



Quadra-Chek® Digital Readouts

Know precisely





You can't make a more accurate choice.

Quadra-Chek® Digital Readouts Quadra-Chek is the world's premiere developer of metrology software and digital readouts for measuring and inspecting 2D geometric components.

Quadra-Chek systems are the standard control interface on the precision measuring devices of many of the world's leading precision metrology instrument manufacturers.

Quadra-Chek digital readouts support industries that call for precise measurement and inspection of 2D parts in single-sensor and multi-sensor environments. The products feature an intuitive user interface and simple, meaningful visual displays. Their design reflects a deep understanding of user needs and a uniform work process model that supports operators at every stage in the measurement process. Quadra-Chek digital readouts lead the precision inspection industry with innovations that improve operator productivity, reduce errors and save time and money.

Gage-Chek Metrology Displays

The Gage-Chek is a versatile display allowing up to eight inputs. The Gage-Chek combines familiar digital readout functions with color graphics to provide fast and accurate measurement feedback. Channels can be mathematically combined for dimensions such as thickness, flatness and volume. Results can be displayed numerically or graphically or archived for process studies such as SPC.

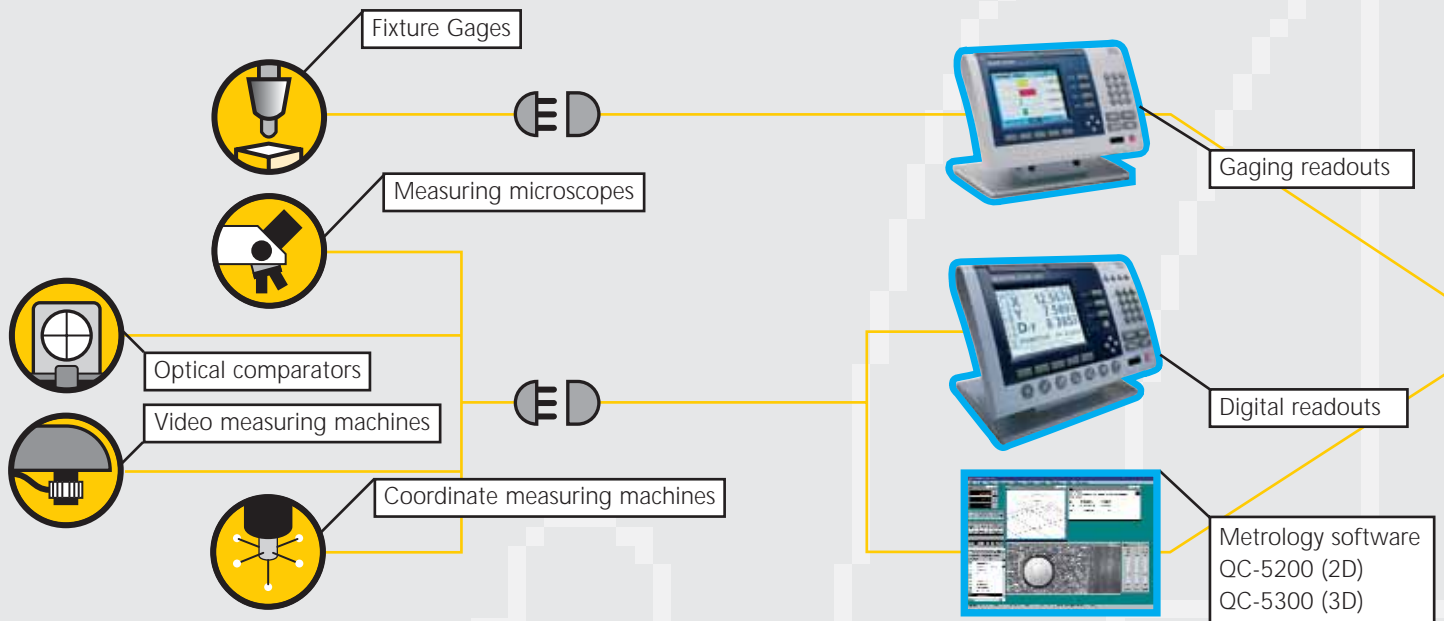
Quadra-Chek 200 Series Geometric Readouts

A time-saving measurement tool with patented Measure Magic® technology. Ideal for measuring 2D features. Can be used with inspection tools such as optical comparators, measuring microscopes and coordinate measurement machines.

Quadra-Chek 300 Series Geometric Readouts

An advanced digital readout with an enhanced, color touch-screen interface. Includes patented Measure Magic® technology. Ideal for measurement of 2D features. Can be used with inspection tools such as measuring microscopes, video systems and video edge detection.

Integrate fully



Versatile instrument support

If you already have a Quadra-Chek product on your shop floor—on any metrology instrument—you can easily integrate our newest products. If you are just developing a dimensional inspection capability, no other company provides as broad a product offering to help you grow as your needs change. Best of all, Quadra-Chek products share measuring protocols and interface conventions across the Metronics product line, which accelerates training, promotes cross-training and improves measurement accuracy.

