Prolink

DATA COLLECTION/ANALYSIS SOFTWARE

QC-CALC

QC-GAGE

SPC Office Buddy

ERS

Enterprise Report Scheduler

QC-SORT

QC-PLC

Product Catalog

Prolink Software Solutions

Prolink offers an entire suite of software solutions to address and automate the data collection and quality analysis tasks performed throughout any organization. The diagram and summaries below explain how each program fills the specific needs of each level. Each color-coded level in the diagram also has a corresponding colored data sheet providing the detail and key benefits of the product.

Enterprise Report Scheduler (ERS)

Enterprise Report Scheduler enables the creation of interactive charts, dashboards, and Full Views enabling a top-down view of the overall quality within the factory.

QC-CALC SPC

QC-CALC SPC is a comprehensive statistical process control application designed to monitor, manage, analyze, and report the results of shop floor data.

SPC Office Buddy

SPC Office Buddy provides a fast and easy way to create charts and reports in Minitab®, JMP®, and Excel®. Integrating with external programs allows employees to leverage existing software purchases and streamlines acceptance within the organization.

QC-Sort

QC-Sort is a non-statistical application that is used to easily identify out of specification parts on a multiple part fixture. Color-coded rectangles enable operators to remove problem parts from the fixture quickly.

QC-CALC Real-Time

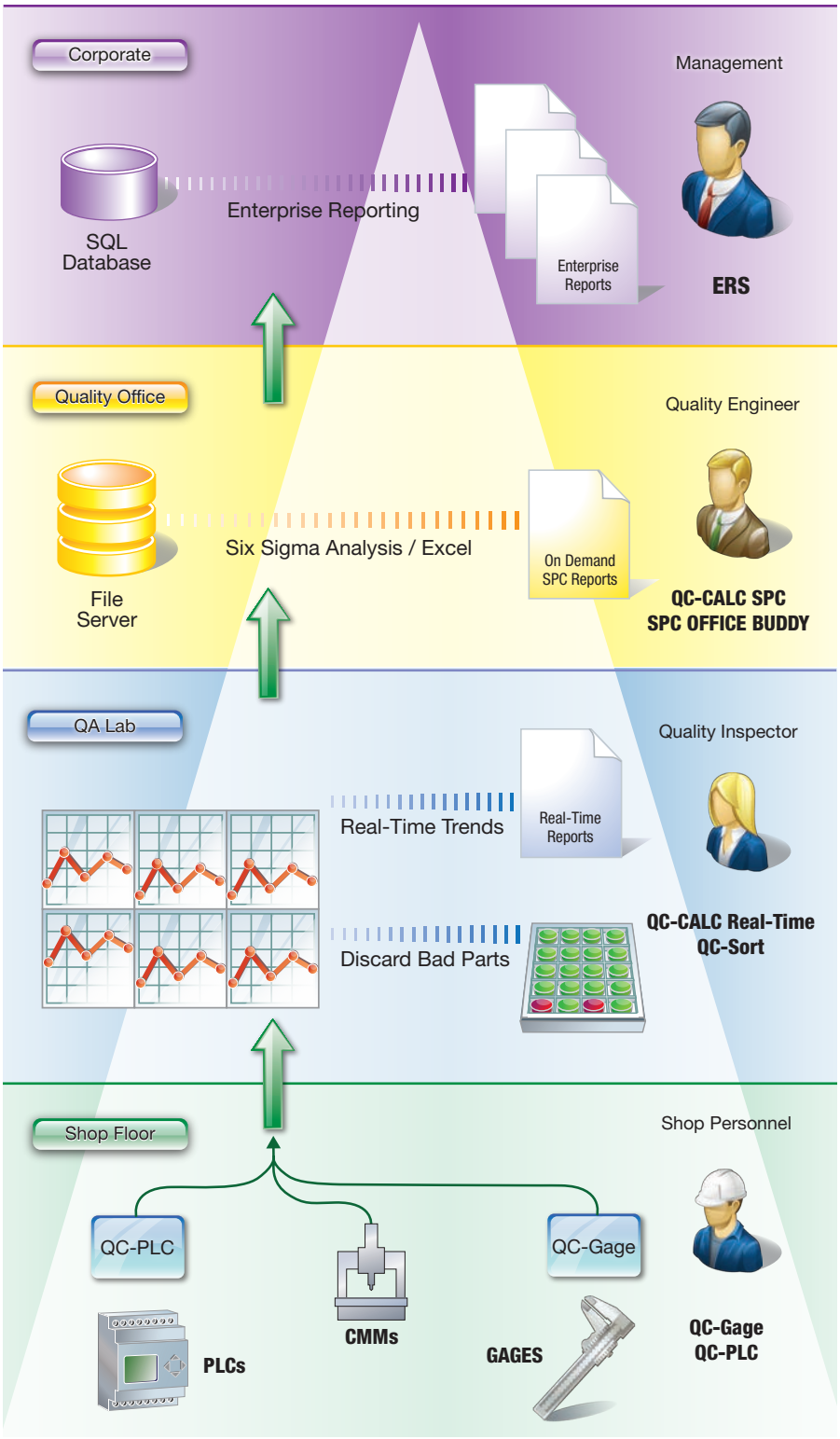
First introduced in 1983, QC-CALC Real-Time is at the heart of Prolink's software suite and is the central hub of all data collection. It collects, analyzes, and reports the inspection results making data collection seamless regardless of the equipment purchased or software used.

QC-Gage

QC-Gage is designed to collect inspection data directly from electronic gages that are not as programmable as CMMs. Regardless of the data source, QC-Gage is ready to automate data collection.

QC-PLC

QC-PLC provides a fast and easy method of reading data from programmable logic controllers (PLCs) at regular intervals saving time & money with improved accuracy.



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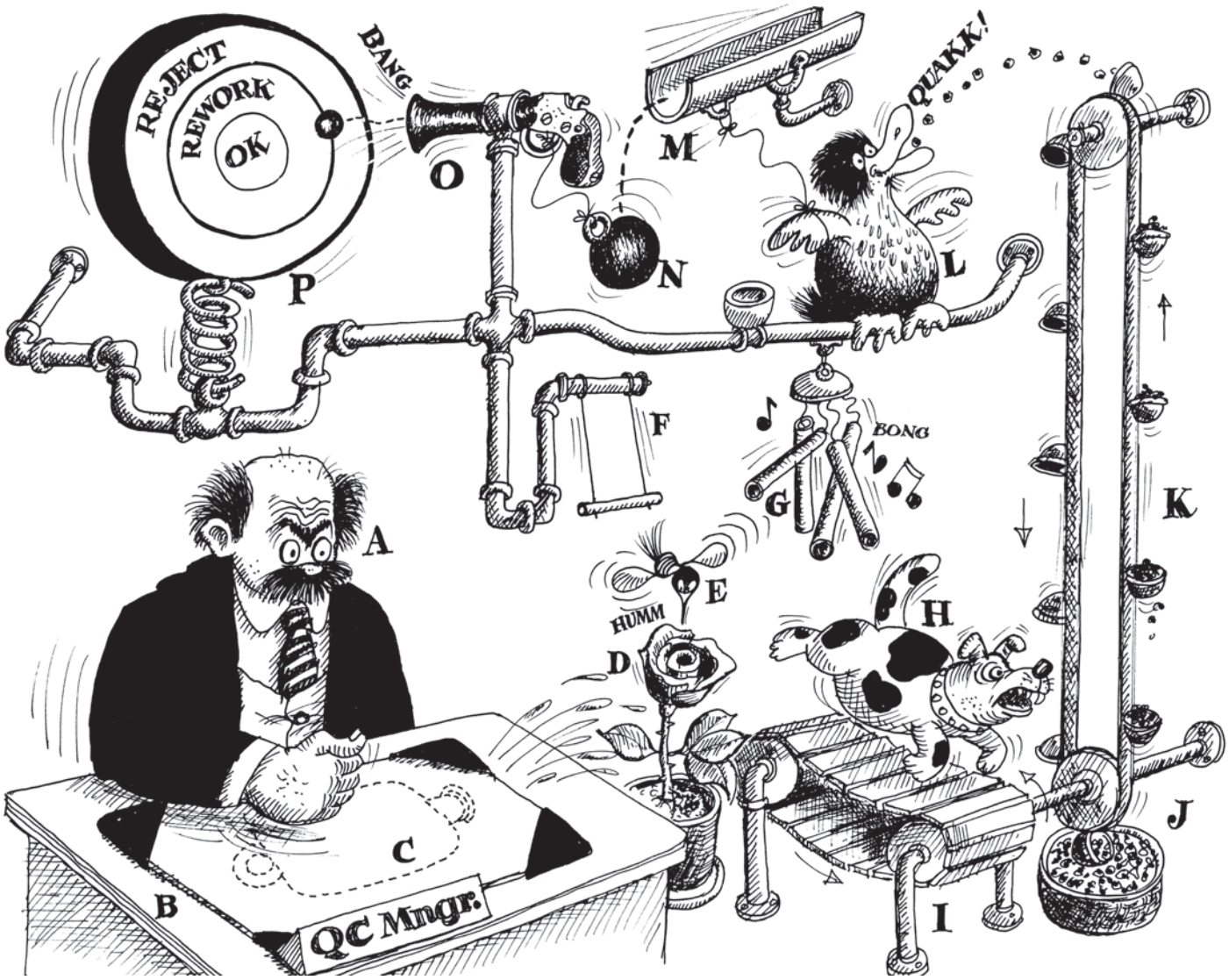

To watch the cartoon in motion, go to
www.ProlinkSoftware.com

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DATA COLLECTION/ANALYSIS SOFTWARE

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Distributed By:

Prolink License Server

Prolink License Server (PLS) is a free, easy-to-use application that can be installed on any PC with an internet connection. Once installed and configured, any Prolink product can be activated or updated using PLS as the gateway to the internet.

