

Introduction

QC-CALC Real-Time is used to collect and display measurement results from all CMMs, Video CMMs, and hand gages without operator intervention. Reports can be created, and data can be exported to spreadsheets, databases, and other SPC programs. This means data can be transferred from all measurement devices to any SPC package using one program!

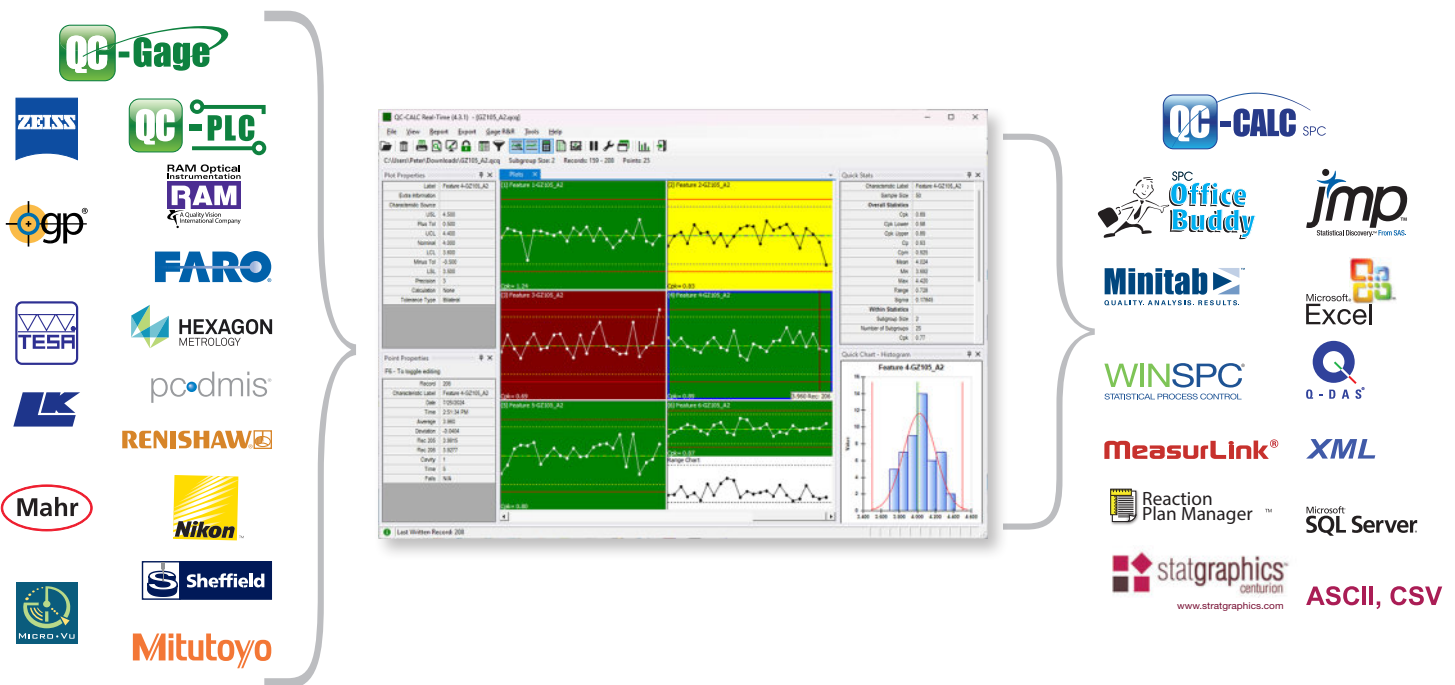
Prolink's goal is to make data collection seamless regardless of the equipment purchased or software used.

Application or Windows Service

QC-CALC Real-Time can be used either as a traditional stand-alone application or run as a central data collector using QC-CALC Real-Time as a Service (RTS). RTS is run on a central server and can collect from multiple inspection machines simultaneously without the worry of users inadvertently shutting down the application.

Key Benefits

- Fully automatic data collection from over 300+ machine types
- View up to 1200 live plots (characteristics) while collecting data for many more
- Manual and automatic export capability to over 40 different output formats
- Data is stored directly in either a MS SQL Server database or file-based database
- Manual and automatic report generation
- 21 CFR Part 11 compliance
- Trend detection with email alerts
- Dynamic filtering of characteristics and records
- Multiple gage output combined into one screen (MultiSource)
- True Position Charting with 2D position charts
- Flexible plots support I&MR, XBar & Range, Scatter, Whisker, and True Position Plots
- Automatic application of True Position relationships
- Live Histogram display panel



Pinpoint On-Screen Information

The plots are interactive and can be interrogated for information and statistics using the mouse to target specific or multiple points.

Trend Analysis

The process can be monitored and reports automatically triggered as trends in the data occur. Operators can then be required to assign causes and corrective actions.

Quick Stats

Calculations are updated in the Quick Stats panel instantly as points are highlighted and as the mouse moves from plot to plot.

Exporting

Data can be exported either manually or automatically by part interval to over 40 different output formats.

Reporting

Reports can be printed either manually or automatically by part interval or by exception event. Reports can be printed to the printer, preview, or any of several output file formats such as PDF. Reports can also automatically be attached to emails allowing QC-CALC to notify the appropriate personnel when the process moves outside control, specification, or configurable limits.

