

Video Measuring Machines

Making Measurements
Error Free & **Operator** Free



Making Quality to Measure Quality

Established in 1971 SIPCON offers a comprehensive and superior lineup of quality Profile Projectors, Vision Measuring Systems, Industrial Vision Inspection Solutions and Coordinate Measuring Machines - the largest range in the world.

With a network of fully trained support team SIPCON provides full after sale service and support second to none. The name SIPCON stands synonymous with the ultimate precision quality and reliability



7 Patents
Approved



7500 USERS *DELIGHTED*

All Across the globe



SHRIRAM
PISTONS



Roop Polymers



هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority



Panasonic

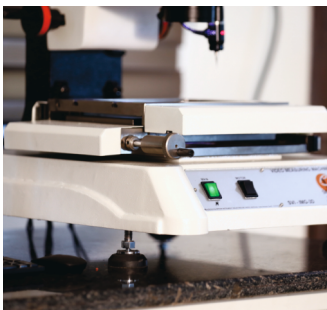


Vision Measuring System

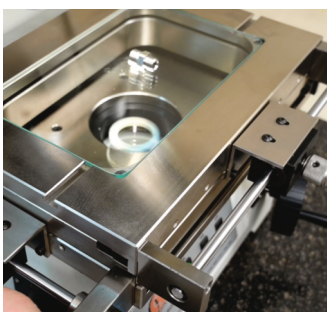
SVI-IMG Series



Software Controlled
Illumination



Precise Metal Base & Column



Threadless Workstage



Probe for 3D Measurements



SVI-IMG-3D



SVI-IMG-M3

Vision Measuring System

SVI-IMG Series



SVI-IMG-3D (Metal Base)



SVI-IMG-M3 (Granite Base with Table)

SOFTWARE

SIPMEAS / M3

MEASURING RANGE

Standard: 150 X 100 X 100 mm
Optional: X-Axis upto 500 mm,
Y-Axis upto 400 mm,
Z-Axis upto 300 mm

RESOLUTION

0.001 / 0.0005 / 0.0001 mm

LINEAR ACCURACY

(3+L/200) micron

REPEATABILITY

± (0.002 mm)

VISION

1/3" High resolution CMOS camera

MAGNIFICATION

Optical: 0.7X - 4.5X
On Monitor: 35X - 225X

VIDEO EDGE DETECTION

Standard

ILLUMINATION

Surface: LED
Contour: LED

OPERATION

Manual with quick release knob

BASE PLATFORM

Metal base / Granite base

PLATFORM LOAD CAPACITY

15 Kgs

POWER SUPPLY

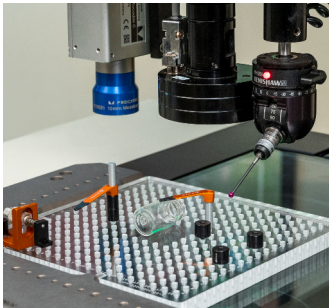
AC - 110/220V (50/60 Hz) single phase

OPTIONALS

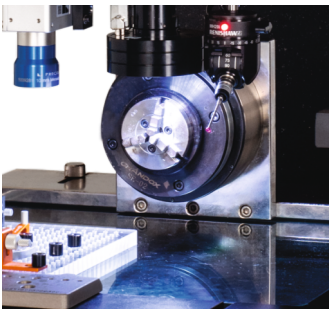
- Motion control through joystick
- Touch probe
- Autofocus

Multi Sensor CNC Inspection System

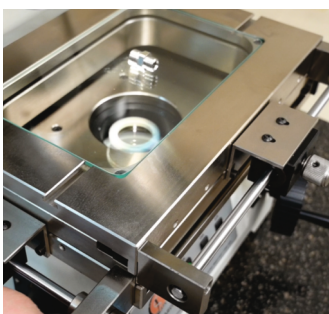
SVI-CNC Series



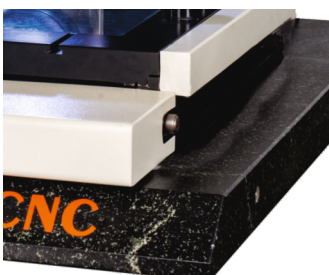
**3 in 1 Vision,
Touch Probe & Laser**



Rotary Indexer



Threadless Workstage



**Granite Base & Platform
for Better Stability**



SVI-3D-CNC

Multi Sensor CNC Inspection System

SVI-CNC Series



SVI-3D-CNC

SOFTWARE

MSU-3DPro / M3

MEASURING RANGE

Standard: 250 X 150 X 200 mm

Optional: X-Axis upto 500 mm,
Y-Axis upto 400 mm,
Z-Axis upto 300 mm

RESOLUTION

0.001 / 0.0005 / 0.0001 mm

LINEAR ACCURACY

(3+L/200) micron

REPEATABILITY

± (0.002 mm)

VISION

1/3" High resolution CMOS camera

MAGNIFICATION

Optical: 0.7X - 4.5X

Monitor: 35X - 225X

Optional: Motorised

VIDEO EDGE DETECTION

Standard

ILLUMINATION

Surface: LED

Contour: LED

OPERATION

CNC

BASE & PLATFORM

Granite base

LOAD CAPACITY

30 Kgs

JOYSTICK

Standard

POWER SUPPLY

AC - 110/220V (50/60 Hz) single phase

OPTIONALS

- Touch probe
- Laser
- White light sensor
- Rotary indexer

Special Purpose Microscope

SVI-TRZ Series



SVI-TRZ-3D

SOFTWARE

MSU-3DPro/ M3

MEASURING RANGE

Standard: 150 X 100 X 100 mm
Optional: X-Axis upto 500 mm,
Y-Axis upto 400 mm,
Z-Axis upto 300 mm

OBSERVATION HEAD

Binocular/Trinocular

RESOLUTION

0.001 / 0.0005 / 0.0001 mm

LINEAR ACCURACY

(3+L/200) micron

REPEATABILITY

+/- (0.002 mm)

VISION

1/3" High resolution CMOS camera

MAGNIFICATION

Optical: 0.7X, 1X, 2X, 3X, 4X, 4.5X

MAG. ON EYEPIECE

Std.: 7X, 10X, 20X, 30X, 40X, 45X
Optional: 50X, 100X, 200X, 400X,
500X, 1000X, 1200X, 1500X

EYEPIECE

WF-10X with Cross hair/
Opt. 20X/25X

ILLUMINATION

Surface: LED
Contour: LED

OPERATION

Manual with quick release knob / CNC

BASE PLATFORM

Metal base / Granite base

PLATFORM LOAD CAPACITY

15 / 25 Kgs

POWER SUPPLY

AC - 110/220V (50/60 Hz) single phase

OPTIONALS

- Touch probe
- Laser
- Metallurgy measurements

Depth Measuring Microscope

SVI-TR Series



SVI-TR-3D

SOFTWARE

MSU-3DPro/ M3

MEASURING RANGE

Standard: 150 X 100 X 100 mm
Optional: X-Axis upto 500 mm,
Y-Axis upto 400 mm,
Z-Axis upto 300 mm

