



**TECHNOLOGY IS  
MEANINGFUL**  
WHEN DELIVERED  
WITH SUPPORT AND  
SERVICES



**ATQ**  
METRO



**ATQ**  
METRO



## ABOUT US

ATQ METRO is one of the leading Manufacturer and Service provider of State-of-the-Art Engineering Products in the field of Industrial 2D/3D Metrology, Dimensional Measurement, Reverse Engineering and Traceability. Our success can be attributed to visionary leadership as well as the company's reputation for high quality precision Products, Excellent Technical Support, and building long term relationship with our Customers, Suppliers and our Employees. We offer a wide range of products for contact and non-contact measurement used in production, quality control, manufacturing and research. ATQ METRO is committed to ensuring that all of our Products are of the highest possible ACCURACY unmatched TRUST and superior QUALITY.

## PRODUCT & SERVICES WE OFFER



## CORE VALUES



PASSION



KNOWLEDGE



CO-OPERATION

- Vision Measuring Machine(VMM)
- Horizontal Vision Measuring Machine(H-VMM)
- One Touch Vision Measuring Machine
- Amalgam Vision Measuring Machine
- Cutting Tool Measuring Machine
- Profile Projector (Horizontal / Vertical)
- Mini Tool Inspect
- Automatic Focusing Digital Microscope
- Laser Marking Machine
- Metrology Fixtures
- Maintenance, Calibration & Repair Services
- Inspection Services

# MANUAL VISION MEASURING MACHINE

## BA SERIES

The BA Series Vision Measuring Machine Is Easy to use & Affordable Dimensional Checking Solution BA Provides you precise & fast measurement of precision components, suitable for small & light weight components.

### FEATURES

- Ergonomic design
- Economical
- Highly stable granite structure
- High precision Linear Guide
- Good Reliability



Model	BA 200	BA 300
Dimension(mm)(L x W x H)	550 x 540 x 930	600 x 740 x 980
Measuring Range (mm)(X x Y x Z)	200 x 100 x 150	300 x 200 x 200
Measuring Accuracy ( $\mu\text{m}$ )	2.5+ L/100	2.5+ L/100
Image & Measuring	Camera	Industrial grade color camera
	Lens	Manual dented zoom lens 0.7- 4.5 X

# AUTO FOCUS VISION MEASURING MACHINE

## EX SERIES

**EX is the perfect solution for your Quality control lab to upgrade your dimensional measurement & Inspection facility.**

EX Series from ATQ offers you Non Contact, High-Precision, Auto focus Vision Measuring System. EX is quick & reliable solution for 2D/3D Measurement.

**View – Measure – Construct – GD &T – Reports – Reverse Engineering**



## FEATURES

- Ergonomic design
- Powerful non contact auto focus Vision measuring machine
- Full HD camera with high image quality
- Highly stable granite structure
- Precision linear guide
- High resolution linear encoder
- Advanced LED light sources
- Segmented surface-ring light
- Manual dented auto feedback zoom Lens
- Measure directly in the image
- Semi-Automatic playback of programs
- On screen Z axis control
- Auto Edge detection
- Easy to use software

Model	EX 200	EX 300	EX 400
Dimension(mm)(L x W x H)	550 x 540 x 930	600 x 740 x 980	700 x 840 x 980
Measuring Range (mm)(X x Y x Z)	200 x 100 x 150	300 x 200 x 200	400 x 300 x 200
Measuring Accuracy ( $\mu\text{m}$ )	2.5+ L/100	2.5+ L/100	2.5+ L/100
Image & Measuring	Camera	Industrial grade color camera	
	Lens	Manual dented zoom lens 0.7- 4.5 X	

# CNC VISION MEASURING MACHINE

## STD SERIES

### Automatic High Precision 3 axis measurement System.

The Machines offers you powerful 3 axis measurement solution with high accuracy & High precision. It provides you fast & accurate measurement of complex precision parts. The image processing technology & high speed stage control enable high-through output measurements, which make the machines optimal solution for work piece that have many features to be measured. With the ATQ METRO measuring software, the machine is capable to offer powerful 2D/3D composite measuring function. the machine is able to work with touch probes & non/contact measuring sensors, which gives more possibilities and efficiency to the series.

