Starrett®

KMR Series

KMR-XGA

KMR-50-XGA

KMR-D1

KMR-50-D1

KMR-Zoom-M3

KMR-FOV-M3

KMR-200-M3

Vision Inspection Systems

METROLOGY SOLUTIONS®

VIDEO INSPECTION SYSTEMS
VERSATILE, AFFORDABLE, EASY TO USE

Starrett KMR video microscopes offer versatility and high-performance for a low cost. These systems are simple to operate without compromising performance. With seven models to choose from, systems can be customised for specific inspection or quick part measurement applications.

KMR-200-M3

VIDEO INSPECTION SYSTEMS

KineMic™ video microscopes are a family of versatile and affordable inspection and vision metrology systems. They are ideal for receiving inspection, quality assurance, training, manufacturing, assembly, research and documentation – wherever easy setup and a range of magnifications are required. Our XGA models set the standard for quick setup and ease of use by not requiring a computer, while the D1 and M3 models offer the power of a colour touch screen monitor and PC with MetLogix™ D1 or M3 inspection and metrology software. Depending on the size of your parts, measurements can be all electronic within the field of view, or be integrated with stage motion for parts up to 200mm.

BASIC KMR FEATURES

- 6.5:1 Zoom Optics
- 21.5" XGA Colour Monitor

OPTIONS

- 50 x 50mm X-Y Stage with LCD Micrometers

INTERMEDIATE KMR FEATURES

- 6.5:1 Zoom Optics
- 24" touch screen and PC
- MetLogix™ D1 metrology software supporting image annotation and image archiving, and basic calculations of feature, size, position and orientation
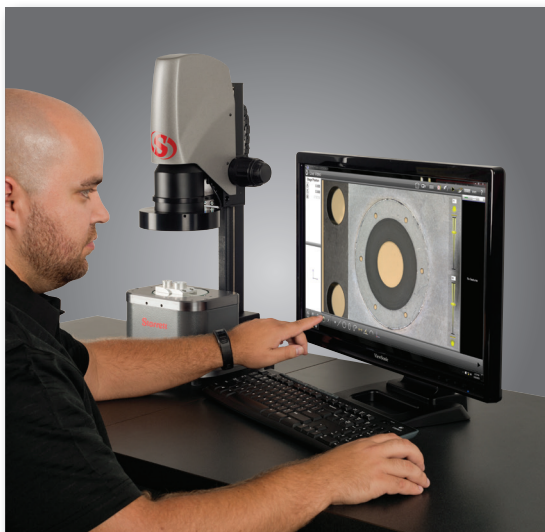
OPTIONS

- 50mm x 50mm X-Y Stage with LCD Micrometers

ADVANCED KMR FEATURES

- Choice of 7 Telecentric Lenses options
- 24" touch screen and PC
- Video Edge Detection (VED)
- MetLogix™ M3 metrology software supporting image annotation, image archiving, geometric constructs and DXF CAD file importing

OPTIONS

- Field of View (FOV) image processing and DXF imports on KMR-Zoom-M3 and KMR-FOV-M3 models only
- Choice of 7 fixed magnification, telecentric lenses on non-zoom FOV systems including 0.14x, 0.3x, 0.5x, 0.8x, 1.0x, 2.0x or 4.0x
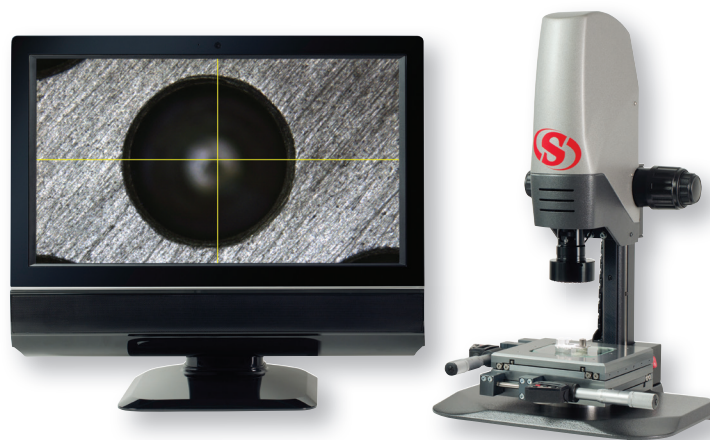
Starrett KineMIC™ "KMR" Models

1. KMR-XGA - Basic

This a basic video inspection system, where the part to be inspected is placed on an illuminated base and a superb, highly magnified image of the part is displayed on a 21.5" video monitor using a colour XGA video camera and 6.5:1 magnifying zoom optics. No need to squint into a microscope eyepiece. The video camera is connected directly to the monitor – no need for a computer or programming. An optional boom stand provides a stable mount for hard-to-reach places.

