

**Starrett®**



**VISION SYSTEMS**

KMIC

EZSERIES

MVRSERIES

AVSERIES

AVRSERIES

AV300+

AV350+

AV300+ MICRO

LFSERIES

METROLOGY  SOLUTIONS

**Starrett®**

AV150

AV300

AV350



# STARRETT VISION SYSTEMS

RUGGED, ACCURATE & EASY TO USE

The Starrett automatic vision (or video-based) metrology systems provide accurate 3-axis measurement capability ( X-Y-Z ) with hi-resolution video zoom optics. The systems can be pre-programmed (CNC) for repetitive part inspection, or driven manually via a joystick and trackball for individual measurements. Superb performance is achieved by a highly stable mechanical design, with precision linear bearings. Throughput is maximized with either QC5000 or Metlogix M3 software controlling all aspects of Video Edge Detection (VED) and multiple channel Fiber Optic or LED illumination.

Starrett automatic vision (AV) systems are ideal for quality assurance, parts inspection, and production runs. Flexible and powerful the AV series allows users to cost effectively achieve maximum throughput of their inspection process, allowing measured data to be effectively archived or networked to other devices.

Also see our multi-sensor metrology systems, which can provide vision metrology operation with travel up to 50" x 36" x 8" (1270 x 915 x 200 mm).



## AUTOMATIC VISION METROLOGY SYSTEMS

The AV Series consist of three models, AV150 with 150mm x 150mm x 140mm, AV300 with 300mm x 150mm x 140mm and the AV350 with 350mm x 350mm 200mm. Stage movement can be controlled by pre-programmed measurement routines or manually by joystick/trackball. These benchtop vision metrology systems are easy to use, versatile and accurate. They are equally suitable for individual measurements, short runs, and large production runs



### FEATURES

- CNC operation or manual operation via joystick and trackball
- X-Y-Z travel: AV150 6" x 6" x 5.5" (150mm x 150mm x 140mm)
- AV300 12" x 6" x 5.5" (300mm x 150mm x 140mm)
- AV350 14" x 14" x 8" (350mm x 350mm x 200mm)
- AV150 & AV300, E2 = 1.9  $\mu\text{m}$  + 5L/1000 accuracy for X and Y, E1 = 2.5  $\mu\text{m}$  + 5L/1000 for Z
- AV350, E2 = 2.5  $\mu\text{m}$  + 5L/1000 accuracy for X and Y, E1 = 2.5  $\mu\text{m}$  + 5L/1000 for Z
- 20  $\mu\text{in}$  (0.5  $\mu\text{m}$ ) reading resolution with M3 software, 4  $\mu\text{in}$  (0.1  $\mu\text{m}$ ) with QC5000 software
- Magnification on 24" monitor, 1:1 pixel setting: 37X to 240X with 6.5:1 zoom, 25X to 240X with 12:1 zoom
- Multiple channel Fiber Optic or LED Illumination
- Cast aluminum base for AV150, and AV300. Granite base AV350
- 1 megapixel color camera

### LENS OPTIONS

- 6.5:1 or 12:1 zoom optics
- Optional 0.5X, 1.5X and 2.0X auxiliary lenses

### OPTIONS

- Ergonomic workstation
- 0.5X, 1.5X and 2.0X auxiliary lenses for zoom optics
- LED darkfield quadrant illuminator

## OPERATOR INTERFACE

The AV150, AV300 and AV350 all available with an all-in-one touch-screen PC with MetLogix M3 DXF/FOV/CNC software, or with a desktop PC with an external monitor

and QC5000 software. The M3 software supports 2D geometrical constructs (lines, angles, circles), while the QC5000 software also supports 3D constructs (inclined planes, cones, spheres).