## FEATURES

- Ergonomic design
- Highly accurate measurements
- Classic model
- High image quality
- High performance auto focus
- Auto zoom lens
- Very robust granite base
- Touch trigger probe option
- Advanced illumination system
- Programmable ring light
- High magnification with distortion free image
- Various options like probe, laser, whitelight etc.



Model	STD 3020	STD 4030	STD 5040
Dimension(mm)(L x W x H)	1600 x 780 x 1700	1750 x 920 x 1700	1900 x 1080 x 1700
Measuring Range (mm)(X x Y x Z)	300 x 200 x 200	400 x 300 x 200	500 x 400 x 200
Measuring Accuracy (µm)	2.5+ L/200	2.5+ L/200	2.5+ L/200
Image & Measuring	Camera	Industrial grade color camera	
	Lens	zoom lens 0.7 to 4.5X	

# HORIZONTAL VISION MEASURING MACHINE

## H-VMM SERIES

The H-VMM Horizontal Vision measuring machine combines best features of horizontal Profile Projector and traditional vision measuring machine. The H-VMM is configured like a traditional horizontal profile Projector. The casting work stage suitable for heavy duty application like Shaft, Precision machined / turned parts, Hobs and cutting tools.



## FEATURES

- Heavy duty work stage
- Automatic edge detection
- High precision glass scales
- Multisensor capable
- LED illumination for surface and profile lighting.
- Digital video colour camera.

Model	H-VMM 300	
Measuring range	300x100x150	
Scale Resolution	0.0005mm	
Measuring accuracy ( $\mu\text{m}$ )	$\pm(3+L/100)$	
Image & Measuring	Camera	Industrial grade colour camera
	Lens	Manual dented zoom lens

# ONE TOUCH VISION MEASURING MACHINE

## ONE TOUCH SERIES

**Smart – Fast – Accurate – High repeatability – Easy to use**

An automatic one touch vision measuring machine that provides highly accurate and repeatable measurement in a single click of a button; simply place a part on the work stage and click a button! It locates part automatically placed anywhere within the system's field of view, no matter how is it oriented and perform measurements. It also automatically records measurement results and creates detailed inspection report. This user friendly machine can be used by anyone to compliment your quality control processes.

**Reduce Inspection Time with ATQ one touch vision measuring machine.**



### FEATURES:

- Large Field of View
- Automatic edge detection
- Automatic measurement
- User friendly interface

Model	VOT 850V	VOT 850V CNC	VOT 860H
Field of view	80x50	80x50	80x60
Dimension(mm) (L x W x H)	300x450x750	300x450x750	300x450x750
Measuring Accuracy (μm)	±(3+L/50)	±(3+L/50)	±(3+L/50)
Measuring Range (mm) (X x Y)	80 X 50	150 X 100	80 X 60



# AMALGAM VISION MEASURING MACHINE

## COMBIGENI SERIES

**Combigeni is an advanced high speed large field-of-view amalgam vision measuring machine that offers ultramodern large field vision analysis capability with multisensor measurements.**

It combines the fast image stitching measurement technology with the traditional vision measurement technology. It is equipped with a Telecentric large field-of-view optics and fully automatic zoom Telecentric optics, i.e. two different vision technologies in one machine. It also supports Simultaneous Measurements on Multiple Parts; this function saves time and effort even with many parts and measurement points. This allows the user to obtain the experience and efficiency of one touch measuring technology along with traditional vision measuring technology in one machine.

Combigeni is fully multisensor machine capable to perform complex contact and non contact measurements. It can be combined with optional Laser sensor and touch trigger probe. It also automatically records measurement results and creates detailed inspection report.

