

Vision Measuring System
QUICK IMAGE



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Vision Measuring System
QUICK SCOPE manual



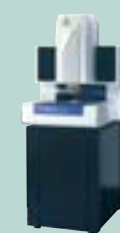
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Vision Measuring Machine QUICK IMAGE

Excellent depth of focus, extra-wide field of view, software included.

- **Bilateral telecentric system**

The wide range of focal depth means that workpieces of different heights or offset surfaces, for example turned parts or cutting tools can be measured without difficulty and without refocusing.

- **Extra-wide field of view**

The field of view of 32 x 34 mm enables complete detection of small parts at a single view – for rapid, easy and automated measurement

- **Standard software**

Conveniently repeatable, programmable measuring sequences and high rate of evaluation with integrated high-end software QIPAK. Bringing maximum quality and versatility to the evaluation process.

- **Can be combined with desktop PC or notebook.**



QUICK IMAGE

Model	QI-RL	QI-505 RL	QI-1010 RL	QI-2010 RL	QI-2017 RL	QI-3017 RL
Field of view	32 x 24 mm					
Measuring accuracy on monitor	± 5 µm (High resolution mode) / ± 8 µm (Normal mode)					
Measuring accuracy (U1 xy)	– (5 + 0,08 L) µm; L in mm					
Measuring range XxY (mm)	–	50 x 50	100 x 100	200 x 100	200 x 170	300 x 170
Z (mm)	25	100				
Camera	1,3 Mega-Pixel 1/2" C-MOS colour camera					
Optical system Magnification	0,2 x					
Focus	± 0,6 mm (High resolution mode) / ± 11 mm (Normal mode)					
Beleuchtung Transmitted- / Co-axial light	●	●	●	●	●	●
4 Quadrant ring light	●	●	●	●	●	●
Max. workpiece weight	approx.5 kg		approx.10 kg		approx.20 kg	

All systems are also available without ring light



Request our detailed brochure!

Vision Measuring Machines QUICK SCOPE manual

Specifications

Resolution:	0,0001 mm
Accuracy (E ₁) 20 °C (XY):	(3 + 2L/100) μm
Magnification on monitor (17"):	with fix-lens 1 x: 42 x (option) with fix-lens 2,5 x: 105 x (standard) with fix-lens 5 x: 210 x (option) with Powerzoom: 21 x to 147 x

QUICK SCOPE manual:

- Compact, economical table-top instrument for the uncomplicated manual measurement of single parts.

System with Fix-Lens:

- High-precision measurement objectives 1 x, 2.5 x and 5 x.

System with Power zoom:

- Powerzoom programming with automatic adaptation of light intensity and pixel size.



QUICK SCOPE

Model	Controller	Measuring range X : Y : Z (mm)	Accuracy E ₁ (XY)	Fix- lens	Zoom- objective	Transmitted light	Co-axial light	Ring- light	Auto- fokus
QS-E 1020	manual	200 : 100 : 150	(3 + 2,0L/100) μm	●	–	●	●	–	–
QS-L 1020AF	manual	200 : 100 : 150	(3 + 2,0L/100) μm	●	–	●	●	●	●
QS-L 1020Z	manual	200 : 100 : 150	(3 + 2,0L/100) μm	–	●	●	●	●	–
QS-L 1020Z/AF	manual	200 : 100 : 150	(3 + 2,0L/100) μm	–	●	●	●	●	●

Specifications

Resolution:	0,0001 mm
Accuracy (E ₁) 20 °C (XY):	(2,5 + 0,6L/100) μm
Magnification on monitor (17"):	with fix-lens 1 x: 42 x (option) with fix-lens 2,5 x: 105 x (standard) with fix-lens 5 x: 210 x (option) with Powerzoom: 21 x to 147 x

Vision Measuring Machines QUICK SCOPE CNC

QUICK SCOPE CNC:

