

LaserQC® System Specifications

Scanning Accuracy*	±0.05mm (0.002")
Maximum Part Thickness	200mm (8.0")
Maximum Part Weight	136kg (300lbs)
Calibration	Automated
Maximum Scan Zone (single scan)	LaserQC 800 - 760mm x 760mm (30" x 30") LaserQC 1200 - 1220mm x 1220mm (48" x 48") LaserQC Expert - 2440mm x 1220mm (96" x 48")
Oversize Parts	Capable, with merged scan feature
Overall Dimensions (LxWxH)	LaserQC 800 - 1575mm x 1220mm x 2440mm (62" x 48" x 96") LaserQC 1200 - 2007mm x 1651mm x 2440mm (79" x 65" x 96") LaserQC Expert - 2870mm x 2057mm x 2612mm (113" x 81" x 103")
Operating Environment	10 - 38°C (50 - 100°F)
Power Requirements	240V/50 Hz or 110V/60 Hz (UPS supplied)
Laser Device & Output	Laser diode device with maximum 4.5 mW output
Laser Class	Class IIIa, meeting the 21CFR 1040 standard for CDRH certification in North America Class 2M, meeting the 60825-1:1993+A1:1997+A2:2001 standard for CE certification in Europe
Software	LaserQC. Includes inspection, SPC and reverse engineering
Computer System	Current model PC with monitor, color printer, keyboard and mouse
Operating System	Windows® XP
Warranty	One-year warranty on hardware and software
Extended Warranty	Optional**
Extended Support Program	Optional**

Due to continuous product improvements, specifications are subject to change without notice.

**Accuracy results are based on tests conducted on standard production machines using a laser-cut part. Results may vary. Contact Virtek for a full report.*

*** Contact Virtek for details.*



Virtek Vision International Inc., is a leading provider of high value laser-based templating, inspection, marking and engraving products and total systems integration solutions.

We serve customers in the prefabricated construction, aerospace, transportation, metalworking, tool and die and mold making industries, worldwide. Our solutions enable customers to produce their products faster, better and at a lower cost.

We market laser inspection technology and software around the globe through direct channels and distributors, who work closely with Virtek to provide the highest level of technical support and training.

Represented by distribution partners in North America, Europe, Australia & New Zealand and Asia.

VIRTEK

Virtek Vision International Inc.
785 Bridge Street
Waterloo, Ontario
N2V 2K1

Toll free (in North America): 1.800.684.7835
Tel: (+1) 519.746.7190
Fax: (+1) 519.746.3383
Email: laserinspection@virtekvision.ca

www.virtekvision.ca

LaserQC®

Get the Edge

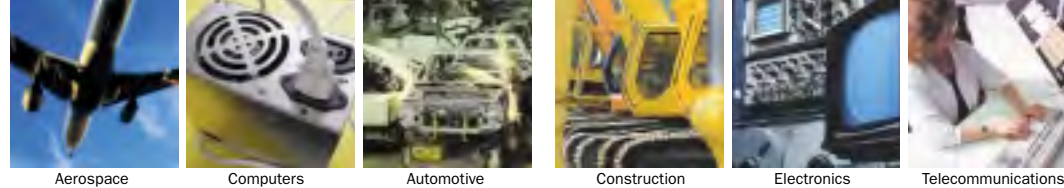
First Article Inspection

Statistical Process Control (SPC)

Reverse Engineering

VIRTEK

LaserQC® Gives you 'The Edge' in 2D inspection



LaserQC brings part inspection up to the speed of today's production technology to dramatically increase throughput in precision sheet metal and gasket fabrication. It is the self-calibrating laser inspection system for first article inspection, Statistical Process Control (SPC) and reverse engineering of 2D materials.

LASER FAST: LaserQC captures over 500 data points per second to make part inspections laser-fast, right on the shop floor.

LASER ACCURATE: The system quickly performs 100% inspections accurate* to $\pm 0.002"$ (0.05mm) in typical production environments.

SHOP FLOOR FRIENDLY: LaserQC offers a reliable, low-maintenance solution that can operate almost anywhere you run CNC equipment. LaserQC self-calibrates and adjusts system settings to accommodate many of the environmental changes common to the shop floor.

CUSTOMER-PROVEN PERFORMANCE: With the help of industry leaders in precision sheet metal work LaserQC has been improved upon, and proven on the shop floor. In use by more than 500 customers worldwide, LaserQC is now on the job in applications ranging from aerospace and high-tech to cabinetry and heavy equipment manufacturing.

GET THE COMPETITIVE EDGE IN EVERY SHOP FLOOR APPLICATION

LaserQC delivers the kind of bottom-line benefits that help your shop to build and retain more business: faster turnaround, increased throughput, lower costs per part, reduced scrap and rework, higher customer satisfaction.