**Revolutionary productivity improvement with amalgam vision measuring machine.**



### FEATURES:

- Large Field of View
- Automatic edge detection
- Automatic zoom Lens
- Multisensor capable
- Automatic measurement
- User friendly interface

Model	Combigeni 400	Combigeni 500	Combigeni 600
Measuring Range (mm) X x Y x Z	400x300x200	500x400x200	600x500x200
Machine Movement	Automatic		
Vision lens configuration	Double Telecentric large field optical lens with additional 0.7-4.5x automatic zoom lens		
large field-of-view	80 x 60mm		
Measuring accuracy (µm)	Vision amalgam measurement : $\pm(3+L/100)$ Traditional Vision Measurement : $\pm(3+L/200)$		
System measuring accuracy	$\pm(3+L/100)$		

# ATQ METRO 2D MEASURING SOFTWARE

## AUTOMATIC EDGE DETECTION BY ADVANCED IMAGE PROCESSING

ATQ METRO 2D/3D Measuring Software is a multiple sensor measuring application software. Use the same software with your touch probe and non-contact system. Measure geometric and complex shapes easily using high-accuracy edge detection and high-speed optical scanning. Fully automatic edge detection tools which can be used in both manual and CNC mode ensuring fast and repeatable results without relying on the skill of the operator.

### FEATURES

- Powerful Autofocus Function
- One Click Measuring Tool Set up
- Illumination Control easy to Use
- Image & Probe Measuring Function
- Scanning Function
- Various kind of report format
- Various conventional pixel calibration methods
- Compatible with various kind of motion controller
- Automatic 2D profile scanning
- DXF import and export
- Automatic measurement routines
- Powerful interactive graphics window
- Automatic feature recognition
- 2D and 3D inspection
- Free form curve inspection
- Feature construction
- GD&T dimensions and tolerances
- Digital Read Out (DRO)



