LARGE SIZE QUICK MEASUREMENT SYSTEM
CODE QMS-A450

VIDEO

coaxial light illumination
(**optional**)

computer (included)

automatic stage

software (included)

SPECIFICATION

Optical lens		dual-field dual-telecentric low-distortion lens	
Measurement range		**wide view field**	**small view field**
		500×400mm	430×350mm
Measurement * **Accuracy**	without stitching	±3µm①	±1µm②
	with stitching	±(5+0.02L)µm③	±(3+0.02L)µm④
Repeatability	without stitching	±1µm	±0.5µm
	with stitching	±2µm	±1.5µm
Travel range (X×Y×Z)		410×340×250mm	
Magnification		3.6X	14.2X
Illumination system	transmission light	telecentric illuminator, green light	
	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)	
	coaxial light (optional)	vertical illuminator, white light	
Glass stage size		520×420mm	
Max. weight of workpiece		25kg	
Measurement time		<2s	
Measurement data		2D measurement	
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)		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 450×360mm, on focal position and environment temperature at 20°C±1°C
④ Within 387×315mm, on focal position and environment temperature at 20°C±1°C

17

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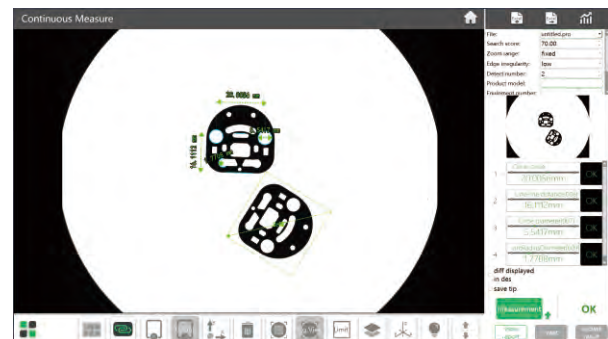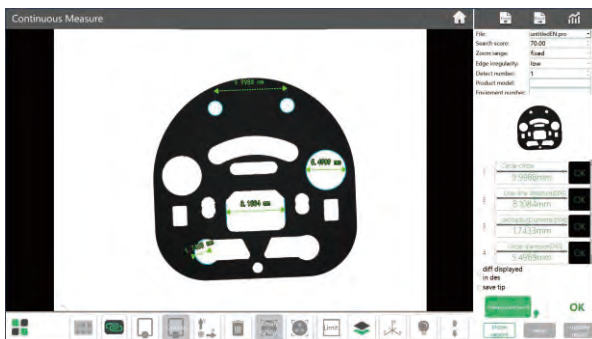- Focus and measure automatically

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

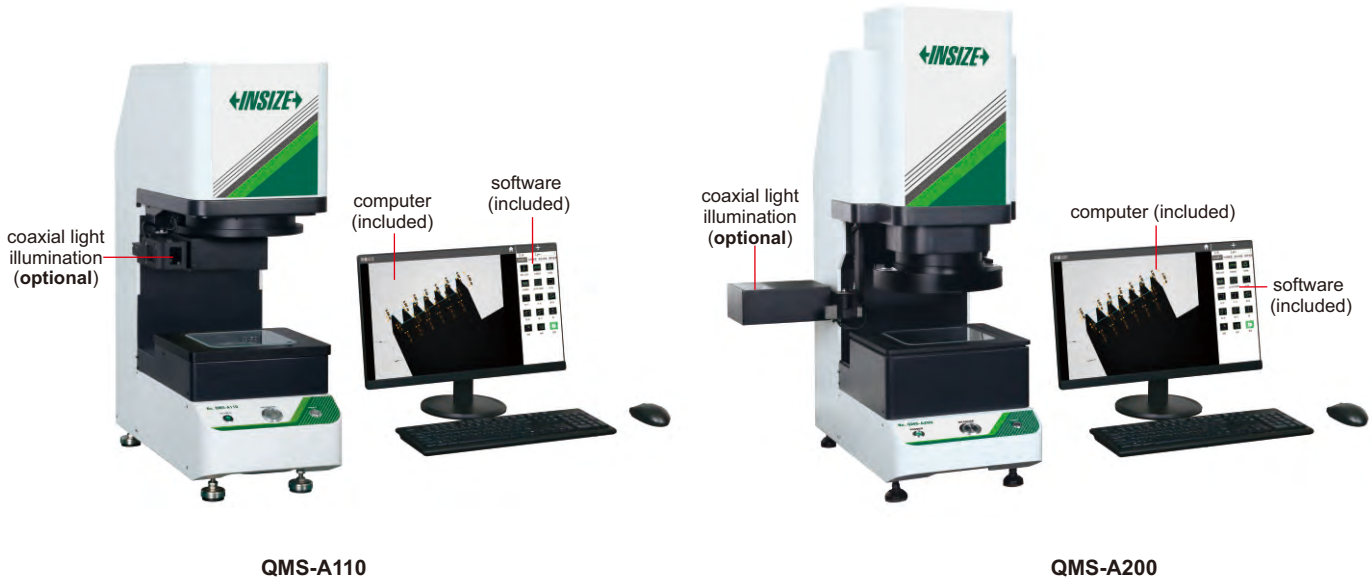| Coaxial light illumination	QMS-43-A1
Data transimission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Laser sensor	QMS-43-SJ1
Foot-switch	QMS-43-FS1

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.