Manual Input Screen

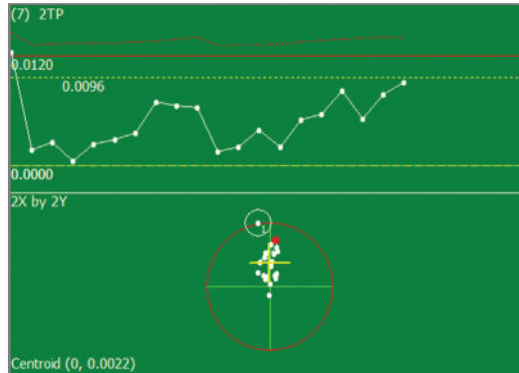
In addition to data collected from automatic inspection equipment, QC-CALC can prompt inspectors for additional measurements or trace data not available from the gage.

Assignable Causes/Corrective Actions

Indicate assignable cause variance and/or corrective actions by right-clicking on the plots and assigning to the part or point.

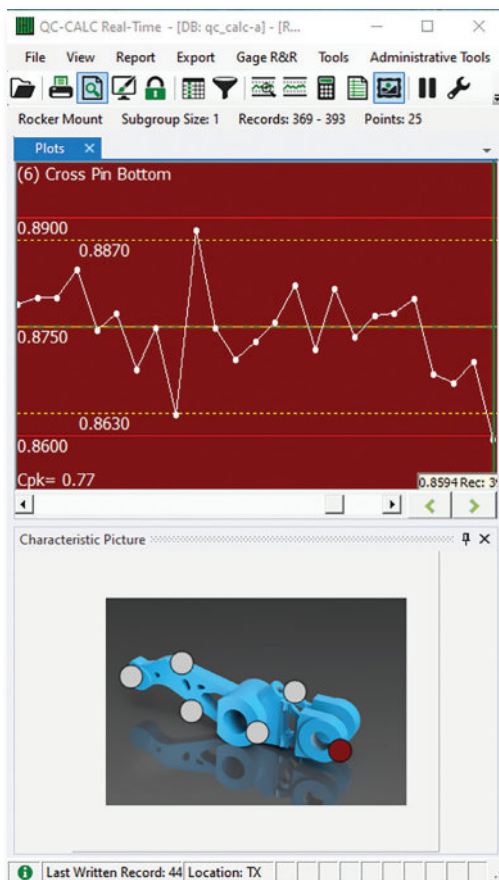
Live True Position Charts

Relationships can be automatically created between the X, Y, Diameter, and True Position data coming from the inspection equipment to create a stacked true position plot. This unique chart depicts the true position with calculated MMC bonus in the top half and the 2D position relative to specification limits in the bottom half. The Cpk and centroid are also calculated and displayed for informational purposes.



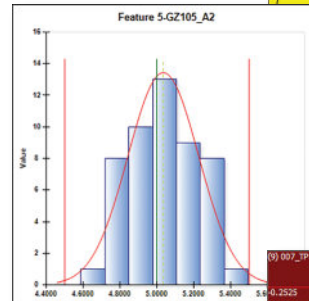
Add Pictures/CAD Snapshots to Characteristics

A picture or snapshot of a 2D/3D CAD image with target can be added to each characteristic to give more meaning to the plot data.

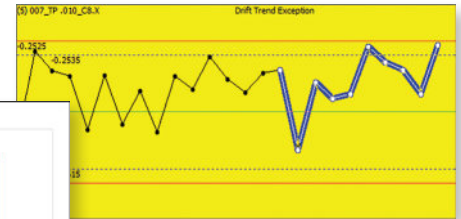


Plot Types

Trend Detection



Histograms



Out of Spec Condition



Scatter Plots

Trace Fields

Trace fields can be captured in addition to the measurement data. This allows for more granular filtering when problems occur.

21 CFR Part 11

The control of inspection information as it applies to the medical industry is defined by FDA title 21 Code of Federal Regulations (21 CFR Part 11). QC-CALC's data collection, storage, and reporting adhere to this standard. This option can be disabled for industries not requiring such strict control.

Data Integrity Report							
Prolink							
SamplePart.Qcc							
The report lists all changes made to the raw QC-CALC file containing inspection data. All changes are documented and include the record number, user, and reason the change occurred.							
If you desire a report for a specific part, serial number, or other condition, please create a record filter to reduce this report. For example, you can create a date filter to see all changes made for a particular day or range of days. Likewise, you can search for a particular serial number and create a report for one part. See filtering data for more details.							
Rec	Date Performed	Action Performed	Feature or Document Location	Old Value or Action ID	New Value	User	Reason
4	12/12/2009 1:26:29 PM	Dimension 1	Feature 1	1.4999	1.5000	Bruce	Bad measurement
9	12/17/2009 1:29:01 PM	NumFactor 1	Cavity	1	2	Bruce	Remeasured Part
14	12/11/2009 1:30:45 PM	Dimension 1	Feature 1	1.4973	1.5100	Bruce	Dirty Part
22	1/2/2009 1:32:02 PM	Dimension 5	Feature 5	5.4976	5.4900	Jon	Bad measurement
48	1/27/2009 1:32:39 PM	Dimension 5	Feature 5	5.4903	5.4900	Jon	Broken Gage

Gage R&R Wizard

Inspection data is useless without first proving the reliability of the measurement system being used. A Gage Repeatability and Reproducibility (GR&R) study doesn't have to be a painful process. QC-CALC's Gage R&R Wizard guides users through the setup process, warns of potential problems, and analyzes the results via customizable reports.