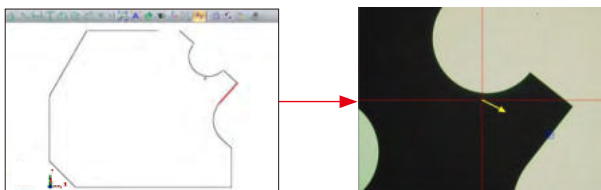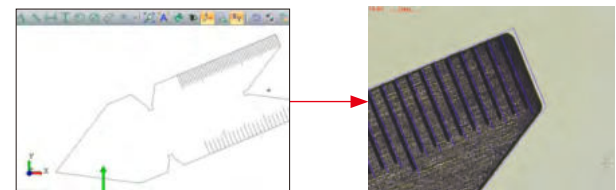

- Contour scanning:

- CAD measuring:

import CAD drawing, set the datum, establish coordinate system,
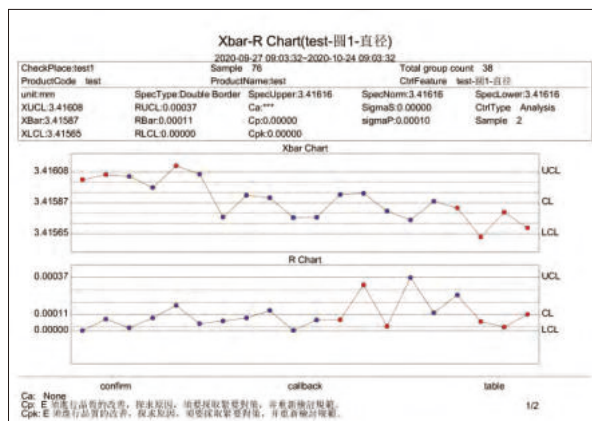then the software will automatically measure

- CAD comparison:

import CAD drawing, set the datum,
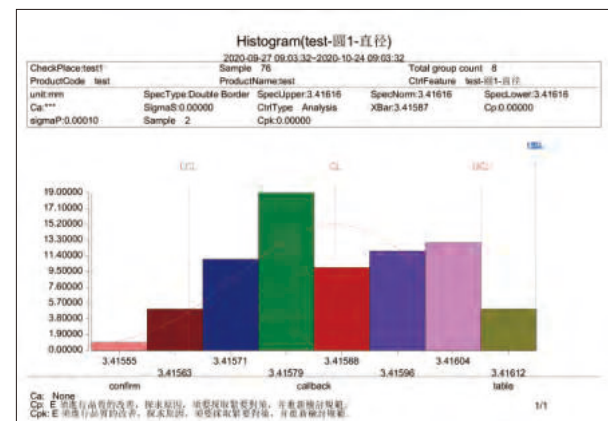then compare real-time image with CAD drawing

- Profile scanning:

- SPC analysis, import the measuring data to SPC module, generate Xbar-R chart, Xbar-S chart, Mid-R chart, X-Rs chart, Histogram, Sigma A and Sigma S chart, Cpk process chart, Process state analyse chart, Single proscess advice analyse chart

Xbar-R chart

Histogram