17

QUICK MEASUREMENT SYSTEMS (WITHOUT STITCHING)

coaxial light illumination (**optional**)

computer (included)

software (included)

QMS-A110

coaxial light illumination (**optional**)

computer (included)

software (included)

QMS-A200

SPECIFICATION

Code	QMS-A110	QMS-A200	
Optical lens	low-distortion lens, single-field telecentric Ø100mm	dual-field dual-telecentric low-distortion lens wide view field: Ø150mm small view field: Ø50mm	
View field range	100×80mm	**wide view field**	**small view field**
		150×110mm	50×35mm
Measurement range (X×Y)	98×78mm	148×108mm	48×33mm
Measurement accuracy *	±3µm ①	±5µm ②	±2µm ③
Repeatability	±1µm	±1µm	±0.5µm
Magnification	3.5X	1.9X	5.75X
Z axis travel range	75mm	75mm	
Glass stage size	150×150mm	175×175mm	
Max. weight of workpiece	5kg		
Measurement time	<2s		
Measurement data	2D measurement		
Power supply	220V, 50Hz, 600W		
Illumination system — back light	telecentric illuminator, green light		
ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)		
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	638×336×885mm	
Weight	45kg	60kg	

* The optimum temperature is 20°C±1°C
① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
② Within 120×88mm, on focal position and environment temperature at 20°C±1°C
③ Within 40×28mm, on focal position and environment temperature at 20°C±1°C

17

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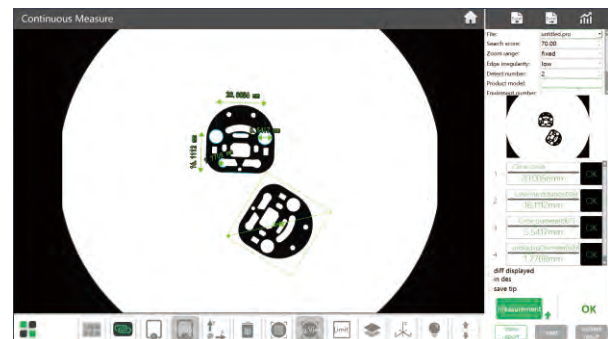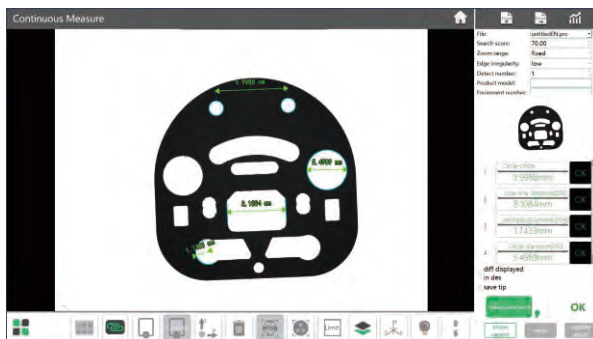- Focus and measure automatically

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

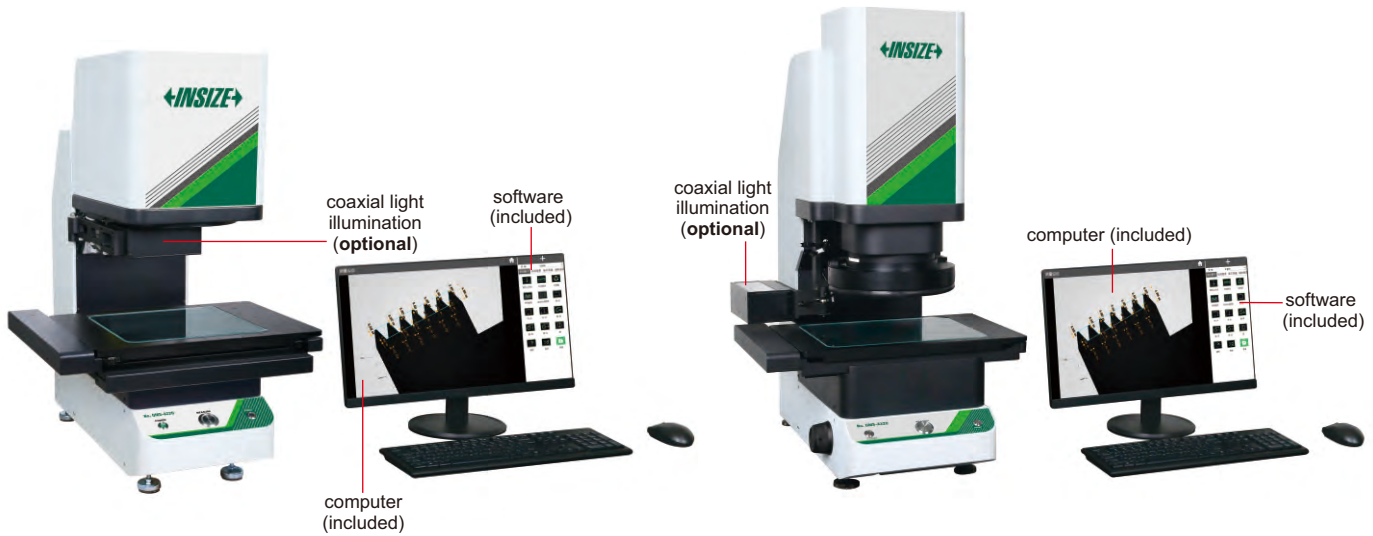| Coaxial light illumination	QMS-23-A3 (for QMS-A110)
	QMS-23-A4 (for QMS-A200)
Data transimission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Foot-switch	QMS-43-FS1