OBSERVATION HEAD

Binocular/Trinocular

RESOLUTION

0.001 / 0.0005 / 0.0001 mm

LINEAR ACCURACY

(3+L/200) micron

REPEATABILITY

± (0.002 mm)

VISION

1/3" High resolution CMOS camera

OBJECTIVE

Standard: 1X, 3X and 5X
Optional: 10X / 40X / 45X / 60X

EYEPIECE

WF-10X with Cross Hair

MAG. ON EYEPIECE

Std.: 10X, 20X, 30X, 50X
Optional: 100X, 200X, 400X, 500X,
1000X, 1500X

ILLUMINATION

Surface: Fibre optic / LED
Contour: LED

OPERATION

Manual with quick release knob / CNC

BASE PLATFORM

Metal base

PLATFORM LOAD CAPACITY

15 / 25 Kgs

POWER SUPPLY

AC - 110/220V (50/60 Hz) single phase

OPTIONALS

- Touch Probe
- Metallurgy measurements

FOV Video Measuring Machine

SVI-FOV Series



SVI-FOV-CBPP



SVI-FOV-M3

SOFTWARE

M3

MEASURING RANGE

Standard: 150 X 100 X 100 mm

Optional: X-Axis upto 500 mm,
Y-Axis upto 400 mm,
Z-Axis upto 300 mm

RESOLUTION

0.001 / 0.0005 / 0.0001 mm

LINEAR ACCURACY

(3+L/200) micron

REPEATABILITY

±(0.002 mm)

VISION

1/3" High resolution CMOS camera

FOV

16 mm, 32 mm, 48 mm

VIDEO EDGE DETECTION

Standard

ILLUMINATION

Surface: LED

Contour: LED

OPERATION

Manual with quick release knob

BASE PLATFORM

Metal / Granite

PLATFORM LOAD CAPACITY

15 Kgs

POWER SUPPLY

AC - 110/220V (50/60 Hz) single phase

OPTIONALS

- Motion control through joystick
- Touch probe
- DXF overlay

Optical Co-Ordinate Measuring Machine

SVI-OCMM Series



SVI-OCMM-442



SVI-OCMM-662

SOFTWARE

SIPMEAS / M3

MEASURING RANGE

450 X 450 X 200 mm
600 X 600 X 200 mm
1000 X 1200 X 200 mm

RESOLUTION

0.0005/ 0.0001 mm

LINEAR ACCURACY

3+L/200 μ m, 5+L/200 μ m

REPEATABILITY

\pm (0.003 mm)

MPEE U3

5+L/200 μ m / 6+L/200 μ m

VISION

1/3" High resolution CMOS camera

MAGNIFICATION

Optical: 0.7X – 4.5X
Monitor: 35X – 225X

TRANSMISSION

Linear guide way + Rolling drive nut/
Air bearing (All models except 442)

Z-AXIS BALANCE

Counter weight / Air cylinder

OPERATION

Manual / CNC

TOUCH PROBE

Renishaw MCP / MH8 /MH20i

BASE PLATFORM

High precision granite DIN 876
Grade 0

LOAD CAPACITY

20Kgs – 50 Kgs

JOYSTICK

Optional

POWER SUPPLY

AC – 110/220V (50/60 Hz) single phase

OPTIONALS

PC + 24" TFT monitor

PART HEIGHT

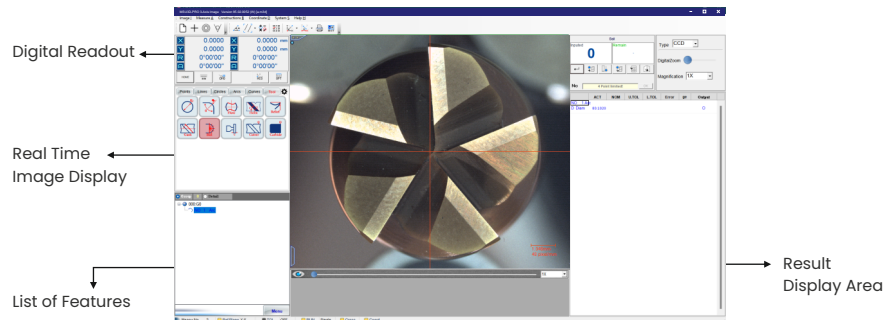
200 mm/250 mm

Note: Other size specifications can be provided on request.(1000X1000X200 and 1200x1500x200)

3D Measuring Software

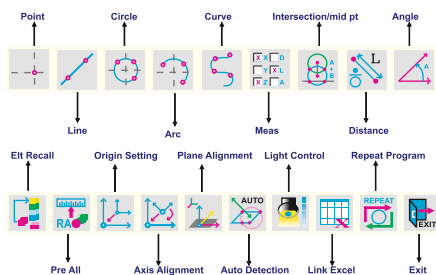
SIPMEAS

Software Desktop



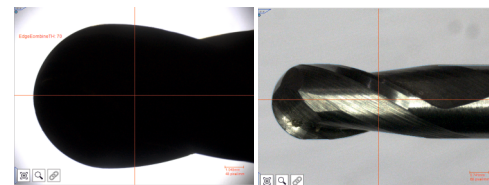
Click & Measure Top Menu Bar

One Click Menu bar for all geometric measurement origin setting, axis alignment, MS-excel output & Programming.



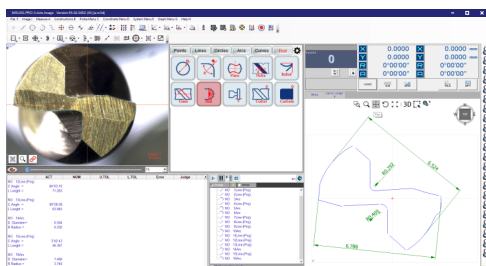
Light Control

4 channel light controller with programming capability for each channel i.e. intensity value for each channel source would be memorized in the program and would be repeated at the time of running.



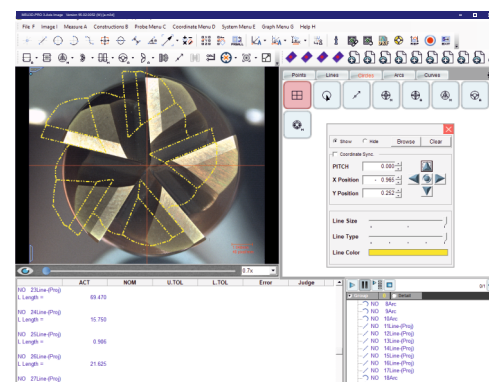
Data Management – Export

Option to save graphs as DXF or IGS files makes it possible to export our measurements to CAD and CAM for further editing. You can also "click" the features in the graph to calculate the measurements between the elements.



