



@Akira-Metro



www.Akira-metro.com



fb.me/AkiraMetro

CATALOG 2019





Vision Measuring Machine	03
Tool Measuring Machine	19
VMM/CMM Fixture	27
3D Scanner	35
VMM/CMM Upgrade Kit	53



Vision Measuring Machine

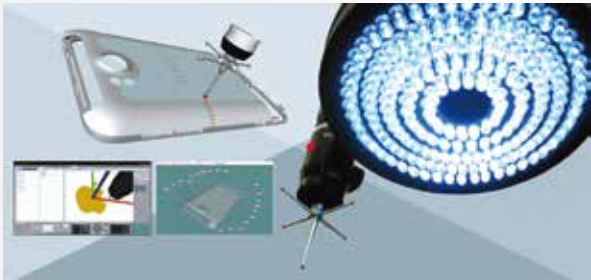
Vision Measurement Machines Series



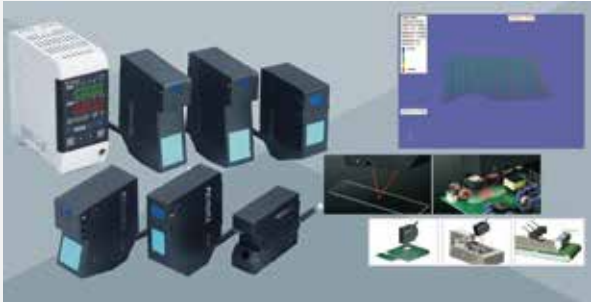
RationalVue Measuring software



RationalVue is the first vision measuring software including the CAD function, also the first to combine the vision, probe and laser sensor measuring function in one single software and all the function are freely switchable. RationalVue is with the features of easy use, 100% graphical, real time model comparison, multiple diagram format and advanced algorithm, ensures the reliability of the algorithm and in the mean time offers easy operation and powerful function.



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 guiding measuring, guiding the software to do comparison between the theoretical values and the measuring results, which increases the measuring efficiency by 2-3 times. The CAD inputting allows the software to achieve ISO geometric tolerance measuring function such as position tolerance, profile tolerance for curve or curved surface.

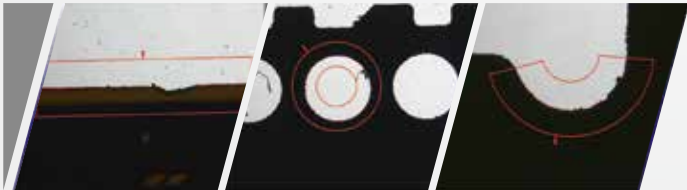


Supporting laser sensor measuring
The RationalVue software is supporting the KEYENCE and Panasonic laser sensors.
RationalVue is offering professional laser measuring function, allows the users to set pace and achieve non-contact measuring function automatically, complete the calculation of height, flatness and profile tolerance of the curved surface



Measure height and flatness by focusing
Thanks to the advanced 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.

Special edge measuring



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



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

ACCURACER Series High Accuracy CNC Automatic Vision Measurement Machine

ACCURACER series VMM is a powerful measuring device which is developed based on the requirement of very high accuracy measuring application. The whole machine including working stage is using granite material, ensures much higher rigidity, minimize the influence to the measuring accuracy by the environment temperature changing.
The ACCURACER series is standard with Renishaw linear scales, HD camera, auto zoom lens, close-loop Panasonic servo motors and drivers, to provide the best combination performance of image, light path and motion control, which improves the measuring accuracy.



Specification

Items		AR300	AR400	AR500	AR600
Dimension(mm)(L×W×H)		840×620×1680	1000×720×1680	1200×820×1680	1400×1020×1680
Measuring range(mm)(X×Y×Z)		300×200×200	400×300×200	500×400×200	600×500×200
Measuring Accuracy(μm)		2.3 + L / 200	2.3 + L / 200	2.3 + L / 200	2.5 + L / 200
Repeatability (μm)		2.3	2.3	2.3	2.5
Weight (kg)		450kg	530kg	650kg	730kg
Image and Measuring	CCD	Industrial grade color CCD camera			
	Lens	Manual dented zoom lens 0.7 - 4.5X / Auto zoom lens 1 - 10X			
	Magnification	18 - 195X (For reference only. With different camera and lens the magnification will be different.)			
	Field of View	8.1~1.3mm			
	Working distance	108mm			
Linear scale resolution		0.1μm			
Driving system		CNC control, close-loop AC Servo driving system, joystick, mouse or keyboard control			
Illumination		Programmable 8 sections LED ring surface light, parallel LED contour light, 40 section LED ring light, co-axial light, movable multi color ring light for option			

TROOPER Series

CNC Automatic Vision Measurement Machine

TROOPER series CNC automatic VMM is the new launched latest upgraded products , which offer outstanding measuring performance. The full TROOPER series is standard with high accuracy linear slide way, which ensures much more stable transmitting performance and high measuring accuracy.

With the External-Array RationalVue composite measuring software, the TROOPER series is capable to offer powerful 2D/3D composite measuring function.

Multi types of non-contact sensors and fast fixturing system are for option, which can satisfy different measuring requirement from different customers.



High quality with great originality and fine-tuning

Aluminum work stage, makes the motion control fast reacting and flexible. Standard with precise linear slide way, offers smarter mechanical strand higher accuracy.

Integrated control system, embedded with motion control, and all signal onrol as illumination and linear scale reading, ensures the performance of the machine is extremely stable.

With powerful automation accessories, the TROOPER series is able to work with touch probes, non-contact measuring sensors or robots, which gives more possibilities and efficiency to the series.



Specification

Items		TP300	TP400	TP500
Dimension(mm)(L×W×H)		1600×780×1700	1750×920×1700	1900×1080×1700
Measuring range(mm)(X×Y×Z)		300×200×200	400×300×200	500×400×200
Measuring Accuracy(μm)		2.5 + L / 200	2.5 + L / 200	2.5 + L / 200
Repeatability (μm)		2.5	2.5	2.5
Weight (kg)		320kg	390kg	460kg
Image and Measuring	CCD	Industrial grade color CCD camera		
	Lens	Manual dented zoom lens 0.7 - 4.5X / Auto zoom lens 1 - 10X		
	Magnification	18 - 195X (For reference only. With different camera and lens the magnification will be different.)		
	Field of View	8.1~1.3mm		
	Working distance	108mm		
Linear scale resolution		0.5μm (0.1μm for option)		
Driving system		CNC control, close-loop AC Servo driving system, joystick, mouse or keyboard control		
Illumination		Programmable 8 sections LED ring surface light, parallel LED contour light, 40 section LED ring light, co-axial light, movable multi color ring light for option		

RIDER Series

Manual Vision Measurement Machine

The RIDER series manual vision measurement machine provides extra measuring function and user experience to customers over normal vision measuring products. We use light weight design on the machine frame, makes the structure more slim, but keep the high rigidity and stability, allows the users to get the max measuring range in smallest space.

The RIDER series is using high accuracy linear slide way, which is totally different from the cross slide way used for other manual VMM, ensures much more stable and accurate transmitting of the work stage, also voiding the potential risk of the shorten traveling range which cost by the cross slide way.



Wider application

Thanks to the light weight structure design, the RIDER series vision measurement machine is offering much wider application range. The RIDER series is able to be used in labs, QC rooms, even R&D center which has really limit space as a desk top precise measuring device. In the mean time, the outstanding measuring accuracy of the RIDER series makes it more adaptable to strict measuring requirement. It is a powerful measuring device for metals, electronics, 3C products, PCB or plastic industries etc.



Specification

Items		RD200	RD300	RD400	RD500
Dimension(mm)(L×W×H)		550×540×930	600×740×980	700×840×980	800×940×980
Measuring range(mm)(X×Y×Z)		200×100×150	300×200×200	400×300×200	500×400×200
Measuring Accuracy(μm)		2.5 + L / 100	2.5 + L / 100	2.5 + L / 100	3 + L / 100
Repeatability (μm)		2.5	2.5	2.5	3
Weight (kg)		140kg	190kg	240kg	290kg
Image and Measuring	CCD	Industrial grade color CCD camera			
	Lens	Manual dented zoom lens 0.7 - 4.5X / Auto zoom lens 1 - 10X			
	Magnification	18 - 195X (For reference only. With different camera and lens the magnification will be different.)			
	Field of View	8.1~1.3mm			
	Working distance	108mm			
Linear scale resolution		0.5μm (0.1μm for option)			
Driving system		X, Y axis manual control, Z axis close-loop CNC control and AUTO FOCUS function available			
Illumination		Programmable 4 sections LED ring surface light, parallel LED contour light, 8 sections LED ring light, co-axial light, for option			

COMMANDER Series Gantry Type CNC Automatic Vision Measurement Machine

The COMMANDER series high accuracy gantry type vision measurement machine combines high accuracy and high efficiency, offers high speed measuring for the geometric elements of different kinds of parts. The COMMANDER series is widely used in varies industries and products as PCB, copper clad laminate, pad glass, LCD modules, and insulation materials etc.

Finite elements analysis is introduced in the designing process of the COMMANDER series, ensures high rigidity and accurate mechanical structure. The machine base is using closed frame movable bridge type structure, which is simple and offers high loading capability and the best motion performance.

000 grade granite machine base, offers high rigidity, corrosion resistance and high stability.

The work stage is able to preset multiple products fixturing solution, also multiple lens combination is for option, satisfy different measuring requirement from different customers.

