TorqueIQ Software

Real-Time Quality Control Software

TorqueIQ is a real-time statistical process control software used by quality teams to improve product quality, reduce process variation, and optimize manufacturing processes.

Torque IQ collects process data from the shop floor and transforms it into real-time, actionable quality information for operators, quality personnel, manufacturing engineers and management.

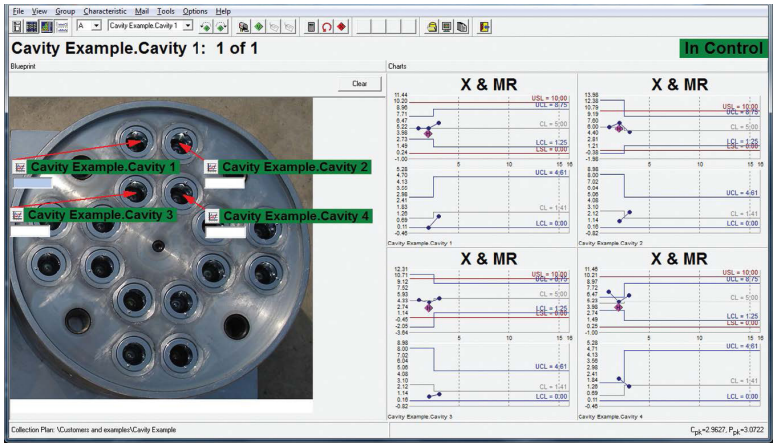
- Improve product quality
- Increase customer satisfaction
- Reduce scrap, waste and rework
- Optimize processes and yield
- Achieve regulatory compliance

Perform Real-Time Statistical Process Control

Capture

Collect shop-floor data in real-time from virtually any source--gages, devices, machines, and other data sources. TorqueIQ's simple, three-step connection process makes it easy to simply connect and begin collecting data from almost anything.

- Connect and collect data from any RS232 serial or USB device
- Capture data from text files, .csv files, Microsoft Excel, any ODBC-compliant database, or machines such as CMMs or PLCs
- Integrate with other manufacturing systems using OPC, OLE, and DDE--Torque IQ's built-in APIs supports over 500 OLE methods and properties



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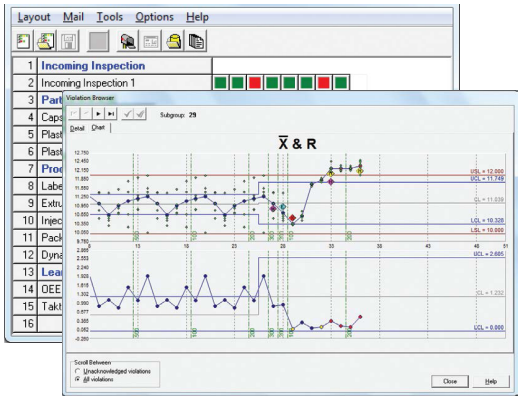
Plant Monitor: Manage Plant-Wide Performance

Gain a bird's eye view of shop floor processes, resolve problems faster, and manage more effectively using TorqueIQ Plant Monitor. It runs on the desktop and displays real-time statistics for every data collection station in one convenient window--giving managers a summary view into their plant's performance from a single screen.

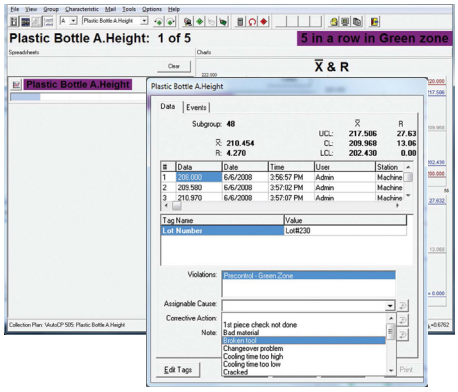


- View visual alerts for problem areas
- Mouse-over cells for detailed statistics
- Acknowledge alerts from your desktop
- Drill-down to investigate, view details, and resolve issues

Monitor

Empower your operators with real-time, actionable intelligence. TorqueIQ displays real-time control charts on the shop floor--enabling your team to immediately detect and correct process issues.