Validation Packages

FDA regulated companies may need to validate our software for 21 CFR Part 11 compliance. Validation packages for each of our products are available to assist with adhering to Part 11 rules.

Maintenance Plans

Annual Maintenance Plans are optional maintenance agreements that are purchased and priced based on the amount of owned software. Maintenance Plans include both upgrades to our products as well as premium support via email, website, and phone.

Please download a 30-day trial version from our website and try it out!

QC-CALC Real-Time

Introduction

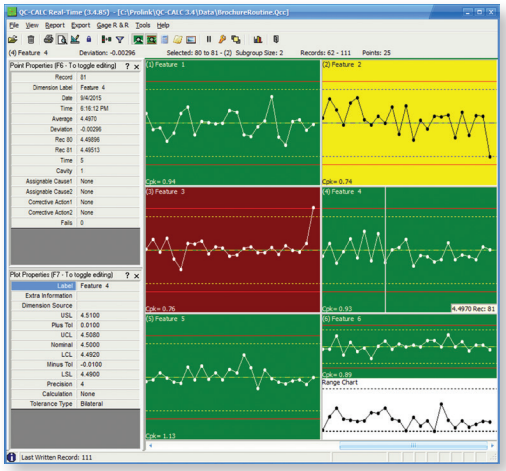
QC-CALC Real-Time is used to collect and display measurement results from all CMMs, Video CMMs, and hand gages without operator intervention. Reports can be created and data can be exported to spreadsheets, databases, and other SPC programs. This means you can transfer data from all of your measurement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

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

Key Benefits

- Fully automatic data collection from over 200 types of machines
- View up to 1200 live plots (dimensions) while collecting data for many more
- Manual and automatic export capability to over 40 different output formats
- Manual and automatic report generation
- 21 CFR Part 11 compliance
- Trend detection with email alerts
- Dynamic filtering of dimensions
- 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

QC-GAGE
ZEISS
QC-PLC
RAM Optical Instrumentation RAM
gp
FARO
TESA
HEXAGON METROLOGY
podmis
LK
RENISHAW
Mahr
Nikon
Sheffield
MICRO-VU
Mitutoyo



QC-CALC SPC
SPC Office Buddy
ERS Enterprise Report Scheduler
Minitab QUALITY. ANALYSIS. RESULTS.
jmp Statistical Discovery™ From SAS
WINSPC STATISTICAL PROCESS CONTROL
Microsoft Excel
MeasurLink®
Reaction Plan Manager™
Q-DAS
statgraphics centurion www.stratgraphics.com
XML
Microsoft SQL Server
ASCII, CSV

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 forced 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 easily be attached to emails allowing QC-CALC to notify 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.

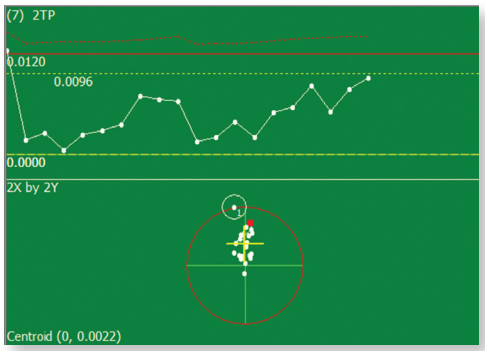
Assignable Causes

Indicate assignable cause variance by right-clicking on the plots and assigning a cause to your part.

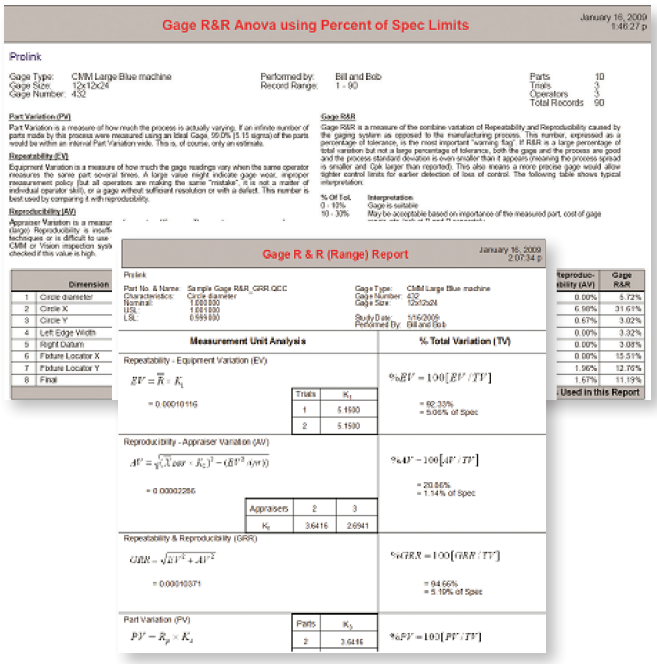
QC-CALC Real-Time

Record Filtering
Quickly display and report on the data needed at the moment. Dynamic record filtering allows the filter to change automatically based on the part or user input just received.

Live True Position Charts
Relationships can be 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.

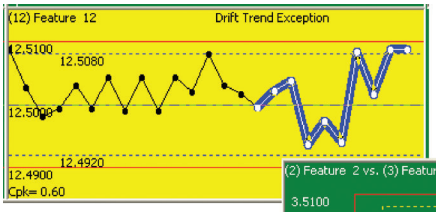


Gage R&R Wizard
Inspection data is useless without first proving the reliability of the measurement system being used. A Gage Repeatability and Reproducibility (GR&R) study doesn't have to be a painful process. QC-CALC's Gage R&R Wizard guides users through the setup process, warns of potential problems,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

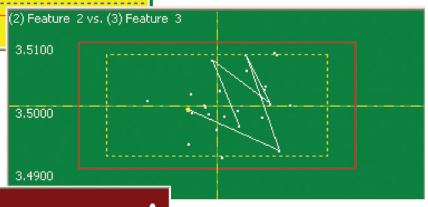


Dimension Filtering
Reduce on-screen clutter to quickly identify only the most critical features.

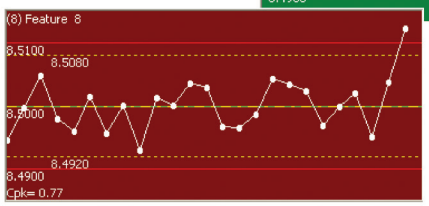
Plot Types



Trend Detection



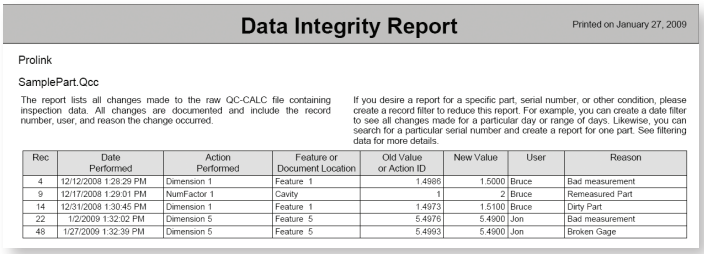
Scatter Plots



Out of Spec Condition

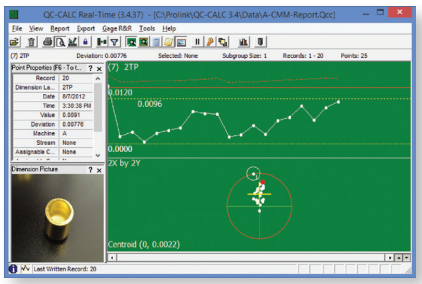
Trace Fields
A maximum of 60 additional trace fields can be captured in addition to the measurement data. This allows for more granular filtering when problems occur.

