QC-CALC

QC-Gage

SPC Office Buddy

QC-Mobile

QC-Sort

QC-PLC

Prolink

DATA COLLECTION/ANALYSIS SOFTWARE

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 details and key benefits of the product.

QC-Mobile

QC-Mobile is a web-based application that distributes reports, dashboards, full views, and drill down statistics via any web browser on the network.

QC-CALC SPC

QC-CALC SPC facilitates the creation of interactive charts, dashboards, full views, and CAD snapshots enabling a top-down view of the overall quality within the factory.

SPC Office Buddy

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

QC-CALC Monitor

QC-CALC Monitor is a simple data editing and monitoring tool that is perfect for smaller implementations.

QC-Sort

QC-Sort is a non-statistical application that is used to easily identify out of specification parts on a multiple part fixture.

QC-CALC Real-Time

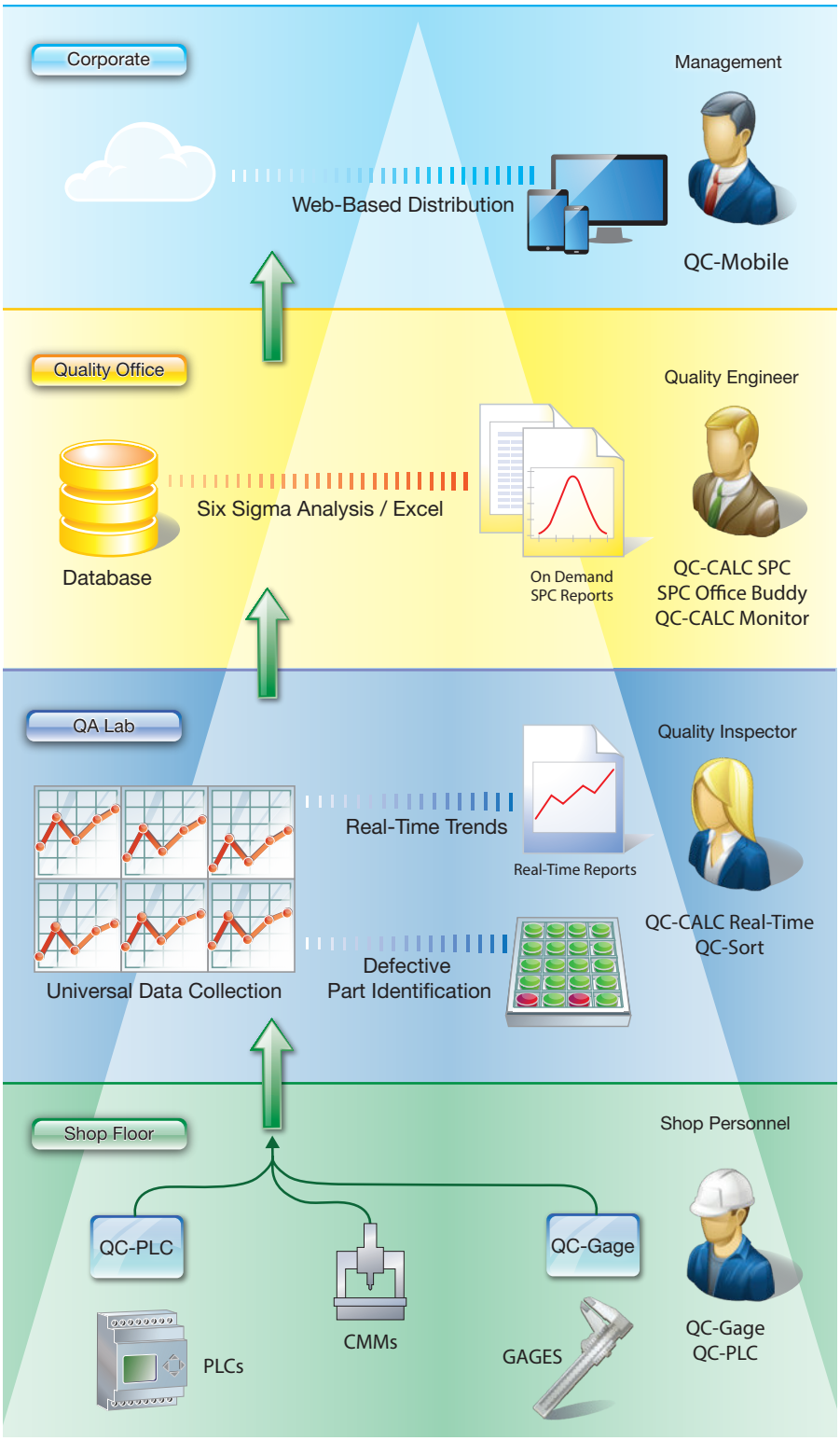
First introduced in 1983, QC-CALC Real-Time is the heart of Prolink's software suite and is the central hub of all data collection. It collects, analyzes, and reports the inspection results making data collection seamless regardless of the equipment purchased or software used.

QC-Gage

QC-Gage is designed to collect inspection data directly from keyboard or electronic hand/bench 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 and money with improved accuracy.



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 data can be transferred from all measurement devices to any SPC package using one program!

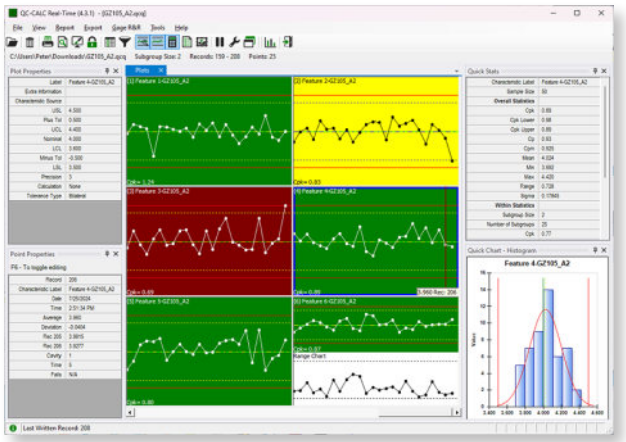
Prolink's goal is to make data collection seamless regardless of the equipment purchased or software used.

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.