- Display a variety of control charts and SPC charts
- Customize screen layouts
- Scroll to view data from the "beginning of time"
- Save time using built-in support for standard SPC rules
- Click to drill-down and perform statistical analysis



Alert

Automatically alert personnel, execute custom programs, shut down machines, or enagage other systems if a nonconformance or rule violation occurs using TorqueIQ's built-in triggers. Whether your requirements are as simple as sending an email or as complex as triggering a process within a corrective action system, TorqueIQ gives you the power to close the quality loop from "detection-to-correction".

- Use a simple pull-down menu to schedule a variety of different notifications and alarms for nearly any condition.
- Program your own custom triggers to schedule enterprise-wide alarms or communicate bidirectionally with other systems or machines or send a command to a device

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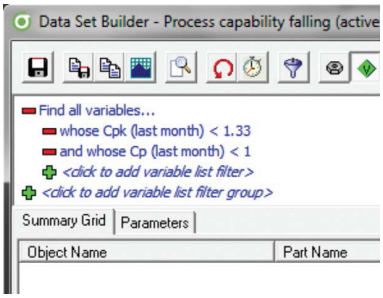
Identify, Prioritize and Solve Quality Issues

Expose

Answer questions, detect changes and discover trends with TorqueIQ's data sets. Using data sets quality teams can identify, prevent, and prioritize quality issues at a macro level. Unlike the traditional microscopic nature of SPC, which focuses on a specific variable, data sets offer a broad view of your database--enabling you to proactively monitor and uncover high priority issues.

- Scan, query, and filter large amounts of data
- Maintain a watchful eye over multiple processes
- Expose areas in need of improvement
- Reveal potential issues before they become problems

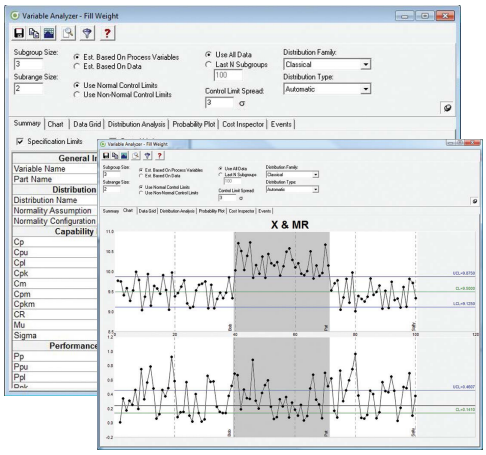


Which processes have:
-the most variability?
-a history of recent violations?
-changed recently?
-the highest cost due to variability?

Analyze

Experiment, visualize, and reveal more information about any variable using the one-click variable analyzer. The variable analyzer delivers both point-of-production and historical analysis capabilities. It puts an entire set of statistical tools at your fingertips-- giving you a comprehensive view of your data from one convenient screen.

- Drill down for detailed views
- Sort, group, and filter data to reveal issues and draw conclusions
- Slice and dice data to perform "what-if" analysis
- Manipulate the options that affect your statistical calculations like subgroup size, data range, distribution type and more
- Review all events logged for a particular variable
- Copy/paste or export data to other popular formats



Industries Served

- Alternative energy
- Building materials
- Computer, semiconductor and computer-related electronics
- Electronics and appliances
- Food and beverage
- Packaging
- Plastics, rubber, paper
- Primary and fabricated metal
- transportation

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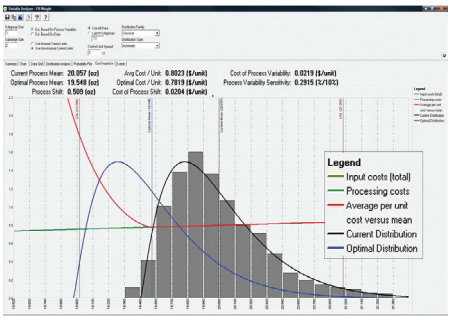
Justify

Identify the hidden cost of give-away, overfill, rework or scrap that weaken a company's profits using TorqueIQ's Cost Inspector™. The Cost Inspector links manufacturing cost information with current and historical process data, empowering quality teams to:

- Search process data across all operations to uncover costly process problems
- Identify sources of give-away, overfill, scrap or waste
- Calculate potential savings per unit by reducing process variation or shifting processes to optimal mean
- Translate process improvement statistics into dollars saved for the company
- Produce cost-based reports to show executive management the return on investments in quality



-Use process data to display unit cost due to variation
-Determine optimal mean and reveal potential savings from a process shift

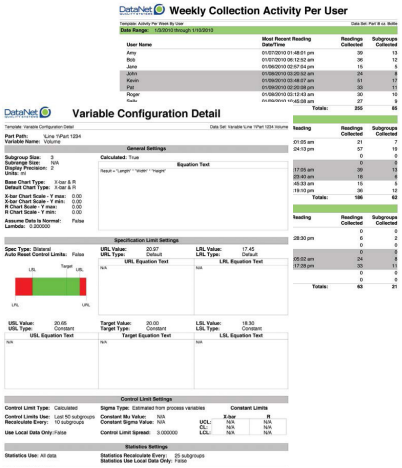
Report

Quickly create, publish and share quality reports across your organization using TorqueIQ's graphical report builder and dozens of standard report templates.