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 important standard. This option can be disabled for industries not requiring such strict control.



Rec	Date Performed	Action Performed	Feature or Document Location	Old Value or Action ID	New Value	User	Reason
4	12/12/2008 1:28:29 PM	Dimension 1	Feature 1	1.4986	1.5000	Bruce	Bad measurement
9	12/17/2008 1:29:01 PM	NumFactor 1	Cavity	1	2	Bruce	Remeasured Part
14	12/31/2008 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	5.4993	5.4900	Jon	Broken Gage

Add Pictures to Each Dimension
A picture can be added to each feature to give more meaning to the plot data.



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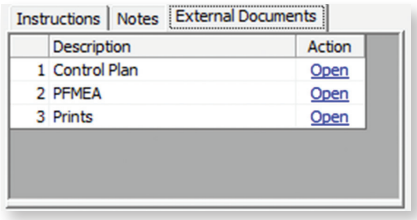
QC-GAGE

Introduction

QC-Gage is a full-featured data collection application for use with keyboard, hand-held gages, barcode readers, LVDTs, and linear transducers. It displays data both graphically and in table form, and automatically interfaces with QC-CALC Real-Time. By using QC-Gage and QC-CALC Real-Time together, out-of-conformance parts can be identified and isolated.

Key Benefits

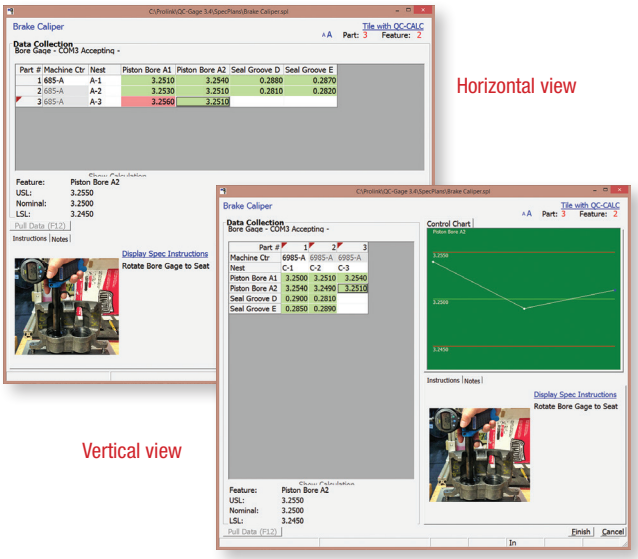
- Easy single-button launch
- Manual Keyboard entry for older dial gages
- Interfaces with all electronic gages using:
  - RS232
  - USB
  - File based
  - Ethernet / TCP/IP
  - GagePort NT®
  - Heidenhain MSE1000®
  - Solartron® Orbit System
  - Marposs USB
- Easy to write Spec Plans provide consistent input
- Text instructions and pictures of inspection techniques guide users
- Calculated dimensions based on entered values and math equations
- 21 CFR Part 11 support
- Reasonable limit alarms eliminate typos
- Link to external work instructions



- File based Spec Plans make copying easy for part families

Easily Create Spec Plans for Inspectors

QC-Gage easily creates Specification Plans that lead the inspector through the process of collecting both data and trace information (serial number, lots, names, etc). Pictures and directions can be included to help identify exactly what and how each feature should be inspected or entered during each step of the process.

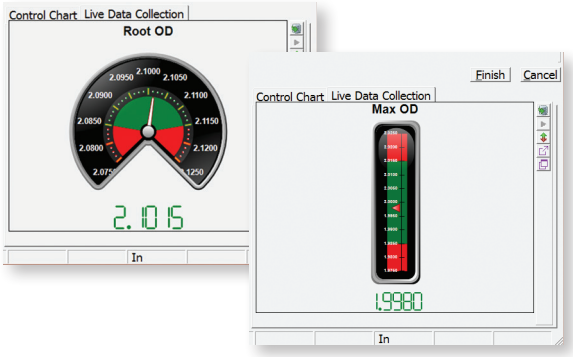


Save and Continue

Use the Save and Continue functionality to save an unfinished Spec Plan and resume measurement at a later time.

Calculated Dimensions

Create dimensions that are based on calculations either on an entered value or on the values of other dimensions. Lookup Tables can be used within calculated dimensions for constant values.

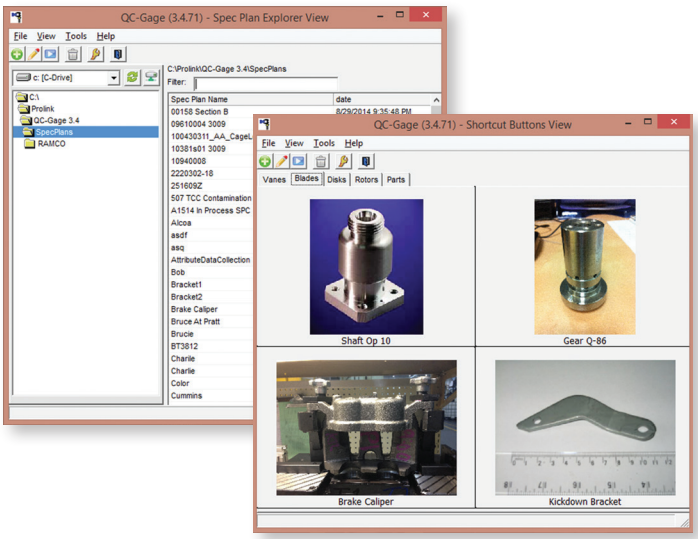


Mastering the Gage

Sometimes you need your Spec Plans to master a gage to a known size. Other times you may need to master a gage connected to a GagePort, Heidenhain, etc. Both mastering techniques are available.

Organize Spec Plans

Create buttons that include pictures of the part for easy identification, use the Filtering in Explorer View to narrow down the matching Spec Plan names, or use a barcode to automatically open the correct Spec Plan.

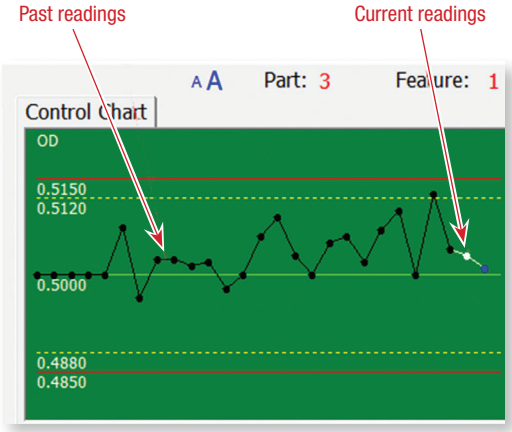


Expandable and Flexible

QC-Gage stores gage definitions in external files so you can add new gages without upgrading the software. A parsing language is available giving the ability to write new interfaces.

Graphical Feedback

As inspection occurs current and past data is shown.



GagePort Support

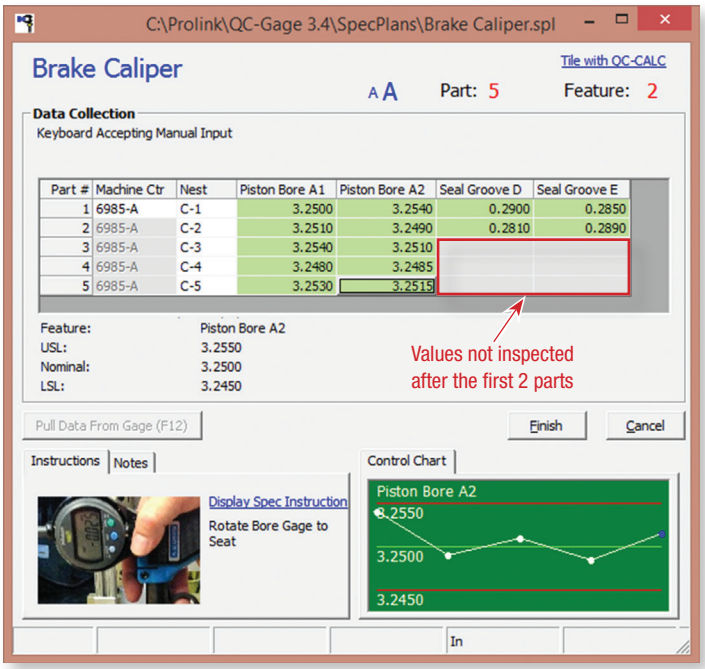
QC-Gage has full support for both analog and digital GagePorts and includes a Spec Plan and data conversion wizard to convert existing Proficy Shop Floor plans.

