

Winslow Engineering Inc.

MODEL 560
TOOL ANALYZERS

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THREE MODELS TO CHOOSE FROM



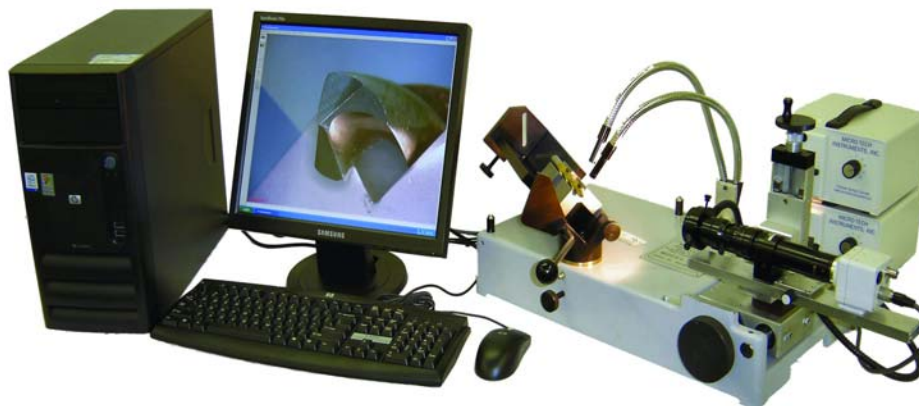
Model 560 DRO

The Model 560 Digital Readout utilizes a right angle scope. The two-axis horizontal and vertical scales read in the "X" and "Y" coordinates.



Model 560 SCOPE

The Model 560 Scope utilizes a right angle scope, X-axis vernier caliper for linear measurement, Y-axis graduated dial for linear measurement and Z-axis graduated dial for angular measurements.

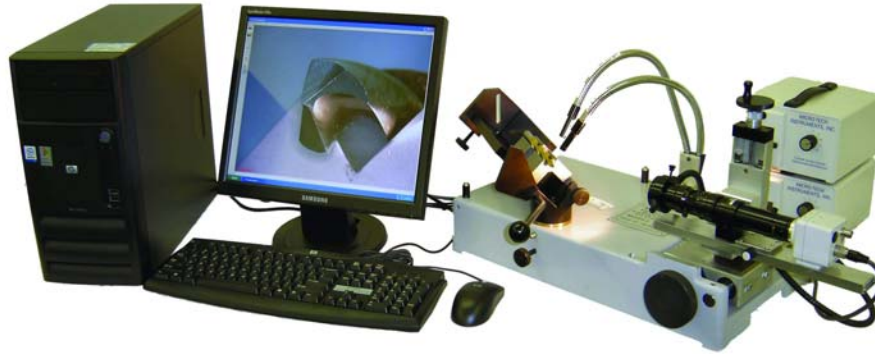


Model 560 VIDEO

The Model 560 Video uses various lenses, camera, computer system and monitor to display the tool images. Tool geometries, as well as various geometric data, are displayed directly on the monitor.

- Complete accuracy and repeatability
- Wide range of inspecting characteristics

Model 560
VIDEO TOOL ANALYZER



Model 560 Video

The **Model 560 Video** permits rapid, precise inspection of all tool geometry characteristics in new tool manufacturing as well as tool regrind. The system uses a series of lenses and a camera. The image of the tool being analyzed is displayed onto a video monitor. A Windows® XP compatible software analysis program is displayed on the monitor where the tool analysis is conducted.

The **Model 560 Video** has a simple to use yet powerful software program for Windows® XP that provides the means to acquire, archive, analyze and annotate video images.

Monitor

Viewable Size 17"
 Contrast Ratio 600:1
 Max Resolution 1280 x 1024

Computer

Operating system: Windows XP Pro
 Input device: Key board and Mouse

Lighting

Standard Halogen lamp 24V/20W and
 Fiber optic ring light
 Optional Fiber-optic goose - neck light

Power Input: 110V 6A

Real – Time Color Image Acquisition, Storage and Retrieval

- Video image storage and retrieval. Images may be saved and retrieved in BMP, TIF, JPG and TGA file formats.
- Image directory for easy retrieval.
- Overlay of text and graphics on still images.

Image Analysis and Measurement

- Create and save calibrations for multiple optic setups or different camera objectives.
- Import DXF cad file overlays.
- X Y scales and readout (optional).
- Measurement capabilities.
 - Length, X – Y.
 - Diameter.
 - Radius.
 - Area.
 - Angle.
 - Horizontal and Vertical.
 - Arbitrary line width.
 - Automatic circle and angle.

Still Image Enhancement features

- Unlimited zoom
- Color correction
- Edge map
- Noise removal
- Blur
- Correct for uneven illumination
- Sharpen
- Smooth
- Brightness
- Contrast enhancement
- Edge detection

Presentation of Analysis of Results

- Split screen comparisons of still images.
- Display of comparison images – either side-by-side or top/bottom.
- Integrated ability to print images on the system printer.
- Create inspections and measurement reports
- Measurement statistics
 - Number of measurements in the sample.
 - Minimum & maximum values in the sample.
 - Mean (i.e. average) of the sample.
 - Standard deviation & variance of the sample.
 - Median value of the sample
 - Cp and Cpk process capability index.

Annotate Image Feature with Live Video Overlay

Overlay of graphics and text information is a powerful feature that lets a user annotate items of interest in the image.

The Model 560 Video Tool Analyzer provides you with the ability to overlay lines, circles, boxes, arrows, text and horizontal and vertical scales. These graphic objects can be positioned on the image. All overlay objects that are created for an image may be saved with it.