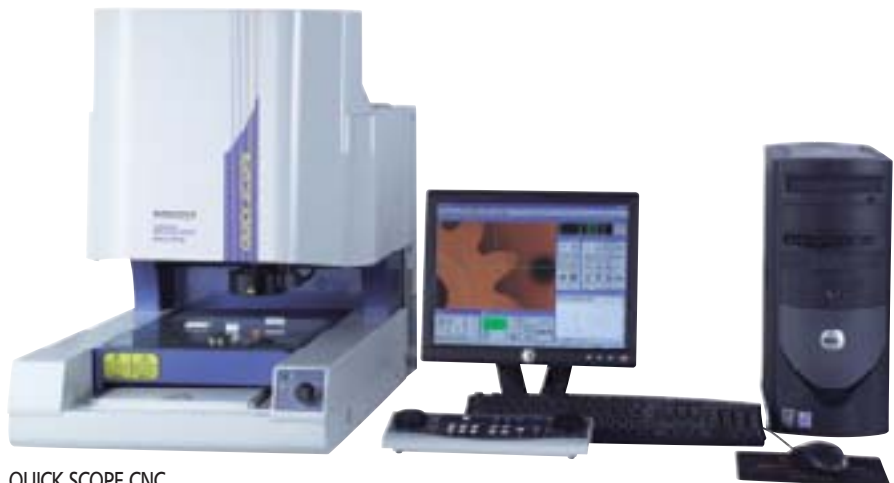
- A color CCD camera is used to provide for realistic workpiece observation and measurement. The color image can be captured and stored as a bitmap image for other uses and can be printed out.

System with Objective:

- High-precision measurement objectives 1 x, 2.5 x and 5 x.

System with Power zoom:

- Powerzoom programming with automatic adaptation of light intensity and pixel size.



QUICK SCOPE CNC

Model	Controller	Measuring range X : Y : Z (mm)	Accuracy E ₁ (XY)	Fix- lens	Zoom- objective	Transmitted light	Co-axial light	Ring- light	Auto- fokus
QS 200	CNC	200 : 200 : 100	(2,5 + 0,6L/100) μm	●	–	●	●	●	●
QS 250	CNC	200 : 250 : 100	(2,5 + 0,6L/100) μm	●	–	●	●	●	●
QS 200 Z	CNC	200 : 200 : 100	(2,5 + 0,6L/100) μm	–	●	●	●	●	●
QS 250 Z	CNC	200 : 250 : 100	(2,5 + 0,6L/100) μm	–	●	●	●	●	●



Request our detailed brochure!

Vision Measuring Machines QUICK VISION ELF

Quick Vision moves your vision measurement and inspection productivity to higher levels with advanced features!

PT-Version:

- Halogen-Ring-Fiber illumination

Pro-Version:

- Halogen-Ring-Fiber illumination
- Programmable power turret tube lens and programmable RGB LED ring light.



QUICK VISION ELF

Model	Measuring range X : Y : Z (mm)	Accuracy E ₁ (XY)
QVE 200 PT	200 : 200 : 100	(2+0,3 L/100) μm
QVE 250 PT	200 : 250 : 100	(2+0,3 L/100) μm

Both PT models are also available in PRO version.

Vision Measuring Machines QUICK VISION APEX / HYPER QUICK VISION

De facto standards for vision measurement.
With 4-quadrant-LED-Co-axial- and -Ring-light.

Pro-System:

- Programmable 4-quadrant-LED Ring-light



QUICK VISION

Model	Measuring range X : Y : Z (mm)	Accuracy E ₁ (XY)
QUICK VISION APEX		
QVX 202 PT	200 : 200 : 200	(1,5+0,3 L/100) μm
QVX 302 PT	300 : 200 : 200	(1,5+0,3 L/100) μm
QVX 404 PT	400 : 400 : 250	(1,5+0,3 L/100) μm
QVX 606 PT	600 : 650 : 250	(1,5+0,3 L/100) μm
HYPER QUICK VISION		
HQV 202 PT	200 : 200 : 200	(0,8+0,2 L/100) μm
HQV 302 PT	300 : 200 : 200	(0,8+0,2 L/100) μm
HQV 404 PT	400 : 400 : 250	(0,8+0,2 L/100) μm
HQV 606 PT	600 : 650 : 250	(0,8+0,2 L/100) μm

The PT models are also available in PRO version.