One Click Measurement



Auto Focus



Contour Inspection



Cut Section Inspection



Image Merge



Cut Section Image Merge



Graphical View



CAD Export



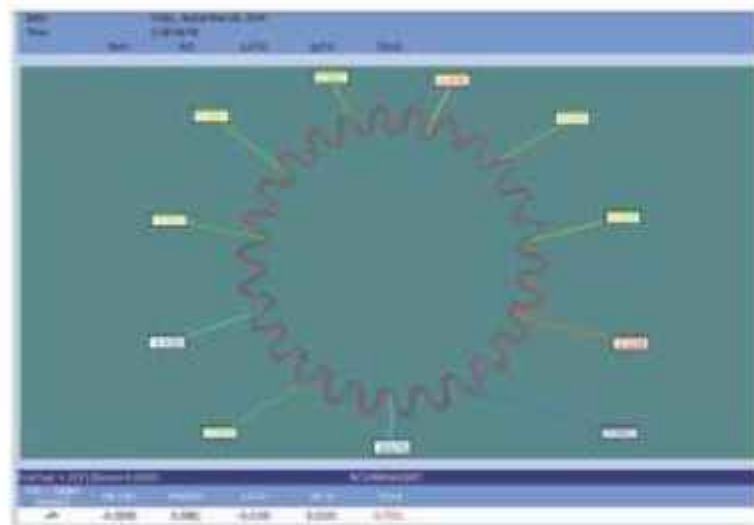
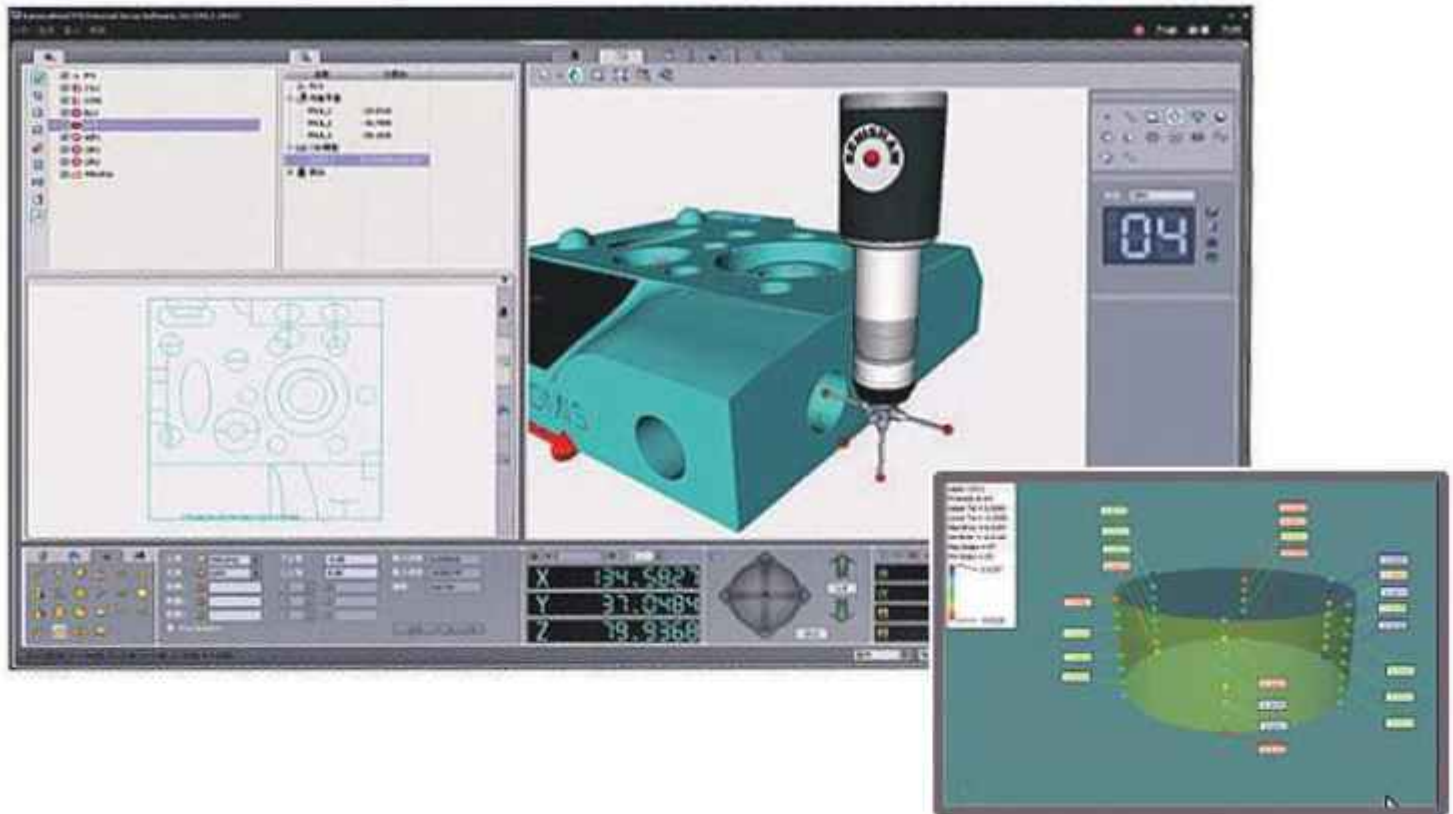
### INSPECTION REPORT

Customer- ATQ Metro				Date:- 02-08-2018			
Drawing Name- ABC				Operator:- Suryakant			
Drawing No.- 02082018				Ref.- XYZ			
Sr. No.	Feature	Nominee	Actual	Upper tol.	Lower tol.	Deviation	Status
1	C2-Diameter	4.5	4.436	0.2	-0.2	-0.064	OK
2	C1-Diameter	12	11.967	0.2	-0.2	-0.033	OK
3	Critical	22	21.98	0.01	-0.01	-0.02	NG
4	C6-Diameter	30	30.003	0.2	-0.2	0.003	OK
5	LIN.Dim1-Linear Lable	1.5	1.469	0.2	-0.2	-0.031	OK
6	Ang.Dim1-Angle	45°0'0"	45°11'32"	2°0'0"	-2°0'0"	0°11'32"	OK