Comprehensive instrument interfaces

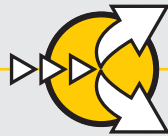
Since our founding in 1983, Metronics has led the industry in the development of measurement solutions for diverse measuring platforms and modern digital readouts. The company is recognized around the world as a comprehensive resource for encoder interfaces that support both the newest tools and the existing platforms of leading metrology instrument manufacturers. We provide encoder interfaces compatible with new and existing instruments from the world's leading manufacturers.

Complete digital readout and software-based solutions

Quadra-Chek products solve 2D and 3D measurement problems across industries and manufacturing functions, from inexpensive single-axis systems to versatile multi-axis, multi-probe platforms that expand in functionality as your measurement needs grow. The Quadra-Chek line includes Windows®-based software solutions and geometric readouts, each with configuration options and complementary accessories that provide turnkey support for all of your precision measurement challenges.

Metronics develops world-class metrology software and geometric digital readouts. The Quadra-Chek product line provides unmatched support for single-axis and multi-axis dimensional measurement of 2D and 3D parts on both new and existing tool platforms.

Quadra-Chek digital readouts and PC-based products integrate innovative user interface conventions, state-of-the-art ergonomics, powerful data import, export and analysis tools. All Metronics products are supported by an international team of field engineers.



Intuitive interface design

Quadra-Chek products incorporate insights gained from ongoing human factors research. They simplify repetitive tasks, visualize measurement data, and expand the possibilities of dimensional inspection processes. Intuitive work process models and operator interface innovations extend programming, automation and measurement capabilities across instruments; advance new standards for ease-of-use; and reduce operator training time.

- › Windows® platform
- › Graphic user interface
- › Icon-based tools and toolbars
- › Color coding
- › Audio feedback
- › Contextual help
- › Intelligent, time-saving protocols

Powerful data management tools

Integral communication tools enable operators to record, store and analyze measurement data. Operators can selectively or historically document measurements in dimensioned photographs and schematic drawings, as well as transfer measurement data efficiently among machines performing related tasks. Operators can also export data to online databases for offline analysis by managers and quality control specialists.

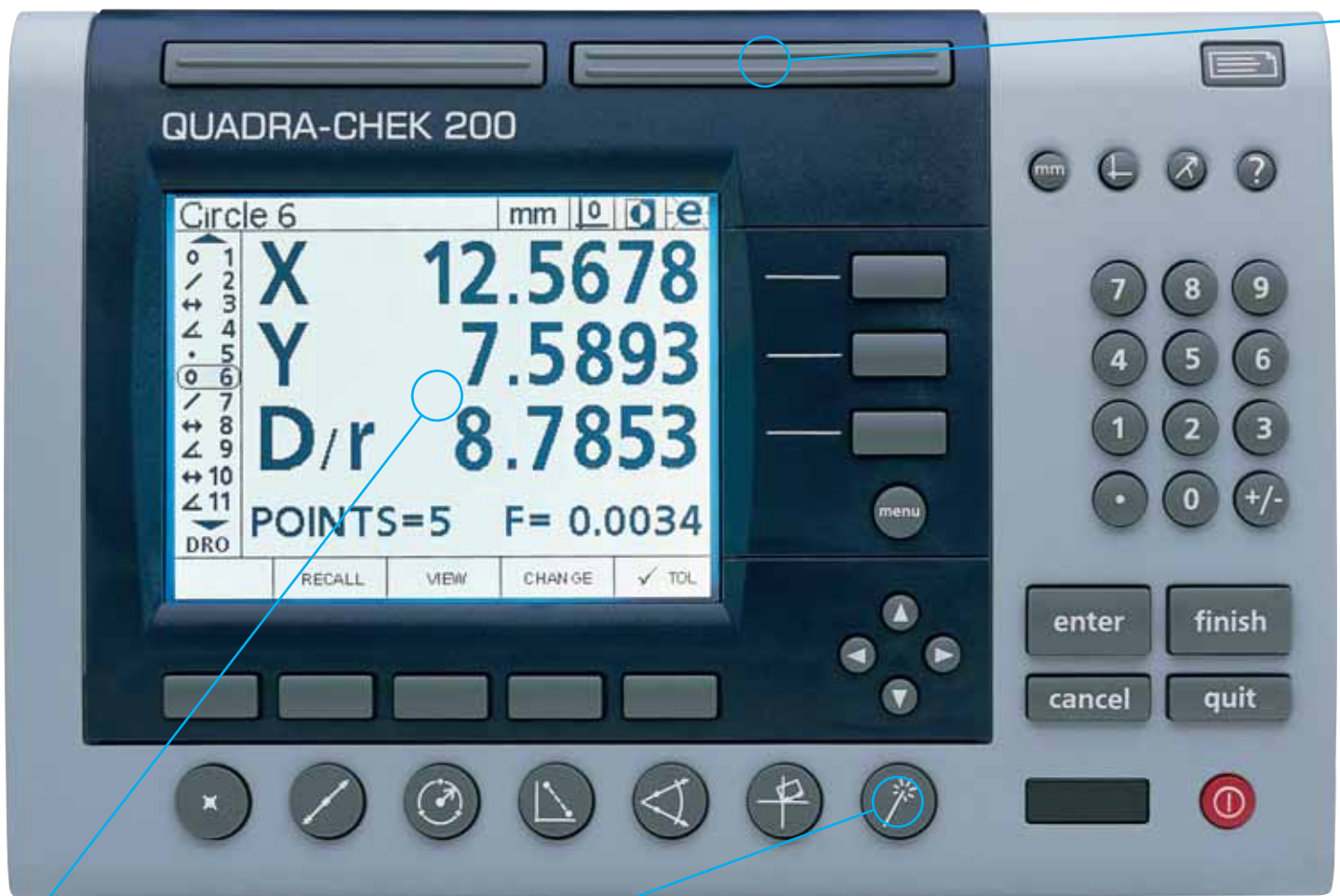
- › CAD export
- › SPC export
- › CNC control
- › Integrated databases
- › Custom reporting