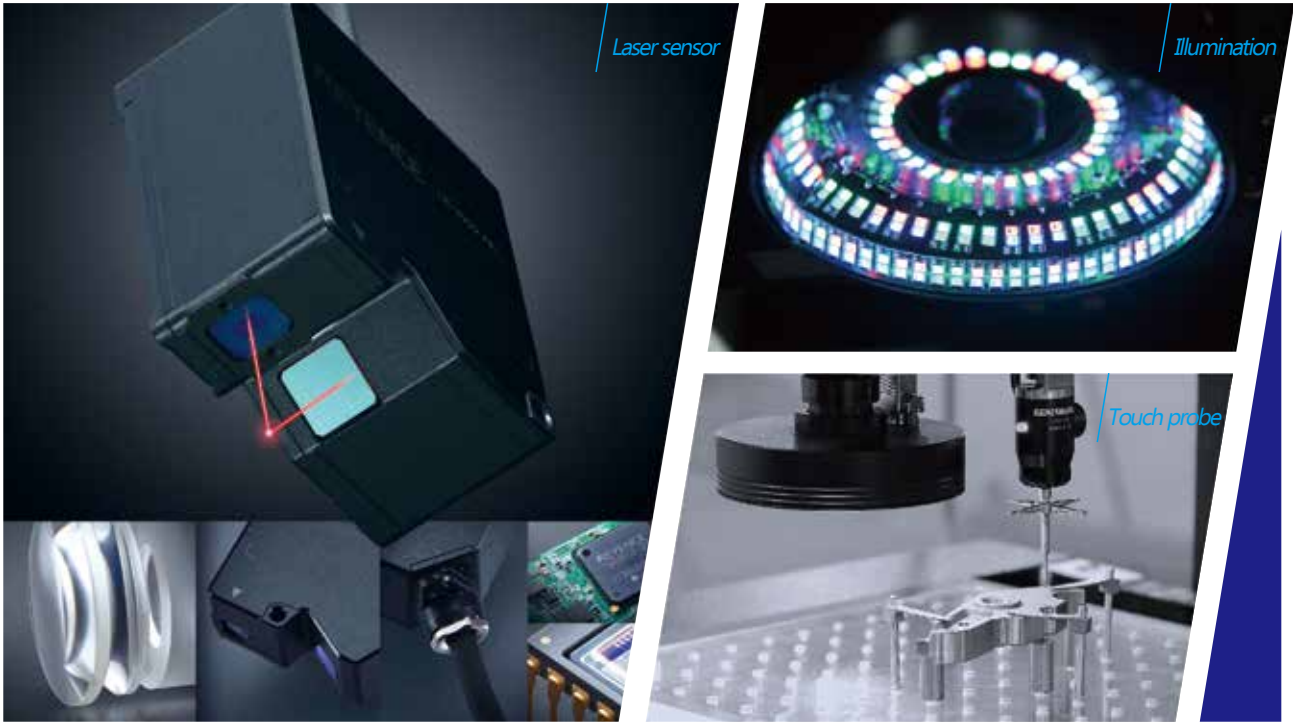
Full close loop motion control system, ensures the best movement and positioning performance.



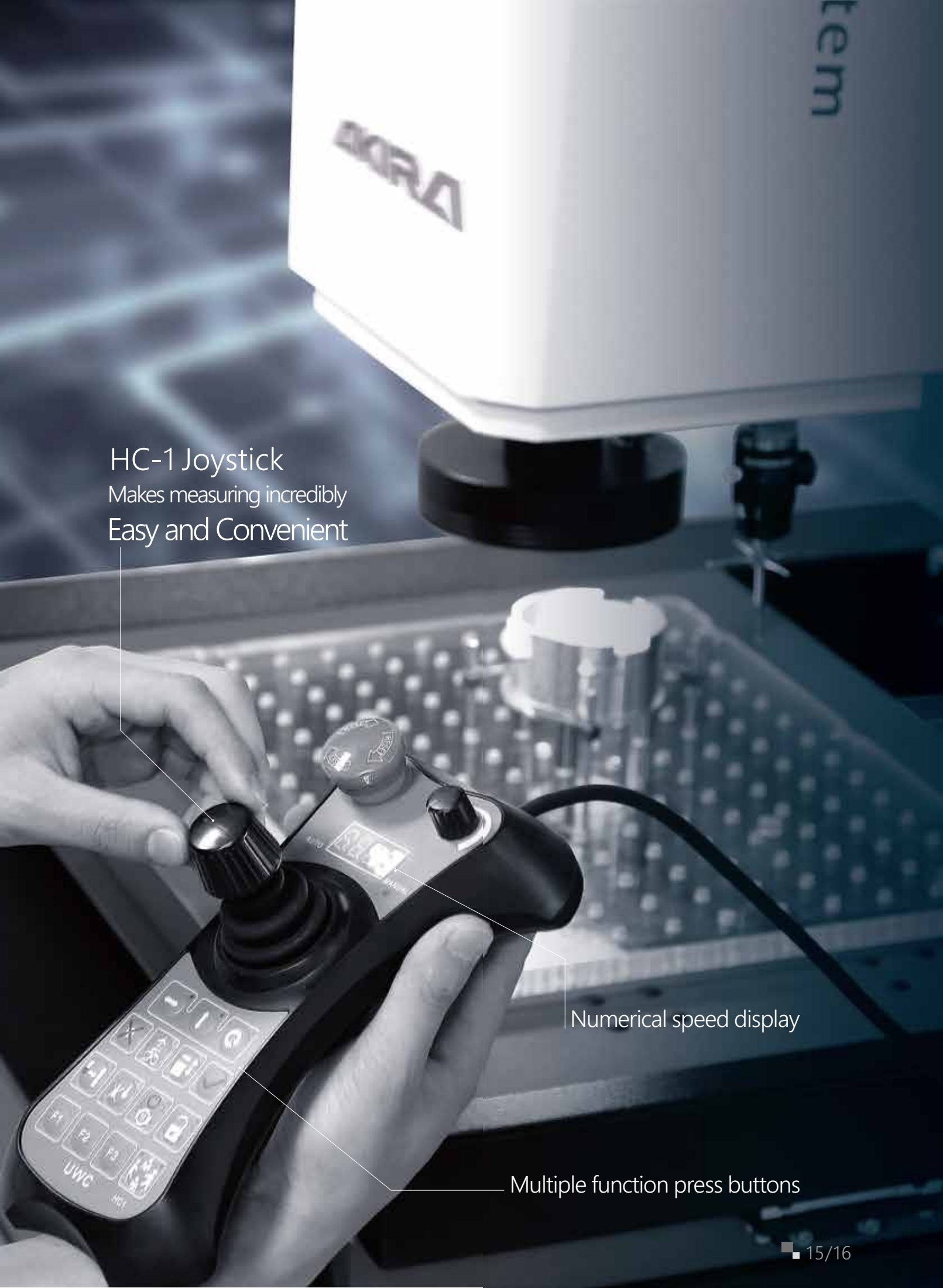
Specification

Items		CMD862	CMD1080	CMD1210	CMD1512	CMD1812
Dimension(mm)(L×W×H)		1700×1280×1750	1900×1480×1750	2100×1680×1750	2500×1880×1750	2700×1880×1750
Measuring range(mm)(X×Y×Z)		600×800×200	800×1000×200	1000×1200×200	1200×1500×200	1200×1800×200
Measuring Accuracy(μm)		3 + L / 200	3 + L / 200	3 + L / 200	3 + L / 200	3 + L / 200
Repeatability (μm)		3	3	4	4	4
Weight (kg)		1800kg	2900kg	3200kg	4400kg	4800kg
Image and Measuring	CCD	Industrial grade color CCD camera				
	Lens	Manual dented zoom lens 0.7 - 4.5X / Auto zoom lens 1 - 10X				
	Magnification	18 - 195X (For reference only. With different camera and lens the magnification will be different.)				
	Field of View	8.1~1.3mm				
	Working distance	108mm				
Linear scale resolution		1μm (0.5μm for option)				
Driving system		CNC control, close-loop AC Servo driving system, joystick, mouse or keyboard control				
Illumination		Programmable 8 sections LED ring surface light, parallel LED contour light, 40 section LED ring light, co-axial light, movable multi color ring light for option				

Optional solutions



Illumination:	Lens:	Touch probe:	Laser sensor
4 / 8 / 40 sections LED surface ring light	Manual dented zoom lens	Renishaw MCP kits:	KEYENCE non-contact laser sensor
48 sections 4 colors LED ring light	Auto zoom lens	Measuring error<=0.75um	White light measuring sensor
Movable 4 colors LED ring light	Manual dented zoom lens with co-axial light	Renishaw PH6+TP20:	
	Auto zoom lens with co-axial light	Measuring error<=0.35um	



HC-1 Joystick
Makes measuring incredibly
Easy and Convenient

Numerical speed display

Multiple function press buttons

Multiple option of accessories

AKIRA METRO offers multiple types of accessories, to satisfy different measuring application.

AKIRA METRO ILLU - PRO series programmable movable color LED ring light

The ILLU - PRO series illumination system is including programmable gray level control, section control, single/ mixing color, programmable movement and strobe/flash illuminating function. Offering reliable and high efficient illuminating solution for varies of complicated vision measuring application.



The LED plate, controller and the motion controller are embedded in one PCB, which promised a unique and stable integrated structure. The ILLU - PRO series is offering 3 rings 8 sections 24 angles. By programmable movement of the LED ring users are able to gain more clear and sharp edge images of the parts. Each section is including LEDs with 4 colors, which is red, green, blue and white, 200 levels continuously adjustable, the colors can be mixed based on different measuring requirement.



