

# Innovative Measuring Systems



- Manual 2D Vision Measuring System
- Manual 2D Vision Measuring System (Auto Focus)
- CNC 2D Vision Measuring System (Economic type)
- CNC 2D Vision Measuring System
- CNC 2D Vision Measuring System (Gantry Type)

**ASIMETO**  
Empowering Possibilities

# Manual 2D Vision Measuring System

## FEATURES:

- High precision marble base and mechanical structure provide great stability and rigidity.
- 6.5X Detented zoom lens, magnification 0.7x-4.5x
- 1.3M pixel digital camera
- Programmable 3-ring 8-division LED surface illumination
- Contour parallel LED illumination
- 0.5um linear scale
- Laser indicator navigator
- RationalVue software

## OPTIONAL:

- Co-axial light
- Auto zoom lens
- Touch probe



MVS2010

## SPECIFICATIONS:

Code	MVS2010	MVS3020	MVS4030	MVS5040
X/Y-axis Travel	200x100mm	300x200mm	400x300mm	500x400mm
Dimension(WxDxH)	550x540x830mm	600x740x890mm	700x840x890mm	800x940x890mm
Net Weight	140Kg	190Kg	240Kg	290Kg
Z-axis Travel	200mm			
X/Y/Z-axis Scale	0.0005mm Resolution			
X/Y-axis Accuracy*	$\leq 2.5+L/200(\mu m)$	$\leq 2.5+L/200(\mu m)$	$\leq 2.5+L/200(\mu m)$	$\leq 3+L/200(\mu m)$
Repeatability	$\pm 2\mu m$			
Base and Pillar	High Accuracy Marble			
Illumination System (Software Adjustment)	Surface: Stepless Adjustable 3-ring 8-division LED Cold Illumination			
	Contour: LED Parallel Illumination			
	LED Laser Navigation Lights			
Camera	1.3M Pixel Digital Camera			
Zoom lens**	6.5X High Resolution Detented Zoom Lens			
	Magnification: 0.7X-4.5X ; Video Magnification: 20X-200X			
Field of View	8.1-1.3mm (Depends on Camera and Lens)			
Working Environment	Temperature: 20°C $\pm$ 2°C, change range < 2°C/hr			
	Humidity: 30% -80%			
	Vibration< 0.002g, <15Hz			

\* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

\*\* Video Magnification is approximate value, it is related to the dimension of monitor and resolution.

# Manual 2D Vision Measuring System (Auto Focus)

## FEATURES:

- High precision marble base and mechanical structure provide great stability and rigidity.
- 6.5X Detented zoom lens, magnification 0.7x-4.5x, with magnifican signal feedback
- 1.3M pixel digital camera
- Programmable 3-ring 8-division LED surface illumination
- Contour parallel LED illumination
- 0.5um linear scale
- Laser indicator navigator with manual pulse generator for Z axis movement control
- Auto focues (Z-Axis)
- RationalVue software

## OPTIONAL:

- Co-axial light
- Auto zoom lens
- Touch probe



MVS2010F

## SPECIFICATIONS:

Code	MVS2010F	MVS3020F	MVS4030F	MVS5040F
X/Y-axis Travel	200x100mm	300x200mm	400x300mm	500x400mm
Dimension(WxDxH)	550x540x830mm	600x740x890mm	700x840x890mm	800x940x890mm
Net Weight	140Kg	190Kg	240Kg	290Kg
Z-axis Travel	200mm			
X/Y/Z-axis Scale	0.0005mm Resolution			
X/Y-axis Accuracy*	$\leq 2.5+L/200(\mu m)$	$\leq 2.5+L/200(\mu m)$	$\leq 2.5+L/200(\mu m)$	$\leq 3+L/200(\mu m)$
Repeatability	$\pm 2\mu m$			
Base and Pillar	High Accuracy Marble			
Illumination System (Software Adjustment)	Surface: Stepless Adjustable 3-ring 8-division LED Cold Illumination			
	Contour: LED Parallel Illumination			
	LED Laser Navigation Lights			
Camera	1.3M Pixel Digital Camera			
Zoom lens**	6.5X High Resolution Detented Zoom Lens			
	Magnification: 0.7X-4.5X ; Video Magnification: 20X-200X			
Field of View	8.1-1.3mm (Depends on Camera and Lens)			
Working Environment	Temperature: 20°C $\pm$ 2°C, change range < 2°C/hr			
	Humidity: 30% -80%			
	Vibration< 0.002g, <15Hz			

\* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

\*\* Video Magnification is approximate value, it is related to the dimension of monitor and resolution.

# CNC 2D Vision Measuring System (Economic type)

## FEATURES:

- High precision marble base and mechanical structure provide great stability and rigidity.
- Can set auto measurement, and process batch measurement with high efficiency.
- 6.5X Detented zoom lens, magnification 0.7x-4.5x
- 1.3M pixel digital camera
- Programmable 5-ring 8-division LED surface illumination
- Contour parallel LED illumination
- 0.5um linear scale
- Joystick control
- RationalVue software

## OPTIONAL:

- Co-axial light
- Auto zoom lens
- Touch probe
- MCR20 rack



## SPECIFICATIONS:

Code	CVS3020E	CVS4030E
X/Y-axis Travel	300x200mm	400x300mm
Dimension(WxDxH)	810x610x1050mm	960x710x1075mm
Net Weight	330Kg	380Kg
Z-axis Travel	200mm	
X/Y/Z-axis Scale	0.0005mm Resolution	
X/Y-axis Accuracy*	$\leq 3+L/200(\mu m)$	
Repeatability	$\pm 2\mu m$	
Base and Pillar	High Accuracy Marble	
Illumination System (Software Adjustment)	Surface: 5-ring 8-division 0-255 grade continue adjustable	
	Contour: LED Parallel Illumination	
	LED Laser Navigation Lights	
CCD Camera	1.3M Pixel Digital Camera	
Zoom lens* *	6.5X High Resolution Detented Zoom Lens	
	Magnification: 0.7X-4.5X ; Video Magnification: 20X-200X	
Field of View	8.1-1.3mm (Depends on Camera and Lens)	
Working Environment	Temperature: $20^{\circ}C \pm 2^{\circ}C$ , change range $< 2^{\circ}C/hr$	
	Humidity: 30% -80%	
	Vibration $< 0.002g$ , $< 15Hz$	

\* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

\*\* Video Magnification is approximate value, it is related to the dimension of monitor and resolution.

# CNC 2D Vision Measuring System

## FEATURES:

- High precision marble base and mechanical structure provide great stability and rigidity.
- Can set auto measurement, and process batch measurement with high efficiency.
- Auto zoom lens 1-10x
- 2.0M pixel digital camera
- Programmable 5-ring 8-division LED surface illumination
- Contour parallel LED illumination
- 0.1um linear scale
- Joystick control
- RationalVue software

## OPTIONAL:

- Co-axial light
- Laser sensor
- Touch probe
- MCR20 rack



## SPECIFICATIONS:

Code	CVS3020	CVS4030	CVS5040
X/Y-axis Travel	300x200mm	400x300mm	500x400mm
Dimension(WxDxH)	1600x780x1700mm	1750x920x1700mm	1850x1180x1700mm
Net Weight	320Kg	390Kg	460Kg
Z-axis Travel	200mm		
X/Y/Z-axis Scale	High precision Linear Scale, resolution: 0.0001mm		
X/Y-axis Accuracy*	$\leq 2.5 + L/200(\mu m)$		
Repeatability	$\pm 2\mu m$		
Base and Pillar	High Accuracy Marble		
Illumination System (Software Adjustment)	Surface: 5-ring 8-division 0~255 grade continue adjustable		
	Contour: LED Parallel Illumination		
	LED Laser Navigation Lights		
CCD Camera	2.0M Pixel Digital Camera		
Zoom lens**	Auto zoom lens: 1-10x		
Field of View	8.1-1.3mm (Depends on Camera and Lens)		
Working Environment	Temperature: 20°C $\pm$ 2°C, change range < 2°C/hr		
	Humidity: 30% ~80%		
	Vibration < 0.002g, <15Hz		

\* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

\*\* Video Magnification is approximate value, it is related to the dimension of monitor and resolution.