Global support network

Metronics field engineers, based in offices located all over the world, can assist in the onsite review of dimensional inspection requirements. Complete contact details are available online at www.metronics.com.

- › United States
- › France
- › Germany
- › Italy
- › United Kingdom
- › Japan
- › Korea
- › Taiwan
- › China

Design innovation



High-visibility LCD display A backlit LCD with .5" letter height is easy to read in diverse lighting situations and from indirect viewing angles.

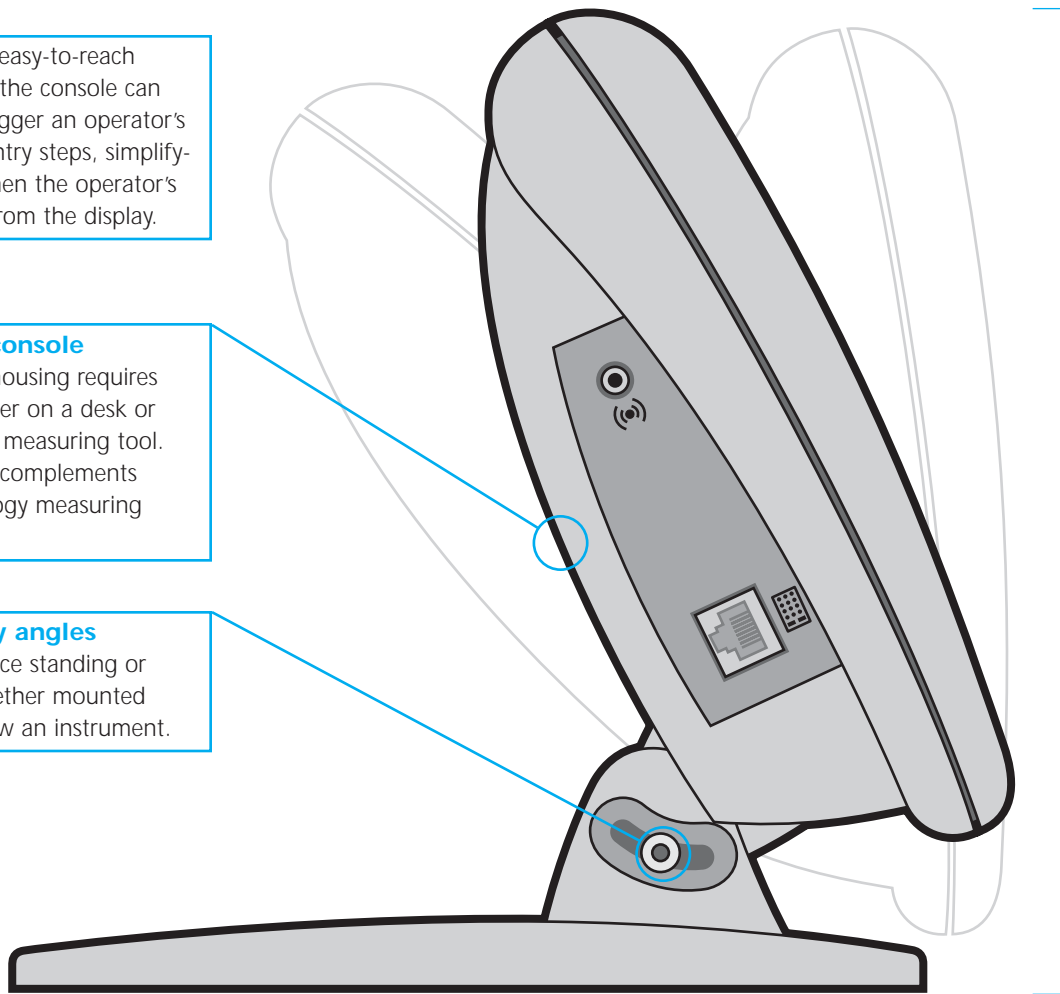
Familiar interface Familiar, intuitive interface conventions were developed through ongoing operator research to simplify repetitive tasks and expedite the training process.

