

MetLogix M3 Measuring Solution Features

Supporting industry-leading, video-based metrology equipment worldwide.

Features & Benefits

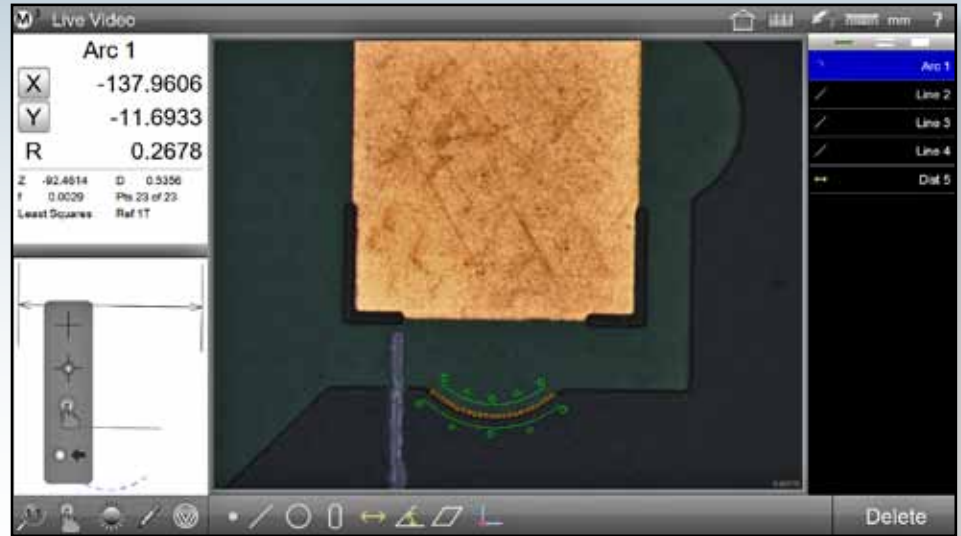
- **Advanced Video Probes**

The custom **EyeMeasure™** probe captures complex edges by creating a custom “tool zone” according to the finger path drawn on your touch screen enabled system.

The **MeasureLogic™** probe’s intelligent design provides an instant feature determination and measurement with a single click or press.

The **Vtouch™** probe provides industry first video touch probe functionality, with simple acquisition of individual points on a feature’s edge, just a single press or click away.

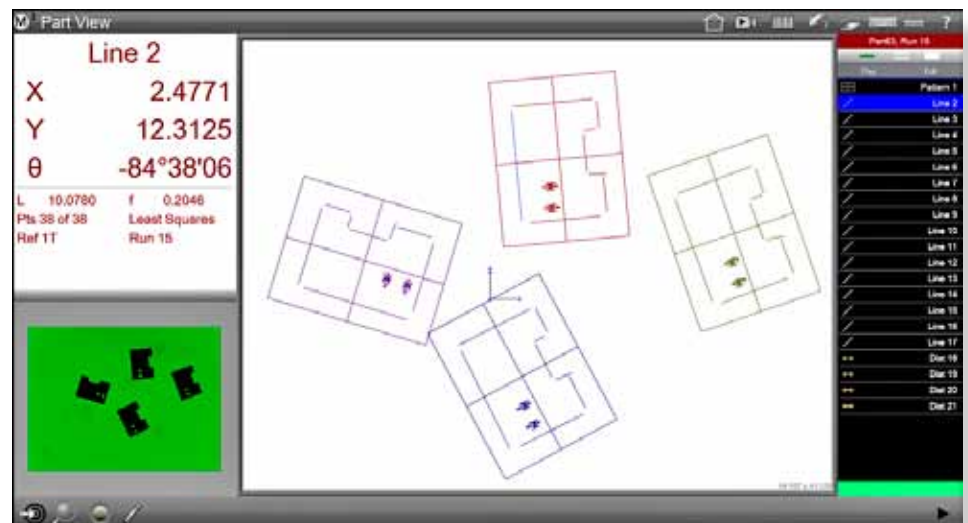
The simple DXF Crosshair tool is always available for manual crosshair probing and can be translated or rotated within the video image for flexible manual probe measurements.



Complex edges are no problem for your M3 software. You have options for probing including our exclusive MeasureLogic and Vtouch probes.