# CNC 2D Vision Measuring System (Gantry Type)

## FEATURES:

- High precision marble base and mechanical structure provide great stability and rigidity.
- Fully auto close loop control, auto measurement.
- Can set auto measurement, and process batch measurement with high efficiency.
- Auto zoom lens with co-axial light
- 2.0M pixel digital camera
- Programmable 5-ring 8-division LED surface illumination
- Contour parallel LED illumination
- RSF / Renishaw 0.1um linear scale
- Joystick control
- RationalVue software

## OPTIONAL:

- Laser sensor
- Touch probe
- MCR20 rack



CVS5040B

## SPECIFICATIONS:

Code	CVS5040B	CVS6050B	CVS8060B
X/Y-axis Travel	500x400mm	600x500mm	800x600mm
Dimension(WxDxH)	1700x1180x1750mm	1700x1180x1750mm	1700x1280x1750mm
Net Weight	1400Kg	1500Kg	1800Kg
Z-axis Travel	200mm		
X/Y/Z-axis Scale	High precision Linear Scale, resolution: 0.0001mm		
X/Y-axis Accuracy*	$\leq 2+L/200(\mu m)$		
Repeatability	$\pm 2\mu m$		
Base and Pillar	High Accuracy Marble		
Illumination System (Software Adjustment)	Surface: 5-ring 8-division 0-255 grade continue adjustable		
	Contour: LED Parallel Illumination		
	LED Laser Navigation Lights		
CCD Camera	2.0M Pixel Digital Camera		
Zoom lens**	Auto zoom lens with co-axial light		
Field of View	8.1-1.3mm (Depends on Camera and Lens)		
Working Environment	Temperature: $20^{\circ}C \pm 2^{\circ}C$ , change range $< 2^{\circ}C/hr$		
	Humidity: 30% -80%		
	Vibration $< 0.002g$ , $< 15Hz$		

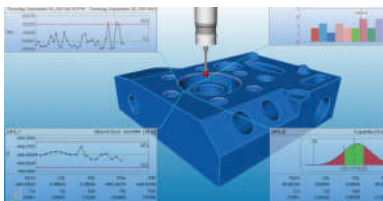
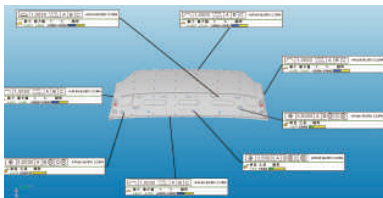
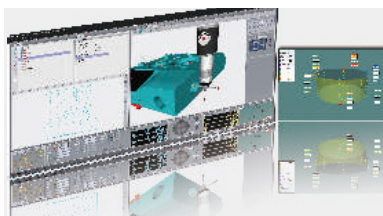
\* L is measuring length, unit is mm, the mechanical accuracy of Z-axis and focus accuracy is greatly related to the surface of the workpiece.

\*\* Video Magnification is approximate value, it is related to the dimension of monitor and resolution.

# RationalVue Mesuring Software

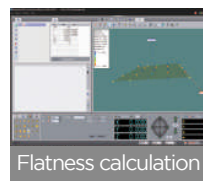
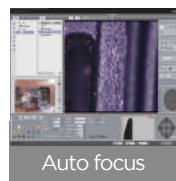
RationalVue fully inherited the features of CAD, with seamless link, 100% graphical display, fast drag-and-drop operation, real-time ratio, multiple graphic reports, advanced algorithm. So as to make it operate simply and functional, as well as to ensure the advanced nature and reliability of the algorithm.

