

## LASERQC<sup>®</sup>

- First Article Inspection
- Statistical Process Control
- Reverse Engineering
- Automatic Form Measurement

LaserQC



LaserQC

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#### LASERQC<sup>®</sup> BENEFITS

LaserQC

LASERQC® IS THE PREMIER SELF-CALIBRATING LASER INSPECTION SYSTEM IN ITS CLASS. LASERQC® DRAMATICALLY INCREASES THROUGHPUT IN PRECISION SHEET METAL, PRECISION FOAM, LEATHER, AEROSPACE AND GASKET FABRICATION. THE SYSTEM IS DESIGNED FOR FIRST ARTICLE INSPECTION, QUALITY REPORTING (SPC, ISO, LEAN, ETC.), REVERSE ENGINEERING AND AUTOMATIC FORMED MEASUREMENT.

#### Laser Fast

LaserQC<sup>®</sup> 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 ± 0.002" (0.05mm) for 2D measurements and ± .010" for Formed (3D) measurements.

#### Shop Floor Friendly

LaserQC<sup>®</sup> offers a reliable, lowmaintenance solution that operates along side your facilities CNC equipment. LaserQC<sup>®</sup> self-calibrates and adjusts system settings to accommodate for environmental changes common to the shop floor.

LaserQC

#### **Fast and Easy**

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

#### **Customer-Proven Performance**

Insight from industry leaders in precision sheet metal work makes the LaserQC<sup>®</sup> a proven performer on the shop floor. In use by more than 1500 companies worldwide, the LaserQC<sup>®</sup> is utilized in applications ranging from aerospace and high-tech to cabinetry and heavy equipment manufacturing.

#### **Customer Support**

Our continuous improvement program is rooted on our customers' shop floor, where our worldwide Service and Support teams gain first-hand knowledge, recognizing operational needs and translating them into technical functionality. Our team works closely with engineers, technicians and programmers to ensure production needs and full delivery of LaserQC<sup>®</sup> capabilities.

# LaserQC<sup>®</sup> delivers bottom-line results.



LaserQC<sup>®</sup> 1200\*

### Get the Edge in 2D and Formed Part Inspection

LASERQC® DELIVERS THE KIND OF BOTTOM-LINE BENEFITS THAT HELP YOUR SHOP BUILD AND RETAIN BUSINESS – FASTER TURNAROUND, INCREASED THROUGHPUT, LOWER COSTS PER PART, REDUCED SCRAP AND REWORK AND ULTIMATELY HIGHER CUSTOMER SATISFACTION.

#### **First Article Inspection**

Integrating laser inspection on your shop floor translates into more 'green-light' time for your production equipment. LaserQC<sup>®</sup> inspects flat and formed parts on the spot, completes scans in just seconds and compares every measurement to CAD specifications.

#### Accuracy Dashboard

LaserQC<sup>®</sup> makes first part inspection fast and easy with no special training required. Laser inspection scans produce a color-coded visual display that illustrates the part's devision from expected. Anything outside of tolerance is immediately apparent, even to the untrained eye. For oversized parts,

#### 3D Laser Accurate Measurements are Just a Click Away

The LaserQC AFM system virtually allows you to measure any formed feature you can measure with calipers, height guage or a digital protractor. Measure heights, raised features, edge-to-edge or hole to hole on interior flanges. Our system virtually replaces hand measurements tools and makes 3D measurement as simple as the click of a mouse.



Automatic Form Measurement (AFM)

The LaserQC AFM system still has all the functionality of our 2D system while accurately measuring heights and raised features with the speed and accuracy you've come to expect from our 2D system. You can attain better, unbiased results, eliminating the need for clumsy hand tools and human error. This powerful tool also has enhanced reporting and data collection, making the QC process painless and automatic for your staff.

"With confidence you can ensure that all required inspection occurs when you want it with the results that you can rely on."

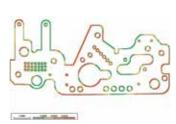
LaserQC<sup>®</sup> automatically merges multiple scans to create a single image and saves the measurement coordinates in vector format.