Import from Ballooning Packages

QC-Gage creates Spec Plans from output from ballooning packages such as InspectionXpert and Discus decreasing the work required to use QC-Gage.

Inspection Groups

Reduce the amount of inspection for certain parts within your batch by assigning any of several inspection rules. These include sequential, custom user selection, and defect rate.



Fixture Groups

Read multiple analog probes, LVDTs, or digital gages at once by linking them together in a fixture group. Multiple fixture groups can be added to the same Spec Plan.

Bulk Spec Plan Editor

The Bulk Spec Plan Editor enables quick management of the features of multiple Spec Plans simultaneously.

21 CFR Part 11

QC-Gage's audit challenges automatically trigger when an inspector completes a Spec Plan or changes a previously saved value.

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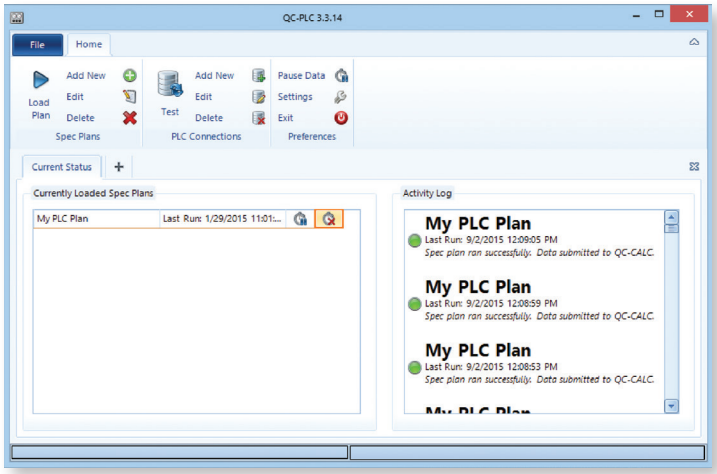
Introduction

QC-PLC provides a fast and easy method of reading data from programmable logic controllers (PLCs) at regular intervals for data collection by QC-CALC Real-Time.

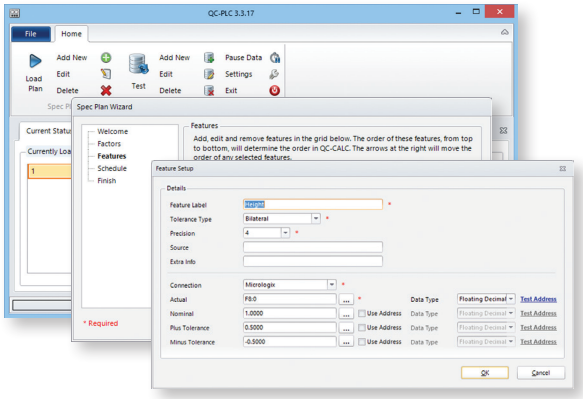


Key Benefits

- Over 100 PLCs supported natively including:
  - Allen Bradley ControlLogix Library
  - Allen Bradley MicroLogix/PLC-5 Library
  - GE Fanuc Library
  - Modbus Library
  - Siemens Library
- OPC support to all other PLCs
- Reusable Connections
- Live monitoring screens

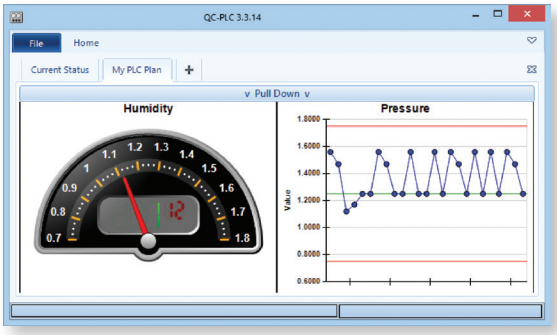
Easily Create new Spec Plans

QC-PLC uses the concept of a spec plan which is a set of instructions to measure a part and create a record of the data. The dimensions of the "part" may not be related to a particular part at all and may instead be the values of a process at a particular point in time. Each spec plan has a different set of traceability fields (factors) and dimensions that can be collected directly from the register on any PLC.



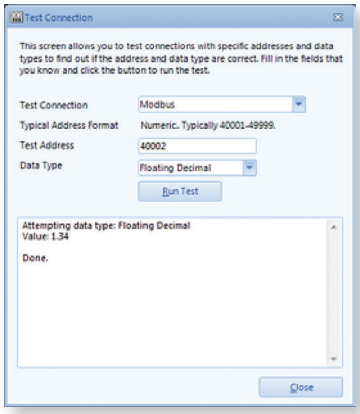
Flexible Collection Intervals

You can collect data either on a time interval (such as every 5 seconds) or based on an event (such as the changing of a value or flag inside the PLC).



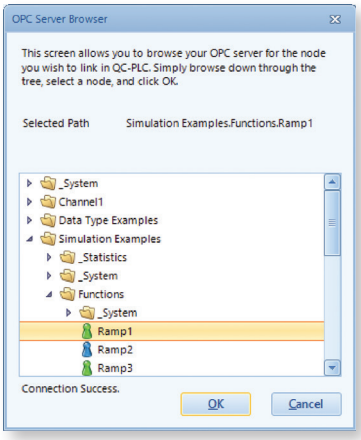
Test Connections

A convenient Test Connection screen allows you to test the connections to your PLCs.



OPC Navigation

The Tree style display screen allows for quick navigation to the OPC tags to be monitored.



Licensing

QC-PLC is licensed by both library type and by the number of connections. The base version includes one library and up to 10 connections (10 different physical IP addresses).

Please download a 30-day trial version from our website and try it out!

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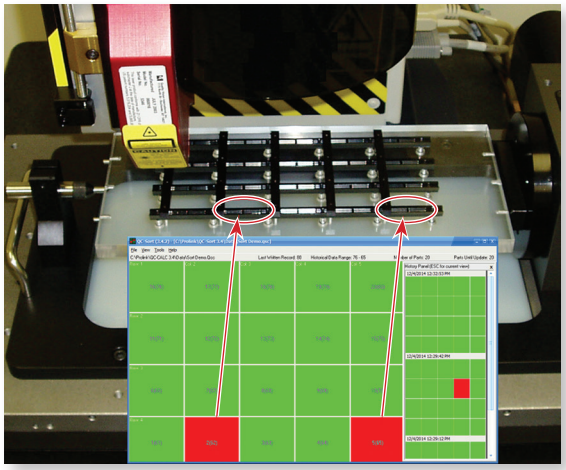
QC-SORT

Introduction

This non-statistical application is used in conjunction with QC-CALC Real-Time to quickly identify bad parts on a multiple part fixture. QC-Sort makes it easy for operators to remove problem parts from the fixture by using color coded squares to identify the bad parts. QC-Sort is adjustable and easily configured to display the physical layout of your parts as they are fixtured.



Key Benefits

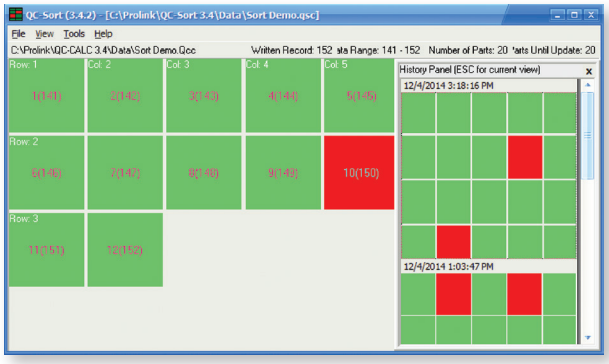
- Out of Spec parts clearly displayed
- Past fixture results available
- Automatically printed fixture results
- Ability to view partial fixture results

Sort Plans Keep you Organized

Simply point the Sort Plan to a QCC file, tell it how many parts to look at, and specify the general layout of the fixture.

Color Coding for Easy Identification

QC-Sort reads the data QC-CALC Real-Time collected and looks at it by the set number of parts that was configured. The parts are then laid out to match your fixturing. If any feature on a part is out of specification, that part is considered a bad part and is displayed in red. All good parts are displayed in green.



Partial Batch

Partial batches can be handled with a quick adjustment. QC-Sort will automatically display the partial batch and return to normal for the next batch.

History Panel

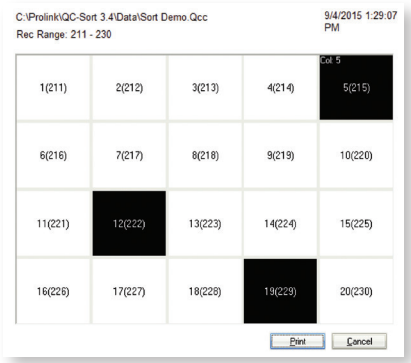
The History Panel displays up to 5 past batches on the right side of the screen. Click on the past batch of interest to see it as the main display.