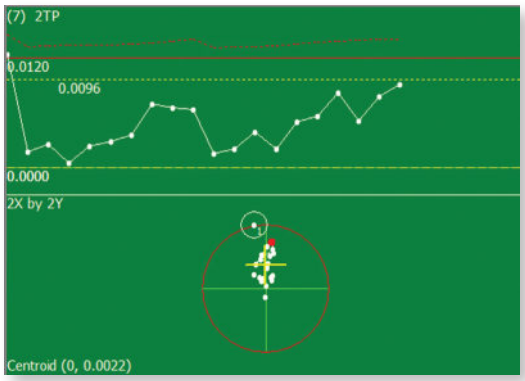
Assignable Causes/Corrective Actions

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

QC-CALC Real-Time

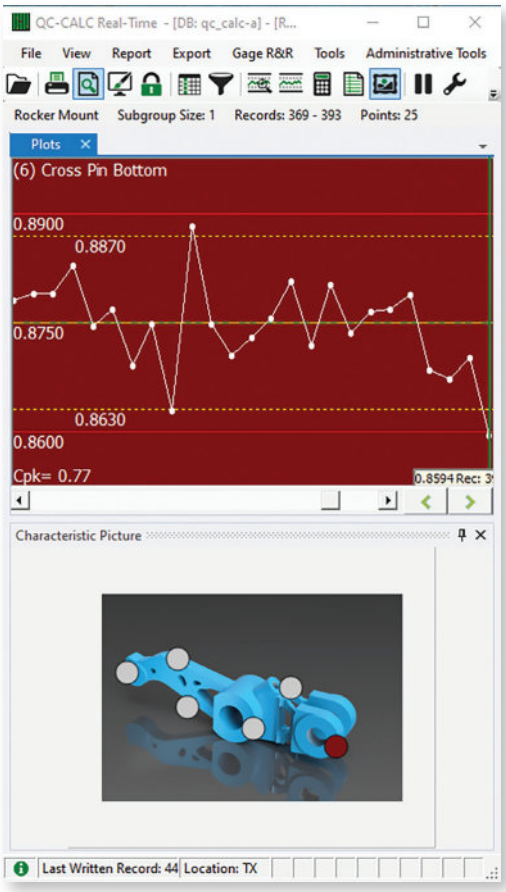
Live True Position Charts

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.

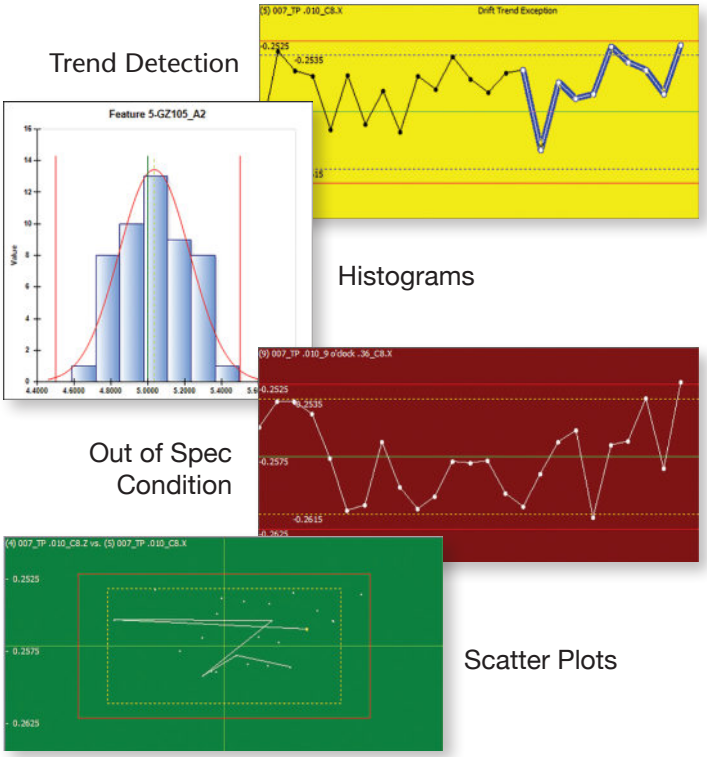


Add Pictures/CAD Snapshots to Characteristics

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

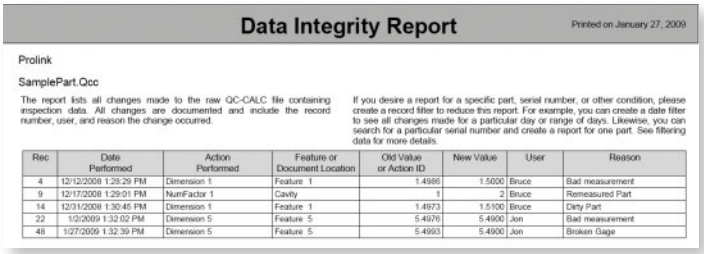


Trace Fields

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

Printed on January 27, 2009

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	12/12/2008 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

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.

Download a 15-day trial version from our website and try it out!

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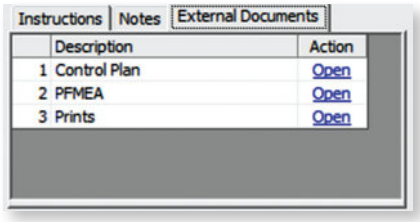
QC-Gage

Introduction

QC-Gage is a full-featured data collection application for use with keyboard, hand-held gages, barcode readers, digital readouts, 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.

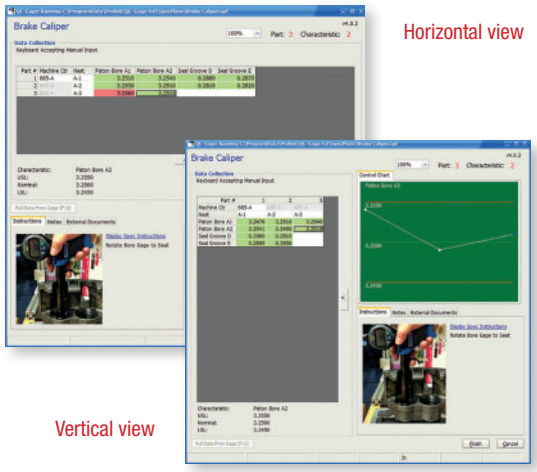
Key Benefits

- Easy single-button launch
- Manual Keyboard entry for older dial gages
- Interfaces with all electronic gages using:
  - RS232
  - USB / Bluetooth
  - Files
  - Ethernet / TCP/IP / Wi-Fi
  - Mahr Wireless gages
  - Keyboard wedge
  - Solartron® Orbit System
- Easy to write Spec Plans provide consistent input
- AQL sampling, including zero acceptance and inspection groups
- Text instructions and pictures/videos of inspection techniques guide users through the inspection process
- Calculated characteristics using functions and entered values
- 21 CFR Part 11 support
- Reasonable limit alarms eliminate typos
- Measurement level traceability of gage serial numbers and user IDs
- Link to external documents, pictures, and videos



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 numbers, lots, names, etc). Pictures and directions can be included to help identify exactly what and how each characteristic should be inspected or entered during each step of the process.