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 (WITH STITCHING)

VIDEO

coaxial light illumination (**optional**)

software (included)

coaxial light illumination (**optional**)

computer (included)

software (included)

computer (included)

QMS-A220

QMS-A320

SPECIFICATION

Code		QMS-A220		QMS-A315		QMS-A320	
Optical lens		dual-field dual-telecentric low-distortion lens					
		wide view field: Ø100mm small view field: Ø25mm		wide view field: Ø100mm small view field: Ø25mm		wide view field: Ø150mm small view field: Ø50mm	
View field range		wide view field	small view field	wide view field	small view field	wide view field	small view field
		93×62mm	30×20mm	100×80mm	25×20mm	150×110mm	50×35mm
Measurement range		200×200mm	130×130mm	300×200mm	230×130mm	300×210mm	200×135mm
Measurement accuracy *	without stitching	±3µm①	±1µm②	±3µm①	±1µm②	±5µm③	±2µm④
	with stitching	±(5+0.02L)µm⑤	±(3+0.02L)µm⑥	±(5+0.02L)µm⑦	±(3+0.02L)µm⑧	±(7+0.02L)µm⑨	±(4+0.02L)µm⑩
Repeatability	without stitching	±1µm	±0.5µm	±1µm	±0.5µm	±1µm	±0.5µm
	with stitching	±2µm	±1.5µm	±2µm	±1.5µm	±2µm	±1.5µm
Magnification		2.8X	11X	1.9X	5.75X	1.9X	5.75X
Travel range (X×Y×Z)		120×140×75mm		205×125×75mm		150×100×75mm	
Glass stage size		249×229mm		318×268mm		318×268mm	
Max. weight of workpiece		5kg					
Measurement time		<2s					
Measurement data		2D measurement					
Power supply		220V, 50Hz, 600W					
Illumination system	back light	telecentric illuminator, green light					
	ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)					
	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)		532×480×766mm		532×497×766mm		669×510×883mm	
Weight		50kg		60kg		68kg	

* The optimum temperature is 20°C±1°C
① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
② Within 20×16mm, on focal position and environment temperature at 20°C±1°C
③ Within 120×88mm, on focal position and environment temperature at 20°C±1°C
④ Within 40×28mm, on focal position and environment temperature at 20°C±1°C
⑤ Within 180×180mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑥ Within 117×117mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑦ 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
⑧ 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
⑨ Within 270×189mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑩ Within 180×121mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage

17

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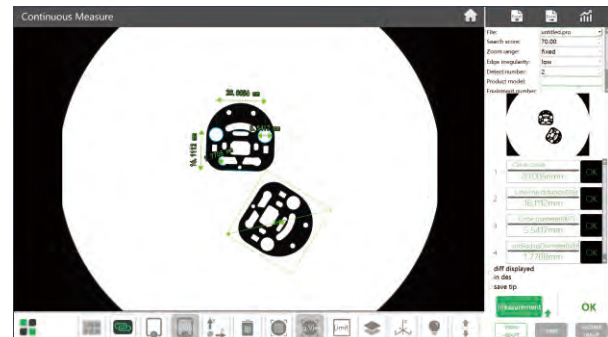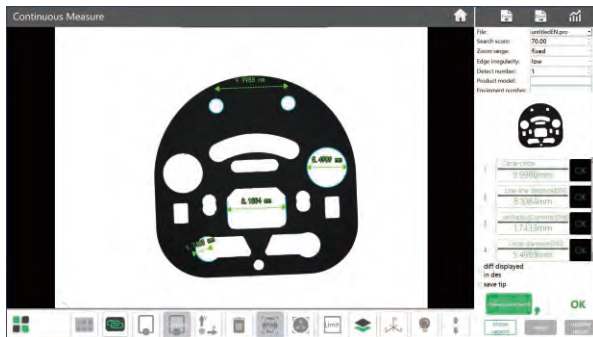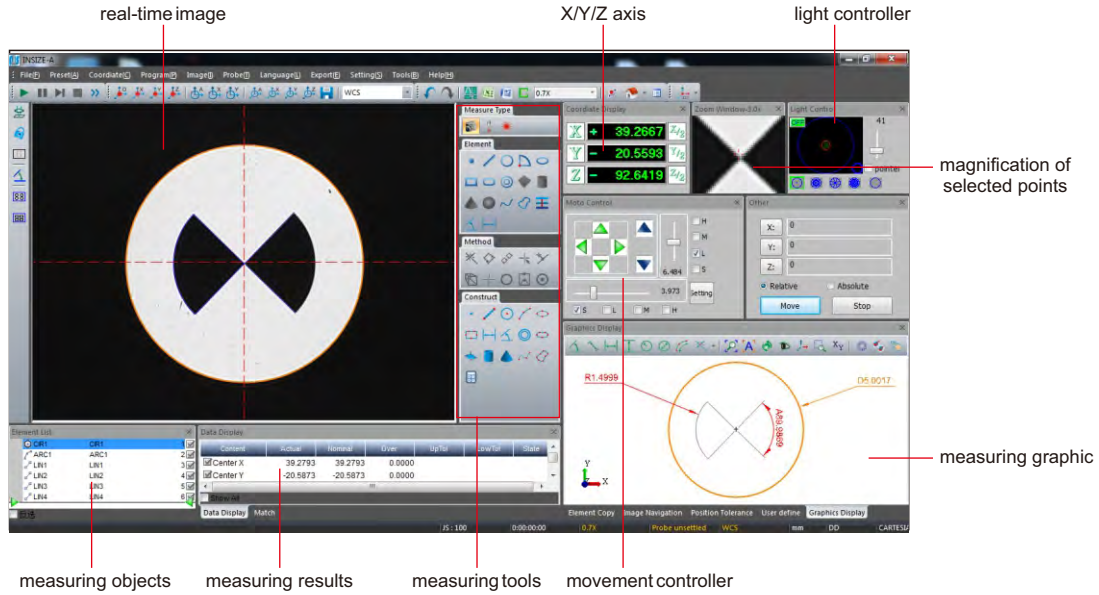- Focus and measure automatically

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Software	1 pc

OPTIONAL ACCESSORY

Coaxial light illumination	QMS-23-A3 (for **QMS-A220C**, **QMS-A315C**)
	QMS-23-A4 (for **QMS-A320C**)
Data transimission function of software	QMS-23-D1
CAD import function of software	QMS-23-C1
Laser sensor	QMS-43-SJ1 (for **QMS-A315C**)
Foot-switch	QMS-43-FS1

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.

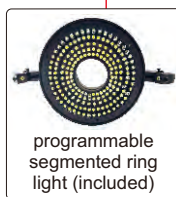**SOFTWARE (INCLUDED)**

■ Refer to page 409~410 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

CNC VISION MEASURING SYSTEMS

MOTORIZED ZOOM LENS IS OPTIONAL

INSPECTION CERTIFICATE

VIDEO

lens with built-in coaxial light (included)

programmable segmented ring light (included)

computer is included

■ 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 395~396)

controller

ISD-V220CNCA

STANDARD DELIVERY

Main unit	1 pc
Software	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
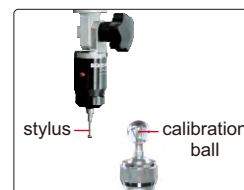
probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10µm

To be continued

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

desk (**optional**)

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**
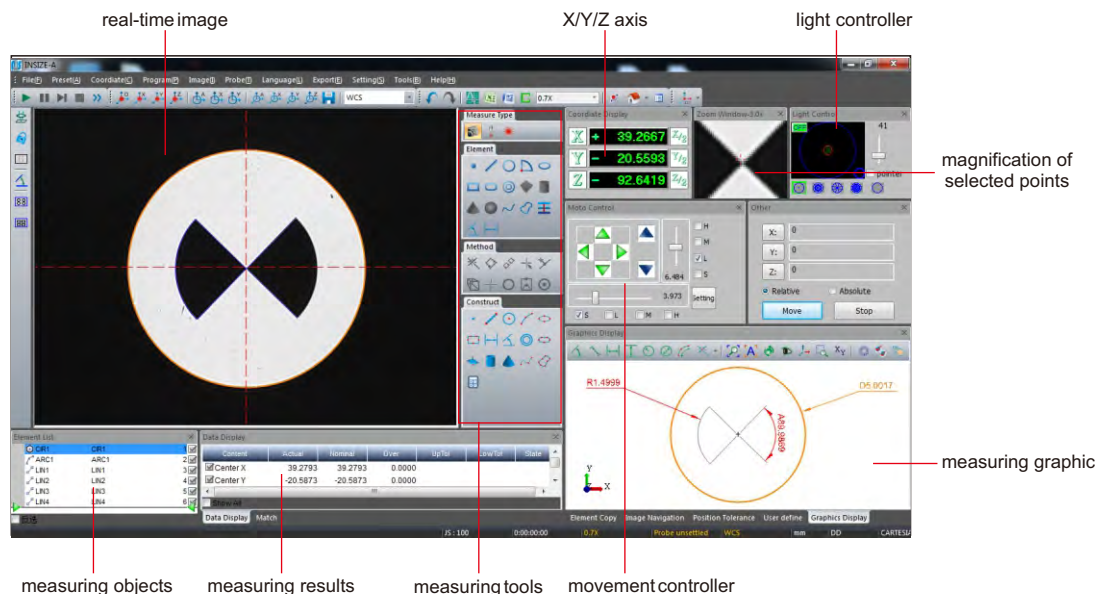
17