Normal illumination

ILLU - PRO movable lighting system

Normal illumination

ILLU - PRO movable lighting system



Compact CHRcodile C sensor

With the stable and high integrated design, the CHRcodile C sensor offers high accuracy insurance for distance and thickness measuring. The CHRcodile C is suitable for online measuring and able to be integrated easily to different measuring devices. The amazing high dynamic range and outstanding noise signal ratio ensure the CHRcodile C can achieve the best measuring result on any kind of surface. Thanks to the compact design and great price performance ratio, the CHRcodile C is the ideal replacement of the traditional laser triangle sensor.

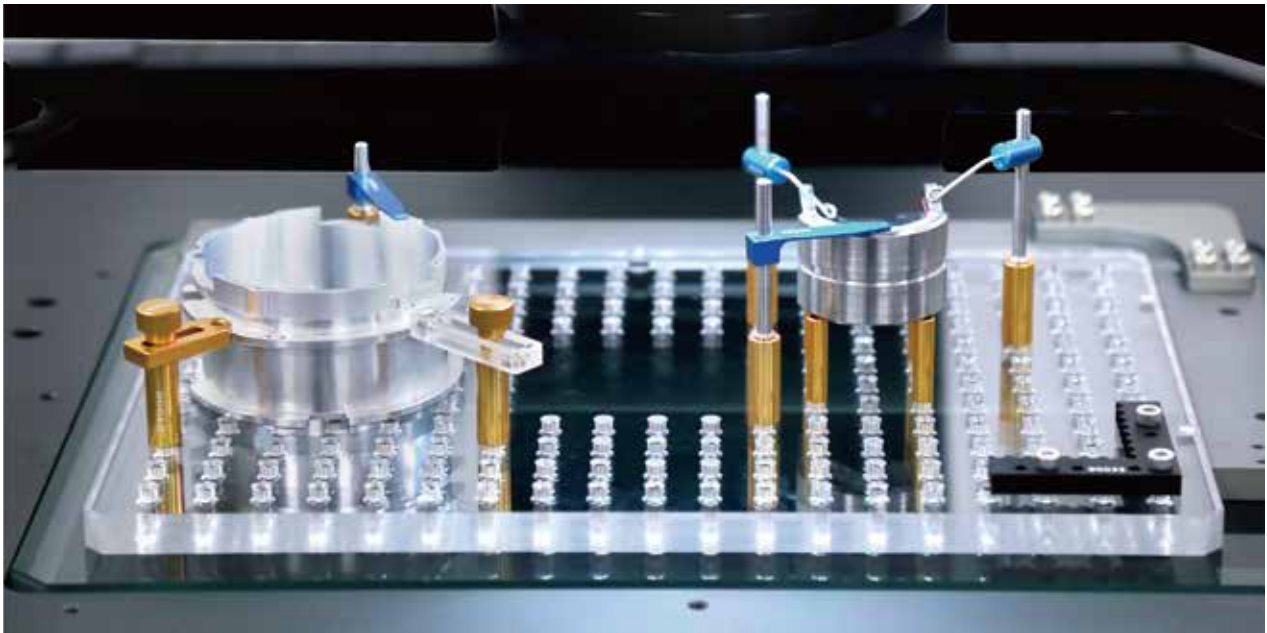
High efficiency
Compact design
Light
Energy saving

Multi function
Distance and thickness measuring
Suitable for any kind of materials
The probe is switchable

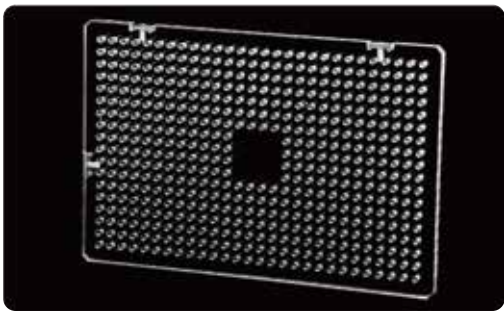
User friendly and safety
Maintenance free
Integrated and convenient
Non-contact

FlexFix series vision measurement machine fixture kit

The FlexFix series VMM fixture kit offers unique fixturing solution for clamping varies components being measured on the vision measurement machine. Users can have continuous and fast clamping for components, largely increase the repeatability of fixturing, and saving the cost for developing special fixture for components. Users do not need any extra tool to assemble the fixture kit component on the base plate, using the components flexibly, ensures the clamping force and lower the deformation. The FlexFix series fixture kit is offering L type magnetic fast positioning block, which increase the flexibility of loading and unloading the base plate.



The base plate is including M4 screw holes, the acrylic material for the base plates are carefully selected, ensures the best flatness. All the components in the kit are with oxidation surface processing, which is anti scratch and losing color.



Each base plate is ensure for fine flatness, it will not influence the light path from the contour light illumination, keeps the image of the measuring part clear and without any deformation during the measuring process.

Tool Measuring Machine



RANGER600 Tool Inspection System

The AKIRA RANGER600 Tool Inspection System is the universal measuring machine for drills, milling cutters and counters and countersinks under Flexible illuminating system. Thanks to the compact design and great stability, the RANGER600 can be employed in the metrology room, receiving inspection, or directly in production.

The RANGER600 Tool Inspection system is configured with SMARTOOL universal measuring software, which makes it the best instrument for all types of metal cutting tools, starting from fast checking of single criteria, such as the outer contour or angles, to complete control of special tool geometries. Users can easily achieve a PUT-MEASURE-ANALYSE measuring process with the RANGER600. Which offers high working efficient in the cutting tools quality control application. The measurement results can be easily output to a detailed report in excel format or a CAD file for further analyse and reverse engineering.



The RANGER600 is with ergonomic design and solid construction, which make it the ideal solution for shop floors QC application. The RANGER600 can be placed directly next to the CNC grinding machine. Contact-free measurement avoids damage to the cutting edges and documents the condition of the cutting edges. Intuitive operation is available base on high resolution image display, auto-detective of the edges, contour / surface lighting free switch and dynamic curve view. Users can always get high accuracy measuring result and detailed report from the instrument.

Advanced Design

- > Ergonomic design and solid construction.
- > HD image capturing and display combination, also microscope magnification level is optional.
- > Stable and accurate V block for easy tools holding and alignment.
- > Mechanical fixed measuring angle of 0 degree and 90 degrees are available on the rotary stage.
- > High accuracy encoder is embedded in the rotary table, offers precise angle location for users.
- > Multiple section programmable LED ring light for surface illumination, also including contour lighting and free angle auxiliary light for standard features.
- > SMARTOOL measuring software offers specific measuring function for cutting tools.
- > Automatic edge detection, fast angle measurement with reticle, CAD element comparison functions are available.
- > Measuring result fast output to EXCEL file report or CAD file.