RationalVue is a kind of authentic 3D composite measuring software, leading vision measuring into 3D era, which has greatly expanded the applications of vision measuring machine. So as to make it authentically widely used in Hardware, Mold, Machining, Precision manufacturing, Automotive parts, Stamping, Aerospace components, Plastic and rubber products, Mobile phone industry, PCB board, Electronic components, Semiconductor components, Medical devices and other fields.



## Comparison based on multiple 3D format

- The software allows users to input 3D files of iges format or CAD files of DXF format.
- The CAD file can be used for measuring, guiding the software to do comparison between the theoretical values and the measured results.



## Measuring height and flatness by focusing

Thanks to the advance focusing algorithm from RationalVue, the machine can achieve fast and precise focus operation to the parts; finish the focusing process within 2-3 seconds. The repeatability of the focusing can be up to 0.003mm, which is able to be used for measuring of height or flatness.



## Supporting laser sensor measuring

RationalVue is offering professional laser measuring function, allows users to set pace and achieve non-contact measuring function automatically, complete the calculation of height, flatness and profile tolerance of the curved surface.

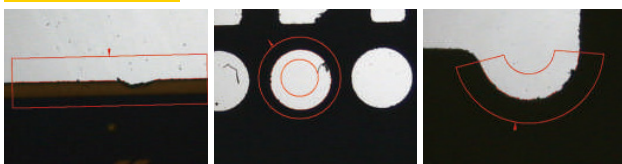


## PTB certificate

RRationalVue software passed PTB certificate, which ensures the software accuracy and reliability by official authority

## Special edge measuring

### Burrsfiltering



RationalVue is able to filter the burrs of the measuring parts edge, increase the measuring accuracy.