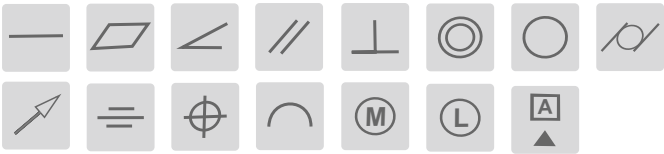
Overlap Comparison

Overlap your DXF files on the magnified image to quickly check whether the part is within the tolerance or not.



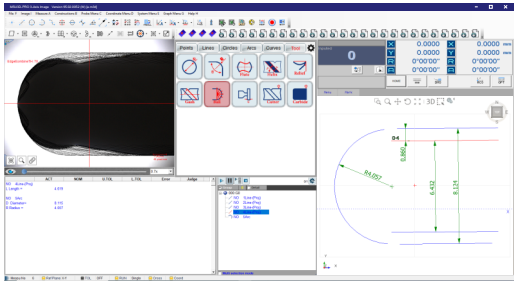
Tolerance Setting & Result Display

Result window will display all the results with tolerance values and will give an indication for PASS or Fail features.



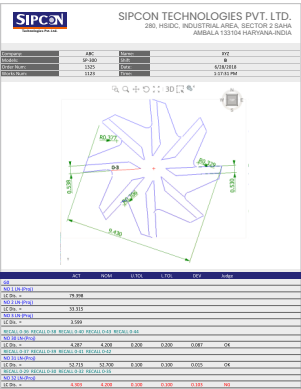
Patented Tools

Patented tools for high point calculation makes the measurement simple and accurate.



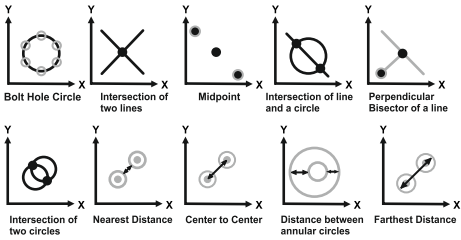
Report Generation

Customised report generation with color coded pass and fail, options to add the company logo , batch number, operator name, date and time etc. Image of measurement done is also the part of the report format.



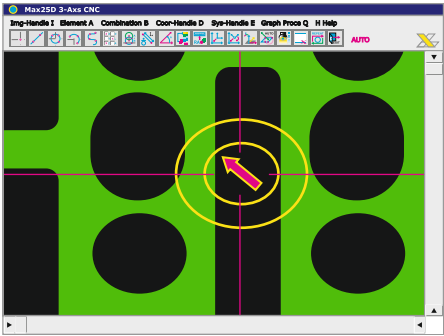
Construction Capabilities

Select two or more features to create intersections or constructions. This reduces operator effort by eliminating confusing construction menus.



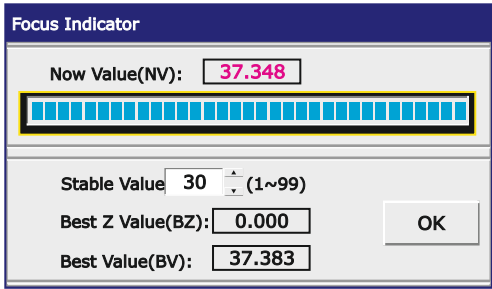
Programming & Navigation

This navigation Toolbar guides you what features are to be measured and where is there exact location – Just press the mouse clicks and complete part will be measured.



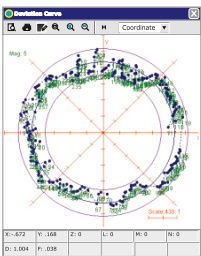
Focus Indicator for accurate 3-D Measurement

This will indicate the best focus value and the corresponding Z value to make sure focus is clear before measurement. A must to do for 3-D Measurement.



Deviation analysis of point data

This feature gives you the coordinates of the points taken on the element along with the form tolerance value of each point. You can choose the type of result you want – Min, Max or Avg. Also you can have a print out of this report.





Metlogix M3

Software Features

FEATURE MEASUREMENT

2D- Point, Lines, Circles, Arcs
Slots, Rectangles, Blobs
Distances, Angles, planes
Patterns & Profiles
3D- Planes, Cylinders, Spheres, Cones

CONSTRUCTION CAPABILITIES

2D- Point, Lines, Circles, Arcs
Midpoints, Mid Lines, PCD, Intersections
Bisectors, Offset
Distances, Angles
3D- Planes, Cylinders, Spheres, Cones

DATUMMING FEATURES

Primary Planes
Skew Alignment
Datum (Origin) Points
Reference Axis Rotation & Skew
Multiple reference Frames & Feature lock

REPORTING FORMATS

CSV, European, Tolerance, European 2
User Defined Fully customized
Single Part or Multiple Part reports
Statistical Reports

TOLERANCES

Size, Form, Orientation, Position, Runout
Profile-Full GD&T Control
Direct import nominals from DXF file
Place Value & Auto Round Tolerancing

EXPORTS

PDF, DXF, IGES, STL, Excel, CSV, TSV(Tab)
TXT, Cloud .CSV, Cloud .DXF
Image (BMP, JPEG, PNG or TIFF)
Data transmit to RS 232 port

CALIBRATIONS

LEC, SLEC, NLEC, Orthogonality
Pixel Size, Camera skew, FOV
Shape Cal, Cross Calibration
Bright Frame Calibration

PROGRAMMING

Measure & program
DXF auto programming
Part pallet programming (Grid & Polar)
PDF Programming, Add user messages

CNC FEATURES

Collision avoidance, Software fencing
Machine Zero / Auto Home
Probe Path data customization
Go to Steps & Default Clearance Moves