- Build hundreds of custom reports using a visual interface--no programming skills required
- Publish to PDF or HTML and email in a single click
- Leverage a library of commonly used report templates
- Configure your own library of commonly run reports
- Link reports to data sets to quickly right-click and produce reports
- Automate daily, weekly or monthly reporting tasks with TorqueIQ and Microsoft Task Scheduler

Process Variation Report (by Part; Variable)

	CPK	CP	PPM	SIGMA	COST per MILLION
Part: Bottle 1					
Variable: Fill Weight					
1st Quarter	0.5991	0.6420	72,288	0.5192	$126,504.00
2nd Quarter	1.6741	1.6926	<1	0.3939	$1.75
Qtr/Qtr Savings					$126,502.25
Variable: Wall Thickness					
1st Quarter	0.8406	1.3447	11,676	0.0916	$43,785.00
2nd Quarter	1.2780	1.5320	126	0.0692	$472.50
Qtr/Qtr Savings					$43,312.50
Part: Bottle 2					
Variable: Fill Weight					
1st Quarter	0.9558	1.0230	4,139	1.6628	$7,243.25
2nd Quarter	1.2652	1.2790	147	0.6511	$257.25
Qtr/Qtr Savings					$6,986.00
Variable:Wall Thickness					
1st Quarter	1.3994	1.4934	27	0.0805	$101.25
2nd Quarter	1.1012	1.2423	955	0.0670	$3,581.25
Qtr/Qtr Savings					-$3,480.00



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Comply with Regulatory Requirements

TorqueIQ's event log feature enables manufacturers who are subject to regulatory requirements (FDA, USDA, ISO, TS, etc.) to build auditability into their manufacturing process.

- Support FDA 21 CFR part 11 requirements for electronic signatures and forced log outs for system security
- Capture, trace and securely store process data for auditability
- Record every system event, including the deletion of event log items, electronic signatures, and system configuration changes
- Quickly filter and retrieve nearly all system activities such as startup/shutdown, security, administration, data collection and violations

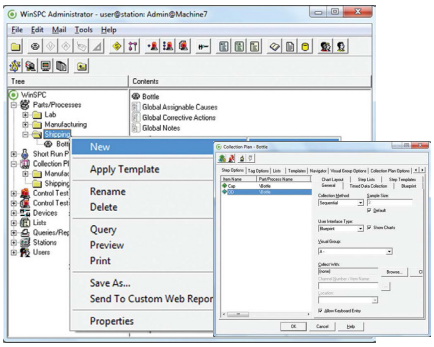
Exchange Information with Systems & Software

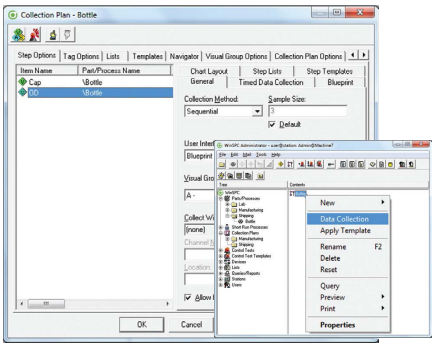
Integrate TorqueIQ with other software and hardware using our built-in APS's with over 400 methods and properties of OLE. TorqueIQ also communicates bidirectionally with other systems, software and devices via OPC (Versions 1-3), DDE, serial, and ODBC.

- Built-in APIs
- Over 400 methods and properties of OLE
- Bi-directionally communicate with intelligent machines and devices
- Successfully integrate with other MES, ERP, HMI systems

Easy to Manage & Operate: Real-Time SPC in 4 Easy Steps

TorqueIQ provides a fast, efficient interface to quickly create, organize, and manage quality programs on a global scale, including all your parts or processes, variables, attributes, tags, and test plans--enabling you to manage large amounts of data and complex parts and processes.