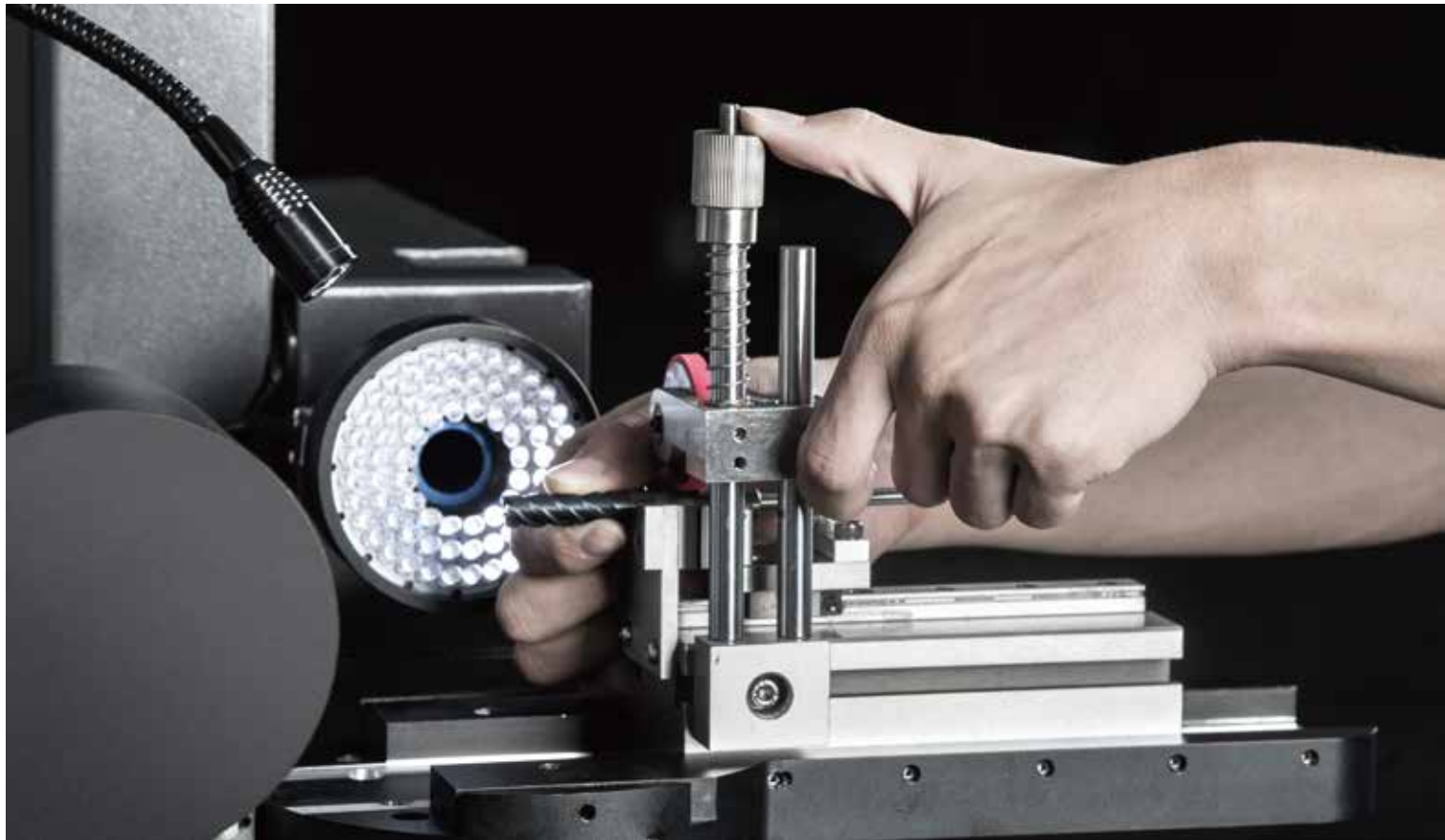


Parameters	
Item	RANGER600
X axis travel	80mm
Y axis Travel	60mm
Z axis measuring range	60mm
Max tool Diameter	50mm
Max tool length	300mm
Working distance	90mm
Lens	0.7X ~ 4.5X dented zoom lens
Camera	2M pixel HD camera / 5M pixel HD camera (Optional)
Linear scale resolution	0.0001mm
Magnification	12.6X ~ 79.2X / 25.2X ~ 158.4X (Optional)
Field of view	27*20mm ~ 4.3*3.3mm / 13.5*10mm ~ 2.3*1.6mm(Optional)
Measuring accuracy	X ~ Y, (2.5 + L / 100)μm , L is the measured length
PC	ALL-IN-ONE PC system, Windows 10 OS, with 24" LCD monitor
Illumination	8 sections LED ring light, contour light and flexible auxiliary light, all software control and programmable.
Input format	DXF files
Output format	EXCEL, DXF

Multiple Angles Measuring

For a more fast and precise tools angle location during the measuring process, the rotary table of the RANGER600 offers 2 mechanical fixed angles, 0 degree and 90 degrees. At the 0 degree position users are able to measure Tool End, Tool End - Center shaft, Tool End - front angle, etc. And 90 degrees position is available for Helix angle, Axial Front angle, First Rear angle, Second Rear angle and Tilting Edge angle, etc.

If other angle location should be required, users can also use the accurate encoder which is embedded in the rotary table to obtain. The angle reading is display in the software.



0 degree

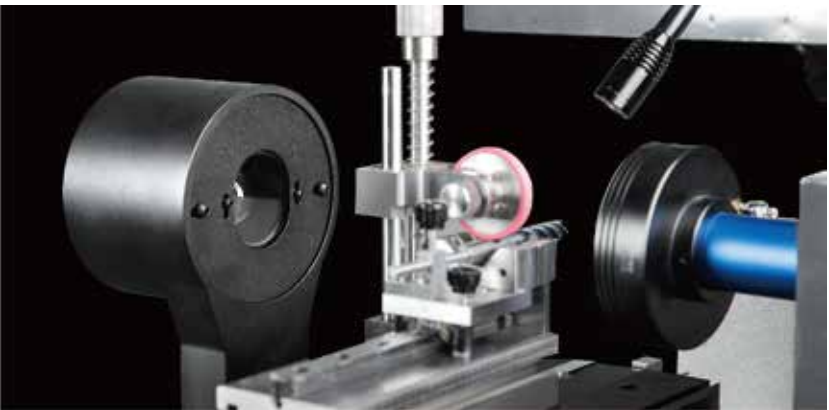
45 degrees

90 degrees

Standard Accessories

Free angle auxiliary light

A dimmable additional light is available on a flexible arm. Which helps the users to get a local enhance image.



Contour light module

The RANGER600 is including a parallel light path contour LED light module, which is movable along the X axis direction, offers the best image and sharp edge of the object view to the user when measuring the contour of the tool.



Base table

Solid standing work station with practical and open-view storage space for storage of materials and tools.



Tools holder

A multiple section tools holder is embedded at the side of the machine. Users can hold all the tools in order for preparation to avoid confusion.



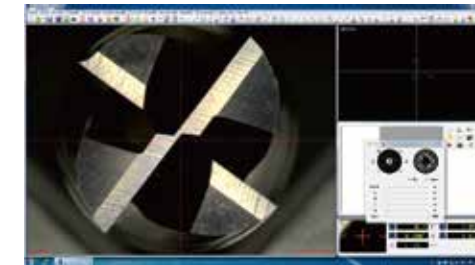
SMARTOOL Measuring Software

Leading cutting tools measuring solution

The SMARTOOL Cutting Tools Measuring Software is developed based on high accuracy optical and digital measuring technology, it is easy and intuitive to operate and offers numerous measuring and evaluation algorithms specifically for tools manufactured or sharpened in grinding business. Sharp, high-contrast views at all magnification. All magnification are calibrated. High zooming level allows analysis of even the smallest surface details or the inspection of micro-tools. Intuitive and easy-operating software interface - for fast and easy measurement application, all function keys and operation panel are graphical, and the automatic edge detection function helps to eliminate the measuring result difference of different operators. Free switch between object image view and real time contour curve view - users are able to get the observation and measure the max edges of the tools during dynamic rotating process. Advanced calibration and compensation process - the SMARTOOL software offers advanced calibration and compensation function, highly increase the accuracy of the measurement.

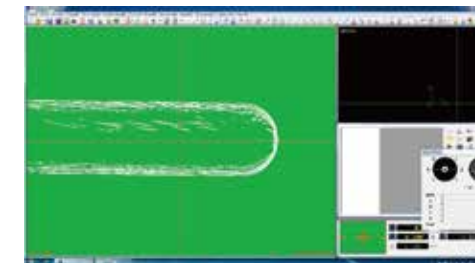


Leading Features



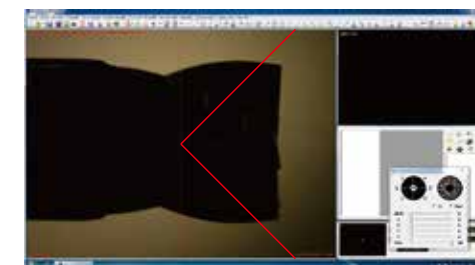
Easy operation

High resolution image display and graphical operation interface. All function keys and control panel are displayed on the software window.



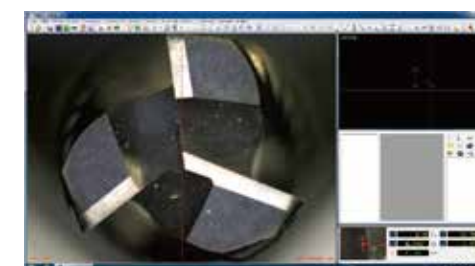
Dynamic Real Time curve view

The software offers real time edge detecting curve view, makes the edge analyse and measuring more intuitive and clear. Users are able to switch to the curve view mode at any time during measuring process.



Fast angle measuring with retical

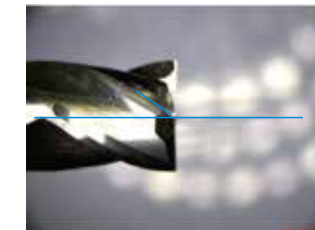
The reticle displayed in the image area of the SMARTOOL software is freely rotatable and able to display angles. Users can achieve fast angle measuring easily by using the retical for edge comparison.



CAD comparison

The SMARTOOL measuring software is supporting CAD comparison function. Users can directly input the CAD drawing of the tool to the software as reference, and compare the real image to the drawing to evaluate the geometries of the cutting tools.