- **Field of View Functions**

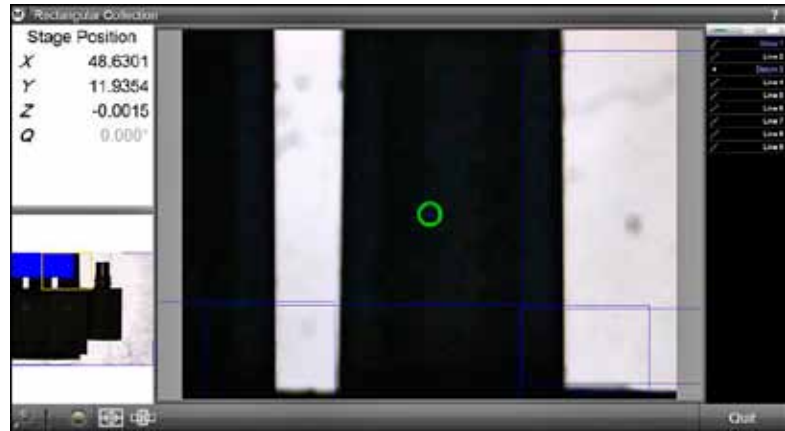
The field of view **Auto Run** function plays part programs to perform measurements quickly without operator intervention. Simply place one or more identical parts in the field of view and the system will identify the part, execute the appropriate program, and report measurement results. View the measurement results for one or more parts in the FOV part view. The new FOV **Motion Monitor** ensures that you are always looking at the live camera image when loading and unloading parts on the measuring surface.



Automated measurements can be performed on multiple parts within the field of view. The measurement results can be displayed in the runs database or part view screen.

- **SuperImage Expands Your Field of View**

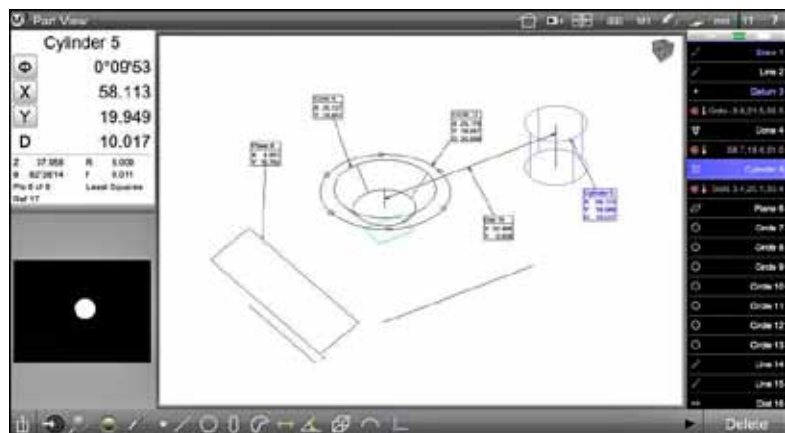
The *SuperImage* function collects and stitches individual camera frames together to scale large images into the field of view on manual and CNC systems. *SuperImages* can be stitched from individual frames or from a rectangular stage area specified by the user. Preset multiple stage areas to color coded *Quick Stitch* buttons to create “soft fixture” image locations. Load one or more parts into “soft fixture” locations for field of view-like execution of your part program. The *SuperImage* function may also be used within and a part program to create an expanded view of specific part locations, improving measurement performance of features with high part to part positional variability.



SuperImages are stitched from multiple camera image frames.

- **Touch Probe Support**

M3 inspection software now expands support for multi-sensor video measuring systems equipped with touch probe modules. Expanded 3-D feature geometries are supported through touch probe and video measurement of features in the XY, YZ and ZX planes. Measure planes, cones, cylinders and spheres in 3-D part space and then view results in the 3-D part view. Part views can be rotated with mark-ups showing feature measurement results. Touch probe support is optional.



3D part views can be annotated by the user to include measurement results and rotated to the desired perspective.