SOFTWARE (INCLUDED)

■ Refer to page 409~410 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

CNC VISION MEASURING SYSTEMS

VIDEO

computer is included

ISD-V500N

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

17

SPECIFICATION

Code	ISD-V500N	ISD-V500HN
Measuring range (X×Y×Z)	470×370×200mm	470×370×400mm
Stage size	786×636mm	
Glass stage size	570×470mm	
Resolution of X/Y/Z axis	0.5µm	
Accuracy of X/Y axis	≤(2.5+L/200)µm (L is measuring length in mm)	
Repeatability of X/Y axis	2µm	
Objective	0.7X~4.5X (zoom)	
Working distance	92mm	
View field (diagonal length)	1.7~11.1mm	
Magnification	20X~128X (on 19.5" monitor)	
Camera	1/2" color CCD, 0.4M pixel	
Illumination	surface	coaxial light, programmable segmented ring light	
	contour	adjustable LED light	
Max. height of workpieces	200mm	400mm
Max. weight of workpieces	30kg	
Operation system	Windows 7/10	
Drive method	automatic	
Power supply	220V, 50/60Hz	
Dimension (L×W×H)	1270×1200×1870mm	1270×1200×2070mm
Weight	870kg	900kg

To be continued

STANDARD DELIVERY

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

lens with coaxial light (included)
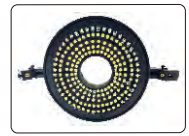
programmable segmented ring light (included)

OPTIONAL ACCESSORY

0.5X auxiliary objective	Code: **ISD-V-OB05X** Working distance: 175mm Magnification: 10~64X (on 19.5" monitor)
2X auxiliary objective	Code: **ISD-V-OB2X** Working distance: 36mm Magnification: 40~256X (on 19.5" monitor)
Probe	Code: **ISD-V-PROBE** Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	Code: **7313-OFFICE**

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

SOFTWARE (INCLUDED)

- Refer to page 409~410 for details

image   X/Y/Z axis display   light control

zoom

graphic

measuring object   measuring result   tools   moto control

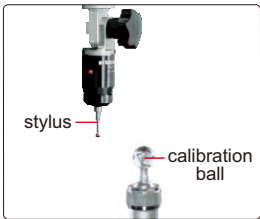# CNC VISION MEASURING SYSTEMS

lens with coaxial light (included)

programmable segmented ring light (included)

stylus — calibration ball

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

17

VIDEO

VMM-L600CN

VMM-L1200CN

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Computer	1 pc
19.5" display	1 pc
Lens 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

SPECIFICATION

Code	VMM-L600CN	VMM-L601CN	VMM-L800CN	VMM-L1000CN	VMM-L1200CN
Measuring range (X×Y×Z)	600×600×150mm	600×900×150mm	800×1000×200mm	1000×1200×200mm	1200×1500×200mm
Glass stage size	640×770mm	640×1070mm	1208×885mm	1408×1085mm	1708×1285mm
Resolution of X/Y/Z axis	0.5µm				
Accuracy of X/Y axis	≤(3.5+L/200)µm (L is measuring length in mm)				
Repeatability of X/Y axis	2µm				
Objective	0.7X~4.5X (zoom)				
Working distance	92mm				
View field (diagonal length)	1.7~11.1mm				
Magnification	20X~128X (on 19.5" monitor)				
Camera	1/2" color CCD, 0.3M pixel				
Illumination surface	coaxial light, programmable segmented ring light				
Illumination contour	adjustable LED light				
Max. height of workpiece	150mm		200mm		
Max. weight of workpiece	30kg				
Operation system	Windows 7/8/10				
Drive method	automatic				
Guide rail	linear guider				
Power supply	100~240V, 50/60Hz				
Operation environment	temperature: 20±2°C, temperature variation: <1°C/h, <2°C/24h, <1°C/m; humidity: 55%~65%				
Dimension (L×W×H)	1500x1300x1510mm	1800x1300x1510mm	2170x2380x1560mm	2370x2580x1560mm	2570x2880x1560mm
Weight	1281kg	1500kg	3260kg	3750kg	4520kg