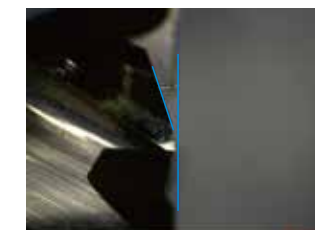
Measuring Capability



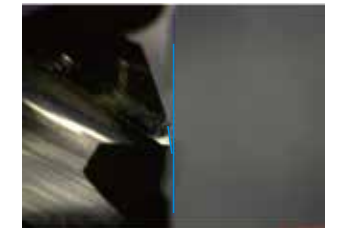
Helix Angle



Axial Front Angle



Second Rear Angle



First Rear Angle



Tilting Edge Angle



Tool End



Tool End - Center Shaft



Tool End - Front Angle



First Rear Angle

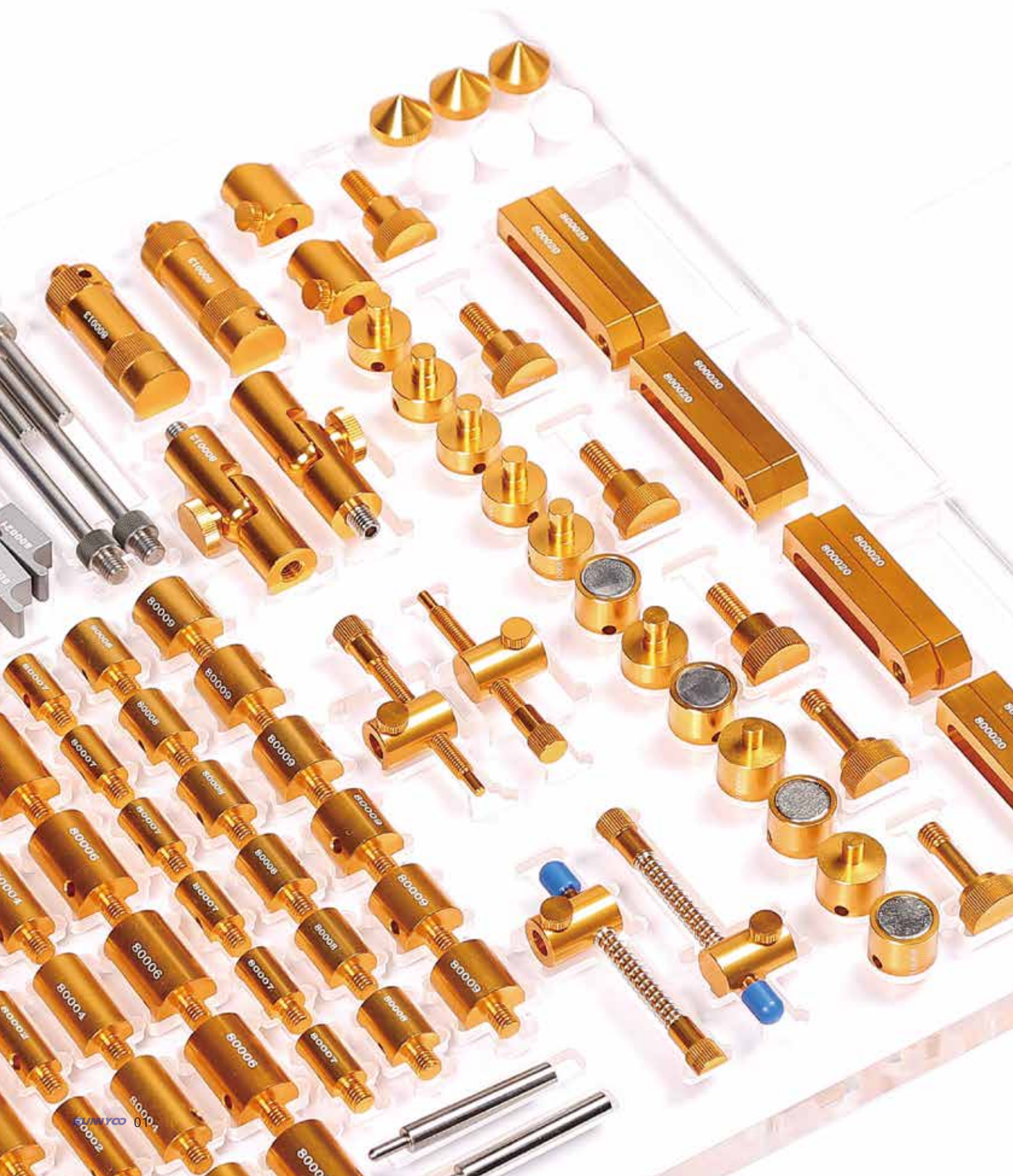


Second Rear Angle



VMM/CMM
Fixture

CMM & VMM Fixturing System FLEXFIX

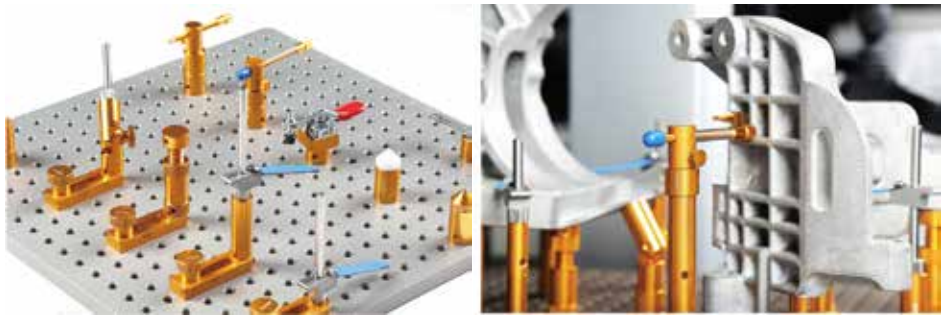


Application

The Flexfix fixtures series are widely used in various industries such as electronics, aerospace, automotive, plastic or medical care. It can be introduced to all sizes and models of CMM and VMM. They are the tools which make your measuring process flexible, repeatable, and standardized.



CMM Fixtures Components



The Flexfix series Fixturing components are designed to hold components firmly with the minimum necessary force and without any special tools, all components are with different function including supporting, clamping or pressing. The reasonable design allows to avoid damage or distortion on the measuring part. With these flexible components users are able to create different type of fixturing combination for varies of parts. Also it is easy to set up a clear probe path of 3D measuring.

Modular Fixturing for your CMM

FlexFix series CMM fixtures system is designed and developed to help CMM users to improve the reproducibility and accuracy of the inspection process by providing quick and repeatable fixturing set-ups for the components. FlexFix series CMM fixtures are modular and can be expanded with user's requirements to provide a complete fixturing solution for any part regardless of its size, shape or material.

For multiple applications such as electronics, aerospace, automotive, plastic or medical care, the FlexFix series can provide a full solution to the CMM fixturing requirements. The series offers fixture plates with M8 threaded fittings in a wide choice of standard sizes, which are made of high accurate aluminum material and with complex manufacturing process, to ensure the accuracy and reliability of the system. Perfect fixturing solutions can be assembled very quickly without any tools to increase throughput and avoid delays in inspection.

The fixture plates are offering an alphanumeric grid pattern and each

Choosing your fixturing kit

Flexfix series CMM fixtures are sold as kits to make a easy starting. A kit consists of one base board and a comprehensive set of components.

We are offering different sizes option for the base plates and user should select the suitable one based on the CMM machine size and measuring requirement.



CMM base plates

Multiple sizes of base plates are available for option for the Flexfix series CMM fixtures. Which allows wide range of application for different size of CMM and also satisfying different size of components fixturing requirement.

A complex manufacturing process is required for the CMM fixtures base plates which includes CNC machining, precision grinding, anodise coating, and laser marking, to make the plates with high accuracy, flatness and reliability. And except the standard sizes we also offer customized sizes and threads holes.

The fixture plates are offering an alphanumeric grid pattern and each fixturing component has its part number easily visible. It makes the user set-up can be fully defined and documented by recording the assembly and location of each of the fixturing components, so that the same set-up can be quickly and accurately reproduced for subsequent inspections.

Plates sizes:
400*300mm, M8 Threaded holes
400*400mm, M8 Threaded holes
500*500mm, M8 Threaded holes
600*600mm, M8 Threaded holes
Other customized sizes

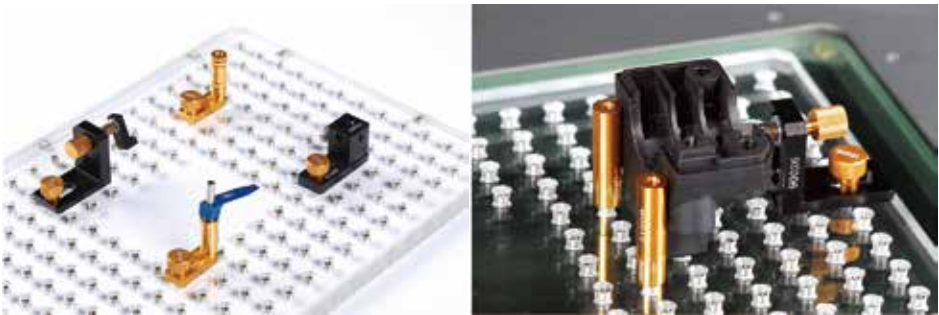
Components list

Item	Mark	Qty.
12*50mm Standoff	80001	6
12*30mm Standoff	80002	6
16*50mm Standoff	80003	6
16*30mm Standoff	80004	6
20*50mm Standoff	80005	6
20*30mm Standoff	80006	6
12*20mm Standoff	80007	6
16*20mm Standoff	80008	6
20*20mm Standoff	80009	6
Pusher clamp	800010	2
Screw pusher clamp	800011	2
Adjustable pivot joint	800012	2
Adjustable jack stand	800013	2
Magnet	800014	4

Item	Mark	Qty.
Pin Standoff	800015	2
Adptor	800016	6
Base board screw	800017	2
V post	800018	2
Screws	800019	4
Adjustable slide	800020	8
Tension clamp	800021	4
Hold down clamp	800024	2
Short tension clamp support	800022	2
Long tension clamp support	800023	2
Cone	800025	3
Nylon cone	800026	3
Screw driver	800027	2



Fixture kits Components



All components are made by precision manufacturing process and with anodise 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.

VMM fixtures

The vision measurement machine application is always coming with varies of different parts with different shapes or materials. Some are even without any effective reference plane to be correctly located on the work stage. Developing specific fixtures for each component should be with low efficiency and high cost. So we have developed the Flexfix series VMM fixtures kit and base plates, to help users saving time and cost but also be able to achieve fast and reliable fixturing during the VMM measuring process. The Flexfix series helps to improve the throughput, reproducibility and accuracy of the inspection process with quick and repeatable fixturing set-ups.

VMM fixture kits

The Flexfix series VMM fixtures are designed as a complete components kit. We have studied most of the VMM measuring application from our experience of VMM users, and have taken reference to different types of parts, to develop the fixtures kit components. The kit is including supporting, pressing, and holding components, which allow the user to manage the fixturing easily and no special tools as required. Regardless of shapes or materials, user can easily find the fixturing solution during measuring process.

Base plates

For VMM measuring needs contour measuring application under most circumstances, we create the VMM fixtures base plate with 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 threads are mounted inside the base plate, the components can be firmly fixed and highly increase the life cycle of the base plate.