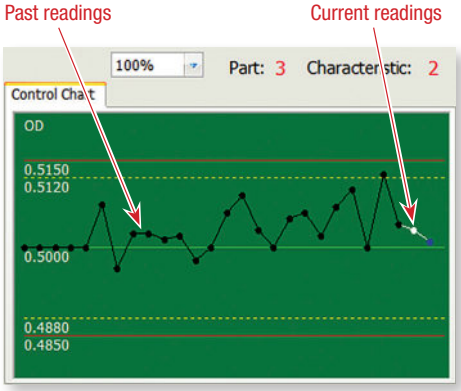


Save and Continue

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

Graphical Feedback

As inspection occurs current and past data is shown.



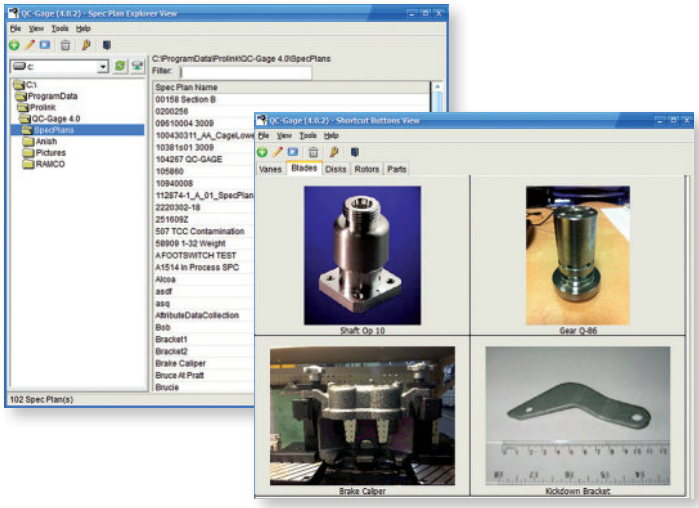
Calculated Characteristics

Create characteristics that are based on calculations either on an entered value or on the values of other characteristics.

AQL Sampling

QC-Gage supports the ISO 2859-1 AQL sampling standard according to lot size. It includes built-in standard zero acceptance tables and allows for the creation of custom tables. The system automatically prompts the quantity to be measured for each characteristic based on lot size to ensure compliance with the standard.

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.



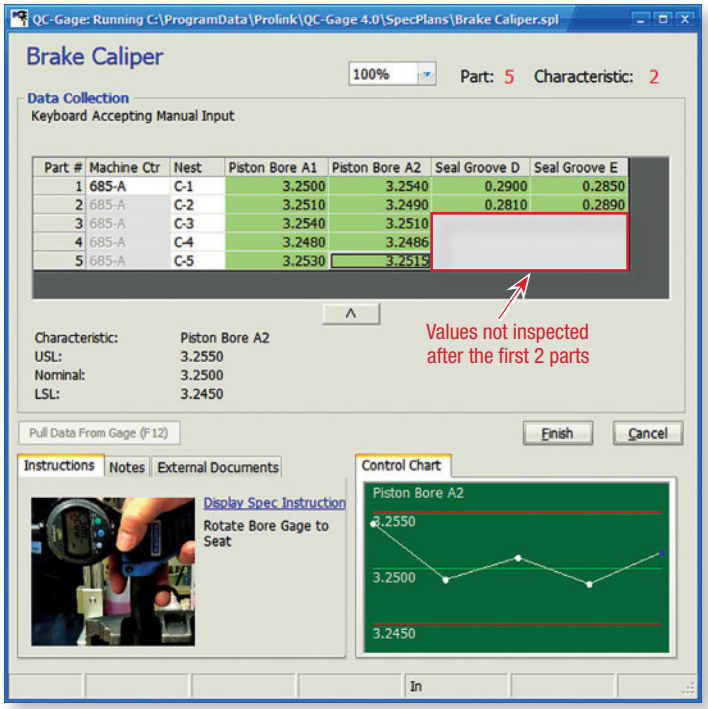
Expandable and Flexible
QC-Gage stores gage definitions in external files so you can add new gages without upgrading the software. A parsing language is available giving the ability to write new interfaces.

Live Display
Choose from column or radial gages to view the new values being received from select streaming gages.

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, Solartron, etc. Both mastering techniques are available and master values can be stored for each part number.

Auto Create Spec Plans
Spec Plans can be created using output from ballooning or other software packages decreasing the work required to use QC-Gage.

Inspection Groups
Reduce the amount of inspection for certain parts within a 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 settings 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.

Download a 15-day trial version from our website and try it out!

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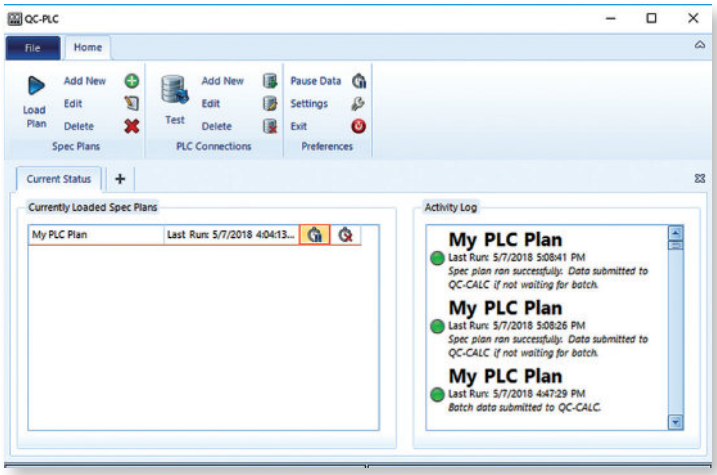
Introduction

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

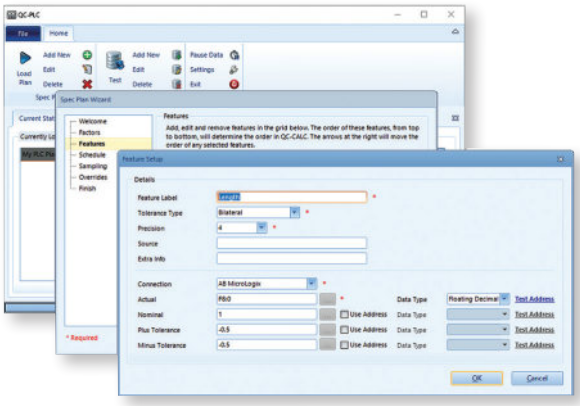


Key Benefits

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

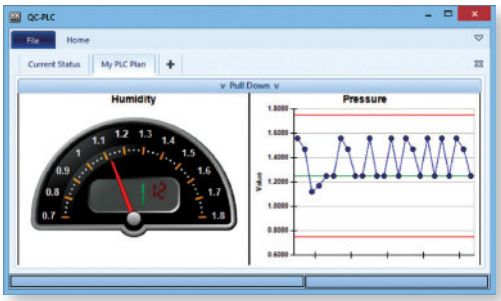
Easily Create new Spec Plans

QC-PLC uses the concept of a spec plan which is a set of instructions to collect data. The data 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 trace fields and characteristics that can be collected directly from the register on any PLC.