#### 2D Reverse Engineering

2D 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 files. The software allows you to manipulate the scan data and part profile on screen to optimize the quality of the CAD model. LaserQC® eliminates costly hand measurement and CAD programming. Simply export the LaserQC®-generated CAD file for post processing or add it to your CAD library.

#### SPC and Quality Reporting

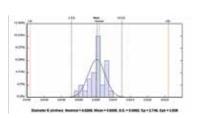
Inspection data from the LaserQC<sup>®</sup> is saved in industry-standard CAD files. From these files, the system generates reports to your exact specifications. The system automatically creates detailed, color-coded inspection records and data files of the scanned part. Automatically create documentation and traceability to meet requirements for ISO, TQM, Six Sigma, Lean and QS reporting. Easily export data files into common Windows<sup>®</sup> - based programs.



Accuracy Dashboard LaserQC $^{\odot}$ 's color codes indicate the part's deviation from expected.



Eliminate your QC Bottleneck Save time by generating a fully dimensioned Inspection Check Sheet in seconds with LaserQC<sup>®</sup> and meet your customers' and your own internal quality requirements.



Analyze your Production Processes LaserQC<sup>®</sup> generates detailed color inspection reports to your exact specifications. SPC functions include charting data in a Histogram, Run Chart, and X Bar/Range plot.

"Our customers constantly bring us parts to be reverse engineered. With LaserQC<sup>®</sup>, 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

"We have been a Virtek LaserQC<sup>®</sup> user for more than 10 years, and upgraded to the new AFM system. The ease of operation, speed, and accuracy sold us. This is a tool every shop needs... (it) checks material thickness as well as our tubing. We are definitely sold on the new technology and are a very satisfied Virtek user."

#### Mark Lindquist, Owner, Rapid-Line Inc., Grand Rapids, Michiga<u>n, USA</u>

"The Virtek LaserQC<sup>®</sup> system has been an 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<sup>®</sup>, we can now do it in 25 minutes."

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

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

#### LaserQC<sup>®</sup> System Specifications

| Scanning Accuracy*                  | LaserQC <sup>®</sup> 800 and 1200<br>±0.05mm (0.002") (2D only)<br>±0.25mm (0.010") for height measurement<br>LaserQC <sup>®</sup> Expert**<br>±0.13mm (0.005") (2D only)                          |
|-------------------------------------|--|
| Maximum Part Thickness              | 200mm (8.0") for 2D, 305mm (12.0") for AFM   |
| Calibration                         | Automated  |
| Maximum Scan Zone<br>(single scan): | LaserQC® 800 - 760mm x 760mm (30" x 30")<br>LaserQC® 1200 - 1220mm x 1220mm (48" x 48")<br>LaserQC® Expert - 2440mm x 1220mm (96" x 48")   |
| Oversized Parts                     | Capable with merged scan feature   |
| Overall Dimensions (LxWxH)          | LaserQC® 800 - 1575mm x 1220mm x 2440mm<br>(62" x 48" x 96")<br>LaserQC® 1200 - 2007mm x 1651mm x 2440mm<br>(79" x 65" x 96")<br>LaserQC® Expert - 2870mm x 2057mm x 2612mm<br>(113" x 81" x 103") |
| Operating Environment               | 10 - 38°C (50 - 100°F)   |
| Power Requirements                  | 110V/60 Hz or 240V/50 Hz   |
| Laser Device & Output               | Laser diode device with maximum 4.5mW output   |
| Laser Class                         | Class IIIa, meeting the 21CFR 1040 standard<br>for CDRH certification in North America<br>Class 2M, meeting the<br>60825-1:1993+A1:1997+A2:2001, standard for<br>CE certification in Europe        |
| Software                            | Includes inspection, SPC and reverse engineering   |
| Computer System                     | Current model PC with monitor, color printer,<br>keyboard and mouse  |
| Operating System                    | Windows® 7   |
| Warranty                            | One-year warranty on hardware and software   |
| Extended Warranty                   | Optional***  |
| Extended Support Program            | Optional***  |
| Part Stabilizer                     | 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 application specific information. \*\* The LaserQC Expert is not available in all countries. \*\*\* Contact Virtek for details.

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