- **Designed for Multi-Touch Software Control**

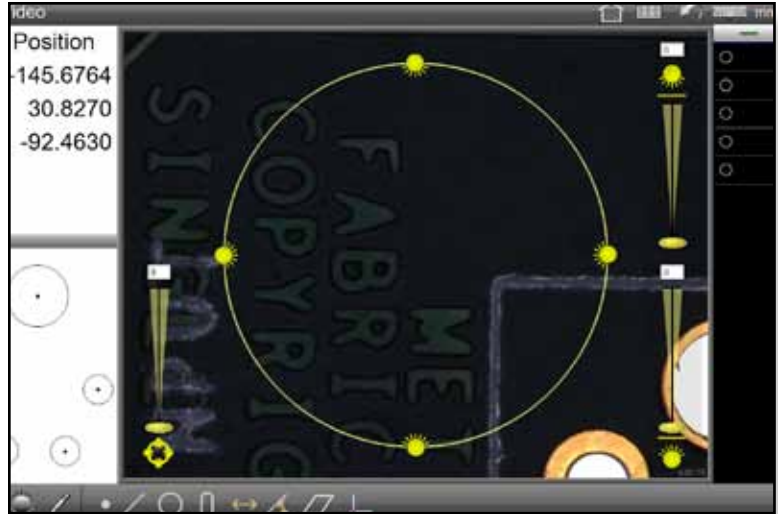
In addition to the conventional mouse interface, expanded Multi-Touch logic allows for one-touch feature measurements as well as versatile panning and zooming of the live video image and the active part view. Increase the efficiency of feature measurements, feature data manipulation, and reporting tasks with a simple *pinch* zoom, *swipe* pan, or double click.



Feature measurements can be performed using common touchscreen operations such as pan and pinch zoom. Or use conventional mouse operations like point and click.

- **Support up to 8 Channels of Programmable Light Control**

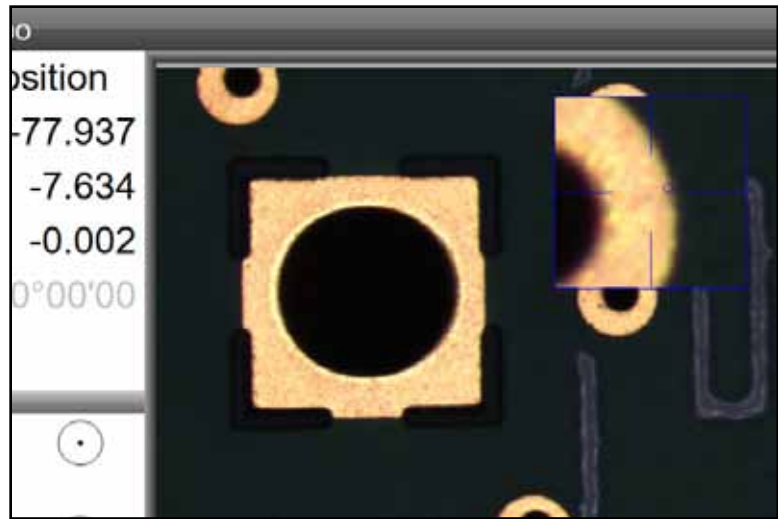
On-screen controls let you adjust Coaxial, Substage, and Quadrant Ring light outputs accommodating a wide range of measuring requirements. Your light levels are also stored as program steps and are recalled during program playback.



On-screen controls let you adjust your part lighting.

- **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 using the M3's manual teach function. Press and hold on an edge in any video image to specify a teach region.



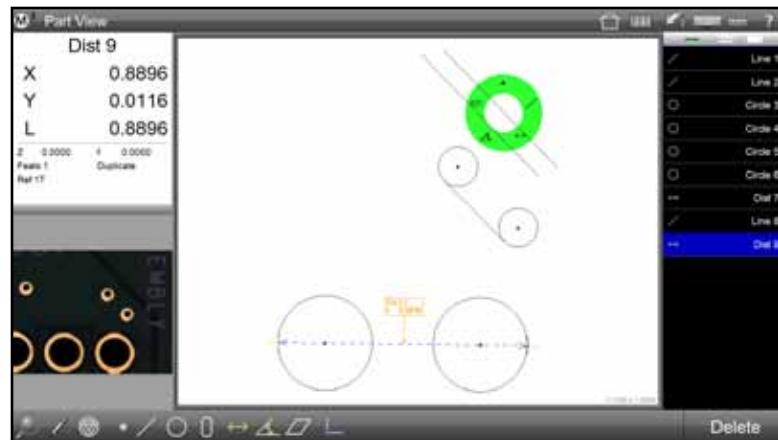
Features with poor edge contrast or difficult spacing can be captured easily with the M3 software's manual teach feature.