APPLICATIONS

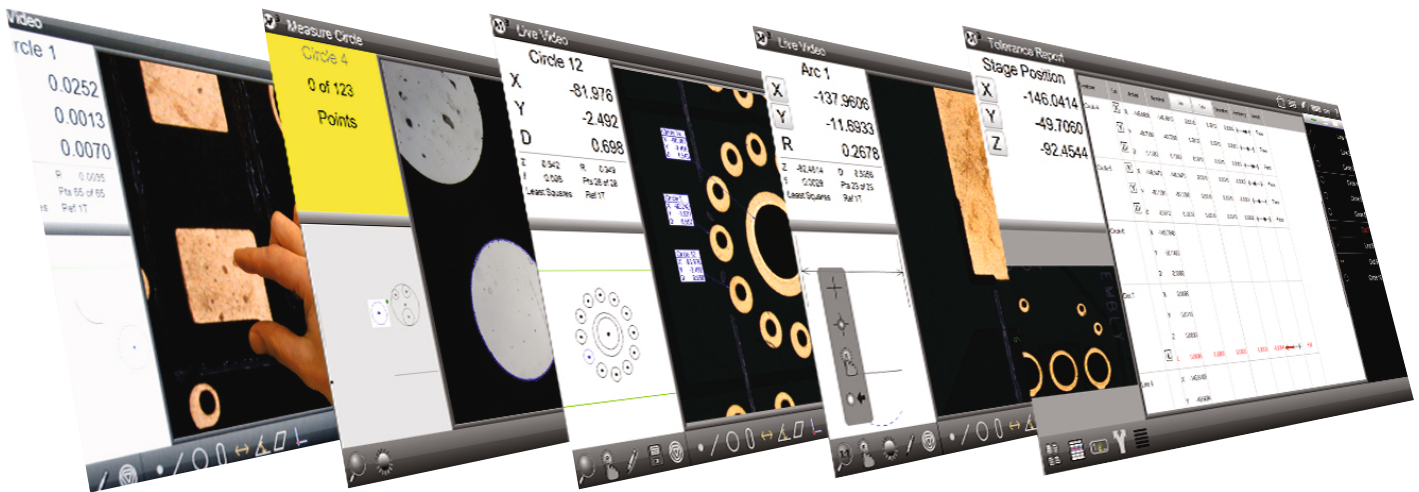
Reverse engineering
In line production
Quality Inspection

MEASUREMENT MODES

Polar/Cartesian
DMS/ DD
MM/ INCH

FOCUS OPTIONS

Auto Focus -CNC
Focus Assist - Manual

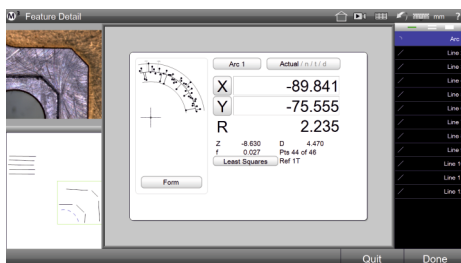


Fully Customizable Reporting

Feature	Type	Actual	Normal	Tol	Deviation	Tolerance	Result
Stage 1	X	-146.0414	-146.0414	0.0010	0.0000	0.0010	Pass
Stage 1	Y	-49.7060	-49.7060	0.0010	0.0000	0.0010	Pass
Stage 1	Z	-92.4544	-92.4544	0.0010	0.0000	0.0010	Pass
Circle 1	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 2	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 3	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 4	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 5	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 6	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 7	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 8	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 9	D	0.698	0.698	0.0010	0.0000	0.0010	Pass
Circle 10	D	0.698	0.698	0.0010	0.0000	0.0010	Pass

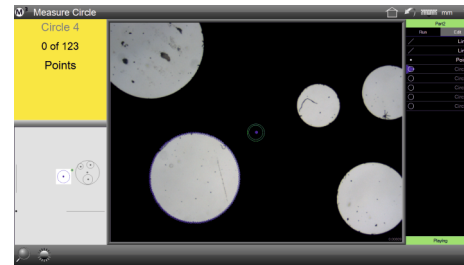
- Data format
- Header information (Company Name)
- Header and footer graphics (Logo and Page no)
- Add Part view graphics in report
- Add time and date stamps,
- Add operator or part information

Feature Detail Graphics



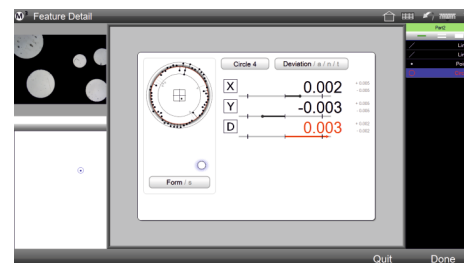
Individual feature views provide you with informative drawings displaying point cloud distribution, as well as nominal deviations, and tolerance results.

Part Programming and Playback



Repeat a sequence of recorded steps including measuring features, printing reports, and exporting measurement data. Playback guidance graphics provides helpful on-screen assistance for successful playback of your part programs.

Geometric Tolerancing



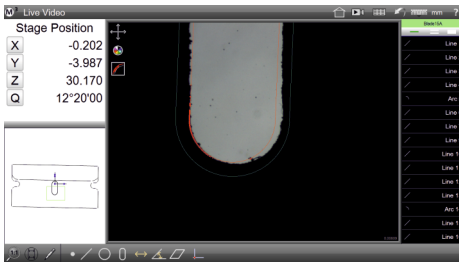
Size: X/Y/Z Positional / Diameter / Radius / Length / Width Size / Theta (Angle)

From: Straightness, Roundness, Flatness

Orientation: Parallelism, Perpendicularity, Angularity

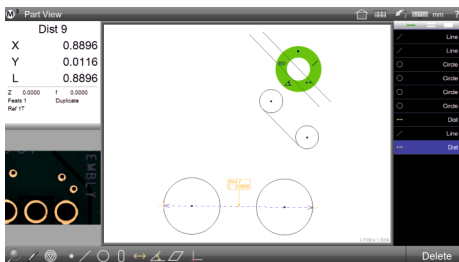
Position: True Position (LMC/MMC Modifiers) Concentricity, Symmetry Runout

DXF Overlay



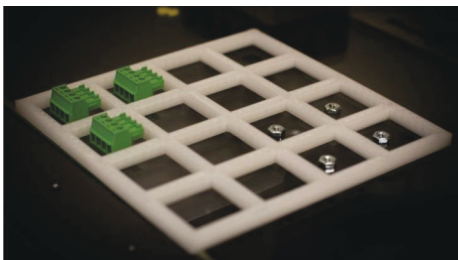
CAD overlays (DXF Files) can be easily imported for “comparative style” Go/No-Go feature and part inspection. This includes a live error whisker display for violations of the original DXF tolerance zones.

Part View constructions



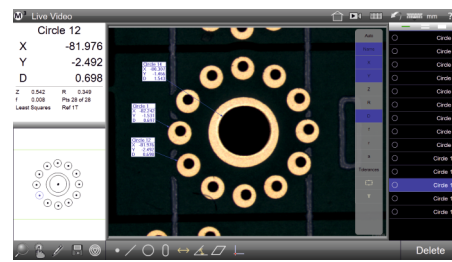
Points: Average , Mid/Center, End, Intersections
Distances: Shortest, Center to center, point to point, Farthest
Lines: Tangent, Mid lines, Offset Skew Lines
 Perpendicular/Parallel, Bisector , Gage.
Circles: Bolt Circle, Gage Circle(s), P.C.D
Angle: Compliments

Palletise Program Mode



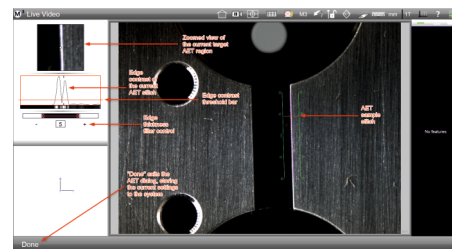
Specify & Select the row and column spacing and create your pallet program with a single click.