### SIMPLE ANALYSIS CHART

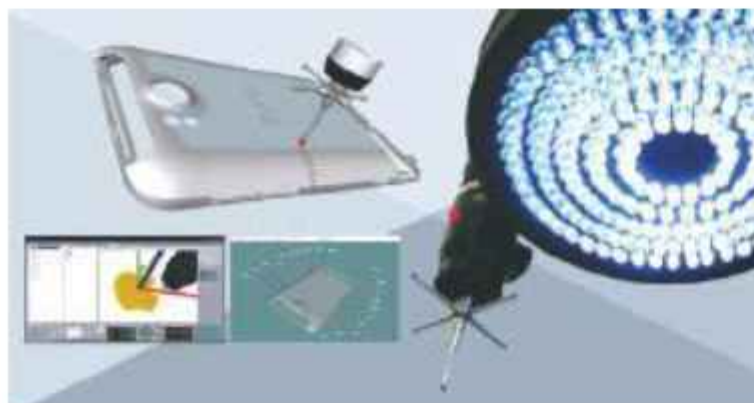


## 3D SOFTWARE (Optional)



### Output form error analysis report

- DMIS based 3D Measuring Function
- Full CAD module for 3D Measuring
- Import IGES & DXF to perform CAD measurement
- Export CAD with IGES & DXF to realize reverse engineering
- CMM type measuring report exporting



### 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.

# CUTTING TOOL INSPECTION MACHINE

## TOOL INSPECT 600

Tool Inspect 600 Cutting Tools Inspection Machine is a common measuring device for metal cutting tools. Offers extra measuring function and application experience to users. The Tool Inspect 600 series is suitable for directly measuring of the Special angles of drill, tap, End mill reamer, inserts or saw, such as orthogonal rake, relief, helix, tool cutting edge angle, end cutting edge angle, pitch, core diameter, chisel edge, chisel edge angle relief, angle axial and radial measuring.



Tool Fixture



Easy Operation



Reports

## THE BEST INSPECTION MACHINE FOR:



End Mills



Drills



Taps



Ball Nose



Reamers



Form Tools

Model	X-axis travel	Z-axis measurement range	Max Measurable and clamped shank diameter	Working distance
TOOL INSPECT 600	180MM	50MM	32MM	90 MM

## PROFILE PROJECTOR

### VERTICAL SERIES

Vertical light path Projector with 300,400,600mm screen, Light duty Glass work-stage Suitable for Plastic, Rubber & Small machined / turned parts



### HORIZONTAL SERIES

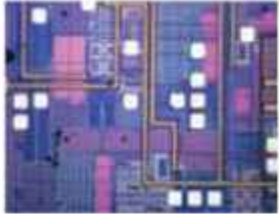
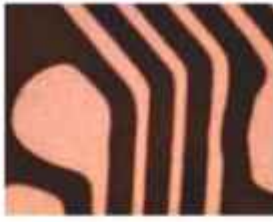
Horizontal light path Projector with 300,400,600mm screen, heavy duty steel work-stage for machined / turned parts like die castings, gears, shafts, hobs and cutting tools.



Lens axis	Vertical	Vertical	Horizontal	Vertical	Horizontal	Horizontal
Specifications	EPP 300VT	PP300 VT	PP 300HT	PP 400VT	PP 400HT	PP 600HF
Work stage table top area	290 x 175mm	380 x 280mm	400 x 120mm	380 x 280mm	450x160mm	600 x 250mm
Measuring range x/y axis	150 x 100mm	200 x 100mm	200 x 100mm	250 x 150mm	300x150 mm	400 x 250mm
Screen: fine grain ground glass	300 mm dia.			400 mm dia.		600 mm dia.
Standard Magnifications	10x					
Optional Magnifications	20x,25x, 50x			20x,25x, 50x,100x		
Magnifications Accuracy	0.05% on profile and surface					

# AUTOMATIC FOCUSING DIGITAL MICROSCOPE

For Visual Inspection



## SERVICES

Calibration, Annual maintenance and retrofitting services for Vision Measuring Machine & Profile Projector.