FEATURE	METLOGIX M3	QC5000
All-in-one PC with touch-screen	x	
Desktop PC with monitor		x
External motion control unit	x	x
Windows 7 operating system	x	x
Wi-Fi network connectivity	x	x
CAD file import & export	x	x
Video edge detection	x	x
X-Y-Z measurements	x	x
2D geometric constructs	x	x
3D geometric constructs		x
CNC control capability	x	x
Report generation and archiving	x	x
Software developer	MetLogix	Metronics / Heidenhain



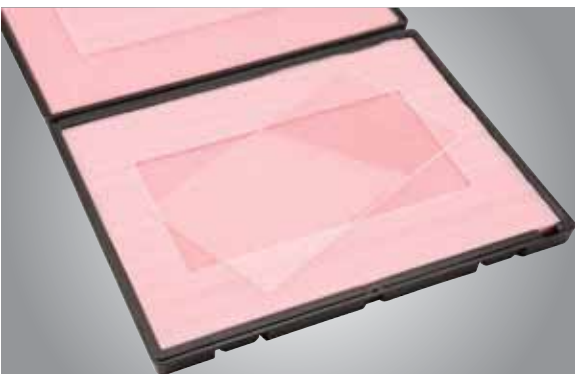
## AV OPTICS

The AV150, AV300 and AV350 include motorized/programmable zoom lenses with magnification ranges of 6.5:1 or 12:1. The two zoom lenses

are available with auxiliary lenses to multiply magnification by 0.5X, 1.5X or 2.0X.

## ACCESSORIES

Starrett manufactures a comprehensive range of fixtures and accessories for our line of optical vision metrology systems.



Glass Calibration Standard

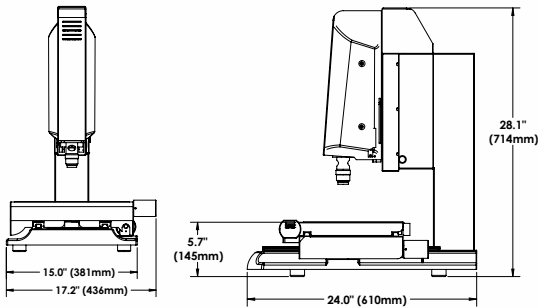


Machine Pedestals

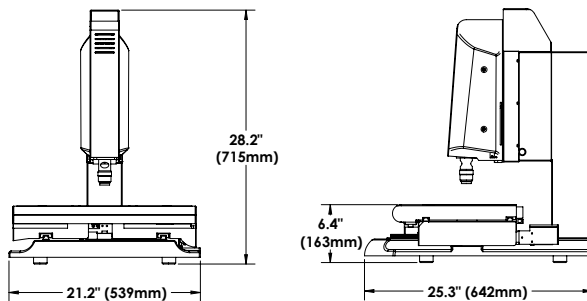
## AV DIMENSIONS

Unit dimensions, H x W x D:

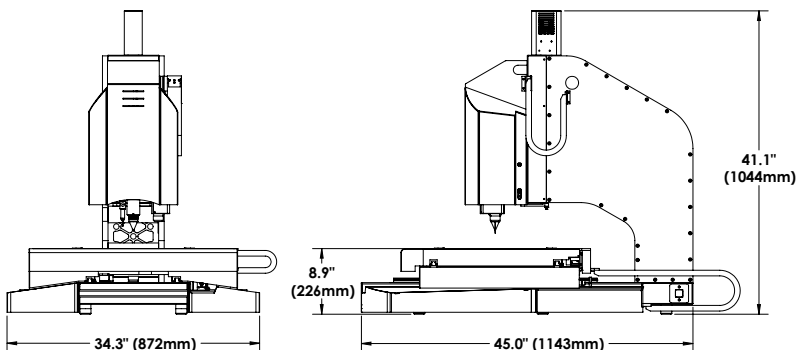
### AV150 23.5"x16.5"x24.5" (60 x 42 x 62 cm)



### AV300 27.5"x23"x25" (70 x 58 x 63 cm)



### AV350 27.5"x23"x25" (70 x 58 x 63 cm)



## Starrett Metrology Division

Starrett Kinematic Engineering, Inc.  
26052-103 Merit Circle  
Laguna Hills, CA USA 92653  
Tel: 949-348-1213



Starrett.com

AV150-300-350

Bulletin 967

1.5M/Q 8/12

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Specifications Subject to Change