Redesigned Quadra-Chek digital readouts incorporate a range of ergonomic and display interface innovations that advance new standards for ease of use.

HotKeys Two large, easy-to-reach buttons at the top of the console can be programmed to trigger an operator's most frequent data entry steps, simplifying measurements when the operator's attention is diverted from the display.

Versatile display console
The slender monitor housing requires minimal space, whether on a desk or mounted directly to a measuring tool. Its sleek visual design complements contemporary metrology measuring instrument designs.

Adjustable display angles
The monitor tilts to face standing or seated operators, whether mounted above, beside or below an instrument.



Maximum height: 7.5"

Base depth: 7.5"

Understand completely



Architecture The Quadra-Chek unique interface seamlessly incorporates the best tools and annotation conventions of previous Quadra-Chek products, reducing operator training time. Fast, familiar tools improve productivity and enhance measurement consistency throughout the entire measurement process.



Input Reduce operator subjectivity and fatigue, and enhance productivity through the use of optical edge detection and automatic point entry.



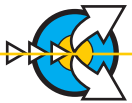
Measurement Record desired feature and construction measurements quickly, easily and accurately with patented software features like Measure Magic®. Accelerate the measurement process with tools that automatically complete complex work steps.



Programming Simplify difficult and repetitive measurement sequences with robust, easy-to-use programming tools. Create step-by-step part programs using a simple self-teach mode to guide subsequent measurements.



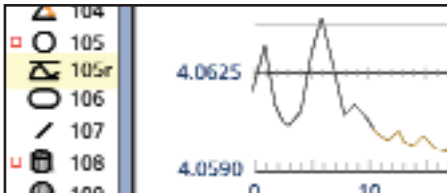
Modern metrology is a complex sequence of measuring, recording, analyzing and reporting dimensional data. The conceptual model underlying the Quadra-Chek digital readout design organizes the workflow to support operators at every stage of the measurement process.



Data Management Manage measurement data in ways that reduce screen clutter, reveal meaningful information patterns and visualize the complex relationships among measured features.



Output Streamline communication among operators, management, dispersed departments and quality-control teams. Send measurement information to a variety of applications, printers or databases. Exchange formatted data easily with partners or colleagues throughout the company and around the world.