Also an L type magnetic fast mounting corner is offered, user only needs to put and measure, which largely increase the measuring efficiency.

Base plates sizes
300*200mm, M4 threads
400*300mm, M4 threads
300*300mm, M4 threads
400*400mm, M4 threads
Customized sizes

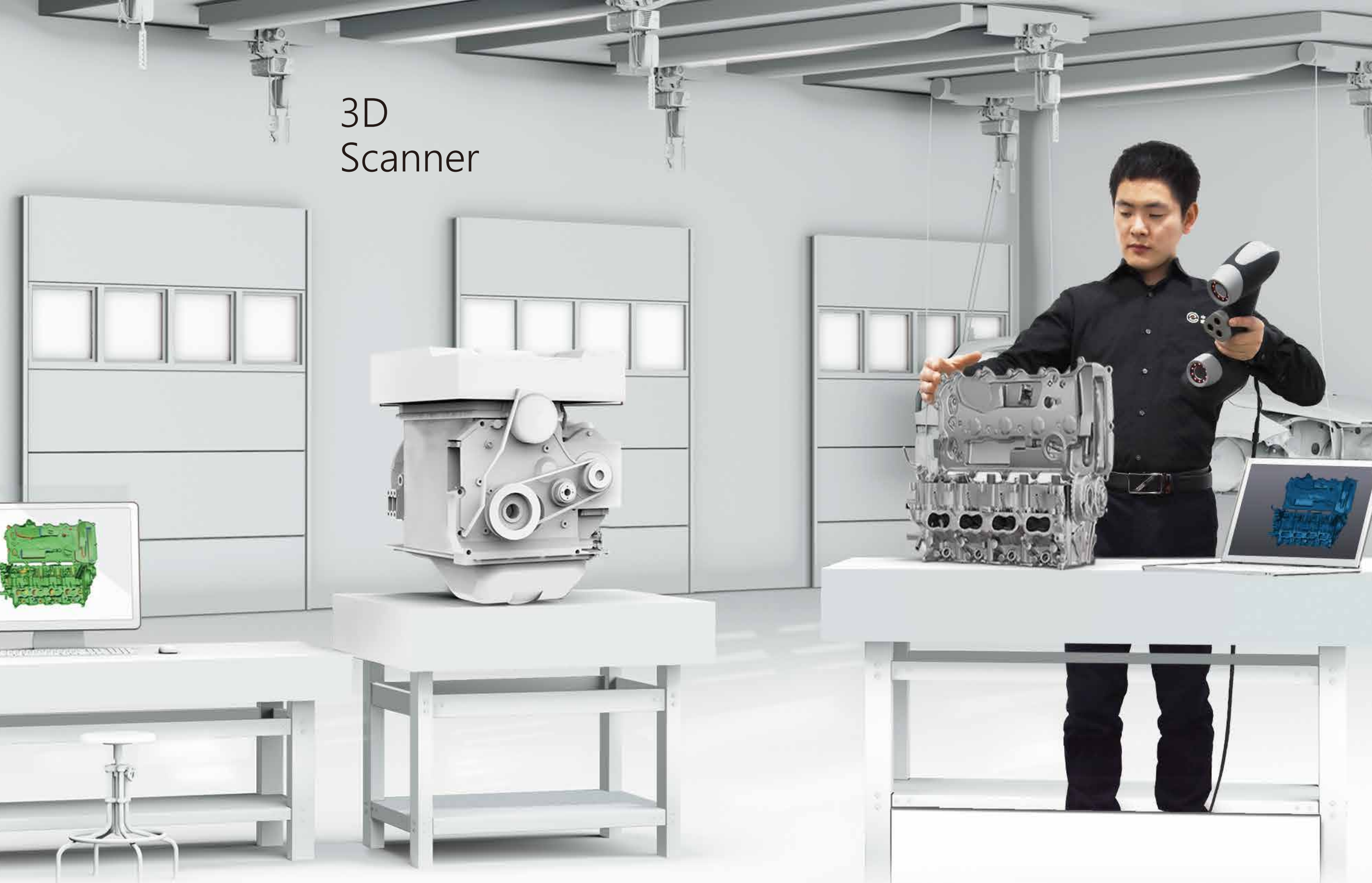


Components list

Item	Mark	Qty.
Tension clamp	90001	4
Short Wire tension clamp	90002	4
Long Wire tension clamp	90003	4
Short tension clamp support	90004	8
Long tension clamp support	90005	3
6*5mm Standoff	90006	3
6*10mm Standoff	90007	6
6*25mm Standoff	90008	6
9*5mm Standoff	90009	3
9*10mm Standoff	90010	6
9*20mm Standoff	90011	6
9*25mm Standoff	90012	6
12*10mm Standoff	90013	6
12*25mm Standoff	90014	6
6*10mm Flat Standoff	90015	4
9*10mm Flat Standoff	90016	4

Item	Mark	Qty.
12*10mm Flat Standoff	90017	4
9mm adjustable Standoff	90018	2
6mm ball type Standoff	90019	2
Multi direction Adaptor	90020	2
Tension support screw	90021	2
L block	90022	1
Adjustable slide	90023	4
Direction switching block	90024	1
Direction switching block base	90025	1
Tension support	90026	1
M4 to M8 adaptor	90027	4
Transparent adjustable slide	90028	8
M3 screw driver	90029	1
Components packing plate		
M4*10 screws (20 pcs)		
Packing suitcase		

3D Scanner



HyperScan SMART TRACKING 3D SCANNER



Powerful 3d scanning system HyperScan, provides a perfect solution for 3d scanning, with full measurement function. Through a concise user interface, leading users to edit, save and reuse scanning data.

HyperScan TECHNICAL FEATURES

- 1、Optical tracking, no need target; Large measurement range and high efficiency;
- 2、Point cloud free of delamination and generate mesh automatically; Handheld scanning, free and flexible operation;
- 3、Dynamic scanning, measurement range can be easily expand to larger, meet the environment in the workshop;
- 4、Fully functional, combined with geometric features contact detection and 3D surface optical scanning, to meet various measurement requirements.

HyperScan APPLICATIONS



AUTOMOBILE



AEROSPACE



MOLD INSPECTION



REVERSE DESIGN



HEAVY MACHINERY



EDUCATION&RESEARCH



ZG-Track OPTICAL TRACKER

ZG-Track, the optical tracker can positioning the scanner, probe and targets on the part in real time and realize dynamic scanning. All the data are automatically unified into the coordinate established by ZG-Track.

ZG-Probe PORTABLE CMM

ZG-Probe is a handheld and wireless CMM. With unparalleled high precision, flexibility and adaptability, ZG-Probe is fully applicable for quality control, reverse engineering, assembly analysis and other fields. Compared with the traditional CMM, ZG-Probe can work in the environment outside laboratory (such as workshop), larger measurement range and easy to expand.....



HyperScan CASES



HyperScan

PRODUCT PARAMETERS

SMART TRACKING 3D SCANNER

TYPE		HyperScan 717
WEIGHT		1.5kg
ACCURACY		up to 0.03mm
VOLUMETRIC ACCURACY	9.6M ³	0.064mm
	17.6M ³	0.078mm
RESOLUTION		0.05mm
MEASUREMENT RATE		480,000 measurements/s
LIGHT SOURCE		7 laser crosses (+extra 1 line)
STAND-OFF DISTANCE		300mm
DEPTH OF FIELD		250mm
CONNECTION STANDARD		USB 3.0
OPERATING TEMPERATURE		-20~40°C
OPERATING HUMIDITY (NON-CONDENSING)		10~90%
OUTPUT FORMATS		.stl, .obj, .asc, .ply, .txt, .xyz etc., customizable
COMPATIBLE SOFTWARE		3D Systems (Geomagic Solutions) 、InnovMetric Software (PolyWorks) Dassault Systemes (CATIA V5 and SolidWorks) 、PTC (Pro/ENGINEER) Autodesk (Inventor、Alias、3ds Max、Maya、Softimage) 、Siemens (NX and Solid Edge)

PORTABLE CMM

ACCURACY		up to 0.03mm
SINGLE POINT REPEATABILITY	9.6m ³	0.044mm
VOLUMETRIC ACCURACY		0.064mm
SINGLE POINT REPEATABILITY	17.6m ³	0.058mm
VOLUMETRIC ACCURACY		0.078mm
VOLUME ACCURACY (COMBINED WITH PHOTOSHOT)	PhotoShot	0.044+0.025mm/m
MEASUREMENT RATE		90measurements/s
OPERATING TEMPERATURE		-20~40°C
OPERATING HUMIDITY		10~90%



SMART **FULL-COLOR**
3D SCANNER GSCAN

GScan is a multi-function handled 3D white light scanner. GScan can quickly acquire colorful 3D data of real objects with high precision.

Non-contact scanning, no need to stick any positioning targets, color matching the 3D data automatically. Ensure obtaining an efficient and reliable 3D data.Handled scanning, easy to carry and multi-function scanning provides you with a wise choice of 3D digitized solution.