### ANNUAL MAINTENANCE CONTRACT

- Calibration Services
- Annual Maintenance Contract
- Machine installations



### CALIBRATION SERVICES

- Relocation
- Retrofitting
- Training & Repair Service



### MAINTENANCE AND REPAIR

- Preventive maintenance
- Application training
- Breakdowns

## MEASUREMENT SERVICES

When you are a manufacturer of high-end metal, plastic or composite components or assemblies, ATQ Measurement services may be the answer.

ATQ METRO in-house metrology facilities support 2D/3D dimensional measurement services for parts used in aerospace, automotive, medical, electronics, and many more industries. ATQ utilizes multiple contact and vision systems to provide accurate, precise measurements. These measurements include:

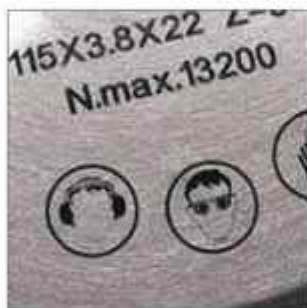
- Third-party Inspection (In process or Final)
- First Article Inspections
- Statistical Analysis
- Capabilities Studies
- Reverse Engineering
- 2D/3D Inspection
- 3D Scanning
- Job Sorting Facility

## LASER MARKING MACHINE

- Laser marking machine is one of the most advanced laser marking equipment in the world
- All-in-one design of electric cabinet and working table.
- Industrial machine type, popular layout, excellent effect of dust proof.
- High space between lifting table and working table, especially used for marking on small size work piece.
- Stable output power, great optical model, excellent quality of laser beam, fast marking speed and best marking effect and efficiency.
- Easy to operate
- Low power consumption



## MARKING SAMPLES



Model	ATQL-F20	ATQL-F30	ATQL-F50
Laser Power	20W	30W	50W
Laser Wavelength	1064 nm		
Power Adjustment	0 to 100%		
Laser Frequency	20KHz to 80 KHz		
Speed	7000 mm/s Max		
Marking Size	100 x 100mm / 200 x 200mm / 300 x 300mm		
Min Font Size	0.2 mm		
Min Line width	0.01 mm		
Cooling type	Air Cooled		
Work Environment	10-40°C, Humidity: 10%-90%		
Power Supply	Ac 220V		