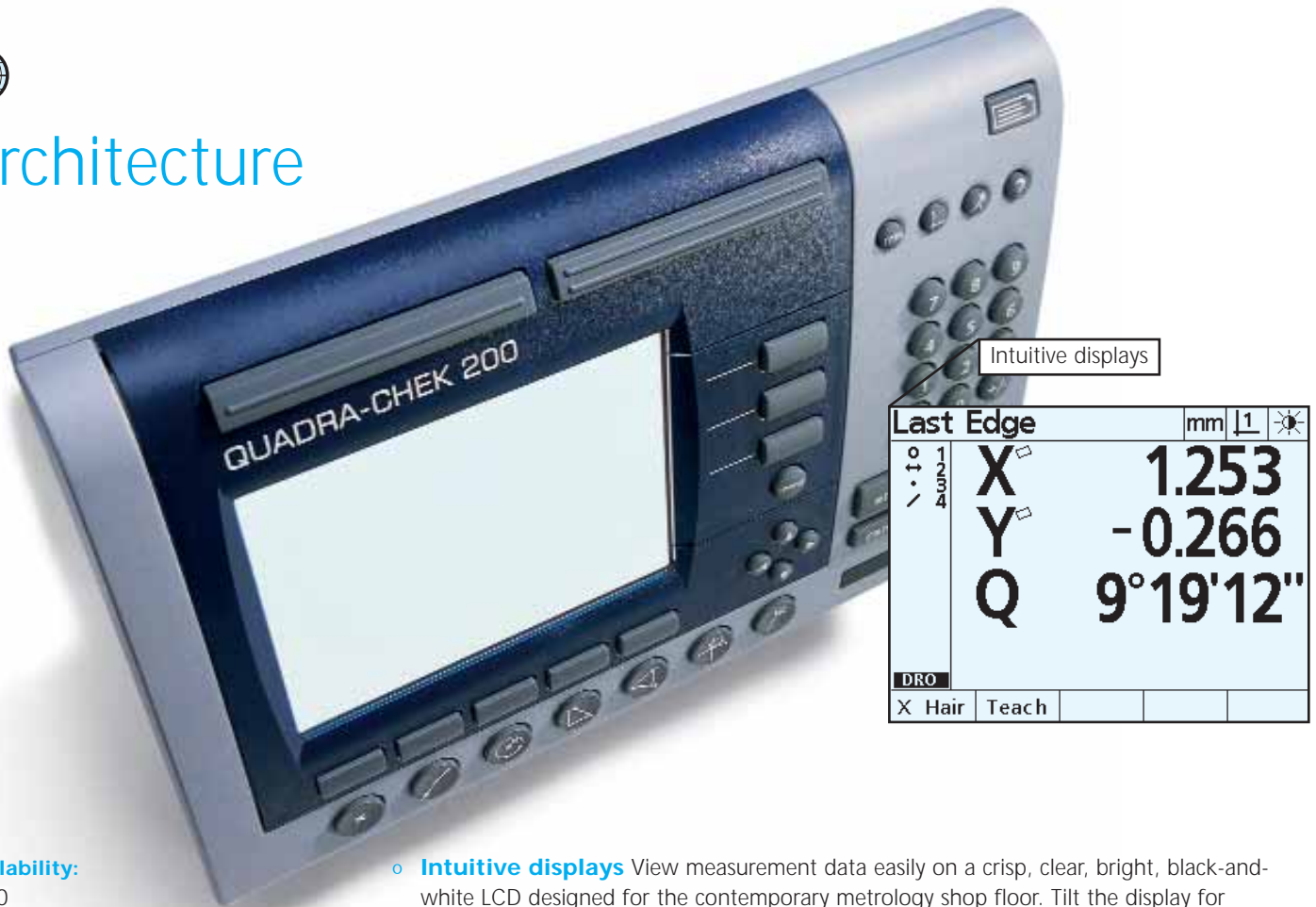


OC 200 Feature Print Out						
Date	Time					
inch						
NO	PKATIRK	11	UNIT:	INFECTION		LINKME:
0007	Verant	1	mm	K =	0.1110	
			A DMS	Y	1.110	
0002	Line	2	mm	X =	0.975	<
			A DMS	Y =	0.105	

The powerful, familiar architecture of Quadra-Chek digital readouts empowers operators during every step of the measurement process.



Architecture



Availability:

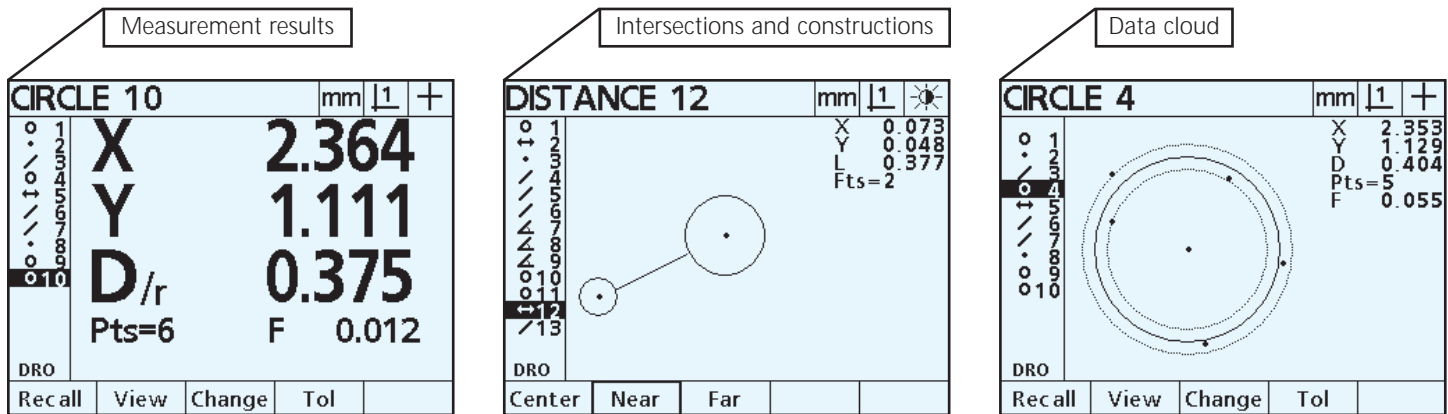
- o 200
- o 300
- o 100, 200, 300

- o **Intuitive displays** View measurement data easily on a crisp, clear, bright, black-and-white LCD designed for the contemporary metrology shop floor. Tilt the display for multiple viewing angles.
- o **Consistent user interface** Experience a proven interface consistent with other Quadra-Chek products that ensures operator accuracy and reduces operator training time.
- o **Options** Get the right tools for the job. Optional remote keypads, footswitches and printers help operators capture the precise measurement data more conveniently while streamlining the work process.
- o **Sound feedback** Listen for helpful sound feedback from a powerful built-in speaker. Different sound cues prompt operator action without interrupting work flow, speeding data entry.
- o **Auto repeat** Measure features and print the results on the fly. Improve productivity and recordkeeping, and share information throughout the company and around the world.
- o **Foreign languages** The QC-200 software accommodates English, Spanish, Italian, German, Chinese, Japanese, French, Czech and Portuguese operators.
- o **Context-sensitive help** Decrease training time and costs with graphics-rich, context-sensitive help that guides shop-floor personnel through Quadra-Chek interface conventions.