Live Monitoring Screen

Live screens can be configured to monitor PLC addresses according to each Spec Plan's needs.

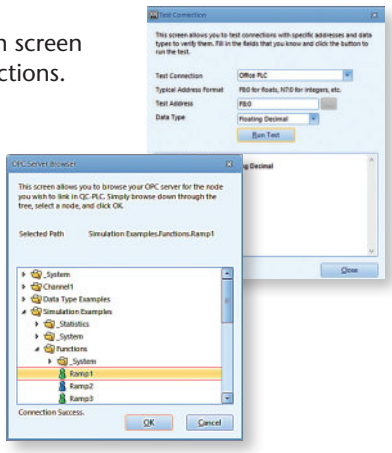


Test Connections

A convenient Test Connection screen enables testing of PLC connections.

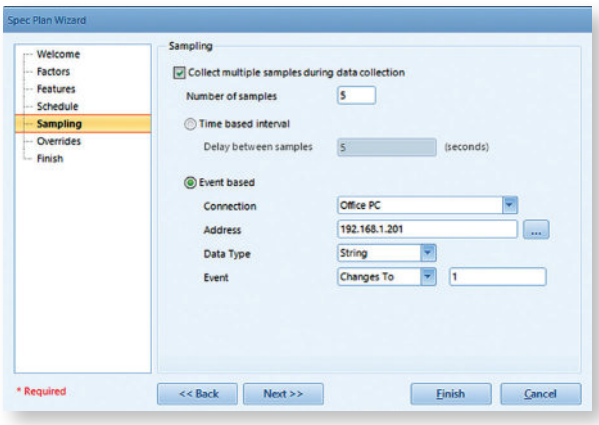
OPC Navigation

The tree view style display screen allows for quick navigation to the OPC DA or UA tags to be monitored.



Flexible Collection Intervals

Data can be collected either on a time interval or based on an event (such as the changing of a value or flag inside the PLC). Sampling gives the ability to take multiple measurements at specified intervals.



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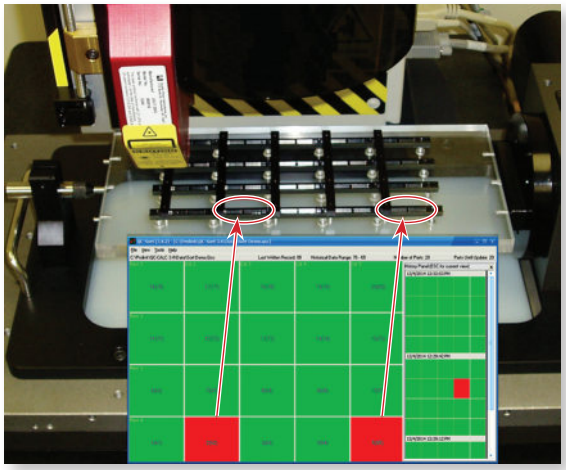
QC-Sort

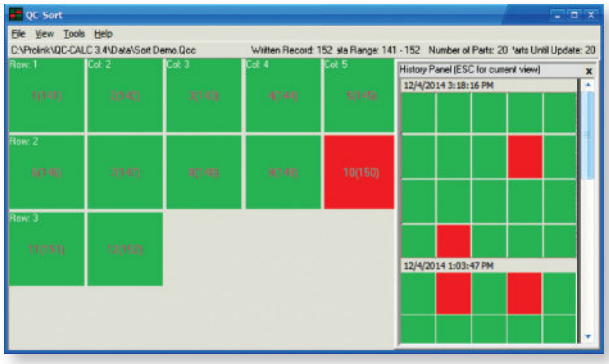
Introduction
This non-statistical application is used with QC-CALC Real-Time to quickly identify bad parts on a multiple part fixture. QC-Sort simplifies the process of removing problem parts from the fixture by using color-coded squares that match the physical layout of the parts in the fixture.



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 Operations Organized
Simply point the Sort Plan to a part file, specify the number of records to review, and define the general layout of the fixture.

Color Coding for Easy Identification
QC-Sort works with the data collected by QC-CALC Real-Time and reads the number of records configured for the fixture. The parts are arranged to match the fixture layout. If any characteristic on a part is out of specification, the part is considered bad and displayed in red. All good parts are displayed in green.

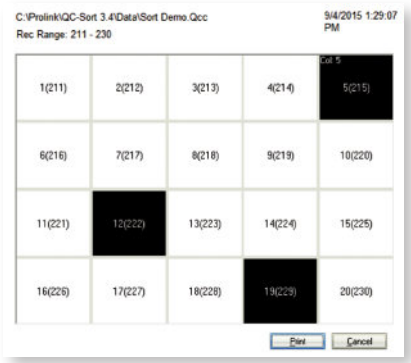


Partial Batch
Partial batches can be handled with a quick adjustment. QC-Sort will automatically display the partial batch and return to normal for the next batch.

History Panel
The History Panel displays up to 5 past batches on the right side of the screen. Clicking on a past batch of interest will bring it up 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 results can stay with the physical fixture.



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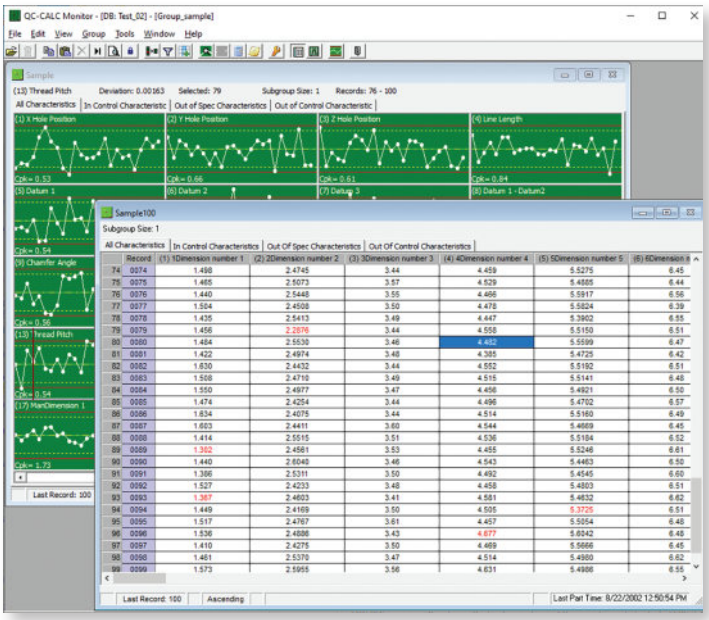
QC-CALC Monitor

Introduction
QC-CALC Monitor is a simple, low-cost remote monitoring and editing tool.