Results On Image & Image Capture



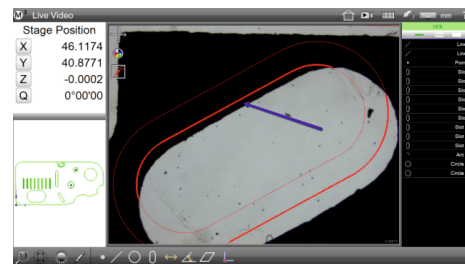
Gain access to instant feature tools using the part view “Gesture Menu”. Add customized feature data to your live video image or part view displaying only the desired coefficients.

Advanced Edge Teach



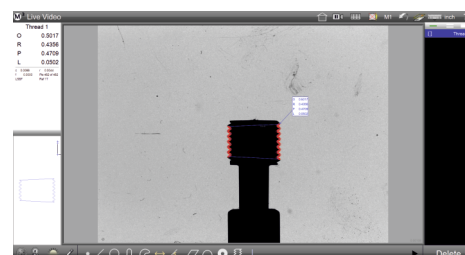
Improve edge detection performance under a variety of image and lighting conditions. Features with poor edge contrast, or difficult spacing can be captured in a snap.

DXF Auto Programming



You can easily convert .dxf drawing files into part programs using the DXF import and Auto Program modules.

One Click Thread Measurement





Touch Probe Support

Measure planes, cones, cylinders and spheres in 3-D part space (in the XY, YZ and ZX planes) and then view rest 3-D part view 3D part views can be annotated by the user to include measurement results and rotated to the desired perspective.

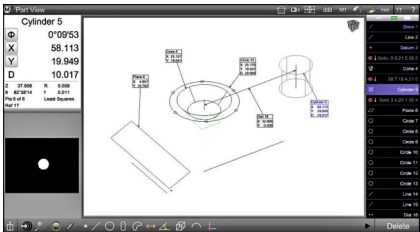
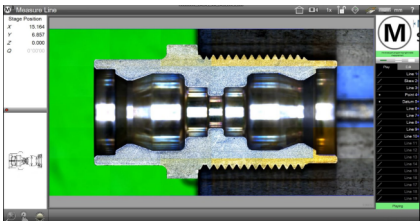


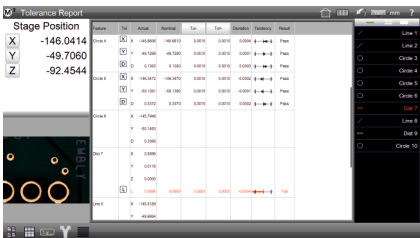
Image Sticking & Soft Fixturing

The SuperImage function collects and stitches individual camera frames together to scale large images into the field of view on manual and CNC systems.



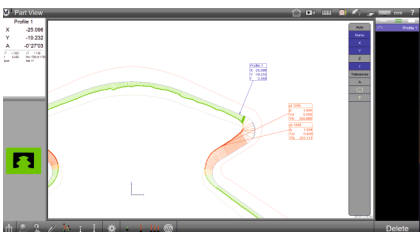
Statistical Reports

Add quick statistical feedback including min, max, range, average, and 6sigma to your data for more detailed analyses of result trends, measurement repeatability and GR&R analysis



Profile Measurement And Analysis

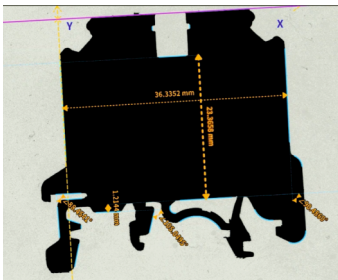
- Compares measured part data to nominal part contours and tolerance limits specified in a DXF file or M3 profile construction.
- Easily analyze profile-fit results- using intuitive tools-for quickly identifying the worst point, the best point, or a specified number of points relative to the profile tolerance."



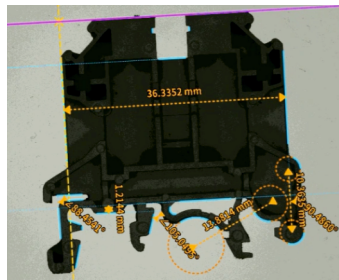
Optics & Illumination

Multi Ring & Multi Sector Axial Lighting (4 or 8 Sector)

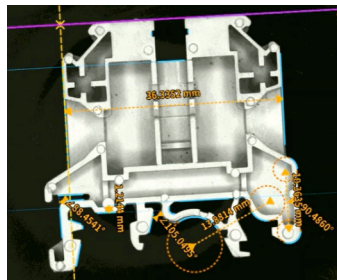
- No external light for the focus
- Led lighting system for surface as well as profile & axial multi-lighting.
- Programmable with intensity control through software.
- Advance lighting to have full control to enhance edges using light.
- **Led life >10,000hrs**
- Zoom lens is calibrated at different positions.



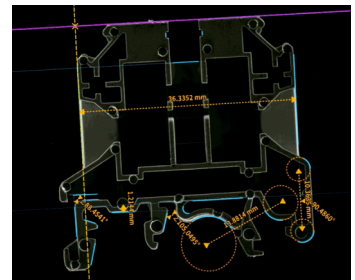
Bottom LED



Ring Light

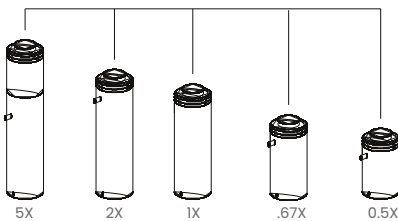


Co-Axial

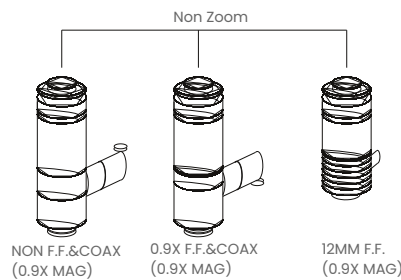


Low Angle Ring Light

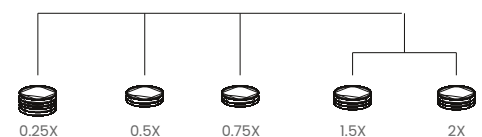
Standard Adapters



Lenses System

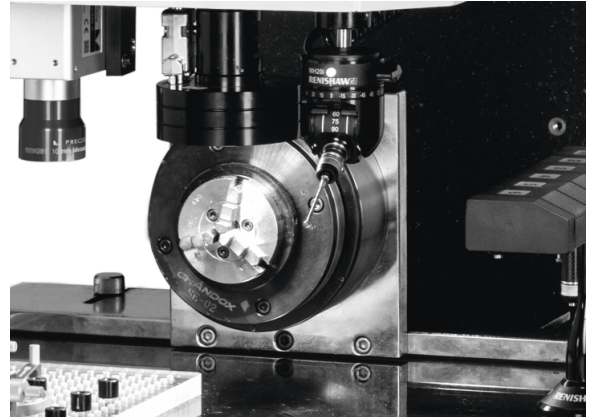


Lens Attachments



Rotary Indexer

- Resolution 2 arc second
- Accuracy 8 arcs second.
- On axis load capacity 5kg-cm
- Off axis load capacity 3kg-cm
- Controlled automatically during auto program run.
- Control on joystick to rotate the rotary manually.