Pictures for Display

Pictures can be used in place of colored rectangles to help operators remove the correct parts from the fixture.

Printed Results

The Auto Print option prints the screen for each batch so the fixture results can stay with the physical fixture.



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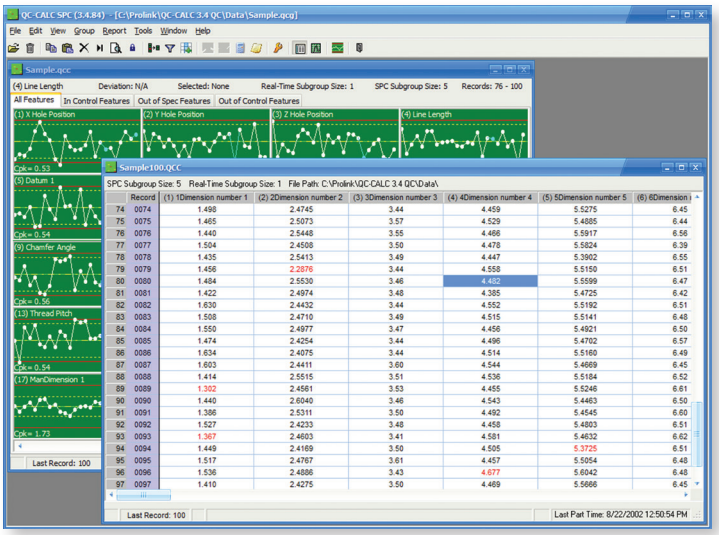
QC-CALC SPC

Introduction

QC-CALC SPC is a complete SPC package that analyzes the data collected by QC-CALC Real-Time. The wide variety of charts and reports available in QC-CALC SPC allow close monitoring of the manufacturing process in order to stay in control. In seconds, QC-CALC SPC gives a precise picture of how the production line is performing with easy-to-use menus.



Key Benefits

- Record and Dimension filtering
- Control charts
- Process capability charts
- Attribute charts
- Ability to print to PDF and email reports
- Built-in report designer
- Remote Real-Time monitoring
- Multiple database grouping
- 21 CFR Part 11 compliance
- Built-in password protection

Reporting

Reporting in QC-CALC SPC analyzes the data and prints the charts to a printer, print preview, or to a file. The following report types are available:

Control Charts

- Xbar & Range
- Xbar & Sigma
- Median & Range
- Individual & Range
- Individual & Moving Range
- Moving Average & Range
- Bivariate Analysis Report

Process Charts

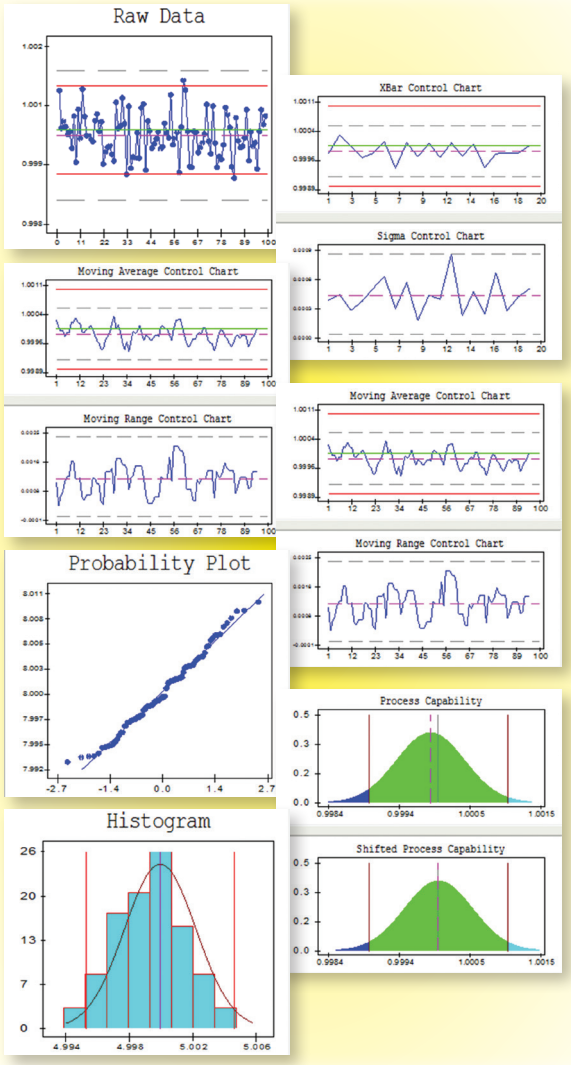
- Histogram Analysis
- Probability Plots
- Pareto Analysis
- Process Capability (Cpk)
- Raw Data w/ Outlier Detect
- Correlation & Regression

Attribute Charts

- P Chart
- Np Chart
- C Chart
- U Chart

Miscellaneous Reports

- Statistical Summary
- Raw Data
- First Article
- Non-Conformance
- Gage R&R (Range & ANOVA)
- 21 CFR Part 11 Audit Report



Record Filtering

Quickly display and report on the data needed at the moment. Dynamic record filtering allows the filter to change automatically based on the part or user input just received.

Dimension Filtering

Reduce on-screen clutter to quickly identify only the most critical features.

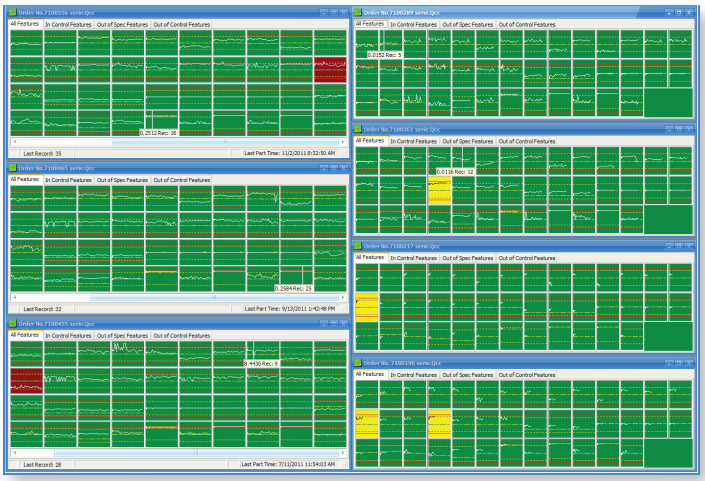
21 CFR Part 11 Compliance

The features that make QC-CALC so flexible can be controlled using the built-in Administrative Tool to guarantee total control of changes. This system includes an audit report showing all password protected changes.

QC-CALC SPC

Grouping

Create a concise summary report by opening multiple files simultaneously across different inspection equipment. Each file can be displayed in a spreadsheet or as plots, similar to QC-CALC Real-Time.

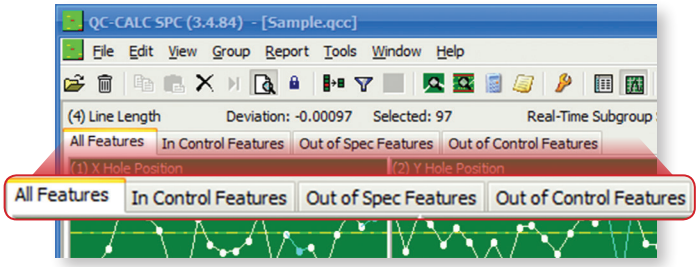


Monitoring

As the CMM runs, QC-CALC Real-Time is updating its live screen while QC-CALC SPC displays the same data in another location (remote office, machining center, etc…). Monitor a single file, a group of files, or the inspection machine itself and see the data in either live plots or in grid form.