Patented features reduce repetitive measures and simplify complex work steps.



Input and Measurement

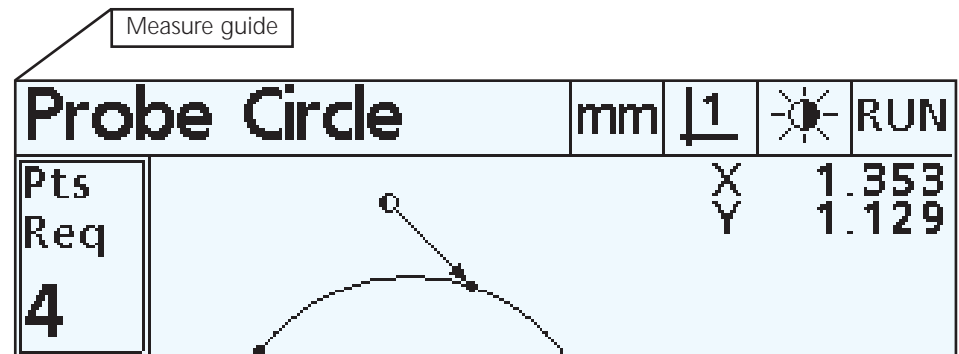


- o **Optical edge detection** Achieve higher throughput, more accurate measurements and more consistent data with optical comparators using optical edge detection. Automatic point entry reduces operator subjectivity and fatigue.
- o **4-axis capability** Use Quadra-Chek to measure up to four axes per part. Quickly and accurately determine measures for X, Y, Z and Q (an integrated rotational axis for angular measurement).
- o **Measure Magic®** To measure, simply probe points and click. Quadra-Chek metrology software detects, without operator intervention, the feature type being measured. With this patented feature, operators can inspect multiple features without taking their eyes off the part that speeds throughput, improves accuracy and reduces user fatigue.
- o **Intersections and constructions** Obtain essential intersection and construction results by selecting from the list of previously measured features, complete with graphics.
- o **Data cloud** Improves the presentation of measurement data with graphic displays of measured features that reinforce operator comprehension by visualizing complex data sets.
- o **Geometric tolerancing** Use Quadra-Chek's unique graphic representations to instantly view pass/fail performance details for critical part dimensions.
- o **Results** Display important measurement data in an uncluttered, comprehensive display.
- o **Video edge detection** For improved throughput and repeatability.

Quadra-Chek digital readouts feature an easy-to-use programming interface that helps streamline difficult and repetitive measures.



Programming



- **Part programming** Quickly and easily create, edit and run part programs. Program a measurement sequence once and run it back as often as you need. Measure the same number of points per feature, in the identical sequence, part after part.
- **Measure guide** Visual cues guide each feature measurement of a part, exactly and repeatedly, to assure complete and consistent data collection.
- **Light Control** Up to six channels of programmable light control.

Availability:

- 200
- 300
- 100, 200, 300

Operators can easily format, analyze and communicate measurements throughout the company and around the world.



Data Management and Output



Availability:

- o 200
- o 300
- o 100, 200, 300

- o **Data management** Quadra-Chek digital readouts allow operators to easily analyze and communicate measurements throughout the department and the entire organization.
- o **Integrated database** Store, retrieve and manage extensive amounts of measurement data on the shop floor. Check quality control at the instrument platform within a familiar and intuitive interface. Share information locally and globally. Export to Microsoft® Office® applications.
- o **Results view** Graphic representation of the data cloud with errors. Feature measurement results and fit type.

Date	Job	Time	Feature	Fit Type	X	Y	Z	D
001	FRONT	1	Circle	A DMS	0.110	1.110		
002	Line	2	Line	A DMS	0.875	0.150		
003	Circle	3	Circle	A DMS	1.150	0.853		
004	Distance	4	Distance	A DMS				
005	Line	5	Line	A DMS	1.200	1.150		
006	Line	6	Line	A DMS	0.880	0.200		

- o **Print output** Print measurement results using a serial or parallel printer in an easy-to-read 40- or 80-column format.
- o **Data output** Parallel and serial ports make it easy to transfer data to PCs, networks and printers.
- o **USB** Save data and connect to peripherals with the USB port.

A flexible, compact and precise digital readout for 1- to 4-axis instruments. Ideal for measuring angular or linear dimensions. Can be used with inspection tools including optical comparators, measuring microscopes and coordinate measurement machines. *Shown with optional remote control.*



Quadra-Chek 100 Series



Inputs

Up to 4 axes

External connections:

Footswitch

Remote keypad

Touch probe

RS-232C serial port

Parallel port

Configurations

	110	120	121	130	131
X-axis					
Y-axis					
Z-axis					
Q-axis					

Specifications

LCD	6" b&w
Display digit size	.5"
Resolution down to	.000004" or .0001mm
Operating temperature	0°C–45°C
Enclosure (W x H x D)	11.5" x 7.5" x 2.75"
Base (W x H x D)	10" x 2" x 7.5"
Enclosure weight	3.5 lbs
Base weight	7 lbs
Input voltage range	85 VAC–264 VAC
Input frequency	43 Hz–63 Hz

Our original digital readout with a fresh new interface and sleek design. A time-saving measurement tool with patented Measure Magic® technology. Ideal for measuring features of 2D features. Can be used with inspection tools such as optical comparators, measuring microscopes and video systems.