Key Benefits
- Record and Characteristic filtering
- Data grid for editing
- Remote Real-Time monitoring
- Multiple database grouping
- 21 CFR Part 11 compliance
- Built-in password protection
- Display multiple parts on one screen

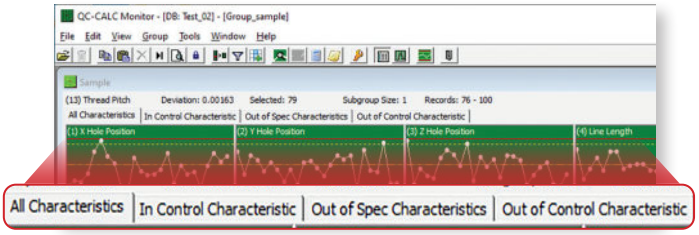
Grouping
Open multiple files simultaneously across different inspection equipment. Each file can be displayed in a spreadsheet or as plots, similar to QC-CALC Real-Time.

Monitoring
As the CMM runs, QC-CALC Real-Time is updating its live screen while QC-CALC Monitor 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.

Record Filtering
Quickly display only the data needed at the moment. Choose a specific line, machine, or batch.

Characteristic Filtering
Reduce on-screen clutter to quickly identify only the most critical characteristics.

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



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.

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Introduction

QC-CALC SPC is a reporting system that allows for the creation of interactive charts, data visualization, and deliverables (Reports, Exports, Dashboards, Snapshots, Full Views, and Triggers) across parts and/or plants. Reports and exports can be scheduled and powerful filtering allows detailed data grouping to call back specific details, compare characteristics made on different machines, etc. The real strength of QC-CALC SPC is its ability to provide a top-down view of the overall quality within the factory.

Windows Application or Service

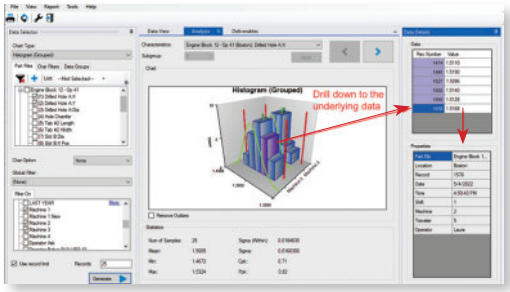
Like other Prolink products, QC-CALC SPC can be run either as an application or as a Windows service ensuring deliverables, such as reports or dashboards, continue to process even when the application is shut down. Services can be grouped and monitored by administrators to ensure timely delivery of content to consumers in the company.

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 characteristic filtering
- Edit data values directly in the grid
- Activate physical andon lights throughout the shop floor for increased visibility
- Link characteristics to 2D/3D CAD drawings for quality callouts
- Trigger actions based on data arrival or a scheduled time
- Production hours and Holiday calendars for time-based deliverables
- Robust system auditing to control user accounts and resources

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.

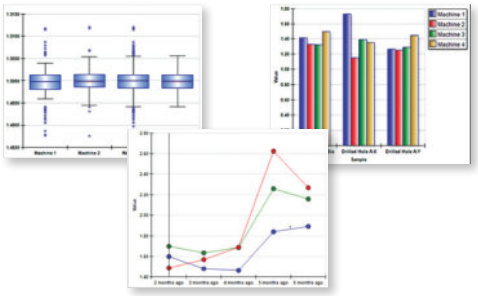


Exporting of Statistics

Export jobs can be set up to export either raw data or statistical results for downstream usage outside the system. Exports can even be set up to run SPC Office Buddy Excel Jobs for full automation.

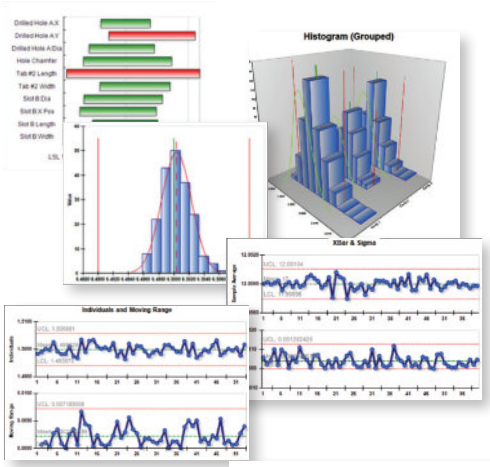
Triggered Actions

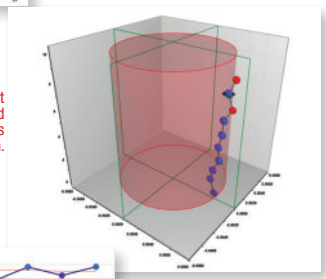
Triggers allow the monitoring of part files for new data. Upon arrival, triggers can be set to check for specific conditions and/or trends. If conditions are met, a customizable list of actions (reports, emails, running of scripts, etc) execute creating a logical rules-based system.



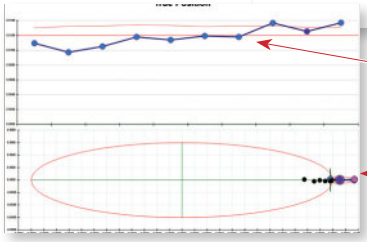
Reporting

Although its power lies in scheduled reports delivered to QC-Mobile or the inbox of management, reports can be run manually or automatically. 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.