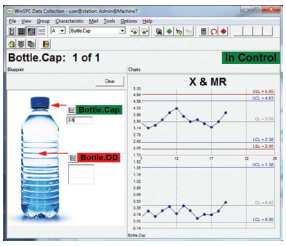




1 Create a part or process **2 Setup a variable or attribute** **3 Build a collection plan** **4 Begin data collection mode**

Train Operators in Less Than 30 Minutes

TorqueIQ offers three simple manual data collection interfaces--all capable of being mastered in minutes regardless of a shop floor operator's level of computer expertise. Choose the layout that works best for you and your team, or customize your own screen to mimic a legacy system.



Add drawings or pictures to intuitively guide users through the data collection process.

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Data Collection
- Collect data from any RS232 or USB device
- Collection rate: 100 points per second
- Collect data in the event of a network failure
- Collect tag values, specification limits, targets, or raw data
- Prompt for data entry at fixed-time intervals
- Supports bidirectional communication using industry standard protocols

Operator Interface
- Standard, blueprint or spreadsheet mode interface styles
- Visually intuitive red-green interface
- Customize screen layout
- Prompt operators to enter data at fixed time intervals
- Cue operators to enter corrective actions, assignable causes and notes
- Embed pictures, drawings or video into collection interface
- Launch work instructions from the menu bar

Monitoring
- Built-in support for Western Electric, Nelson and Shewhart rules
- Built-in equation builder to execute simple or complex calculations from raw data being collected
- Right-click to toggle views and display data in different charts
- Scroll to view data from the "beginning of time"
- Set fixed control limits or automatically recalculate control limits

Charts
- X-bar & R
- X-bar & S
- X-MR
- Median (R)-R
- P, Np, C, U, Q
- Tabular Cusum
- EMMA chart
- EWMV
- EVMS
- EWRMS
- Time Series
- Z & W
- Difference & MR
- Z-bar & S
- Difference-bar & R
- Run charts
- Pareto charts
- Frequency histograms

Triggers & Alarm (custom triggers available)
- Message box with instructions
- Launch electronic work instructions
- Post violation data to a log
- Prompt operators for notes, assignable causes and corrective actions
- Launch an external .exe file
- Reject "unreasonable" data and prompt for another reading
- Send a command to an OPC, OLE, DDE, or serial device
- Increment an attribute pass/fail count
- Write data to a .txt or .csv file

Analysis
- Variable analyzer
- Multivariate analysis with English-language queries
- Cost Inspector™
- Process capability studies
- Scatter diagrams
- Box and Whisker charts

Reports
- Capability
- Production summary
- Certificate of analysis
- Continuous improvement
- Activity by user
- Performance against specifications
- Statistical summary
- Configuration error
- Violation listing
- Variable configuration detail
- Data collection history
- Process variability summary
- Process cost detail
- Cost of process change

Administrative & Technical
- One-touch upgrades
- Centralized administration and granular, role-based security
- Automatic disconnect protection (continuous data collection in the event of a network failure)
- Standard, relational database stores data centrally
- Multi-language support: English, Spanish, German, French, Portuguese

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Superior Return on Investment

The average Mesa Labs customer achieves a 400-600 percent return on their investment within the first year of installing TorqueIQ. Ask your sales consultant for our return on investment calculator and determine how TorqueIQ can boost your bottom line.

Fast Implementation

Use Mesa Labs' service to get your project up and running quickly and efficiently. Our team of implementation experts understand SPC, data collection, and information technology--plus offer years of experience installing TorqueIQ at thousands of manufacturing facilities across the globe.

Most TorqueIQ customers have their staff trained and SPC programs operational after Mesa Labs' installation service. The majority begin earning a return on their investment in as little as 30 days.

The World's Finest Brands Choose DataNet for Superior Quality Control

- Hershey Foods Corporation
- Harley-Davidson Buell
- Abbott Laboratories
- Suniva
- Applied Materials
- Western Digital
- Trane
- Hitachi
- Tyco
- Black & Decker
- GAF Materials
- Sara Lee
- Tropicana
- Welch's
- Bausch & Lomb
- Symmetry Medical
- Borg Warner
- Federal Mogul
- Pratt & Whitney (United Technologies)
- Magna
- Toyota
- Graphic Packaging
- Amway
- Westlake Chemical
- ArcelorMittal
- Dofasco, Inc.
- Goodrich
- Kawasaki

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