## METROLOGY FIXTURES

### HOLDING FIXTURE KIT FOR VMMs

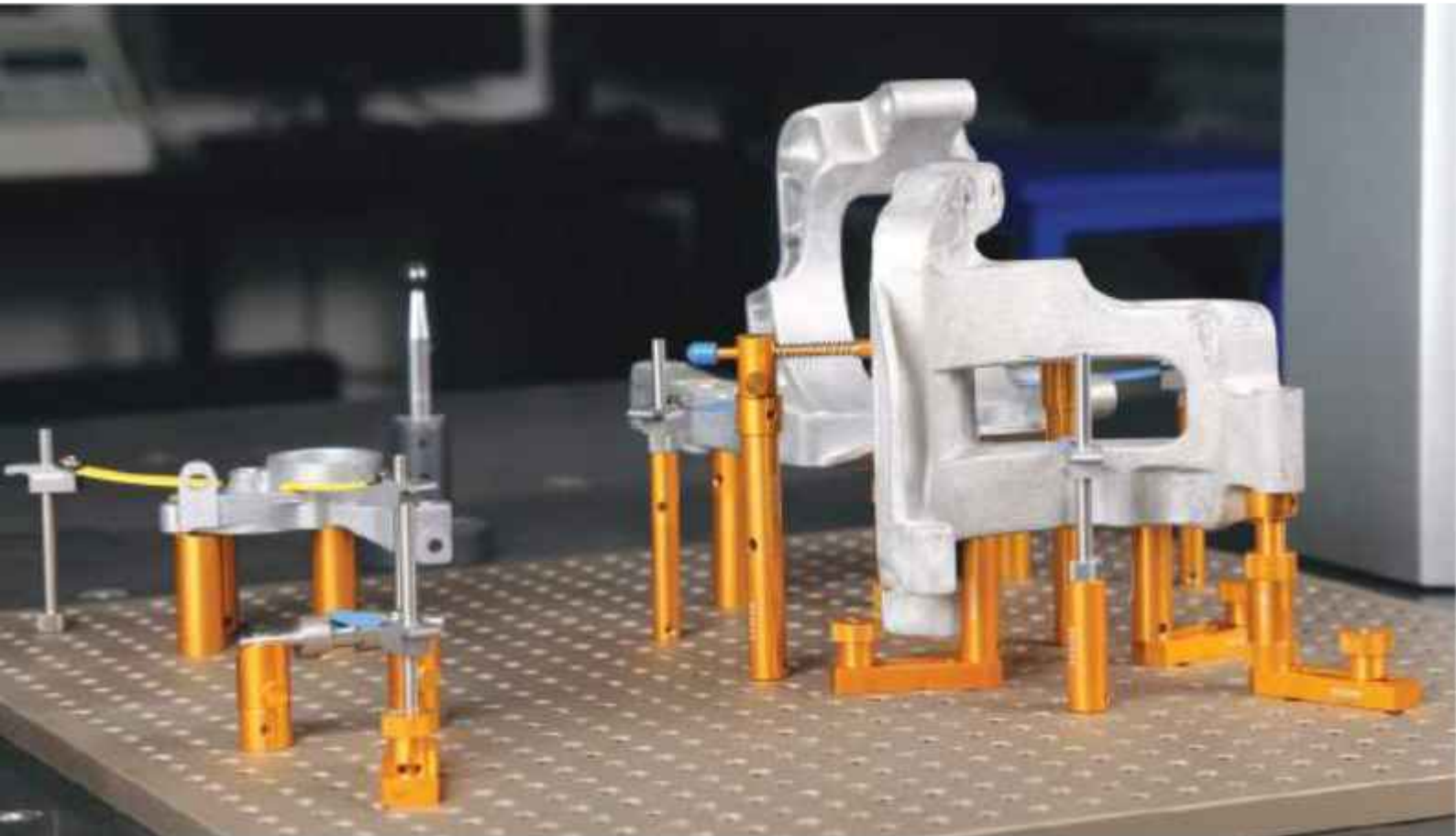
ATQ offers a range of modular fixtures for use with Vision Measuring Machine (VMMs).

The ATQ METRO VMM fixture kit offers unique fixturing solution for clamping various components being measured on the vision measuring machine. users can have continuous & fast clamping for components, largely increase the repeatability of fixturing & saving the cost for developing special fixture for components.



### HOLDING FIXTURE KIT FOR CMMs

ATQ METRO CMM fixtures can improve the reproducibility and accuracy of your inspection process by providing quick and repeatable fixturing set-ups for your components. ATQ METRO CMM fixtures are modular and can be expanded with your requirements to provide a complete fixturing solution for any part regardless of its size, shape or material.





## WIDE RANGE OF APPLICATIONS

Vision measuring machine's are offering much wider application range. These machine's are well accepted in Metrology Labs, QC/Standard rooms, R&D center. In the mean time, the outstanding measuring accuracy these machine's makes more adaptable strict measuring requirement. Is a powerful measuring device used In precision manufacturing for metals, electronics, products, or plastic industries etc.

## INDUSTRIES WE SERVE



AEROSPACE



AUTOMOTIVE



MEDICAL CARE



DEFENCE



ELECTRONICS



OEM



## OUR ESTEEMED CLIENTS





ATQ  
METRO

## Joystick

Makes measuring incredibly  
Easy and Convenient



Numerical speed display

Multiple function press buttons



## Let's Connect...

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### REGIONAL OFFICES

#### BENGALURU

Sharada Colony,  
Rajaji Nagar,  
Bengaluru - 560010.

#### JAMNAGAR

Plot No 3689, Shop  
No 14, GIDC Phase 3,  
Golden Point, Dared,  
Jamnagar - 361006

#### GURUGRAM

H.No. 411/16, Ground  
Floor, Civil Lines,  
Peer Baba Wali Gali,  
Gurugram - 122001

#### LUDHIANA

H.J. 711, H.B. Colony,  
B.R.S. Nagar,  
Ludhiana - 141012