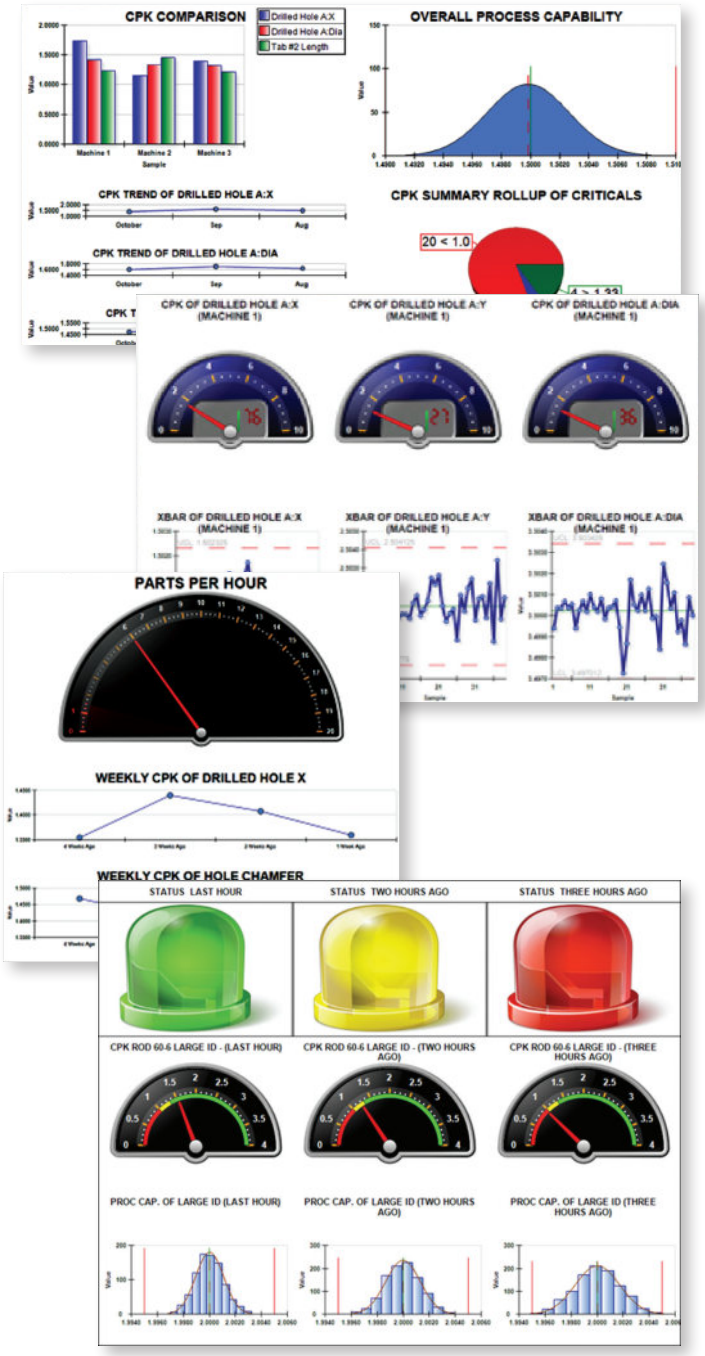
Time-based linear view of True Position displays TP by part with RFS and MMC Bonus tolerances.

Positional view shows where the TP actually landed. Bonus is shown with small red ring.

QC-CALC SPC

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.



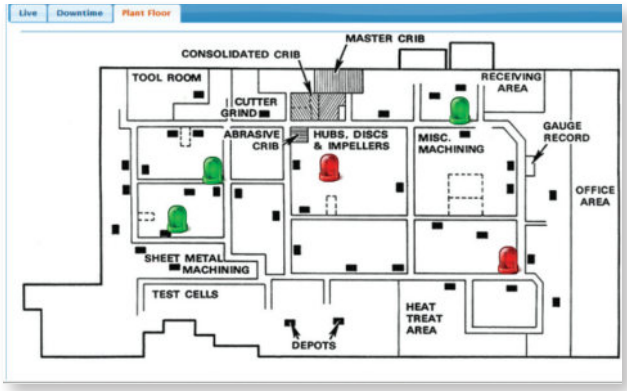
Triggered Actions

Triggers allow the monitoring of part files for new data or lack thereof. They can be set to check for specific conditions and/or trends. A customizable list of actions can be added, creating a logical, rules-based system.

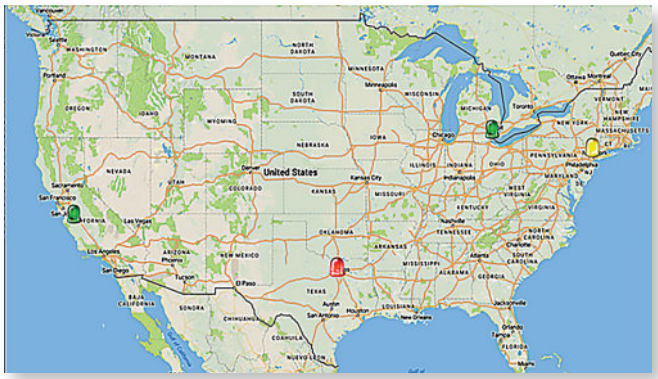
Full View

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 can also optionally flash physical andon lights on the shop floor for more visible notification. Hotspots support drill down capability 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. Summary Full Views can be created that drill to other Full Views giving management a high level overview with zoom capabilities.



QR Code Linkage

Create reusable QR codes for shortcuts to QC-Mobile. QR Codes can either be normal hyperlinks (requiring login to QC-Mobile) or specialized impersonation codes allowing management to scan and be directed to relevant results without the need to remember login information.

Download a 15-day trial version from our website and try it out!

