Vision ENGINEERING

KESTREL

Non-Contact Measuring System

For inspection and measurement of 2-dimensional parts

- 2-axis non-contact measurement
- Patented optical image clearly defines edges, offering superb resolution and contrast
- Powerful and intuitive microprocessors deliver simple, fast results
- Optional video edge detection for higher throughput measurements
- High accuracy, low investment system

2-Axis Non-Contact Measuring System

The Kestrel non-contact measuring microscope utilises Vision Engineering's patented Dynascope™ technology. Dynascope™ technology offers the user a superior image of the subject making it easy to accurately measure small intricate parts.

Vision Engineering's Kestrel measuring microscope provides fast, simple and accurate measurement of precision component parts, in a configuration that is ideally suited to shop-floor use.

From simple manual, single-feature operation to more complex component part measurement, Kestrel combines high resolution, high contrast images with an intuitive microprocessor to deliver accuracy and simplicity for a wide range of measuring applications.

Patented Technology

Kestrel utilises Vision Engineering's patented Dynascope™ optical projection technology to provide enhanced surface definition for fast and accurate measurement.

Difficult-to-view features such as low contrast black or white plastics, materials of different colours and textures, or transparent parts may all be viewed in intricate detail - something not possible with other measuring devices such as profile projectors or video-based systems. The superb optical clarity also allows detailed visual inspection to be performed simultaneously.

Intuitive Microprocessor

Kestrel, with a 150mm x 100mm stage, is ideal for measuring 2-D features of small, intricate parts. Data processing is performed by a QC-200 multi-function microprocessor and has been designed with ease of use in mind.

The intuitive QC-200 software can be used by shift workers or advanced users and accommodates multiple languages including English, French, German, Italian, Portuguese, Spanish, Swedish, Czech, Polish, Turkish, Japanese and Chinese.

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Features & Benefits

- Ideal for rapid measurement and inspection of small components, providing a crisp, high contrast image of the subject
- Stage travel of 150mm in X-axis and 100mm in Y-axis and accommodates components up to 10kg

Precision Measuring Stage

- 150mm x 100mm precision measuring stage has factory completed non-linear error correction to ensure optimum accuracy, traceable to International standards for the purposes of ISO9000
- 1µm resolution glass measuring encoders ensure the highest levels of precision

Illumination

- Surface and sub-stage illumination options enable adjustment of lighting to suit any application. A range of surface illumination options are available, including semi-coaxial spotlamps, 6-point fibre-optic ring light and an episcopic (through the lens) illuminator for viewing blind bores or deep surface features. Substage illumination provides the ability to measure profiles.

QC-200 Digital Microprocessor

Quadra-Chek digital readouts and metrology software are the premier systems for the measurement and inspection of 2-D geometric components. A QC-200 digital readout is the standard control interface on the Kestrel non-contact measuring system, providing a powerful combination to empower operators along every step of the measurement process. Patented features reduce repetitive measurements and simplify complex work steps.

Intuitive User Interface
A consistent, intuitive interface ensures operator accuracy and reduces training time.

Part Programming
Programme 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.

Intersections and Constructions
Obtain essential intersection and construction results by selecting from the list of previously measured features, complete with graphics.

Measure Magic
To measure, simply probe points and click. QC-200 detects, without the operator's intervention, the feature type being measured.

Context-Sensitive Help
QC-200 decreases training time and costs with graphics-rich, context sensitive help that guides shop-floor personnel through Quadra Chek interface conventions.

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.

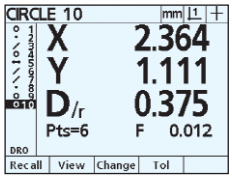
Languages
As standard, QC-200 can accommodate English, French, German, Italian, Portuguese, Spanish, Swedish, Czech, Polish, Turkish, Chinese and Japanese languages.

Connectivity
Data output via USB and RS-232 ports.

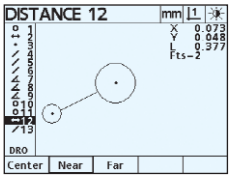
Geometric Tolerancing (optional)
QC-200's unique graphical representation instantly views pass/fail performance details for critical part dimensions. Results and important measurement data are displayed in an uncluttered and comprehensive LCD display.

Video Measurement (optional)
With the optional video camera and QC-300 microprocessor, users can select between optical and video measurement to solve different measuring tasks on the same component. QC-300 features an array of video measurement tools, including simple crosshair measurement, manual or automatic single point detection and multi-point video edge detection.

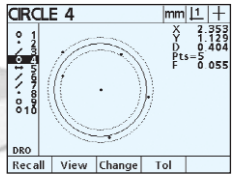
- Optical measurement for one-off, difficult-to-view features or critical measurements
- Video measurement for fast, higher throughput measurements
- Intuitive touch-screen colour display can be used by shift workers or advanced users alike



Measurement results



Intersections and constructions



Data cloud

Technical Specifications

Optical
- Twin pupil monoscopic, infinity corrected optical system utilising patented Dynascope™ Technology
- Pre-centred crossline graticule to both eyes
- Custom designed graticule, pre-centred to one eye (optional)

Illumination
- Surface illumination provided by 2 x 30W semi-coaxial spot lamps with integral power supply - 600 hours
- 30W substage illumination for profile measurement - 600 hours
- 150W semi-coaxial 6-point ringlight with free-standing fibre-optic illuminator and power supply - 200 hours (optional)
- 100W episcopic (through the lens) illuminator for viewing blind bores or deep surface features - 200 hours (optional)

Measuring Stage
- 150mm x 100mm
- Factory installed non-linear error correction (NLEC) calibration to ensure optimum accuracy, traceable to International standards for the purposes of ISO9000
- 1µm encoder resolution
- 10kg max. glass plate load

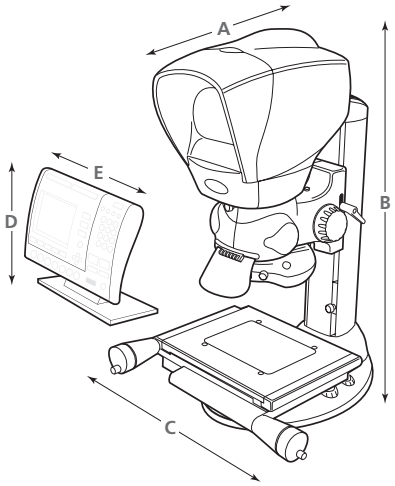
Measurement Uncertainty
$U_{95}2D = 7+(6.5L/1000)\mu m$*

*where L = length in mm (x50 system magnification, controlled 20°C, using traceable chrome on glass grid artefact, with intersection points at the standard measuring plane).

Image Capture and Archive (optional)
- Modular multimedia solutions for image archiving, acquisition processing, analysis and documentation

Dimensions

A = 490mm
B = 600mm
C = 405mm
D = 210mm
E = 285mm



Weight

	Packed	Unpacked
Head	5kg	4kg
Focus Assembly/Illumination	3.5kg	2.5kg
Stand/Stage	16.5kg	14kg
Microprocessor	7kg	6kg

Optical Information

Objective Part Number	System Magnification	Working Distance	Field of View
K-007	x10	81mm	14.2mm
K-008	x20*	81mm	7.1mm
K-009	x50	61mm	2.9mm

*standard option

For more information...

Vision Engineering has a network of offices and technical distributors around the world. For more information, please contact your Vision Engineering branch, local authorised distributor, or visit our website.

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