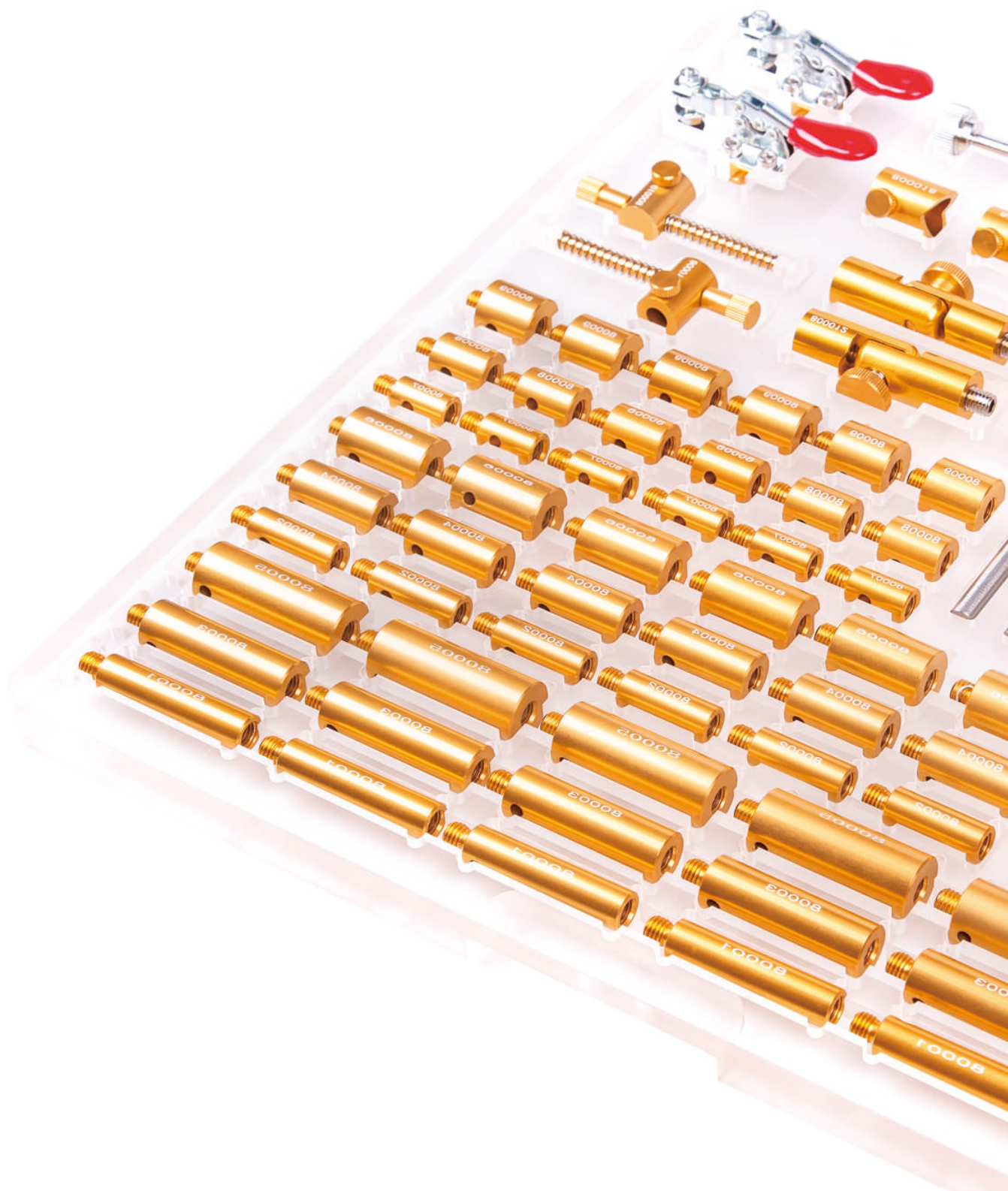
### Edge sharpen



Self-developed advanced edge sharpen function, ensure the software can precisely detected blurry edge or edge with large burrs, which ensure the real automatic measuring function.

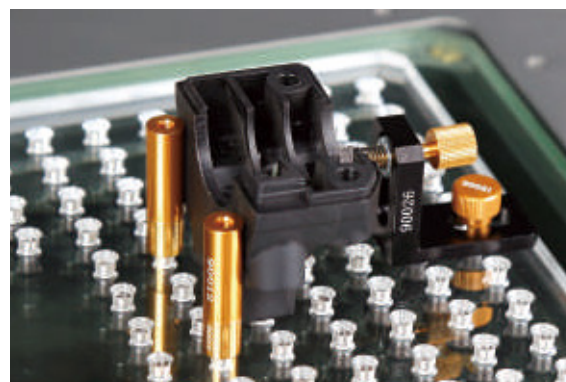
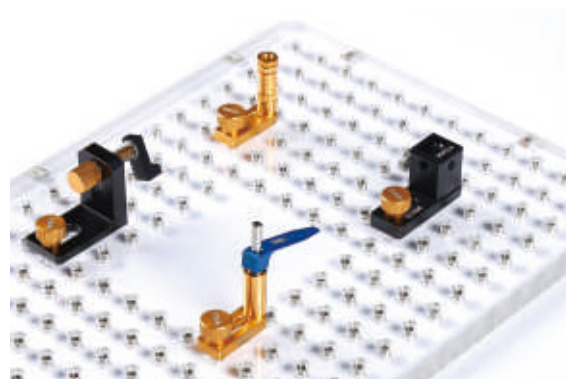
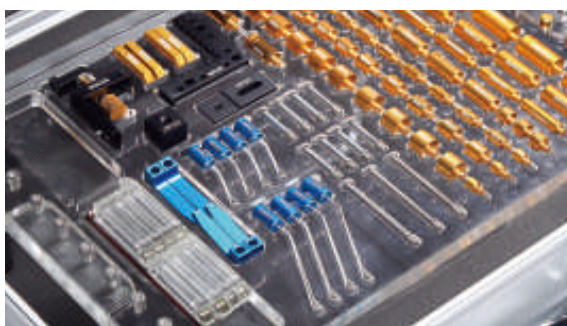