Quadra-Chek 200 Series



Inputs

Up to 4 axes

External connections:

Footswitch

Remote keypad

Touch probe

RS-232C serial port

Parallel port

Configurations

	220	220e	221	221e	230	230e	231	231e
X-axis								
Y-axis								
Z-axis								
Q-axis (Electronic protractor)								
Optical edge detection								

Specifications

LCD	6" b&w
Display digit size	.5"
Resolution down to	.000004" or .0001mm
Operating temperature	0°C–45°C
Enclosure (W x H x D)	11.5" x 7.5" x 2.75"
Base (W x H x D)	10" x 2" x 7.5"
Enclosure weight	3.5 lbs
Base weight	7 lbs
Input voltage range	85 VAC–264 VAC
Input frequency	43 Hz–63 Hz

The QC-300 features an enhanced touch-screen interface and patented Measure Magic® technology. It is ideal for the measurement of 2D microscopes, optical comparators and video systems. All QC-300 Series models include parallel, serial and USB ports for use with printers and on networks.



Quadra-Chek 300 Series



Inputs

Up to 4 axes

External connections:

Footswitch

Remote keypad

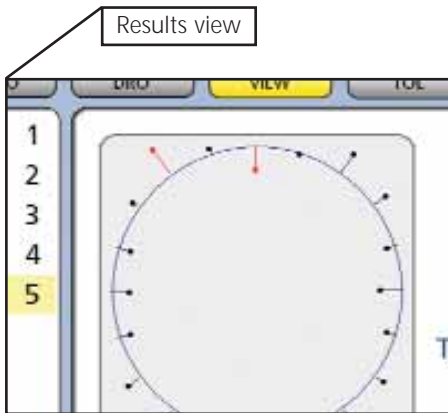
RS-232C serial port

Parallel port

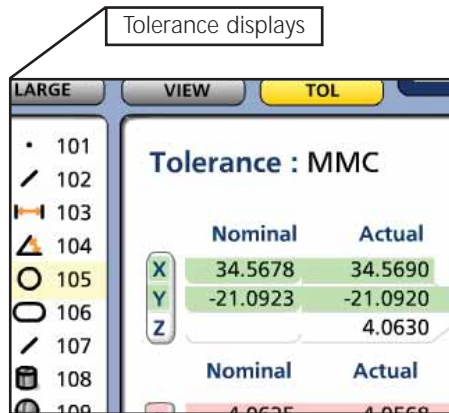
USB

Specifications

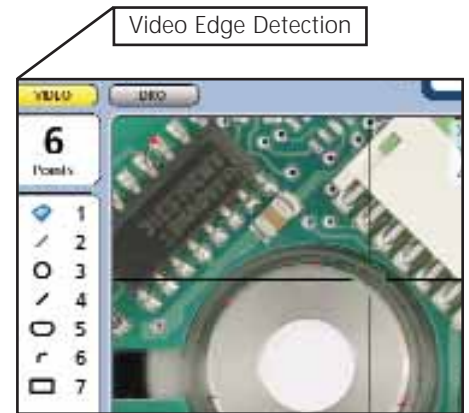
LCD	8.4" color touch screen SVGA
Resolution down to	.000004" or .0001mm
Operating temperature	0°C–45°C
Enclosure (W x H x D)	11.5" x 7.5" x 2.75"
Base (W x H x D)	10" x 2" x 7.5"
Enclosure weight	3.5 lbs
Base weight	7 lbs
Input voltage range	85 VAC–264 VAC
Input frequency	43 Hz–63 Hz



Results view Graphic representation of the data cloud with errors. Feature measurement results and fit type.



Tolerance displays Translates data-intensive reports into visual displays that are readable at a glance.



Automatic Video Edge Detection For improved throughput and accuracy.

QC-320 Series

Configurations	320	321	323	324
2D Measurement	Available	Available	Available	Available
X-axis	Available	Available	Available	Available
Y-axis	Available	Available	Available	Available
Z-axis	Not Available	Available	Available	Available
Q-axis (Electronic protractor)	Not Available	Available	Not Available	Available

Options

Motion control system	Available	Available	Available	Available
Video edge detection (color or b/w)	Available	Available	Available	Available

Please call (603) 622.0212 for options pricing.