OPTIONAL ACCESSORY

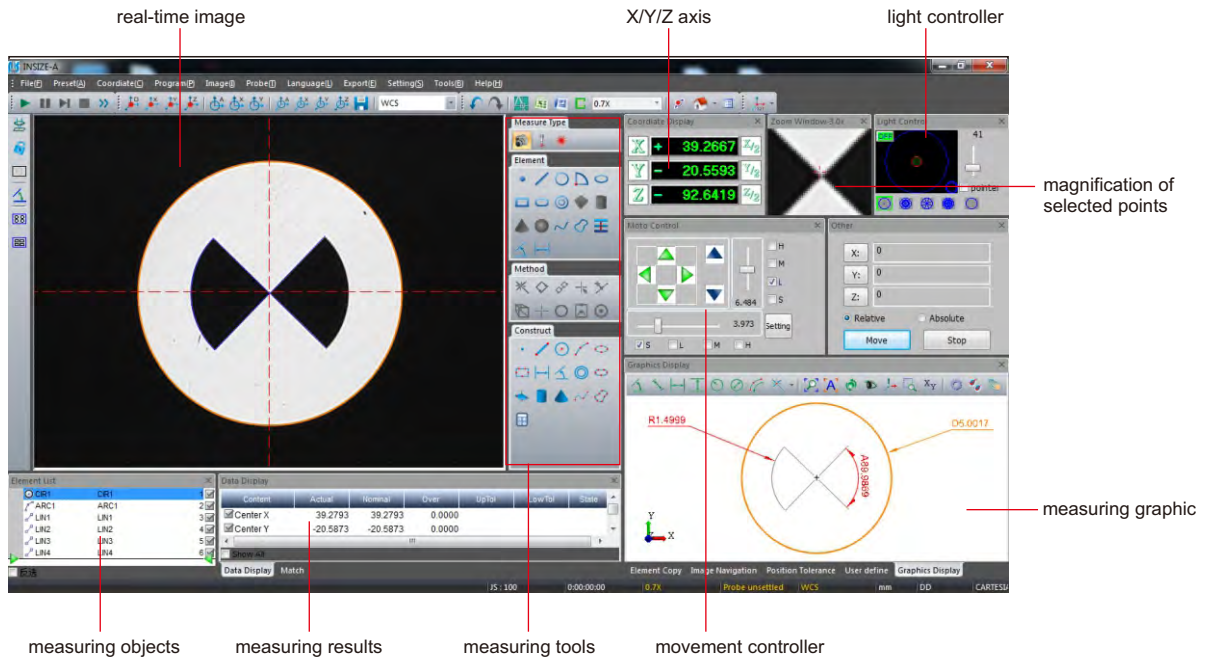|	
0.5X auxiliary objective	Code: **ISD-V-OB05X** Working distance: 175mm Magnification: 10~64X (on 19.5" monitor)
2X auxiliary objective	Code: **ISD-V-OB2X** Working distance: 36mm Magnification: 40~256X (on 19.5" monitor)
Probe	Code: **ISD-V-PROBE** Includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	Code: **7313-OFFICE**

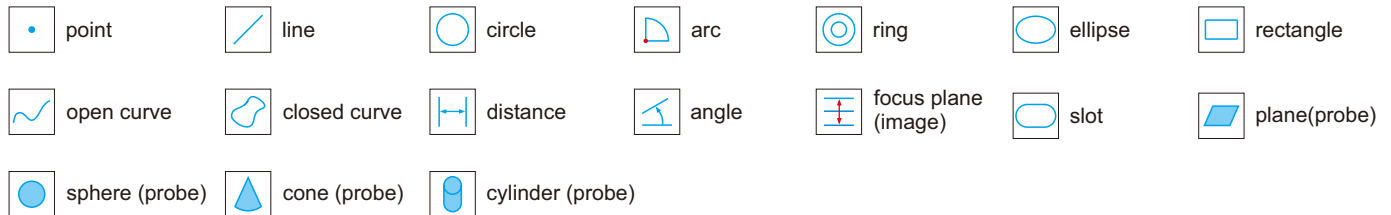## SOFTWARE (INCLUDED)
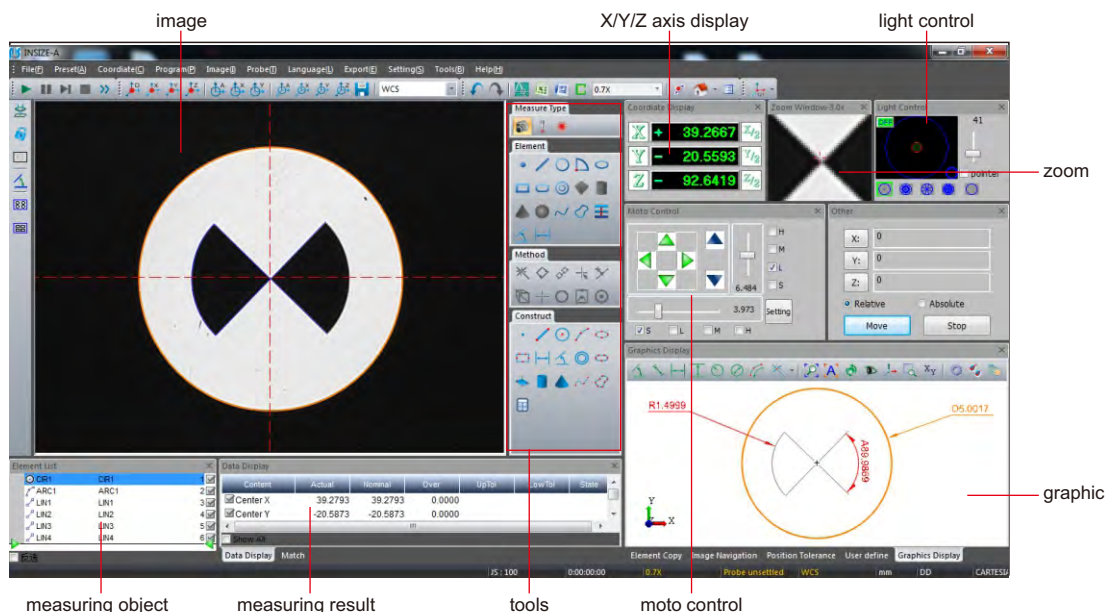
■ Refer to page 409~410 for details

