



Video Measuring Machine for precision 3-axis measurement

- 50 years of proven optical experience, packed into a powerful 3-axis non-contact video measuring machine
- Powerful and intuitive with amazing simplicity
- High accuracy, high quality system
- Compact, robust system with small footprint
- Range of system configurations and options, including CNC control



FM 557119

Vision Engineering Ltd has been certified for the quality management system ISO 9001:2008.

Measurement uncertainty

(X,Y), 150mm x 100mm measuring stage

- Uncertainty formula $U_{95}2D = 7 + (6.5L/1000)\mu\text{m}$, where L = length in mm, using controlled conditions

(X,Y), 150mm x 150mm measuring stage

- Uncertainty formula $U_{95}2D = 4 + (5.5L/1000)\mu\text{m}$, where L = length in mm, using controlled conditions

(Z)

- Z-axis accuracy $10\mu\text{m}$, using highest available magnification under controlled conditions

Video camera

1.3MP colour CMOS camera with 5-position indexed zoom (5:1 ratio) and iris aperture control

Optical data

Zoom Magnification Range	10 - 50x	20 - 100x
Maximum field of view	13.5mm	6.75mm
Minimum field of view	2.7mm	1.35mm
Working distance	91mm	61mm

Camera/optics

Camera Iris	5-position indexed camera iris allowing increased Z-axis accuracy and enhanced component edge definition.
Zoom Indexing	Repeatable 5-position indexed zoom

Illumination

- Quadrant controllable surface illumination provided by 20 (4 banks of 5) x high intensity long-life LEDs
- Controllable substage illumination provided by 1 x high intensity long-life LED

Measuring stages

	150mm x 100mm	150mm x 150mm	150mm x 150mm (motorised CNC)
NLEC* Stage Calibration	✓	✓	✓
SLEC** Z-Axis Calibration	✓	✓	✓
Z-Axis Control	Progressive motorised Z-axis for fine and rapid movement		Fully automated CNC control with autofocus

* Non Linear Error Correction ** Segmented Linear Error Correction

Encoder resolution

X = 1µm **Y** = 1µm **Z** = 1µm

Power

Power supply: 100 - 240V AC 50/60Hz

System weight

- Falcon with 150mm x 100mm stage 19.0kg
- Falcon with 150mm x 150mm stage 24.5kg
- Falcon with 150mm x 150mm CNC stage 25.0kg

Accessories

Footswitch	'Plug & play' footswitch option for hands-free data entry.
Substage Colour Filter	Standard 40.5mm colour filters to enhance edge definition of profiled or turned parts.