- **Graphics-based "Part View" Constructions**

Generate popular construction types, like Distances and Tangent Lines, from within the graphical part view itself. The "Gesture Menu" can be used within the part view to provide access to "on the fly" feature creation and manipulation tools.

Supported construction types include:

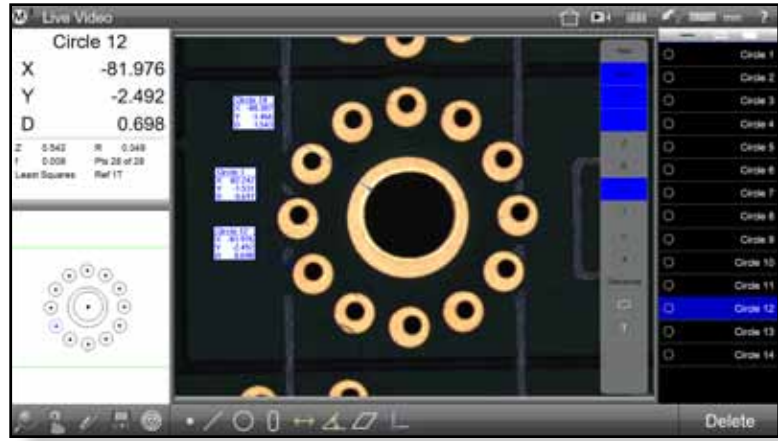
- Average
- Intersections
- Tangent Line(s)
- Angle Compliments
- Gage Circle(s)/Line(s)
- Mid/Center Point(s)
- Shortest Distance
- Offset Skew Lines
- Perpendicular/Parallel Line(s)
- End Point(s)
- Farthest Distance
- Bolt Circle



Use the Gesture menu to access on-demand feature create and manipulation tools.

- ### Quick Annotate and Markup

Gain access to instant feature markup tools using the part view “Gesture Menu”. Add customized feature data to your live video image or part view displaying only the desired coefficients. You may annotate one or several features simultaneously with the smart marquee feature selection.



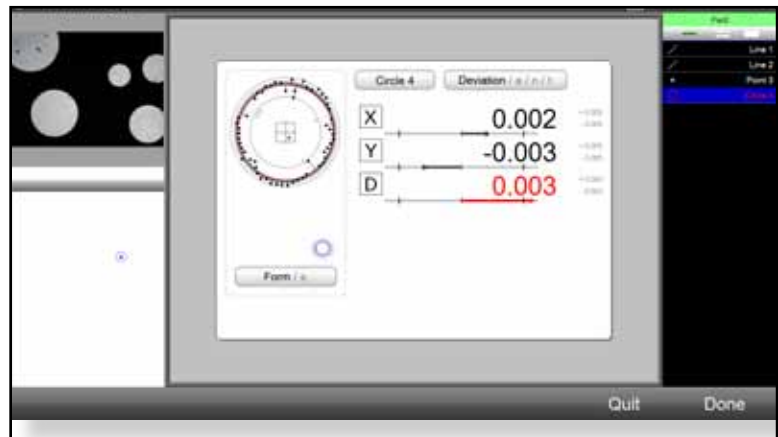
Add customized feature data to your live video image or part view.