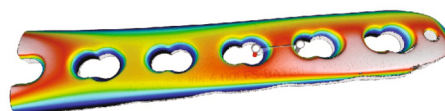
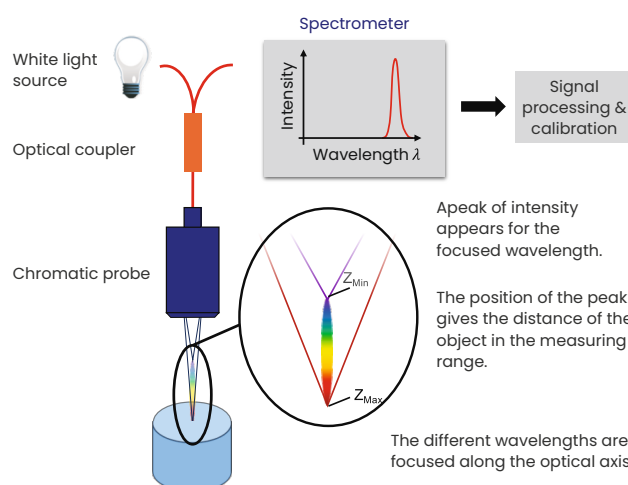
Technical Specifications		
Voltage		200V
Excitation		Permanent magnet
Mounting		Flange-mounted
Repeatability		±1.3 s
Rated Torque	W	42
Rated/Maximum Torque	N*M	2.00/6.00
Rated/Maximum Current	Arms	1.8/5.4
Rated/Maximum Motor Speed	Min	200/500
Torque Constant	N*M/Arms	1.18
Motor Moment of Inertia	$\times 10^{-4} \text{ kg} \cdot \text{m}^2$	28.0
Rated Power Rate	kW/s	1.43
Rated angular Acceleration Rate	rad/s^2	710
Allowable Thrust Load	N	1500
Allowable Moment Load	N*m	40



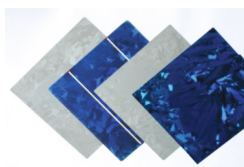
Laser Measurement System

Specification	
Application	Thickness, distance
Principle	Chromatic confocal
Measuring rate	4 kHz
Dimensions	99 mm x 65 mm x 47 mm
Weight	430 g
Power consumption	4 W
Number of available probes	4
High sensitivity version available	Yes
USP	All in one; compact

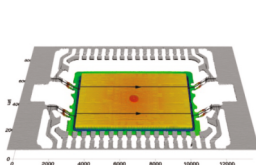
Meas. Range	200 μm	1 mm	4 mm	10 mm
Working distance	4.8 mm	15.5 mm	37.5 mm	68.0 mm
Lat. Resolution	1.7 μm	2.5 μm	4 μm	8 μm
Axial resolution	8 nm	40 nm	160 nm	400 nm
Measuring angle	90° \pm 45°	90° \pm 28°	90° \pm 20°	90° \pm 14°
Weight	41 g	31 g	57 g	86 g
Diameter	28 mm	28 mm	34 mm	40 mm
Length	23.7 mm	17 mm	26.6 mm	35.3 mm



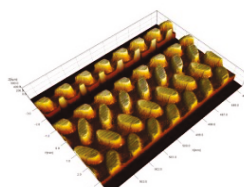
Applications



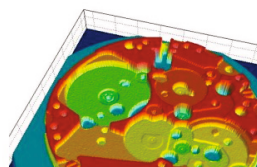
Metal



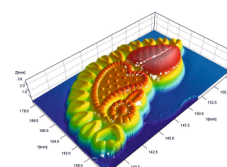
Electronics



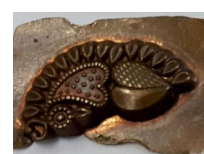
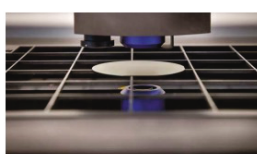
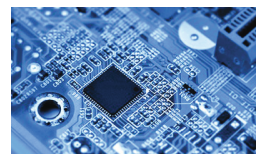
Glass



Semi Conductor



Jewellery



Touch Probe

- Kinematics fixture mount.
- All probes of **Renishaw** (with modules & extensions) are compatible
- All **calibration** of probes & parking handled by software
- Standard **probe** kit supplied with system
- **Four different sizes** and combinations of **probes** with M3 adapters.

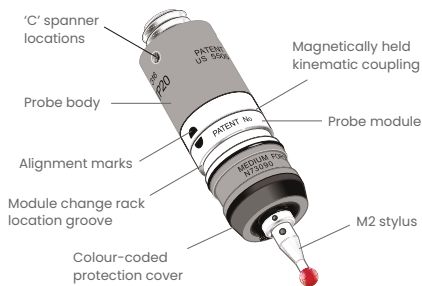
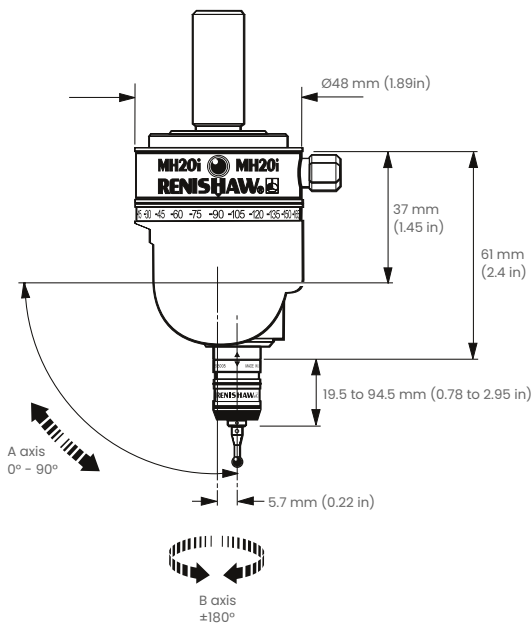


Figure 1 - The TP20 touch-trigger probe



Multi-port probe change rack installed on system with **built-in calibration** routine

Stylus Kit

- Stylus 0.3x10 mm
- Stylus 0.5x10 mm
- Stylus 1x10 mm
- Stylus 2x10 mm
- Stylus 3x20 mm
- Stylus 2x30 mm (star)
- 5 Was Stylus Centre
- Stylus Extension 5 mm
- Stylus Extension 10 mm
- Extension Bar 50 mm
- Stylus Tool Kit