The new Gage-Chek is a multi-axis metrology display that accepts up to eight discrete inputs. It features intuitive visual displays, helpful audio cues and user-defined formulas. It also reports dynamic Min/Max measurements, provides SPC analysis from an integrated database and includes connectivity to PCs and other peripherals.



Gage-Chek



Specifications

LCD	6" color
Display digit size	.45"
Resolution down to	.000004" or .0001 mm
Operating temperature	0°C–45°C
Enclosure (W x H x D)	11.5" x 7.5" x 2.75"
Base (W x H x D)	10" x 2" x 7.5"
Enclosure weight	3.5 lbs
Base weight	7 lbs
Input voltage range	85 VAC–264 VAC
Input frequency	43 Hz–63 Hz

Inputs

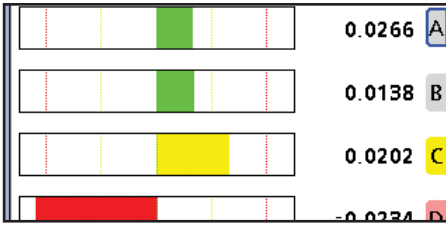
1-, 4-, and 8-axis input available

External connections:

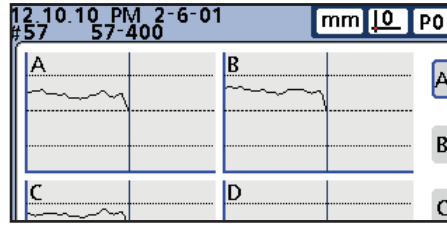
- Footswitch*
- Remote keypad*
- Touch probe*
- RS-232C serial port*
- Parallel port*

Outputs

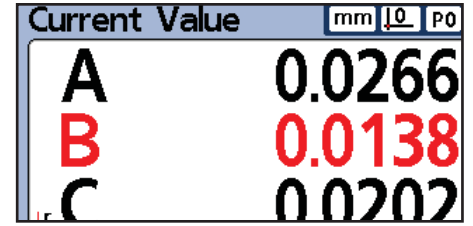
2 relay outputs



Visual feedback A highly visible, intuitive and familiar interface with standard color cues. Instantly informs operators of pass/fail performance details for critical part dimensions.



Integrated SPC database Store, retrieve and manage enormous amounts of measurement data on the shop floor. Check quality control of each gage. Share information locally and globally.



Formulas Up to 16 output channels apply mathematical formulas to measurement data for on-the-spot part analysis.



Product comparison



Architecture

	GC-100	QC-100	QC-200	QC-300
Display				
Number of digits	8	9	9	9
LCD color	color	b/w	b/w	color
Digit size	0.45"	0.45"	0.45"	.045"
Auto repeat				
Context-sensitive help				
Correction				
LEC				
SLEC				
NLEC (optional)				
Orthogonality				
C-scale (AR, HH)				
Footswitch input				
Remote keypad input				
Sound feedback				
Speaker jack				
Date/time stamp				
Tilt adjustment				
Foreign languages				
Portuguese				
Chinese, Japanese				
English, Spanish, Italian, German, and French				



Automation

CNC	
Light Control	
Zoom Lens	



Input

Optical edge detection (opt.)	
Touch probe input	
Video Edge	



Measurement

	GC-100	QC-100	QC-200	QC-300
Point				
Line				
Radius				
Circle				
Angle (vertex point)				
Distance				
Plane				
Min./Max between features				
Form information				
Measure Magic®				
Data cloud				
Rotary axis				
Incremental/absolute				
Intersections				
Constructions				
Create				
Preset				
Forward/backward annotation				
Feature stamp				
Geometric tolerancing				



Programming

Part programming	
Measure Guide	



Data Management and Output

Output ports	
Parallel	
Serial	
40-column printout	
80-column printout	
Auto print	
SPC output	
USB	





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Metronics is the world's premiere developer of metrology software and digital readouts for measuring and inspecting 2D and 3D geometric parts. Metronics' Quadra-Chek® systems are the standard control interface of the world's leading precision metrology instrument manufacturers.

Metrology software

Quadra-Chek 5200 Series 2- through 4-axis Microsoft Windows®-based measurement system for 2D applications.

Quadra-Chek 5300 Series 3- through 4-axis Microsoft Windows®-based measurement system for 3D applications.

Digital readouts

Gage-Chek 100 Series 1, 4, 8 inputs metrology displays.

Quadra-Chek 100 Series 1- through 4-axis, 1D digital readouts.

Quadra-Chek 200 Series 2- through 4-axis, 2D geometric readouts.

Quadra-Chek 300 Series 3- and 4-axis, 2D geometric readouts.

Automation kits

Stage Retrofits Bolt-on kits for microscope stages.

Light Control Programmable control of up to eight channels of light sources.

Indexers Stepper indexers to drive rotary stages and motorized zoom lenses.

Stepper Amplifiers Closed- or open-loop 2- and 3-axis stepper amplifier controllers with limit switches.

Joystick 2 or 3 axes joysticks with trackball.

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