image   X/Y/Z axis display   light control

zoom

graphic

measuring object   measuring result   tools   moto control

17

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)

To be continued

INSIZE » M&B Calibr | info@insz.sk | +421 944 367 573 | www.insz.sk
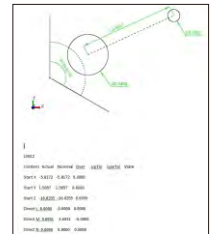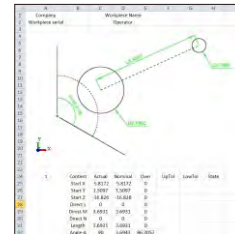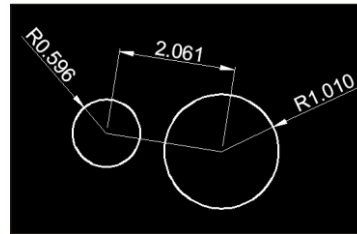
Continued from previous page

■ Measuring and element construct methods:
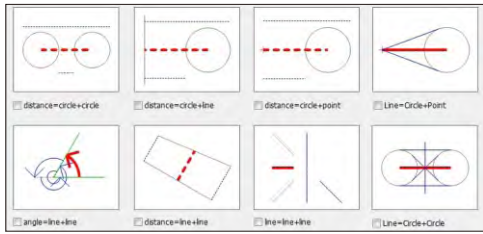
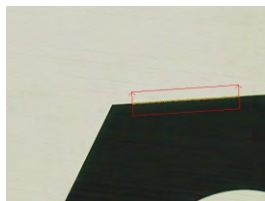■ Export to CAD, EXCEL, WORD

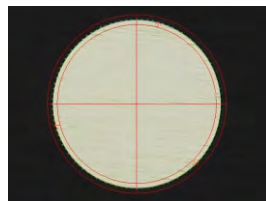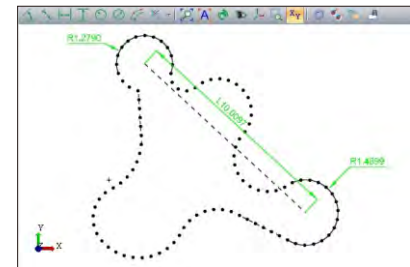CAD   EXCEL   WORD

■ Edge-detection:

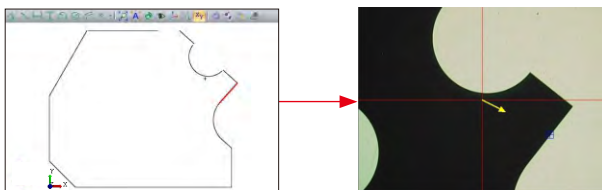point tool   box tool   circle tool
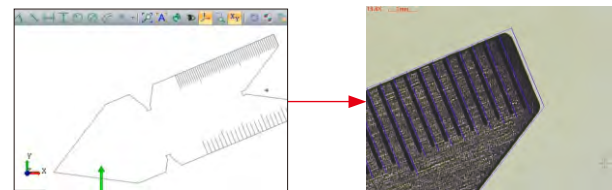

■ Contour scanning:
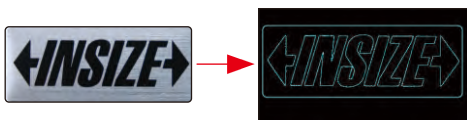

■ CAD measuring:

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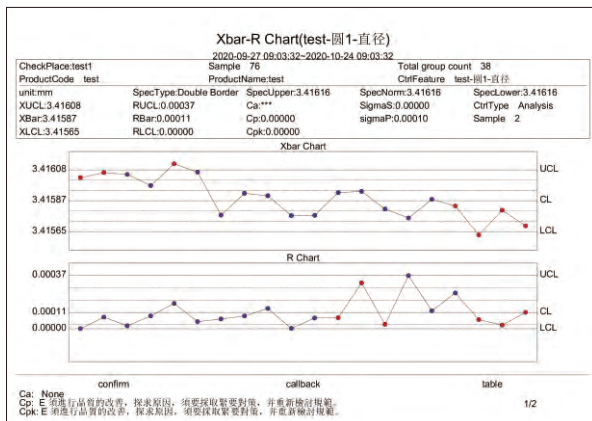
■ CAD comparison:

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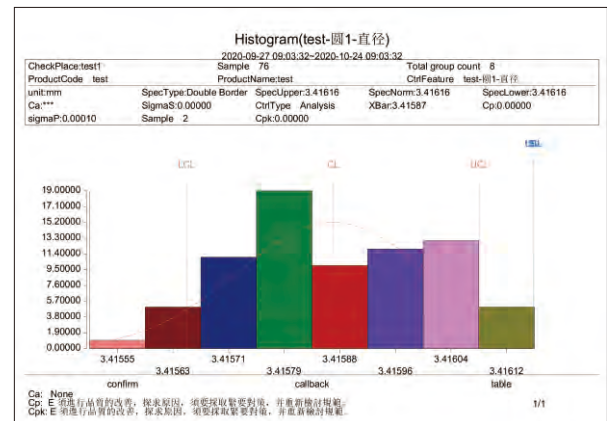then compare real-time image with CAD drawing

■ 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
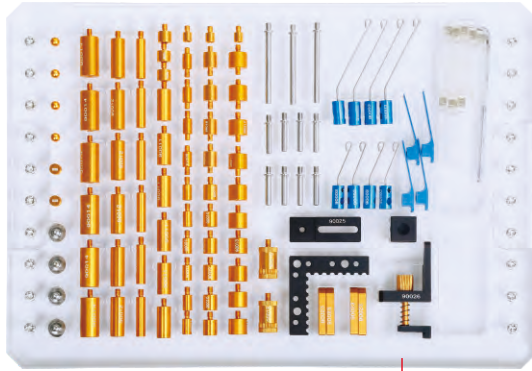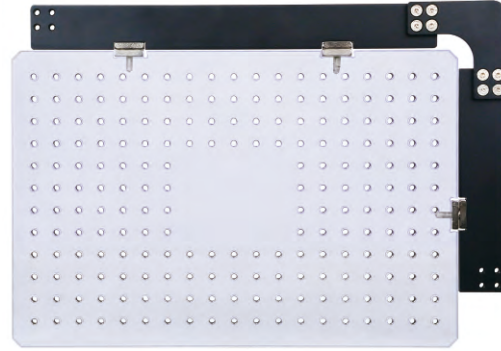

Xbar-R chart   Histogram
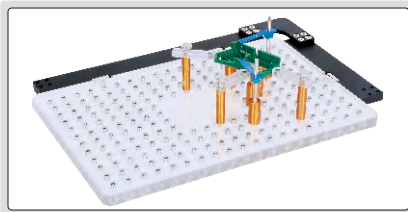
JIG SET FOR VISION MEASURING SYSTEM
CODE ISY-700

VIDEO

acrylic tray (included)

ISY-700

application example

Product	Code	Size (mm)	Quantity
clip	ISY-700-90001	7×34	4
clip	ISY-700-90002	Ø1.5×24	4
	ISY-700-90003	Ø1.5×50	4
clip stand	ISY-700-90004	Ø4×20	8
	ISY-700-90005	Ø4×46	3
spherical support head	ISY-700-90006	—	4
stand	ISY-700-90007	Ø6×10	6
	ISY-700-90008	Ø6×25	6
	ISY-700-90019	Ø6×6	3
stand	ISY-700-90009	Ø9×7	3
	ISY-700-90010	Ø9×10	6
	ISY-700-90011	Ø9×20	6
	ISY-700-90012	Ø9×25	6
stand	ISY-700-90013	Ø12×10	6
	ISY-700-90014	Ø12×25	6
stand for slice parts	ISY-700-90015	Ø6×10	4
	ISY-700-90016	Ø9×10	4
	ISY-700-90017	Ø12×10	4
stand with fine adjustment	ISY-700-90018	Ø12×20~25	2

Product	Code	Size (mm)	Quantity
adapter for square support	ISY-700-90020	—	2
clamping screw	ISY-700-90021	—	4
L-shaped positioning plate	ISY-700-90022	50×50×6	1
sliding support plate	ISY-700-90023	30×12×5	4
square support	ISY-700-90024	20×16×16	1
base for square support	ISY-700-90025	45×16×6	1
spring stand	ISY-700-90026	—	1
acrylic sliding support plate	ISY-700-90028	45×12×5	8
wrench	ISY-700-90029	M3	1
acrylic base plate	ISY-700-90030	300×200×12	1

17