## Accessories





The vision measurement machine application is always coming with varies of different shapes or materials. Some are even without any effective plate to be correctly located on the work stage. Developing specific fixtures for each component should be with low efficiency and high cost. This new develop fixture kits should be able to help customers save time and cost, also achieve fast and reliable fixturing during measuring process, improve the throughput, reproducibility and accuracy of the inspection process with quick and repeatable fixturing set-ups.



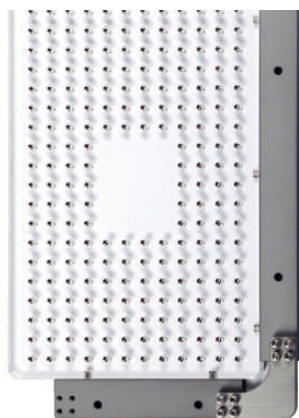
#### VMM fixture kits

This kit includes supporting, pressing, and holding components, which allow the user to manage the fixturing easily and no special tools are required. Regardless of the shapes or materials, user can easily find the fixturing solution during measuring process.

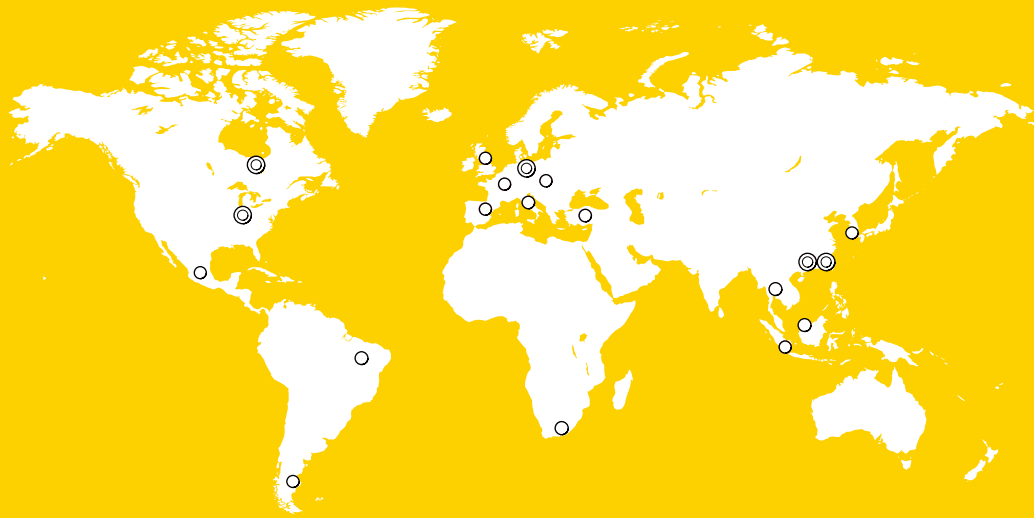
All components are made by precision manufacturing process and with anodize coating. Each part is with laser marking coding. So all the combination of the components can be repeatable for the subsequent inspections. Which helps to eliminate the variation of different parts or operators, and increasing the measuring accuracy and repeatability.

Special designed base plate for the fixture kit, made by high transmittance and flatness acrylic material, which to ensure the straight light path from the contour light, keeping the original measuring accuracy of the machine.

Metal M4 screw inserts are mounted in the base plate, the components can be firmly fixed and highly increase the life cycle of the base plate. An L shape magnetic fast mounting corner is available. User only needs to place and measure, which largely increase the measuring efficiency.



Base plate size	
300*200mm	M4 threads
400*300mm	M4 threads
300*300mm	M4 threads
400*400mm	M4 threads
customized sizes	



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