FEATURES



REALISTIC COLOR
High color reproduction



PORTABLE
Total weigh 0.56kg,
easy to cary



USER-FRIENDLY
Easy operation
10 minutes to master to operation



MULTI-FUNCTION SCANNING
Handheld or fixed scanning modes



FAST SCANNING RATE
3,100,000 measurements/s
Quickly acquire 3d data



VISUALIZED OPERATION
PC displays real-time
scanning data



Museology and furnishings



Artistic design



3D Printing



Human body scanning



Medical and healthcare



SCAN MODE	HAND-HELD	FIXED
PROJECTION MODE	speckle/Stripe projection	grating stripe projection
ACCURACY	up to 0.1mm	up to 0.05mm
VOLUMETRIC ACCURACY	0.3mm/m	not applicable
MEASUREMENT RATE	3,100,000 measurements/s	single scan <2s
RESOLUTION	up to 0.5mm	0.2mm
RECOMMENDED OBJECT SIZE	0.15-4.00m	0.03-0.25m
POSITIONING METHOD	geometry, targets, combined	turntable positioning, geometry, targets
POSITIONING METHOD	400mm	
DEPTH OF FIELD	200mm	
SINGLE SCANNING AREA	320×230mm	
LIGHT SOURCE	white light(LED)	
TEXTURE MAPPING ACCURACY	1 pixel	
CONNECTION STANDARD	USB 3.0	
OPERATION SYSTEM	Win7 (64bit) 、 Win10 (64bit)	
WEIGHT	0.56kg	
DIMENSIONS	280×130×50mm	
OPERATING TEMPERATURE	-20~40℃	
OPERATING HUMIDITY (NON-CONDENSING)	10~90%	
OUTPUT FORMATS	.stl, .obj, .wrl, .ply, .txt, .xyz, .asc etc., customizable	
COMPATIBLE SOFTWARE	3D Systems (Geomagic Solutions) 、 InnovMetric Software (PolyWorks) Dassault Systems (CATIA V5 and SolidWorks) 、 PTC (Pro/ENGINEER) 、 Siemens (NX and Solid Edge) 、 Autodesk (Inventor, Alias, 3ds Max, Maya, Softimage)	

INDUSTRIAL 3D METROLOGY SOLUTIONS

ZGScan™

Smart Handheld Laser 3D Scanner

Reverse Design and Simulation
Quality Control, Maintenance and Repair
Cultural Heritage Protection
Multimedia & VR·AR
Education & Healthcare



ZGScan 717 Plus



ZGScan 717



ZGScan 313

WEIGHT	0.83 kg	
DIMENSION	310 × 147 × 80 mm (12.2 × 5.8 × 3.1 in)	
MEASUREMENT RATE	480,000 measurements/s	205,000 measurements/s
SCANNING AREA	275 × 250 mm (10.8 × 9.8 in)	
LIGHT SOURCE	7 laser crosses (+ extra 1 line)	3 laser crosses (+ extra 1 line)
LASER CLASS	2M (eye-safe)	
RESOLUTION	up to 0.05 mm (0.0020 in)	
ACCURACY	up to 0.02 mm (0.0008 in)	up to 0.03 mm (0.0012 in)
VOLUMETRIC ACCURACY	0.02 mm + 0.06 mm/m (0.0008 in + 0.0007 in/ft)	0.03 mm + 0.06 mm/m (0.0012 in + 0.0007 in/ft)
VOLUME ACCURACY (combined with PhotoShot)	0.02 mm + 0.025 mm/m (0.0008 in + 0.0003 in/ft)	0.03 mm + 0.025 mm/m (0.0012 in + 0.0003 in/ft)
STAND-OFF DISTANCE	300 mm (11.8 in)	
DEPTH OF FIELD	250 mm (9.8 in)	
OUTPUT FORMATS	.asc, .stl, .obj, .ply, .txt, .xyz etc., customizable.	
CONNECTION STANDARD	USB 3.0	
OPERATING TEMPERATURE	-20 ~ 40 °C	
OPERATING HUMIDITY	10 ~ 90%	
COMPATIBLE SOFTWARE	3D Systems (Geomagic Solutions)、InnovMetric Software (PolyWorks)、Dassault Systemes (CATIA V5\SolidWorks)、PTC (Pro/ENGINEER)、Siemens (NX\Solid Edge)、Autodesk (Inventor、Alias、3ds Max、Maya、Softimage).	

Auto-scan Solution



3D Scanned data



3D Inspection

ZGScan™ series smart handheld laser 3D scanner, our fully proprietary product granted with multiple national invention patents and certified by National Institute of Metrology China in respect of accuracy, greatly meets the application demands of product R&D and design personnel as well as quality control department and provides them with efficient and reliable 3D data acquisition method.

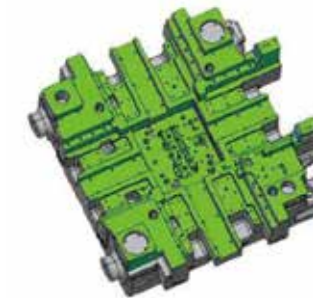


Application



Automobile

- Competitive Analysis
- Vehicle Modification
- Custom-made of Inner Decorations
- Automobile Modeling
- Quality Control & Measure of Accessories
- Simulation & Finite Element Analysis (FEA)



Die & Mould

- Virtual Assembly
- Reverse Engineering
- Quality Control & Inspection
- Wear Analysis & Maintenance
- Fixture Design & Adjustment



Aerospace

- Fast Forming
- MRO & Damage Evaluation
- Aerodynamics & Stress Analysis
- Accessories & Detection and Adjustment on assembly



3D Printing

- Forming Test
- Reverse Design into CAD file of Original Objects
- Contrastive Analysis of Finished Products
- Directly Processing 3D Printing with Scanned Data



Other

- Education & Scientific Research
- Medical Healthcare
- Cultural Relic & Furnishings
- Industrial Design
- Reverse Design
- VR/AR

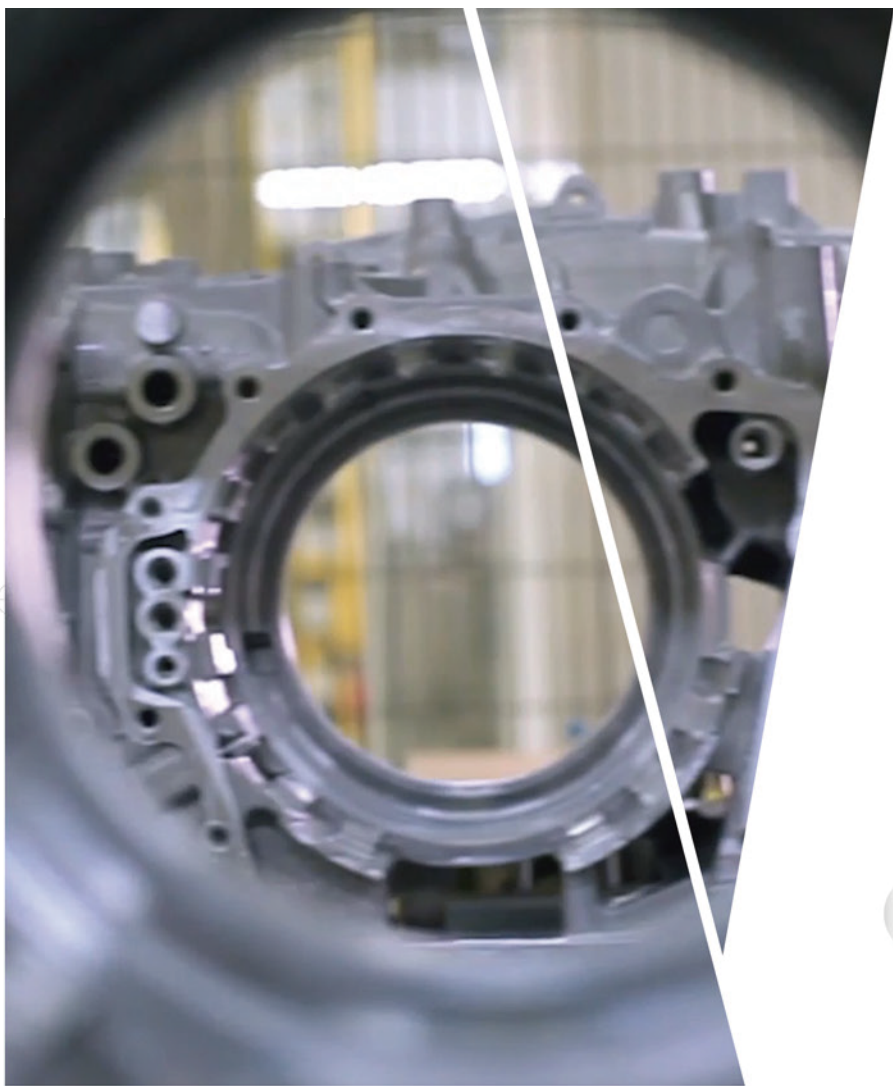
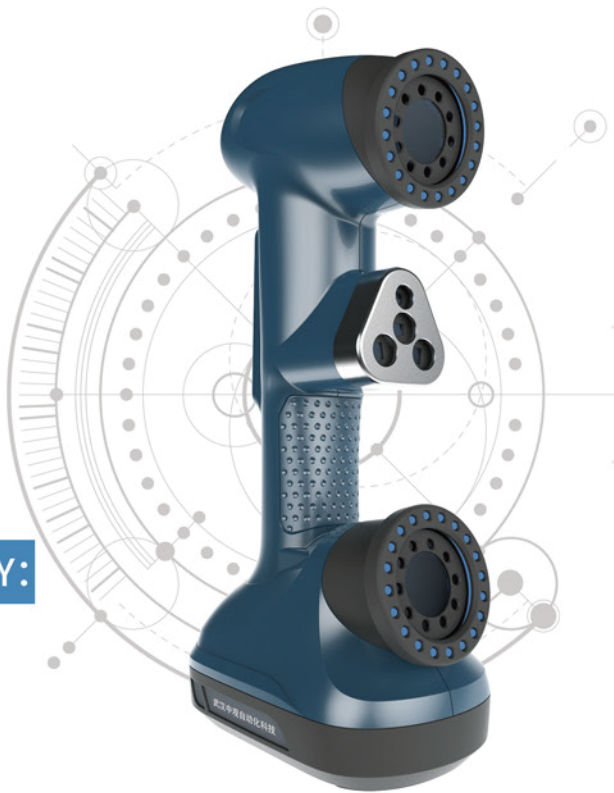
SMART FLASH LASER 3D SCANNER

AltairScan™

AltairScan™ Smart Flash Laser 3D Scanner series, is a revolutionary measurement system developed independently by ZG(international patent). AltairScan™ can extract hole center coordinates and diameter at an instant, with an accuracy up to 0.02mm, certificated by National Institute of Metrology.