PH-10T



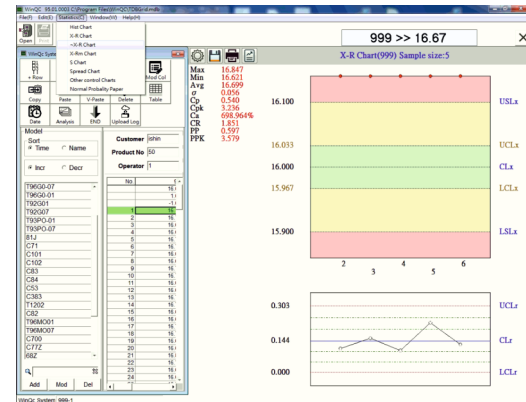
MH-20



SPC Module

Provide various types of analysis chart

Compute the statistics value



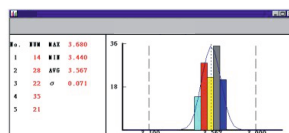
- Pareto chart
- Histogram
- X-R
- X-Rm
- X-R

- Average
- Standard deviation
- Cp
- Cpk
- Cr
- PP
- PRK

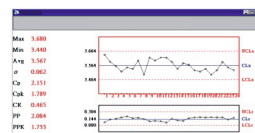
- Provides various analysis chart report layout, the database is convertible to EXCEL, it is highly compatible.
- Provide Various scale setting.
- Provide the setting for scale name, decimal and format
- Provide Data Report Print Out
- The data in working space can convert to EXCEL file format and point out the report



Pareto chart



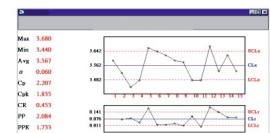
Histogram



\bar{X} -R chart

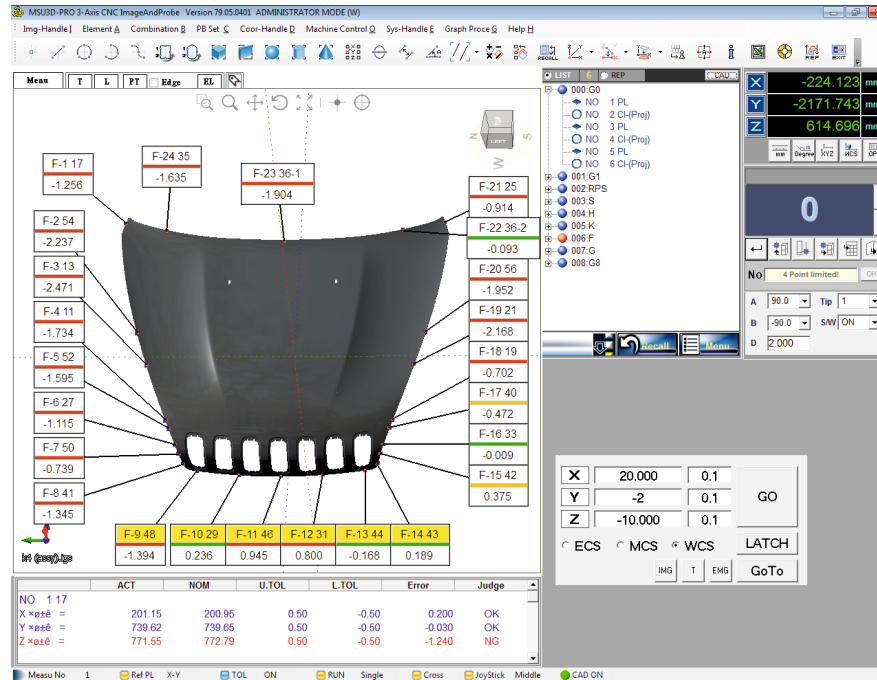


X-R chart



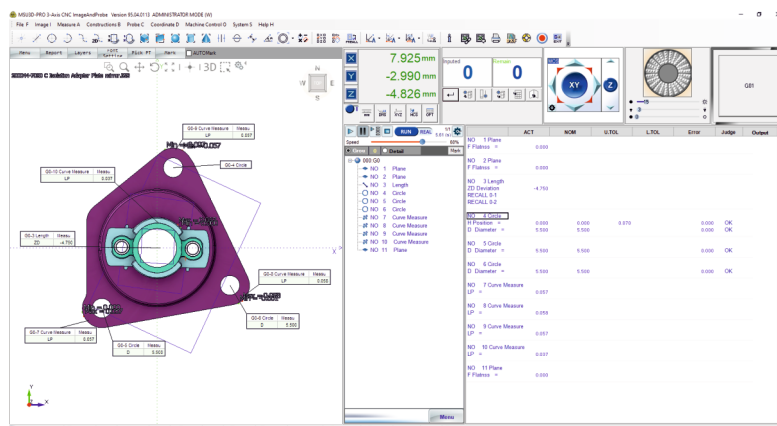
X-Rm chart

3D Overlap Module



- **Automatic probe path** for all geometrical and sheet-metal features.
- **Measure against CAD Curves / Models and Surface** in manual or CNC modes.
- Advanced **fixture-less alignment** methods with CAD.
- **Graphical reporting** for templates deviations and confetti..
- Scribing & Marking with curves and surfaces.

- GD&T: **Profile of surface** and Profile of Line tolerance measurement.
- Die, mold, fixture, Sheet metal and plastic
- Prismatic, geometric features, GD&Tolerancing **as per ANSI & ISO**
- **Offline & Networked programming**
- Point Cloud measurement with laser sensor



Applications

- Die
- Mold
- Fixture
- Sheet metal
- Plastic

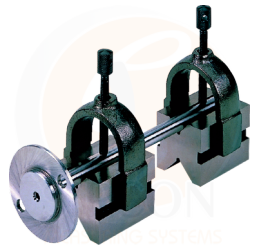
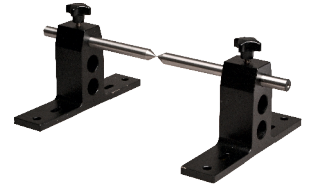
Accessories