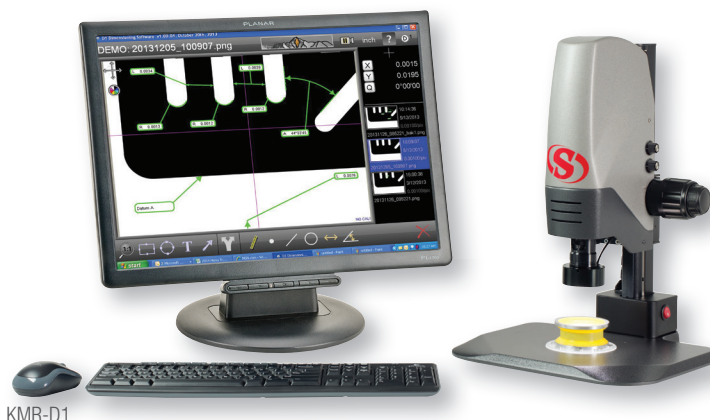KMR-XGA

2. KMR-50-XGA - Basic

This is a video toolmaker's microscope which combines the simplicity of the XGA basic model plus a 50 x 50mm X-Y stage and X and Y micrometers. The micrometers are used to move the stage in the X and Y directions and also to display the stage position digitally with a resolution of 0.001mm (0.00005"). Accurate measurements are taken as the magnified image is moved under crosshairs generated by the camera. Pushbuttons select millimetres or inches, zero the micrometer display, and add a zero point offset if desired. The measurement of small parts has never been easier.

KMR-50-XGA

3. KMR-D1 - Intermediate

This powerful yet affordable vision metrology system provides 6.5:1 magnifying zoom optics with six detents magnification levels, a 24" touch screen and PC (8GB RAM, 128 GB SSD, Windows® 10 Professional, 64 Bit), and MetLogix™ D1 inspection and metrology software featuring image annotation and image archiving, and data import/export under Windows® 10 Professional.

KMR-D1

4. KMR-50-D1 - Intermediate

All the features of the KMR-D1 system plus a 50 x 50mm X-Y stage with measurement resolution of 0.001mm (.00005"). These affordable video based inspection and measurement systems are ideal for receiving inspection, quality assurance, training, manufacturing, assembly, research and documentation - wherever easy setup and a range of magnifications is required. D1 models offer image annotation, image archiving, measurement and easy transfer via network or email.

KMR-50-D1

5. KMR-Zoom-M3 - Advanced

The KMR-M3 is a highly versatile video microscope that includes a colour digital video camera, 6.5:1 zoom lens, 24" touch screen and PC (8GB RAM, 128 GB SSD, Windows® 10 Professional, 64 Bit), and MetLogix™ M3 software. M3 offers the advantages of Video Edge Detection (VED), Field of View (FOV) image processing and DXF CAD file imports for direct comparison to the work piece.

KMR-Zoom-M3

5. KMR-Zoom-M3 - Advanced

The KMR-M3 is a highly versatile video microscope that includes a colour digital video camera, 6.5:1 zoom lens, 24" touch screen and PC (8GB RAM, 128 GB SSD, Windows® 10 Professional, 64 Bit), and MetLogix™ M3 software. M3 offers the advantages of Video Edge Detection (VED), Field of View (FOV) image processing and DXF CAD file imports for direct comparison to the work piece.

KMR-Zoom-M3

6. KMR-FOV-M3 - Advanced

This vision metrology system provides a choice of 7 fixed magnification telecentric lenses, 24" touch screen and PC (8GB RAM, 128 GB SSD, Windows® 10 Professional, 64 Bit), and MetLogix™ M3 vision metrology software – but no X-Y stage. It is ideal for high-speed digital video measurements of small part parts that fit within the Field of View (FOV) of the optics and camera, which can range from 1.4mm to 9mm in the X direction depending on the lens selected. The M3 software is also great for image archiving and image annotation, offers Video Edge Detection (VED), and DXF CAD file imports. The result is an accurate and versatile metrology measuring microscope.

KMR-FOV-M3-0.14x

7. KMR-200-M3 - Advanced

The KMR-200 utilises a 6.5:1 zoom lens, digital video camera and a precision 200 x 100mm X-Y stage with digital encoders that interface with the system PC and the M3 software to provide accurate repeatable measurements. System features also include a 24" touch screen and PC (8GB RAM, 128 GB SSD, Windows® 10 Professional, 64 Bit), and MetLogix M3 vision metrology software. These simple yet high-performance metrology systems are ideal for high accuracy, high throughput measurements of small parts, with automatic comparison to CAD files and electronic record keeping.
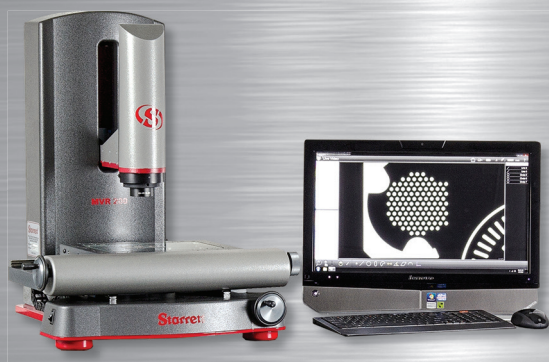
KMR-200 with M3