- ### Geometric Tolerancing

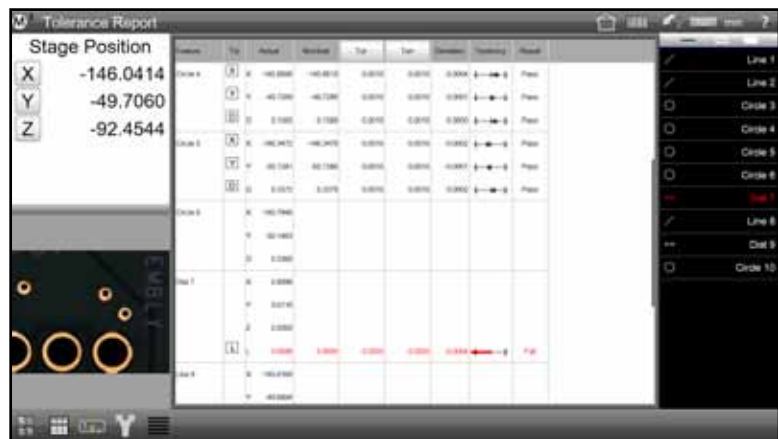
Measure features, set nominals, apply tolerances and view deviation results with only a few quick clicks. You may also apply a variety of popular tolerance types to features in the standard “feature-to-feature” fashion, or utilize the “place tolerancing” system for applications where tolerances are specified in a block tolerance style call out. For these cases the M3 software let’s you enter and apply universal tolerance values according to your feature resolution groupings.

Supported tolerances include:

- X/Y/Z Positional
- Diameter/Radius/Length/Width Size
- Theta (Angle)
- Form
- Parallelism
- Angularity
- True Position (LMC/MMC Modifiers)
- Straightness
- Perpendicularity
- Roundness
- Concentricity
- Runout



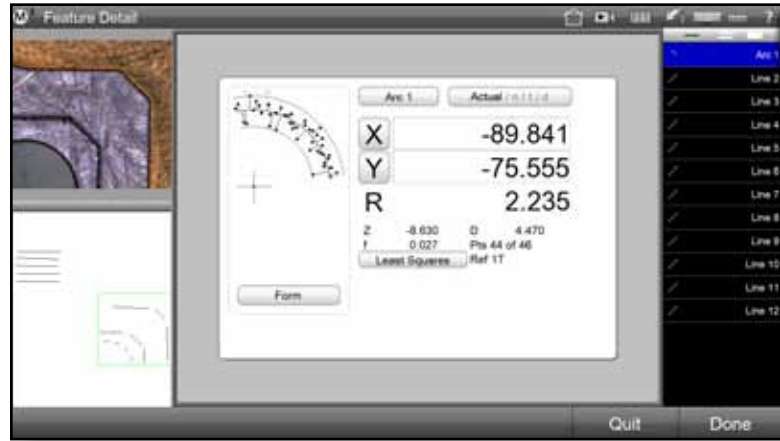
Measure features, set nominals, apply tolerances and view deviation results quickly and easily.



Display your comprehensive tolerance report.

- **Feature Detail Graphics**

Individual feature views provide you with informative drawings displaying point cloud distributions, as well as nominal deviations, and tolerance results. Scroll through your measured features list from this view for a feature by feature display of Actual, Nominal, Tolerance, Deviation, and Data Fit Type information.



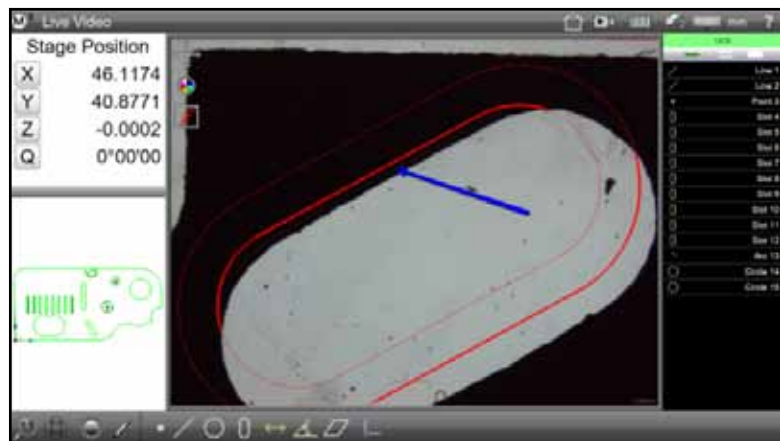
Individual feature views provide you with informative drawings with point cloud distributions, nominal deviations and tolerance results.

- **DXF Overlay and FOV Capability**

Using the DFX/FOV option pack, you can import DXF files 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. You can even utilize custom DXF crosshair files, create “on the fly” overlay feature tools and utilize pattern recognition for part program playback.