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SPC Office Buddy

Introduction

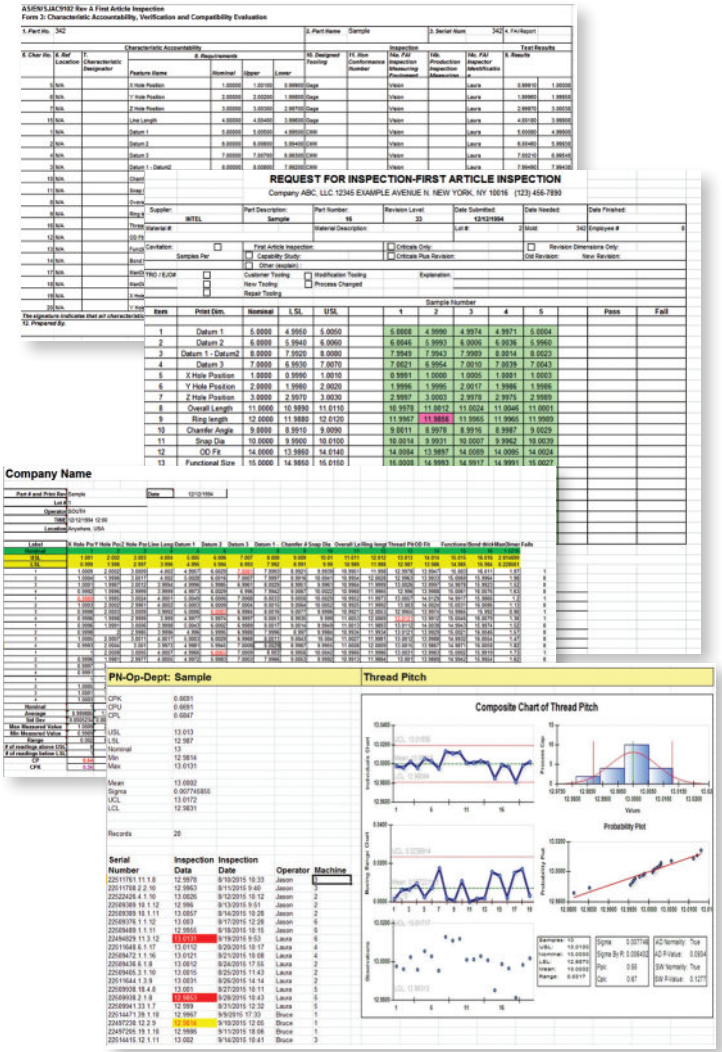
QC-CALC is the leader in data collection and Real-Time SPC, Minitab is an industry leader of 6-Sigma statistical software, and Excel is the industry standard in spreadsheets. SPC Office Buddy was written to tie these "best-in-class" products together into a simple, easy-to-use, comprehensive reporting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

Key Benefits

- No more manually entering tolerances into Minitab
- No more time-consuming typing of customer required reports, and no more Excel macros
- Data is sent directly to Minitab
- AS9102 Rev Cs, PPAPs, and other custom Excel reports are created in seconds using existing Excel reports
- Scheduled batches can run multiple reports automatically
- Fully automated Non-Normal data identification using Goodness-of-fit tests

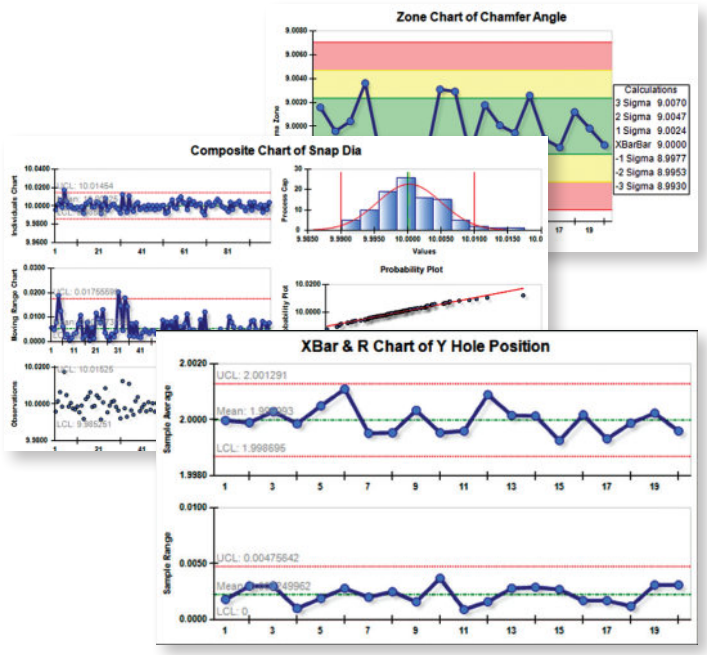
Excel Jobs

SPC Office Buddy integrates directly with Minitab and Microsoft Excel to run reports using data collected by QC-CALC Real-Time. Minitab receives data, tolerances, and commands to run charts and statistics. Buddy then uses the results to create the desired report. Excel Jobs can be set up in minutes placing data, charts, and statistics where desired without using macros. Complex reporting is reduced from hours of cutting, pasting, and typing to mere seconds!



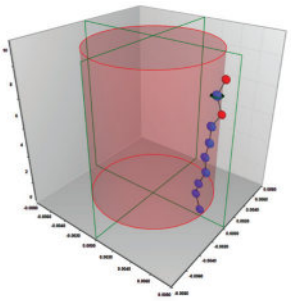
Prolink Charting - Charts and Statistics

Create charts and statistics without the need for Minitab. These charts can be used automatically in Excel Jobs.



3D True Position Chart

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



Non-Normal Data

When measurement data is non-normal, Buddy can optionally perform a series of Goodness-of-fit tests (or command Minitab to do so) and use the highest P-value for running charts.

Download a 15-day trial version from our website and try it out!

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Introduction

QC-Mobile is a browser-based web application that brings shop floor quality information to any device. Display Reports, Dashboards, Full Views, Live Data, and Statistical Summaries without the need to install software. Plus, it features an industry-first QR code linking functionality, making it possible for management to access relevant data about a process without prior knowledge of the software.

Imagine posting printed QR codes in each cell throughout the plant to link directly to the current quality results of that cell. Management can then check the status of the cell with their mobile device by simply scanning the QR code. Welcome to the future of SPC!

Key Benefits

- Supports all desktop and mobile devices
- Monitor the shop floor from anywhere
- QR code support
- Dashboard slide show with drill down
- Customizable Home screen
- Interactive Full View display
- Viewable across the internet (outside your company)
- Web/network-based means software updates are simple
- No software to install on user's device
- Supports all screen sizes (desktop, tablet, phone)
- View snapshots of linked 2D/3D CAD images linked through QC-CALC SPC with live statistics
- Require acknowledgement of trending data
- Export raw data to Excel

Browser-Based View

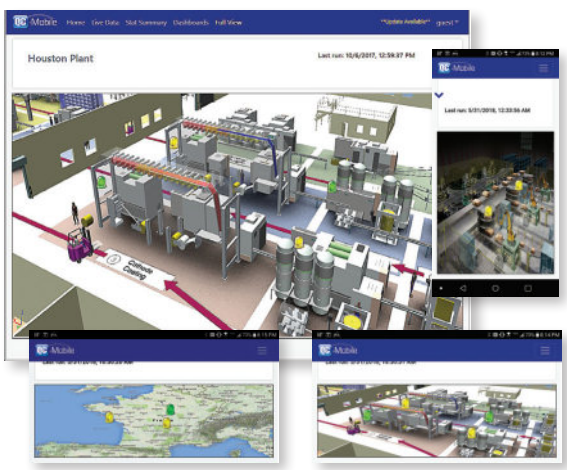
Instead of a collection of separate web pages, QC-Mobile functions as an integrated application, enabling interactive links between Live Data, Dashboards, Snapshots, Full Views, and Statistical Summaries. The popular "card" style display allows our charts and data to adapt seamlessly to different screen sizes and orientations, from an extended two-monitor desktop to a tablet or smartphone.