MULTIPLE MIXED REFLECTION TECHNOLOGY:

- 1、Instantly capture hole data
- 2、Simultaneously capture surface mesh with circle boundary, to improve accuracy
- 3、Reliable inspection result
- 4、Smart, simple and fast



> HOLE FLASH CAPTURE TECHNOLOGY

> DYNAMIC SCANNING TECHNOLOGY

> FINE DETAIL SCAN

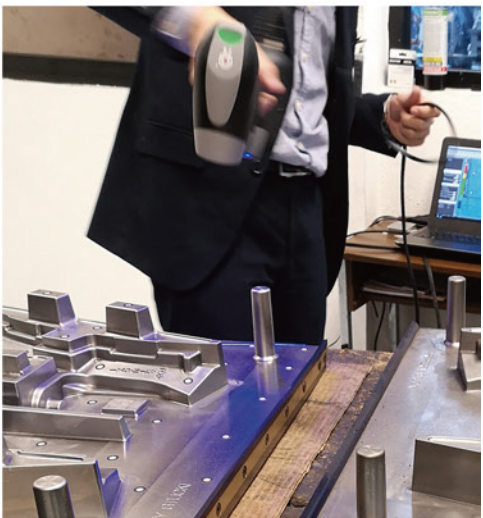
> ULTRA HIGH ACCURACY

> BLUE LASER

> WIRELESS

SPECIFICATION:	AltairScan™	AltairScan Elite™
MEASUREMENT RATE	205,000measurements/s	480,000measurements/s
SCANNING AREA	275×250mm	
BLUE LASER LIGHT SOURCE	6 laser lines (+ extra 1 line)	14 laser lines (+ extra 1 line)
LASER CLASS	CLASS II (eye-safe)	
RESOLUTION	0.05mm	0.03mm
ACCURACY	up to 0.03mm	up to 0.02mm
VOLUMETRIC ACCURACY	0.03+0.06mm/m	0.02+0.06mm/m
VOLUMETRIC ACCURACY (COMBINED WITH PHOTOSHOT)	0.03+0.025mm/m	0.02+0.025mm/m
HOLE ACCURACY	up to 0.03mm	
HOLE VOLUMETRIC ACCURACY	0.03+0.06mm/m	
HOLE VOLUMETRIC ACCURACY (COMBINED WITH PHOTOSHOT)	0.03+0.025mm/m	
STAND-OFF DISTANCE	300mm	
DEPTH OF FIELD	250mm	

AltairScan™ can efficiently capture the holes on surface of the parts, which can be widely used for quality control in automotive industry, aircraft fuselage and parts, molds as well as in other industries. AltairScan™ apply blue laser scanning technology for a fine scanning of structures. In the mean time, AltairScan™ can be equipped with wireless module, for more easy and flexible scanning experience of large parts. Thus, AltairScan™ provides the perfect 3D measurement solution for all industries.



HANDHELD BLUE LASER 3D SCANNER

RigelScan™



INTRODUCTION:

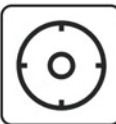
The RigelScan™ series handheld blue laser 3D scanner, is a new metrology system. RigelScan™ can capture fine features of the parts with an accuracy up to 0.02mm, certified by National Institute of Metrology. RigelScan™ applies blue laser scanning technology for fine scanning of structures. In the mean time, RigelScan™ can be equipped with wireless module, for more easy and flexible scanning experience of large parts. Thus, RigelScan™ provides the perfect 3D measurement solution for all industries.

SPECIFICATION:	RigelScan™	RigelScan Elite™
MEASUREMENT RATE	205,000measurements/s	480,000measurements/s
SCANNING AREA	275×250mm	
BLUE LASER LIGHT SOURCE	6 laser lines (+ extra 1 line)	14 laser lines (+ extra 1 line)
LASER CLASS	CLASS II (eye-safe)	
RESOLUTION	0.05mm	0.03mm
ACCURACY	up to 0.03mm	up to 0.02mm
VOLUMETRIC ACCURACY	0.03+0.06mm/m	0.02+0.06mm/m
VOLUMETRIC ACCURACY (COMBINED WITH PHOTOSHOT)	0.03+0.025mm/m	0.02+0.025mm/m
STAND-OFF DISTANCE	300mm	
DEPTH OF FIELD	250mm	

FEATURES:



ULTRA HIGH ACCURACY
Up to 0.02mm



FINE DETAIL SCANNING
Capture perfect 3D data of precision parts



DYNAMIC SCANNING
Freely move parts without affect accuracy



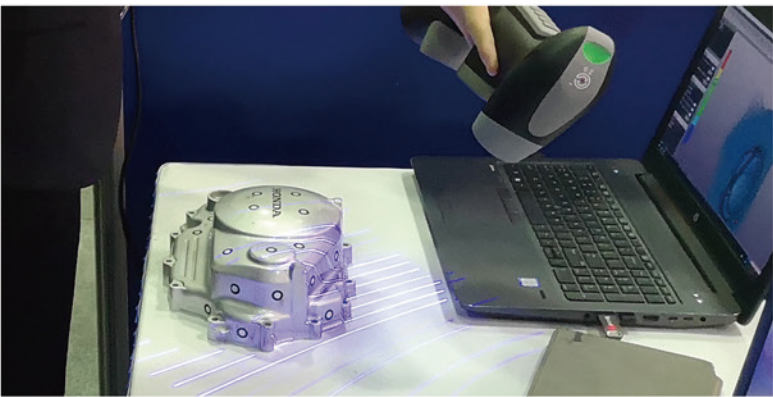
GOOD ADAPTABILITY
Easily capture data of shiny or reflective surface



USER-FRIENDLY
Easy operation, within half hour can master the operation



WIRELESS CONNECTION
Easy scanning for large parts
Flexibility



APPLICATION



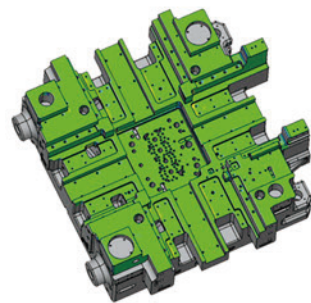
AEROSPACE

Rapid prototyping
MRO and damage assessment
Aerodynamics, stress analysis
Parts Inspection & adjustment



AUTOMOTIVE

Competitive product analysis
Car modification
Custom interior design
Modeling and design
QC and Spare parts measurement
Simulation and Finite Element Analysis (FEA)



MOLD

Virtual assembly
Reverse engineering
Quality control and inspection
Wear analysis and repair
Fixture design and adjustment



NEW ENERGY

Hole assembly
Pre-processing component evaluation
Component to CAD inspection
Supplier quality control
Tool/robot path programming

■ EDUCATION AND RESEARCH

■ REVERSE ENGINEERING

■ CULTURAL RELIC & FURNITURE

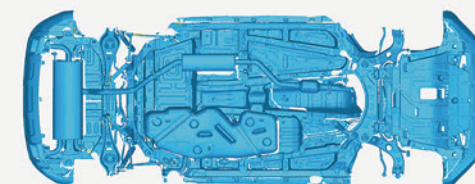
■ HEALTHCARE

■ INDUSTRIAL DESIGN

■ VR · AR



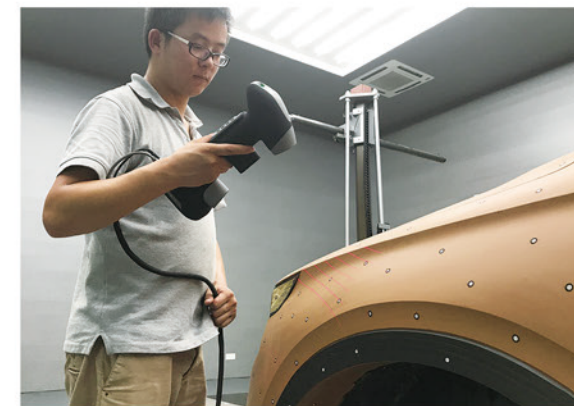
>>SLUDGE MODEL DATA



>>CAR CHASSIS DATA



>>CAR INTERIOR DATA



>>SLUDGE MODEL SCANNING



>>CAR CHASSIS SCANNING



>>CAR INTERIOR SCANNING

VMM/CMM Upgrade Kit

Akira Metro also provide upgrading for Manual CMM and Vision Measuring Machine. With our powerful controller and component, customer will get the best solution for upgrading. We can also offer the service such as repairing or calibration after upgrading. So customer can be ensure that the machine is under good taking care.



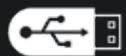
Contour Light



Surface Ring Light



XYZ Axis Linear Scales



USB



Switching Power Supply



Limit Switch



Z Motor (Driver contained) For auto focus



Touch Probe