Specifications

Resolution: 0,0001 mm
Accuracy
(E₁) 20 °C (XY): (2+0,3 L/100) μm

Specifications

Resolution: 0,0001 mm (APEX),
0,00002 mm (HYPER)
Accuracy
(E₁) 20 °C (XY): 1,5+0,3 L/100 μm (APEX),
0,8+0,2 L/100 μm (HYPER)



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Specifications

Resolution: 0,0001 mm,
0,00002 mm (HYPER)

Accuracy
(E_i) 20 °C (XY): 1,5+0,3 L/100 μm,
0,8+0,2 L/100 μm (HYPER)

Laserprobe scanning system

The fast laser scanning system distinguishes the QUICK VISION HYBRID machines from the QUICK VISION APEX / HYPER QUICK VISION. It turns them into high-precision 3D contour scanners for the digitisation and testing of surfaces and contours including on the finest of objects.

Vision Measuring Machines QUICK VISION HYBRID

Stationary Measuring System with measuring Laser-scanning-system. Ideal for testing electronic components and digitising small 3D surfaces.

Specification same as QUICK VISION APEX / HYPER QUICK VISION and added:

- Two different laser-scanning systems to choose from.
- Efficient testing of electronic components, e.g. BGA measurements (ball grid array).
- Laser-autofocus.
- Programmable 4-quadrant-LED Ring-light



QUICK VISION HYBRID 404 PRO

Model	Measuring range X : Y : Z (mm)	Accuracy E _i (XY)
QVH 302 PRO	300* : 200 : 200	(1,5+0,3 L/100) μm
QVH 404 PRO	400* : 400 : 250	(1,5+0,3 L/100) μm
QVH 606 PRO	600* : 650 : 250	(1,5+0,3 L/100) μm
HYPER		
HQVH 302 PRO	300* : 200 : 200	(0,8+0,2 L/100) μm
HQVH 404 PRO	400* : 400 : 250	(0,8+0,2 L/100) μm
HQVH 606 PRO	600* : 650 : 250	(0,8+0,2 L/100) μm

* The measuring range is restricted when the laserprobe scanning system is used.

Specifications

Resolution: 0,0001 mm

Accuracy
(E_i) 20 °C (XY): 1,5+0,3 L/100 μm

Vision Measuring Machines QUICK VISION ACCEL

Stationary measuring system with fixed measuring table for rapid acceleration and high-speed travel. The dynamic solution for fast testing of series.

Pro-Version:

- Programmable 4-quadrant-LED Ring-light



QUICK VISION ACCEL 404 PRO

Model	Measuring range X : Y : Z (mm)	Accuracy E _i (XY)
QVA 404 PT	400 : 400 : 150	(1,5+0,3 L/100) μm
QVA 606 PT	600 : 650 : 150	(1,5+0,3 L/100) μm
QVA 806 PT	800 : 800 : 150	(1,5+0,3 L/100) μm

The PT models are also available in the PRO version.



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Vision Measuring Machine ULTRA QUICK VISION

Stationary CNC Measuring System with hydrostatic air bearing system.

To maximize an accuracy of machine movement.

This provides a sub-micron linearity for full-stroke travel.



ULTRA QUICK VISION 350 PRO

Measuring range X : Y : Z (mm)	Accuracy E _i (XY)
350 : 350 : 150	(0,3+0,1L/100) μm

Specifications

Resolution: 0,00001 mm

Accuracy
(E_i) 20 °C (XY): (0,3 + 0,1L/100) μm



Request our detailed brochure!