DXF/FOV option pack features include:

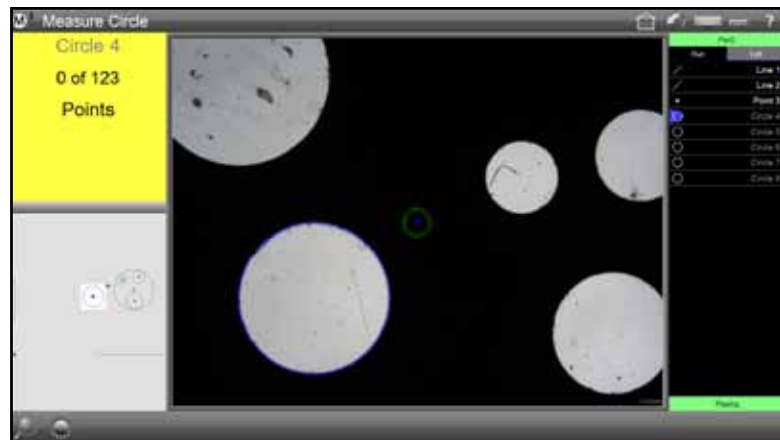
- Custom DFX crosshair
- Create feature-based video overlays
- Import DFX overlay
- Export features to DFX
- Pattern teach and recognition
- Live image “freeze”



Import DFX files for Go/No-Go feature and part inspections.

- **Part Programs and Playback**

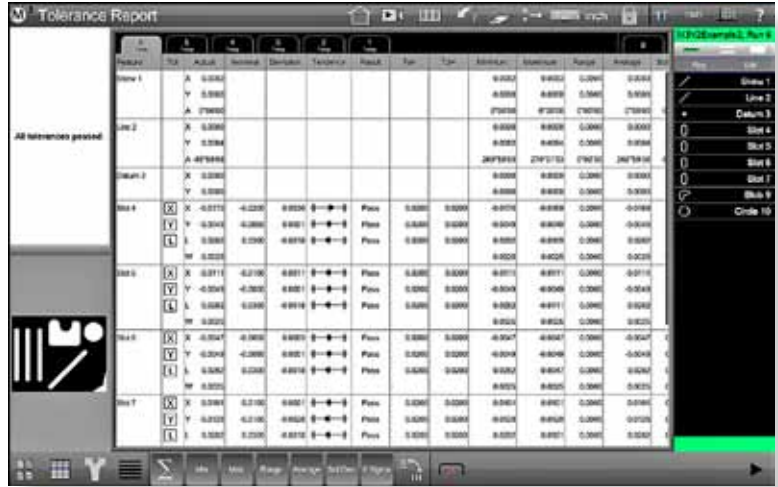
Playback or edit groups of measured, constructed, and created features from a saved part program file. Part program files, when loaded, will prepare the M2 software to repeat a sequence of recorded steps including measuring features, printing reports, and exporting measurement data. Playback guidance graphics provides helpful on-screen assistance for successful playback of your part programs.



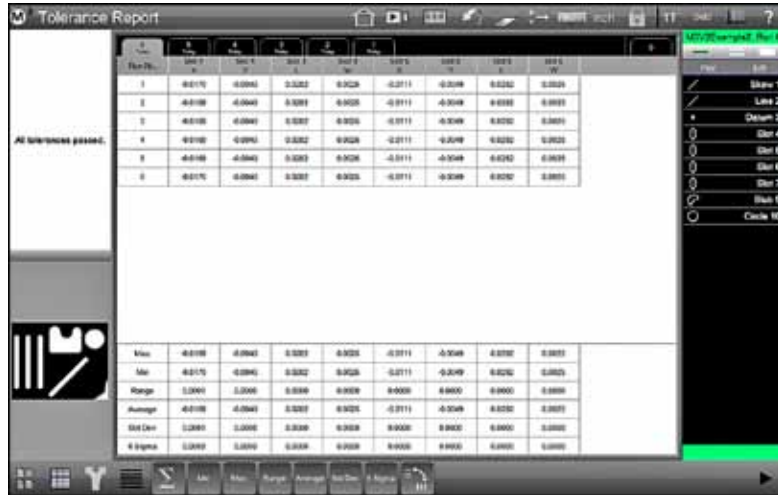
Playback or edit groups of measured, constructed and created features.