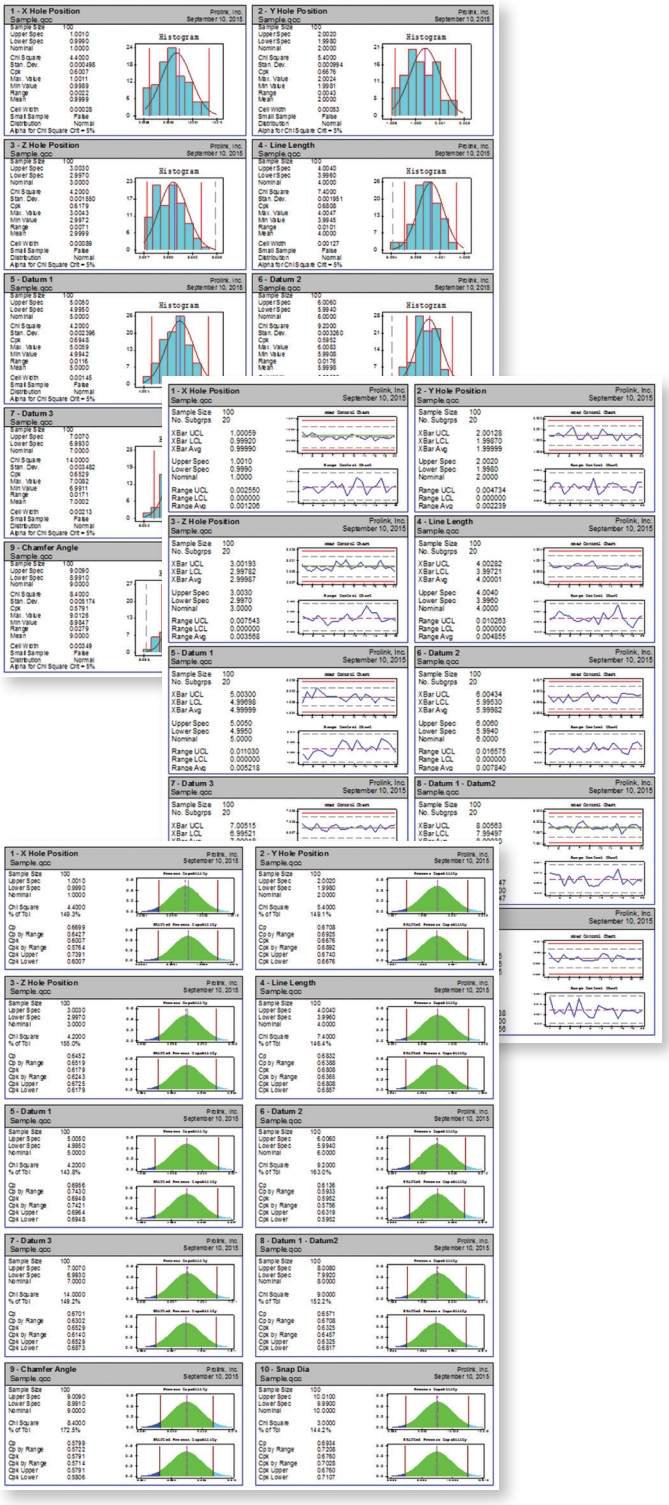
Tabs in Plot View

When using the Plot View option, multiple tabs are available to quickly switch between the dynamic Dimension Filters.



Multiple Dimension Reporting

Due to the large number of dimensions that can be saved in each file a secondary option is available for the reports within QC-CALC SPC. Using the Multiple Plots option provides a brief overview of the statistics for each dimension along with the corresponding graph for that report type.



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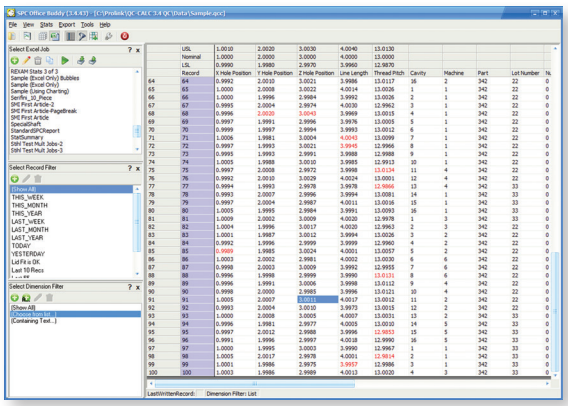
SPC Office Buddy

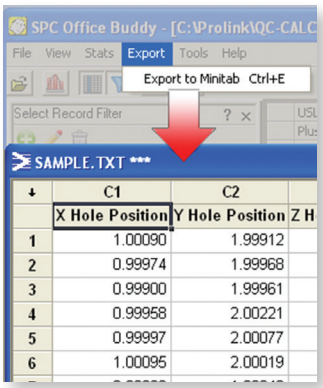
Introduction

SPC Office Buddy is a revolutionary application that integrates directly with Minitab, JMP, and Microsoft Excel to run reports using inspection data collected by QC-CALC Real-Time. Statistical reports or Sixpacks can be run on any subset of data and placed into Excel reports. Buddy automatically sends each dimension's label, nominal, tolerance, and subgroup information straight to Minitab or JMP without typing, saving you time and money.



Key Benefits

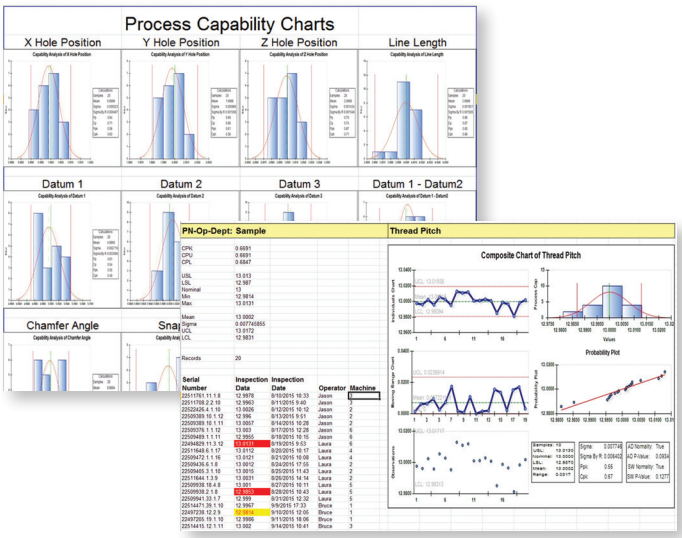
- No more manually entering tolerances into Minitab
- No more Excel macros
- Data is sent directly to Minitab or JMP
- PPAPs or other custom Excel reports are created in seconds using existing Excel reports
- Multiple reports can be run in scheduled batches for full automation
- Fully automated Non-Normal data identification using Goodness-of-fit tests
- Direct raw data export to Excel, Minitab, or JMP
- Excel Job automation from QC-CALC Real-Time or ERS

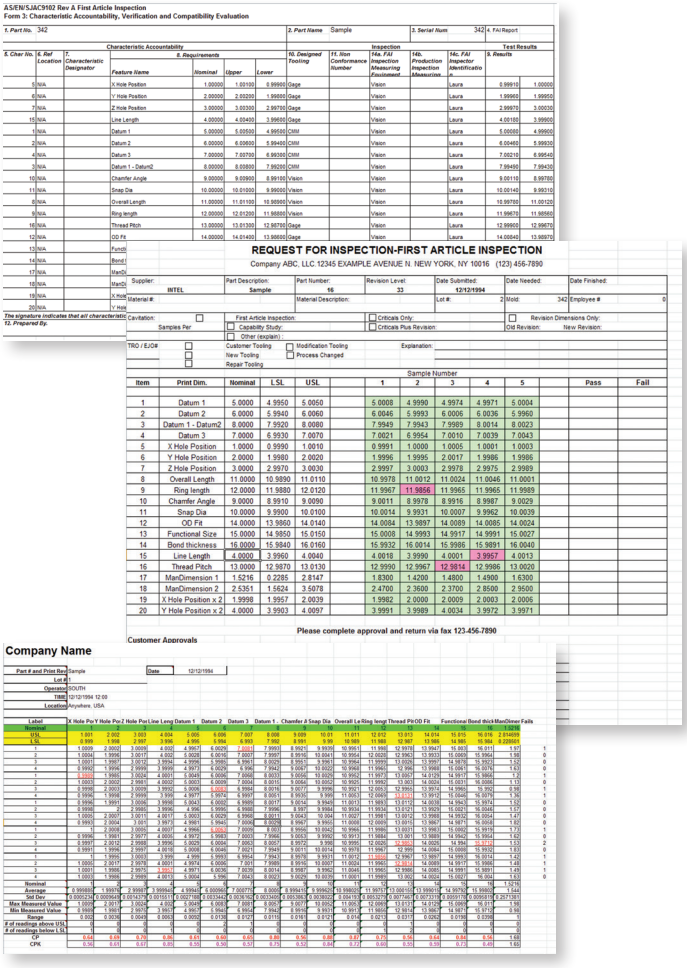


Excel Jobs

QC-CALC is the leader in data collection and Real-Time SPC, Minitab is an industry leader of 6-Sigma statistical software, and Excel is the industry standard in spreadsheets. In recognition of these facts, Buddy was written to tie these "best-in-class" products together into a simple, easy-to-use, comprehensive reporting tool to save time and money.