UMAP contact sensor



Optical sensor for positioning and vision measurements

Vision Measuring Machine UMAP VISION Systems

Contact measurement of the finest contours using an extra-small contact probe tip – probe ball diameter 30 μm and shaft length 2 mm

- The UMAP 103 micro measurement sensor enables, for example, contact measurement of very small and narrow bores with the help of an extra-small probe tip – probe ball diameter 30 μm – shaft length 2 mm – length ratio 66.7.

An optical sensor enables the user to magnify any required detail and to carry out vision measurements

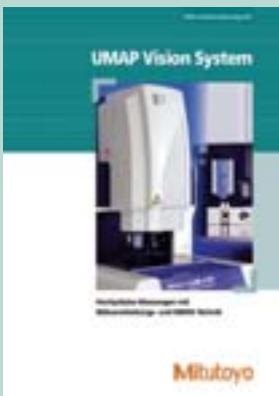
- With an optical sensor, the probe tip can be positioned easily and accurately onto a tiny area that is difficult to see with the naked eye. The sensor can also be used for vision measurements.

Contour measurement with contact scanning

- Also for measuring fixed geometric forms, the UMAP 103 enables point-to-point measurements by tactile scanning. Here scanning is automatic, the device determining the contour of the current point using the measured data and then predicting the next measuring point.



UMAP VISION System HYPER 302 Type 1



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Vision Measuring Machine NANOCORD

Flexible 3D vision measuring machine for the nano measuring range.

- A basic device with a wide variety of different sensors (e.g. UMAP) for every task.
- High precision MPE: $(0,3 + L/1000) \mu\text{m}$.
- Large measuring range: 300 x 200 x 100 mm.



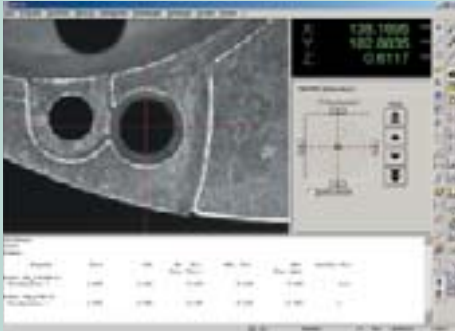
NANOCORD

QVPAK software system

Enormously versatile and user-friendly basic software for the QUICK VISION vision measuring systems.

- The clever design, practical tools and excellent on-screen representation open up a whole new dimension of efficient measuring. With QVPAK, even highly complex measuring procedures can be planned, controlled and evaluated. Even unaccustomed users will familiarise themselves with the QVPAK environment very quickly and easily using the integrated online help.

QVBasic programming language, which is based on Visual-Basic ensures maximum flexibility – for instance when linked up to barcode readers, for data transfer to MS Office applications or the preparation of user-defined input and inquiry dialogues.



MiCAT
Mitutoyo Intelligent Computer Aided Technology

the standard in world
metrology software

CMM

Vision Measuring Systems

QV
QVPAK

Software package

Expansion modules

MeasurLink

Module for the statistical management of measured data as well as the analysis and storage of measured data.

QV CAD-IMPORT/EXPORT

The CAD-Import & Export program converts the workpiece CAD data (IGES or DXF format) so that it can be brought into QVPAK.

QV EIO

Serves communication of the QUICK VISION system with an external programmable controller.

QV EIO PC

QVEio PC provides external control through a personal computer equipped with an RS-232C interface.

QV PARTMANAGER

QVPartManager is an optional software package that allows multiple workpieces lined up on the stage to be measured at once using a part program.

PAGPAK

PAGPAK automatically generates a part program based on 2D CAD data (in IGES, DXF or GERBER format) or NC processing data, for measuring discontinuous through-holes in printed circuit boards.

EASYPAG

EASYPAG allows off-line part programming for QVPak by using a two-dimensional CAD data (in IGES or DXF format).

FORMPAK-QV

FORMPAK-QV performs two-dimensional contour analysis based on measurement data collected by Quick Vision, comparing that data with nominal values.

QV GEARPAK

Generates a parts programme for measuring toothed wheels including evaluation module for toothed wheel parameters.