First article inspection Putting laser inspection on your shop floor translates into more green-light time for your CNC equipment. LaserQC will inspect flat parts on the spot, completing a 100% scan in just seconds and comparing every measurement to CAD specifications. With inspections performed by the equipment operator right at the production station, you avoid QC bottlenecks and save time at every step. Your line can make more parts with current staff and equipment, and help you satisfy customer demands for fast delivery on precision work.

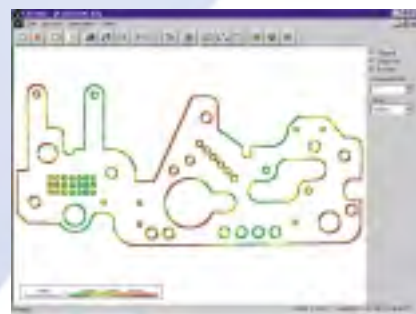
'Accuracy at-a-glance' LaserQC makes first part inspection fast and easy with no special training required. Laser inspection scans produce a color-coded visual display that shows the image of the CAD drawing and design tolerances along with the scanned part - any off-spec variance is immediately apparent, even to the untrained eye. For oversize parts, LaserQC automatically merges multiple scans to create a single image.

SPC and quality reporting Inspection data from LaserQC is saved in industry-standard .dxf files used by CAD programs. From these files, the LaserQC system generates reports to your exact specifications within seconds of completing the scan. The system automatically creates detailed, printed color inspection records and data files of the scanned part measurements including any variances from the CAD data. SPC functions include charting data in a Histogram, Run Chart, and X Bar/Range plot for analysis of part production processes over a specified period of time. You get complete,

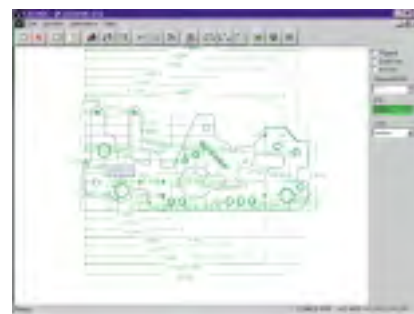
automatic documentation and traceability to meet requirements for ISO, TQM, SixSigma, Lean and QS reporting. Data files can easily be exported to common Windows®-based programs.

The speed and simplicity of LaserQC, combined with its automated documentation capabilities, enable you to upgrade your quality process with minimal cost, training and effort.

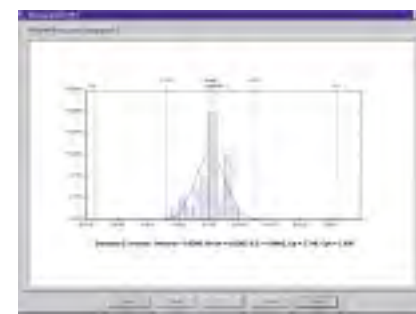
Reverse engineering Precision, 'while you wait' reverse engineering is a built-in feature with every LaserQC system. The scanning process captures the complete profile of existing parts or templates at laser speed, and stores the data in CAD-compatible .dxf files. The software even allows you to manipulate the scan data and part profile on screen so that you can optimize the quality of the CAD model. LaserQC eliminates the need for costly hand measurement and CAD programming. You simply export the LaserQC-generated .dxf file for post processing or add it to your CAD library.



'Accuracy at-a-glance'
LaserQC's Quick Inspect format color-codes the varying tolerances to show any off-spec variances.



Eliminate your QC bottleneck
Save time by generating a fully dimensioned Inspection Check Sheet in seconds with LaserQC and meet your customers' and your own internal quality requirements.



Analyze and improve your production processes
LaserQC generates detailed color inspection reports to your exact specifications. SPC functions include charting data in a Histogram, Run Chart, and X Bar/Range plot.

Fast and easy

LaserQC is designed to set up easily so your system gets up and running in less than a day. The intuitive user interface allows new operators to become fully proficient within just a few hours.

HOW IT WORKS The system consists of a Class IIIa/Class 3R laser projector mounted over a retro-reflective scanning table and powered by Virtek's proprietary LaserQC software. The software runs on standard Windows-based workstations.

When you start up LaserQC, an inspection window opens, and you are ready to begin scanning. Simply position the part on the scanning table, then click the "scan part" icon. The system automatically self-calibrates and a visible laser beam scans your part.

For gaskets and seals and other parts made of flexible materials LaserQC is available with a part stabilizer to flatten parts. This integrated cover system sandwiches a part between the glass cover and the support glass to force the part to conform to the flat surface. As a result, the accuracy of the scan is independent of the flatness of the original part.

LaserQC captures over 500 data points per second, which it relays and images on the computer screen in real time. The software displays the scanned image superimposed on the CAD reference image, and the tolerances are color coded to instantly reveal any variances.