Live Data

The Live Data screen continuously monitors data, displaying either a summarized view (by record or characteristic) or the familiar real-time plots of QC-CALC Real-Time.

Full View

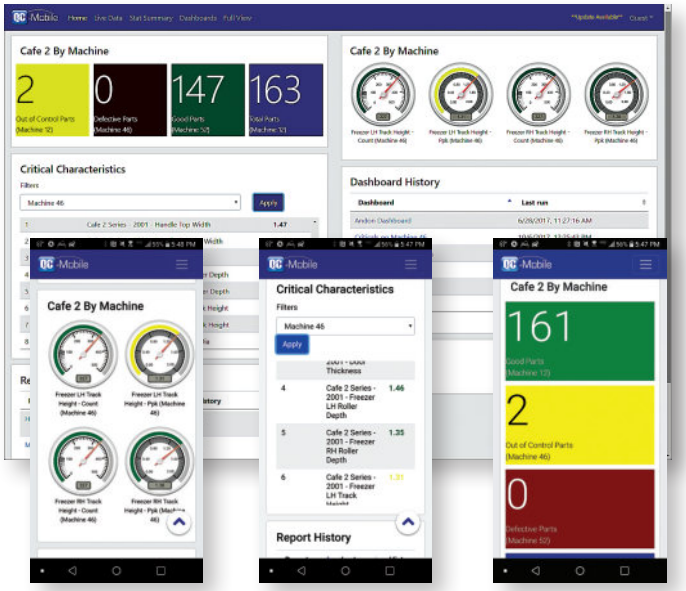
The Full View screen brings high-level shop floor monitoring and drill-down capability from QC-CALC SPC to the browser. Quality information has never been more visual and interactive, whether viewed from a phone, tablet, or a shop floor touch kiosk.



QC-Mobile

Customizable Home Screen

The Home screen features programmable cards that can be customized to monitor different elements.



Dashboard

The Dashboard screen presents interactive dashboards from QC-CALC SPC in a slide show. Each user can monitor different lists of dashboards allowing location-specific overhead monitors to be installed throughout the factory.

Stat Summary

The Stat Summary screen displays a growing list of statistics and charts at both the record and characteristic level.

QR Codes Make it Easy

QC-CALC SPC generates QR codes that can be posted throughout the factory and act as hyperlinks for QC-Mobile. Scanning these QR codes from any scanner app on a mobile device allows management to get relevant self-serve quality information for any cell in the factory without the need for training.

The QR code above directs to Prolink Software's website, where a sample database can be viewed.

Download a 15-day trial version from our website and try it out!

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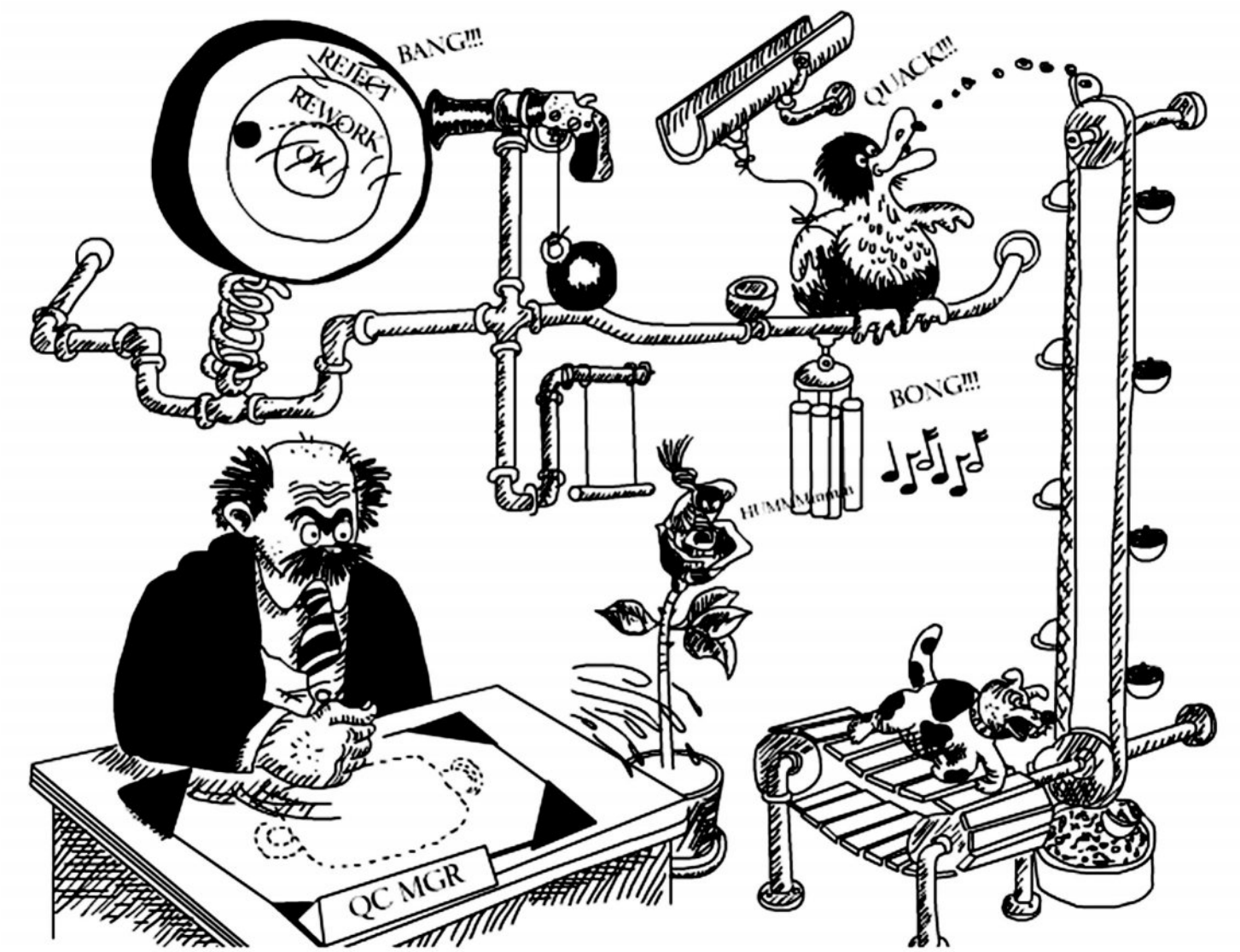

Prolink

DATA COLLECTION/ANALYSIS SOFTWARE

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