Unlike a typical export, where the data is dumped starting at cell "A1", Excel Jobs can create custom reports in minutes without using macros. They can be created to handle periodic weekly or monthly reports, such as PPAPs, saving time on repetitive tasks. Complex reporting is reduced from hours of needless cutting, pasting, and typing to mere seconds.





SPC OfficeBuddy

Record Filtering

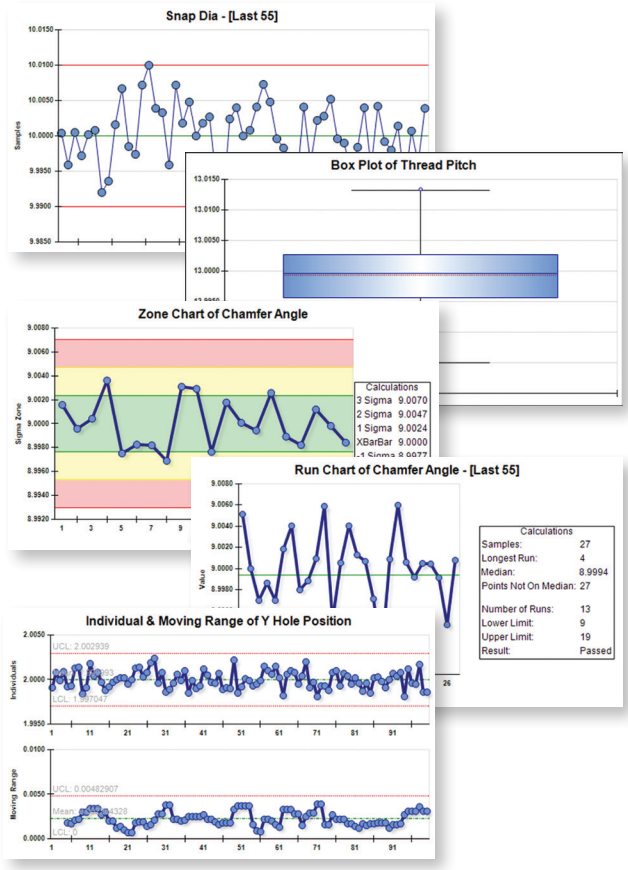
Quickly display and report on the data needed at the moment. Dynamic record filtering allows the filter to change automatically based on the part or user input just received.

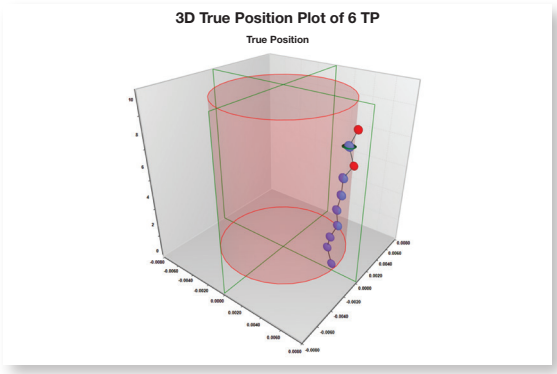
Non-Normal Data

If the measurement data has a single-sided tolerance, Buddy can optionally command Minitab to generate a Goodness-of-fit test and then use the highest P value when running non-normal charts.

Prolink Charting - Charts

Create charts without the need for Minitab. These charts can be resized, pasted, and used in Excel Jobs.





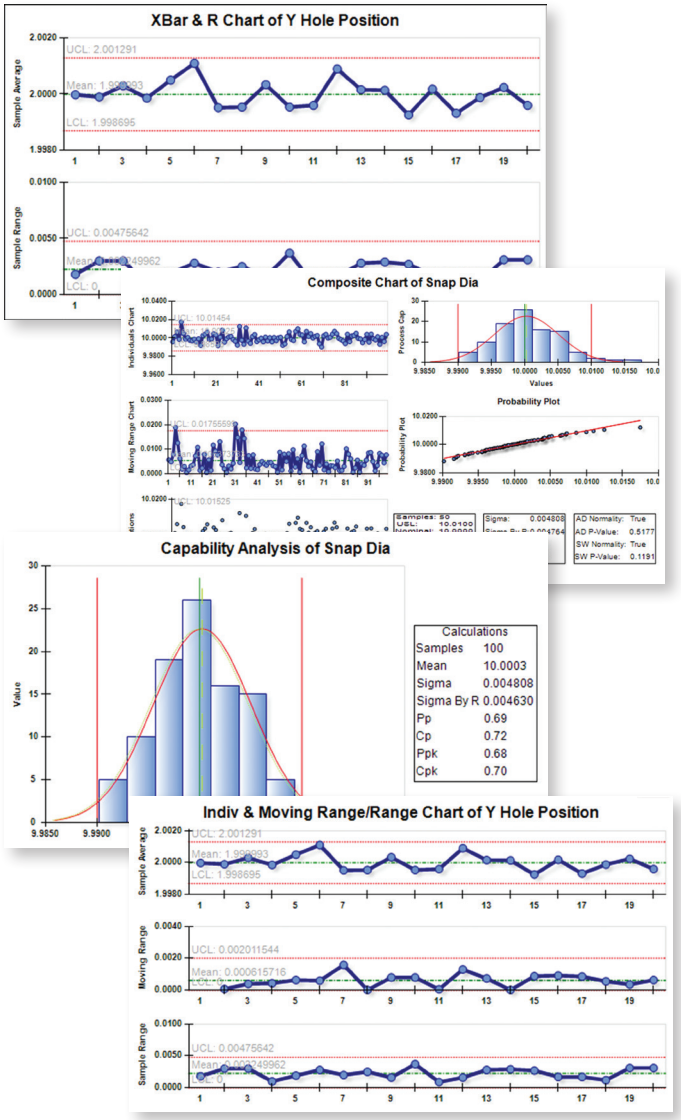
Prolink Charting - Statistics

A myriad of statistical calculations are available via Prolink Charting allowing the creation of robust reports.

37			4.495381
38			
39	Calculations	Min	4.491416
40		Max	4.506641
41		Average	4.499696
42		Range	0.015225
43		Cp	0.91864
44		Cpk	0.893453

Dimension Filtering

Reduce on-screen clutter to quickly identify only the most critical features.



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ERS Enterprise Report Scheduler

Introduction

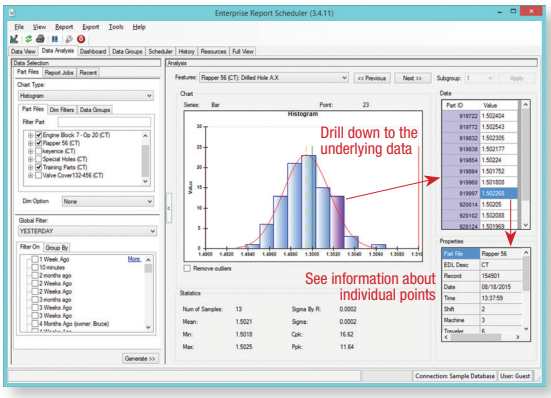
Enterprise Report Scheduler (ERS) is a desktop reporting package that allows the creation of interactive charts and reports across parts and/or plants. Reports and exports can be scheduled and powerful filtering allows detailed data grouping to call back specific details, compare features made on different machines, etc. The real strength of ERS is its ability to provide a top-down view of the overall quality within the factory.

Key Benefits

- Entire factory capability in one report
- Ability to compare plants against one another to identify the most capable plant
- Automatic reporting/exporting scheduler for timed reports
- Live, fully customizable dashboards can be displayed throughout the plant
- Full View places hotspots over a map of the shopfloor to instantly see quality issues
- Powerful record and dimension filtering

Drill Down Analysis

All charting on the Analysis screen is interactive, allowing drill down by selecting points, histogram bars, etc. Upon selection, lists of raw data and statistics appear as well as immediate charting options for the data subset.

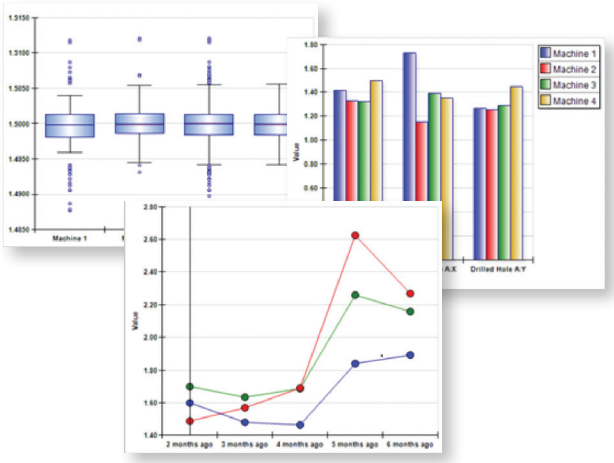


Export of Statistics

Aggregate statistics exporting provides a simple way of gathering statistics without locking the calculated values away in a report. This allows IT departments to display or move the statistical values into downstream systems without needing to become statisticians.