	KineMic XGA Zoom, Basic	KineMic XGA Zoom, 2 x 2 Stage	KineMic D1 Zoom	KineMic D1 Zoom, 2 x 2 Stage	KineMic M3 Zoom, FOV	KineMic M3 Telecentric, FOV	KineMic M3 Zoom, 4 x 8 Stage
Part Number	KMR-XGA	KMR-50-XGA	KMR-D1	KMR-50-D1	KMR-Zoom-M3	KMR-FOV-M3	KMR-200-M3
Optics	6.5:1 zoom	6.5:1 zoom	6.5:1 zoom	6.5:1 zoom	6.5:1 zoom	7 telecentric lenses	6.5:1 zoom
CCD Sensor	0.83 MPixel	0.83 MPixel	1.33 MPixel	1.33 MPixel	2.02MPixel	2.02 MPixel	1.33 MPixel
Camera Interface	VGA cable	VGA cable	USB cable	USB cable	USB cable	USB cable	USB cable
Computer	N/A	N/A	PC	PC	PC	PC	PC
Software	N/A	N/A	MetLogix™ D1	MetLogix™ D1	MetLogix™ M3	MetLogix™ M3	MetLogix™ M3
Video Screen	19" XGA monitor	19" XGA monitor	24" touch screen monitor and PC	24" touch screen monitor and PC	24" touch screen monitor and PC	24" touch screen monitor and PC	24" touch screen monitor and PC
Screen Resolution	1024 x 768	1024 x 768	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
Lens Magnification	0.7x to 4.5x Zoom Lens	0.7x to 4.5x Zoom Lens	0.7x to 4.5x Zoom Lens	0.7x to 4.5x Zoom Lens	0.7x to 4.5x Zoom Lens	Choice of One Fixed Telecentric Lens: 0.14x, 0.30x, 0.50x, 0.80x, 1.0x, 2.0x, 4.0x	0.7x to 4.5x Zoom Lens
Screen Magnification	31x to 200x	31x to 200x	31x to 200x	31x to 200x	31x to 200x	4.6x to 178x	31x to 200x
Auxiliary lenses	0.5x, 0.75x, 1.5x, 2x	0.5x, 0.75x, 1.5x, 2x	0.5x, 0.75x, 1.5x, 2x	0.5x, 0.75x, 1.5x, 2x	0.5x, 0.75x, 1.5x, 2x	N/A	0.5x, 0.75x, 1.5x, 2x
Field of view (X-axis)	1.4 to 9.0mm	1.4 to 9.0mm	1.4 to 9.0mm	1.4 to 9.0mm	1.4 to 9.0mm	1.8 to 24mm	1.4 to 9.0mm
X-Y Stage Motion	None	50 x 50 mm	None	50 x 50 mm	None	None	200 x 100 mm
Metrology Means	None	Micrometers	D1 software**	D1 software**	M3 FOV software	M3 FOV software	X and Y encoders
Measurement Resolution	N/A	Up to 2µm*	Up to 2µm*	1µm (.00005")	Up to 2µm*	Up to 2µm*	0.5µm (0.00002")
Meas. Accuracy	N/A	3µm per 25mm	Up to ±2.5µm*	3µm per 25mm	Up to ±2.5µm*	Up to ±2.5µm*	2.5µm + 5L/1000
Basic Stand	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Boom Stand	Optional	N/A	Optional	N/A	Optional	N/A	N/A
LED Back Light	Standard	Standard	Standard	Standard	Standard	Standard	Standard
LED Ring Light	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Lighting Control	Adjustment knobs	Adjustment knobs	Adjustment knobs	Adjustment knobs	Via M3 software	Via M3 software	Via M3 software

* These are best values. Actual values will depend on the zoom lens setting or selected telecentric lens.
**D1 software basic measurements are taken by manually positioning a cross-hair on the screen.
Disclaimer: Due to continual product improvements, specifications may change without notice.

	KineMic XGA Zoom, Basic	KineMic XGA Zoom, 2 x 2 Stage	KineMic D1 Zoom	KineMic D1 Zoom, 2 x 2 Stage	KineMic M3 Zoom, FOV	KineMic M3 Telecentric, FOV	KineMic M3 Zoom, 4 x 8 Stage
Model Number	KMR-XGA	KMR-50-XGA	KMR-D1	KMR-50-D1	KMR-Zoom-M3	KMR-FOV-M3	KMR-200-M3
Video Inspection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Basic Dimensions	No	Manual LCD Micrometer	Yes - Manual	Manual LCD Micrometer	Yes, VED - FOV Measurement	Yes, VED - FOV Measurement	Yes, VED – FOV Stage Measurement
Geometric Constructs	No	No	No	No	Yes	Yes	Yes
Image Annotation	No	No	Yes	Yes	Yes	Yes	Yes
Image Archiving	No	No	Yes	Yes	Yes	Yes	Yes
Video Edge Detection	No	No	No	No	Yes	Yes	Yes

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Vision Systems

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