LaserQC will accurately scan flat parts up to 8" (200mm) thick. Scanning tables are available for parts up to 30" x 30" (760mm x 760mm), 48" x 48" (1220mm x 1220mm) and 96" x 48" (2440mm x 1220mm). For parts larger than the scanning table, LaserQC automatically merges multiple scans into a single image.

As soon as the scan is completed, LaserQC saves the measurement coordinates in vector format. This format allows immediate comparison with the existing CAD model and enables you to immediately generate inspection reports, perform statistical analysis, or produce a .dxf file for reverse engineering.

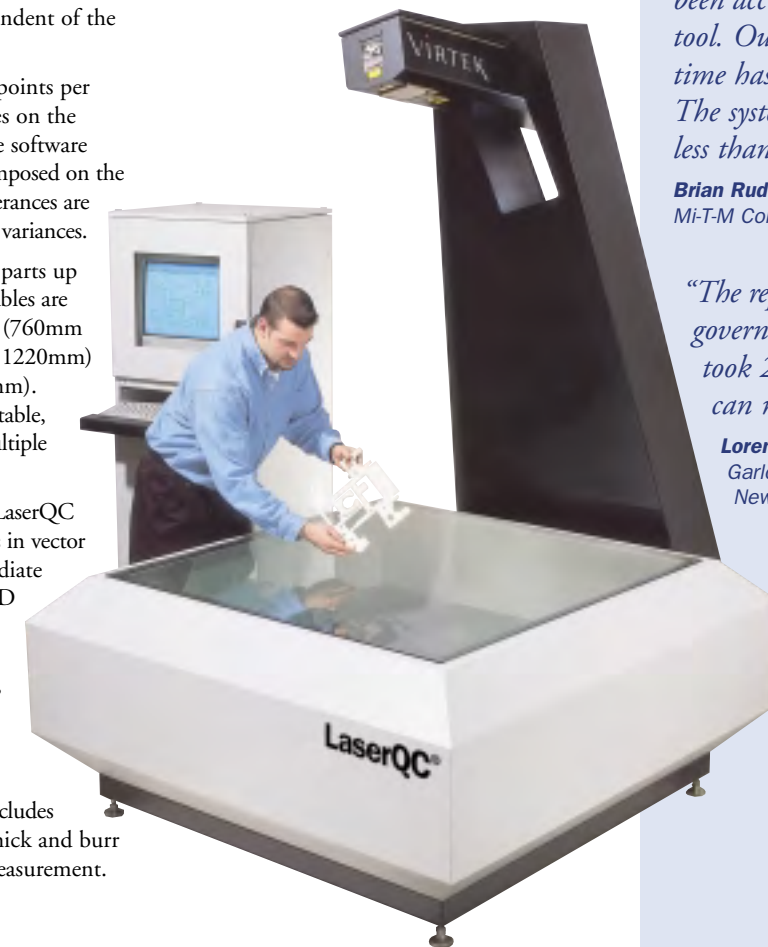
For flexible part manufacturers LaserQC's unique functionality includes concentric feature measurement, nick and burr detection and deformable part measurement.

Advanced technology with expert support

Our continuous improvement program is rooted on our customers' shop floor, where Virtek service and support teams gain the first-hand knowledge to recognize operational needs and translate them into technical functionality. With LaserQC you are always assured of the latest updates and product advancements.

Virtek's commitment to customers extends to in-depth presale and aftersale support. Our team works closely with customers' engineers, technicians and programmers to ensure the best match with production needs and full delivery of LaserQC's capabilities.

*Accuracy results are based on tests conducted on standard production machines using a laser-cut part. Results may vary. Contact Virtek for a full report.



"Our customers constantly bring us parts to be reverse engineered. With LaserQC this process is quick and easy. The system will pay for itself in less than two years."

John Tempelton, General Manager,
Tempelton & Sons Metal Products Ltd.,
Mississauga, Ontario, Canada.

"Before we had the LaserQC, we had to sit down and use calipers to check every single hole. Now, we get all that information in moments. LaserQC shows you where the errors are instantly. It saves us time and has improved our quality process."

Phu Vu, CNC Programmer,
L&T Precision, Poway, California, USA.

"The Virtek LaserQC system has been accurate and reliable inspection tool. Our flat layout inspection time has been reduced by 75%. The system has paid for itself in less than 6 months."

Brian Ruden, Quality Assurance Manager,
Mi-T-M Corporation, Peosta, Iowa, USA

"The reporting requirements for our government contracts previously took 2 days. With LaserQC we can now do it in 25 minutes."

Loren Buck, Manufacturing Manager,
Garlock Gasket and Seal,
New York, New York, USA