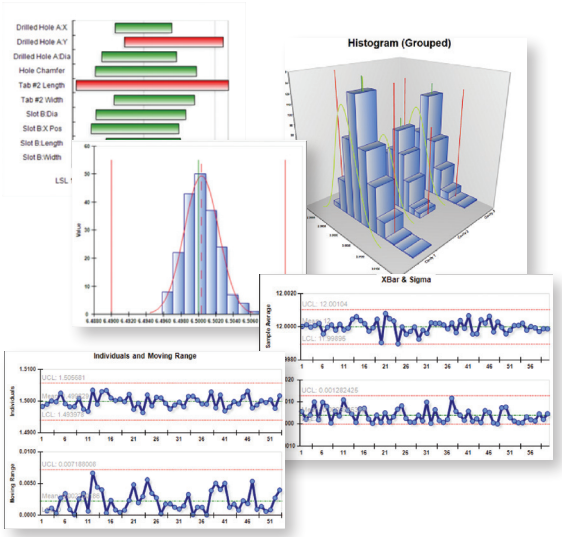
Raw Data Export

In addition to simple text output, ERS can be scheduled to send the raw data to SPC Office Buddy for Excel Job automation.

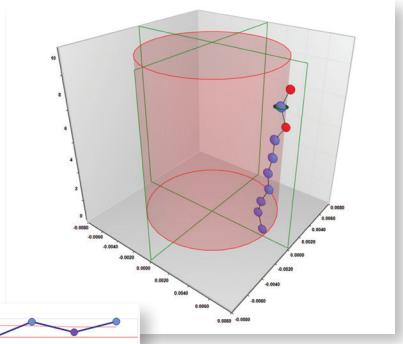


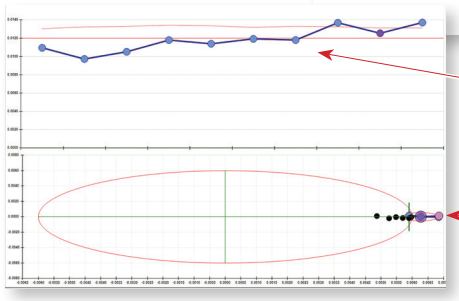
Reporting

Although its power lies in scheduled reports delivered to the inbox of management, reports can be run manually or automatically. Like QC-CALC, all typical output formats (PDF, etc) are supported as is the ability to customize the report template.



The 3D True Position chart combines the linear and positional charts using time as the 3rd dimension.





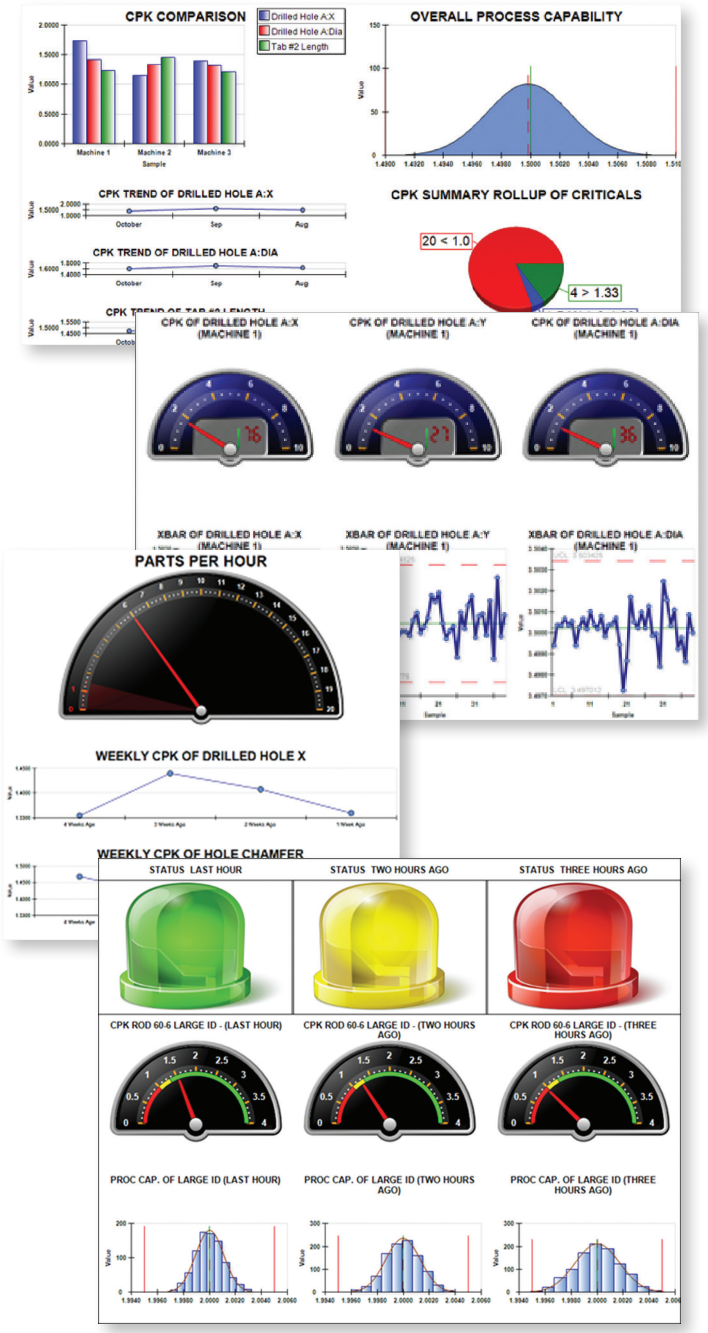
Time-based linear view of True Position allows you to see your TP by part with RFS and MMC Bonus tolerances.

Positional view allows you to see where the TP actually landed. Bonus is shown with small red ring

ERS Enterprise Report Scheduler

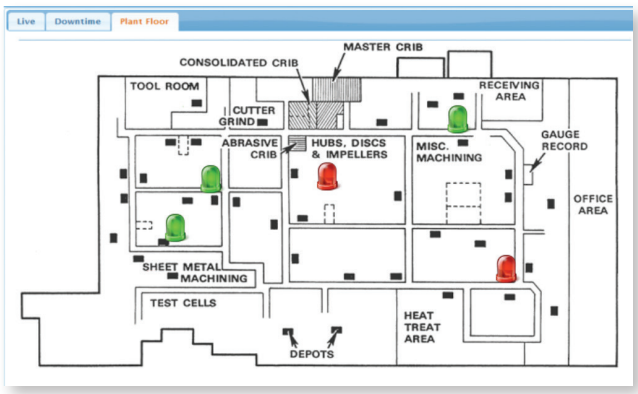
Dashboards

The fully customizable dashboards provide critical real-time information through the use of pictures, charts, and statistics. Widgets are simply dropped onto the surface and linked to data to create stunning displays. Generated dashboard images can then be displayed anywhere in the factory without extra licenses of ERS.

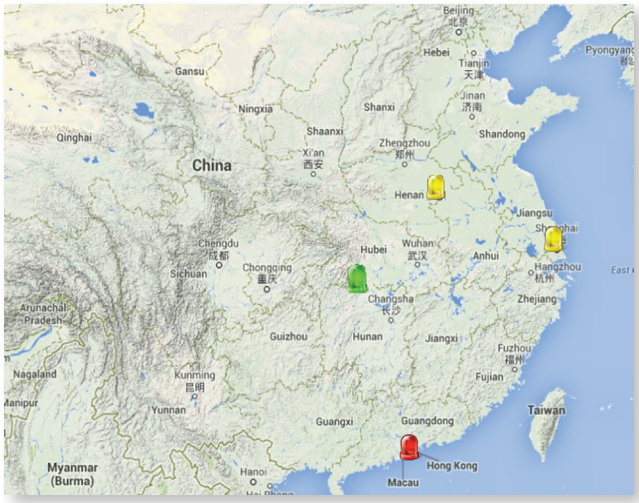


Full View

Similar to dashboards, this live display allows the placement of andon light hotspots on a background image such as a factory blueprint. The hotspots are then linked to measurement data and trend rules to provide instant feedback about the inspection within a particular cell. As trends occur, the andon lights begin flashing yellow or red based on severity of the exception. Hotspots support drill down capability via mouse selection to find the trend that occurred and optionally run charts on the related data.



Full View hotspots also support drill through, allowing the hotspot state to be representative of an entire separate Full View. This means summary Full Views can be created that drill to other Full Views giving management a high level overview with zoom capabilities.



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