- ### Runs Database and Results View

Track and analyze measurement run results for your M3 part programs. View past measurement results quickly and easily using the tabbed runs database program results view. Perform quick cross-run analyses of feature results using the *Pivot* data mode. Add quick statistical feedback including min, max, range, average, and 6sigma to your data for more detailed analyses of result trends and measurement repeatability.



Tabs across the top of the runs database provide access to measurement results for individual program runs. Statistics are shown at the right.



The Pivot view reorients runs to the vertical report axis to show measurement results across runs. Statistics are now shown across the bottom.

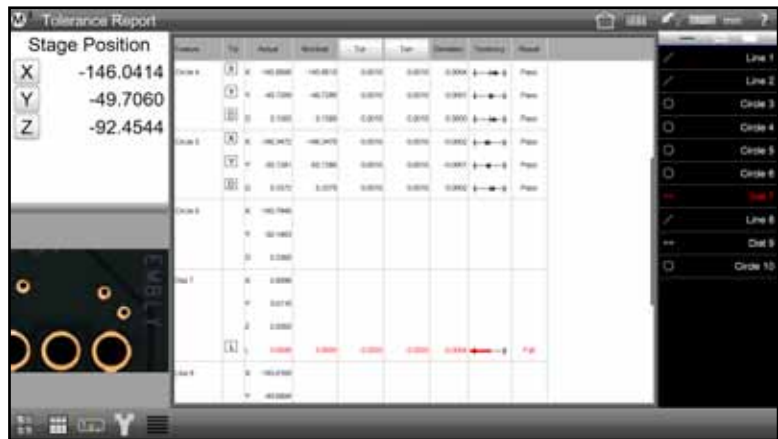
- ### Flexible Report Content and Formatting

M3 software supports full customization of the data format, header information, and header and footer graphics. Part view graphics, time and date stamps, and operator information can all be included for any report type.

Reports can be viewed, printed, or exported at the conclusion of a single inspection routine, or they can be included in a part program to support repetitive or automated measurement and reporting. Reports may be printed directly to a local or networked, Windows-compatible printer. Data can also be exported in a variety of formats to local or network storage locations.

Report data formats include:

- European
- Tolerance
- CSV
- European 2



View, print and export report data at the conclusion of your inspection routine.

- **Machine Integration**

Ask your MetLogix representative about a wide variety of encoder interface technologies, camera types, and light control hardware supported in the M3 system.

- **Support for All Current Industry Standard Software Methodologies for Stage and Camera Calibration**

Robust and reliable machine/camera calibration can be achieved using popular machine and video correction methods. Linear Error Correction(LEC), Segmented Linear Correction(SLEC), Non-Linear Error Correction(NLEC), Orthogonality, Pixel Size, Camera Skew, Parcentricity and Field of View.

- **Industry Leading Operating System Platforms**

The Windows® 7 and 8 operating systems represent the current enterprise solutions for computer software operating systems. You gain the performance and reliability of globally recognized software solutions as part of your measuring machine package.

MetLogix M Series Features Matrix

Feature	M1 Series	M2 Series	M3 Series
Optical Edge Detection	■	■	■
Video Edge Detection			■
Advanced Video Probe Group			■
Field of View Functions			■
Superimage Frame Stitching			■
Geometric Functions	■	■	■
Graphic-Based Constructions		■	■
Multi-UCS Datuming			■
Tolerancing		■	■
Data Export and Reporting	■	■	■
Part Programming and Playback		■	■
User Account Control		■	■
Part View Display		■	■
Feature Annotation		■	■
Video Image Archiving			■
Image Markup			■
Multi-Language Support	■	■	■
XY, XYZ or XYQ Axis Support	■	■	■
Touchprobe/3D Option			■



Help and Resources.

Please visit the support section at www.metlogix.com for access to Metlogix product documentation.

Watch tutorial videos for popular M3 functions at <http://www.youtube.com/user/Metlogix/feed>.

Join the discussion on Facebook, search “Metlogix”.

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Part number 15012-00
May 2014
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