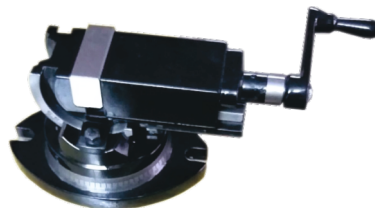
V Block



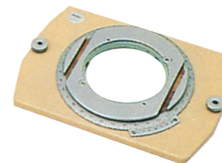
Center Holding Device



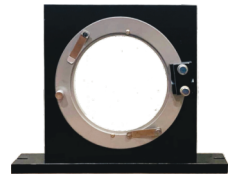
V Support



Vice



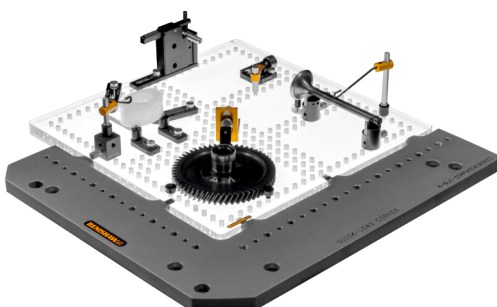
Rotary Table



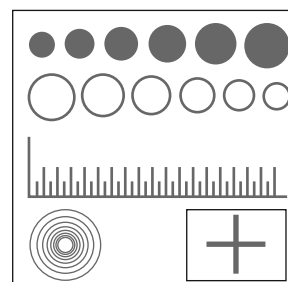
Touch Screen Monitor



Foot Switch



Fixture Plate



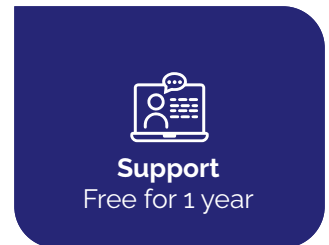
Calibration Master: Universal

Installation, Training & Online Support

Installation and Training is for all customers and usually takes place within 3 to 4 days of the delivery of the system at customer premises. Calibration is done free of cost after installation. Subsequent calibrations are required after every one year and are chargeable at per calibration.

We offer two type of support:

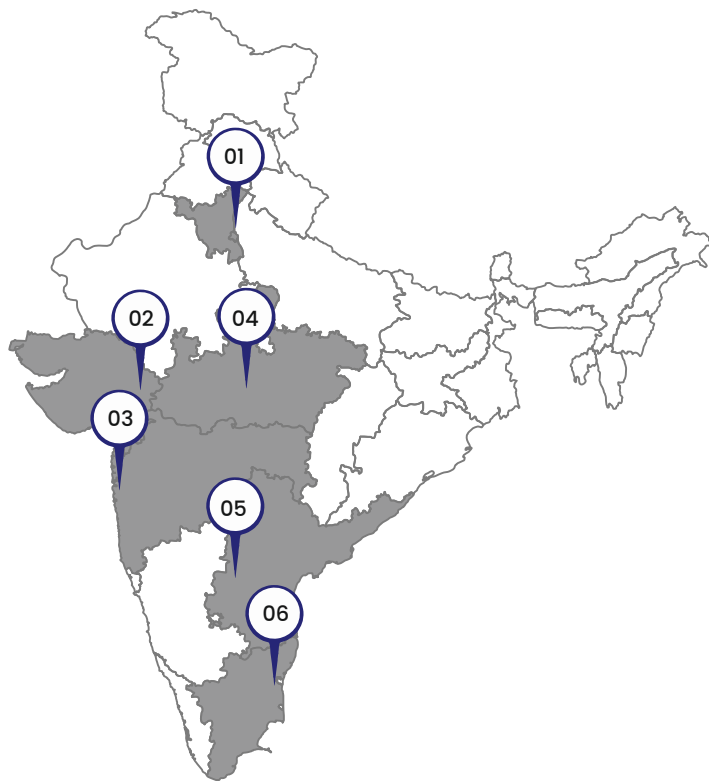
ONLINE & OFFLINE



Online support is free of cost throughout the life of the system and resolves 90% of the issues arising in system.

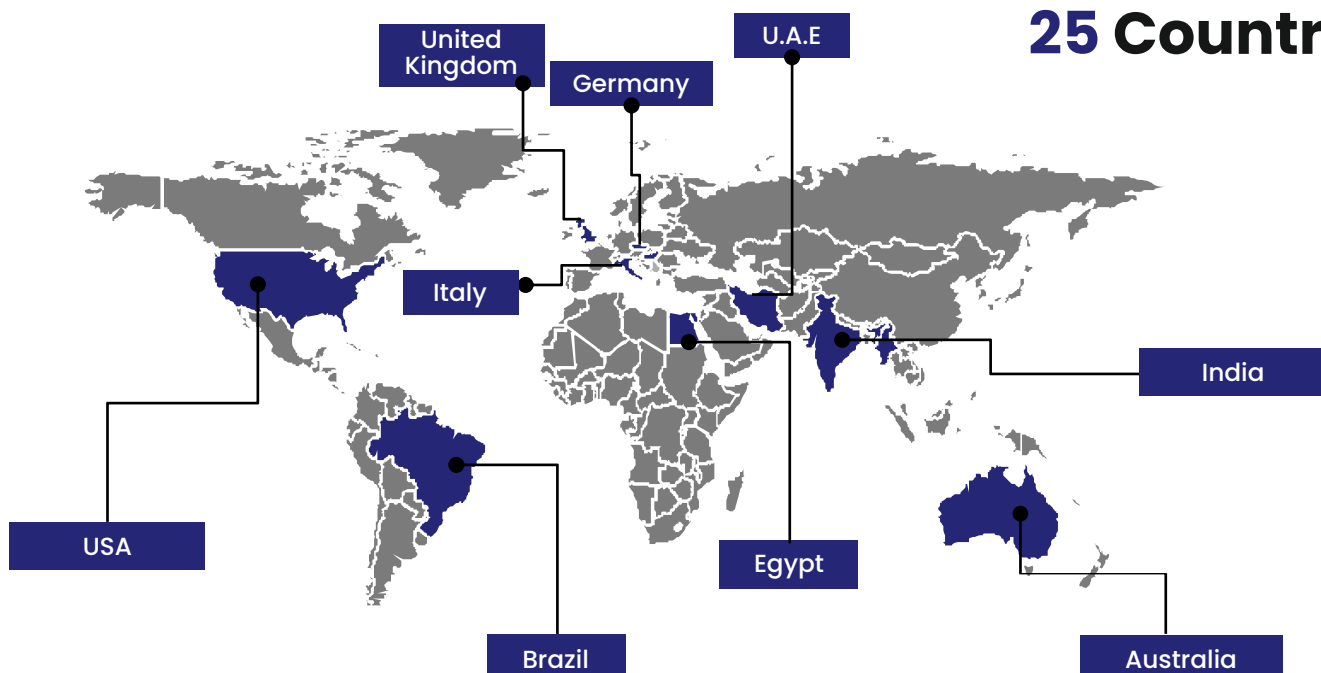


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Exported To 25 Countries

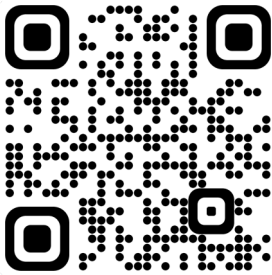


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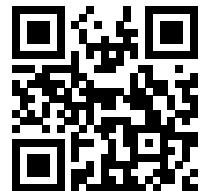


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