Share Information

- E-Mail annotated images to colleagues, vendors, or customers.
- Save measurement results to file.
- Export annotated images to disk for use in other programs.
- Integrated ability to print images on the system printer.

Magnification, Resolution and Field of View with analog camera

.5X Auxiliary Lens

17" Flat Screen with 600:1 contrast ratio

Zoom	Mag	Resolution	Field of View
.75	4.89	.0020	1.343 X 1.000
1	6.52	.0020	1.000 X .750
1.5	9.79	.0010	.656 X .500
2	13.05	.0008	.500 X .375
3	19.57	.0005	.343 X .250
4	26.10	.0004	.250 X .187
5	32.62	.0003	.187 X .156

.75X Auxiliary Lens

17" Flat Screen with 600:1 contrast ratio

Zoom	Mag	Resolution	Field of View
.75	7.34	.0010	.875 X .687
1	9.78	.0010	.656 X .500
1.5	14.68	.0007	.437 X .343
2	19.57	.0005	.343 X .250
3	29.36	.0004	.218 X .156
4	39.15	.0003	.156 X .125
5	48.93	.0002	.125 X .109

Model 560 TOOL ANALYZERS



Model 560 DRO

Save time and increase productivity with the 560 DRO. Enter points using crosshairs. Use Measure Magic to interpret point data and determine feature geometry automatically. Compensate for imperfect part alignment using the skew function. Define hot keys to perform common tasks at the press of a button. Automate repetitive inspections using the programming capability.

Use the front panel keys to perform standard inspection tasks. Select measurement functions, change operation and display modes, enter numeric data, zero axes, turn the LCD display on/off, or send data to a printer or computer with the press of a button. The illustration below shows the location of the various panel keys.



Fast track keys are located above the LCD. By default, the left fast track key is the same as the *enter* key and the right is the same as the *finish* key. Users can save time by programming the fast track keys to perform common tasks. Most front panel keys can be programmed in the same way. Since the fast track keys are fairly large, users can find them by touch without looking at the QC200.

Soft keys execute measurement-specific functions. Depending on the current task, various soft key options are displayed on the bottom of the LCD screen. Press the soft key beneath the displayed option to execute the desired function.



Model 560 Scope

The Model 560 Scope offers a cost efficient measuring device for the precise inspection of tool geometry characteristics.

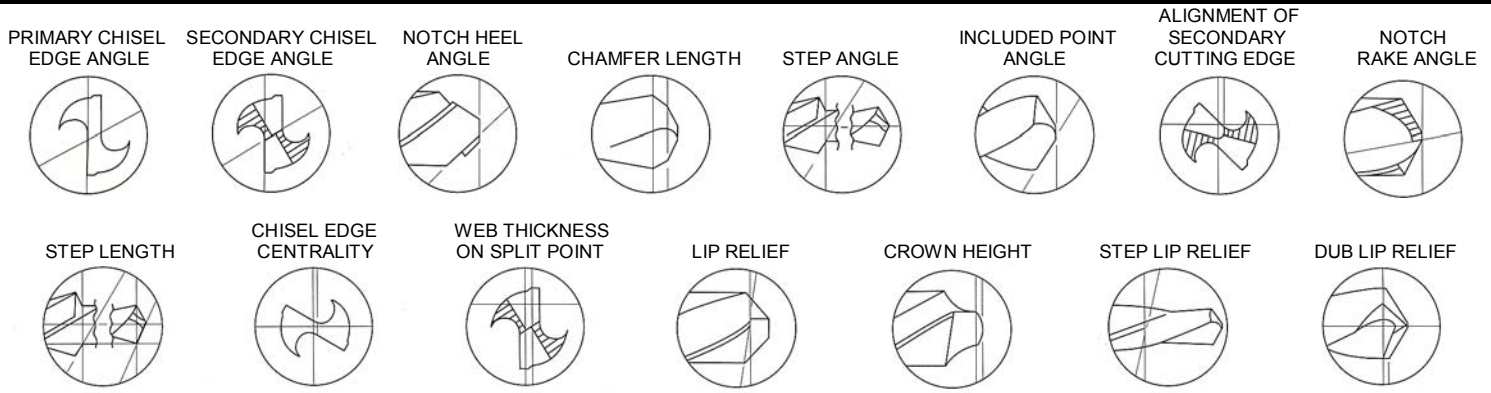
The Model 560 Scope comes standard with a 2.5X lens with a working distance of 7.75 inch, a field of view of .470 inch. And total magnification of 15X

Optional 20X lens has a working distance of 5.50 inch, a field of view of .250 inch. And total magnification of 120X

Optional 36X lens has a working distance of 2.38 inch, a field of view of .094 inch. And total magnification of 216X



All Winslow Model 560 Tool Analyzers are capable of inspecting the following geometries and more



Optional Components

- Fiber-optic goose - neck light
- Small Tool Inspection Unit, with collet chuck assembly
- 36X Lens
- 20X Lens
- Triple Nose Turret
- Certified Alignment Bar

Standard Features and Equipment on all 560 Analyzers

Vertical Movement is controlled with a dovetail slide.

Horizontal Movement is controlled by linear ball bearings and ways.

Base vee block	2 -7/16" to 2 -1/2" (1.55 to 38 mm)
Mid-range vee block	1-7/32" to 2 -7/16" (1.55 to 28 mm)
Small vee block	1/8" to 1-7/32" (3.0 to 25.4 mm)
Vee block rotation	90 deg.
Dust Cover	

Lighting

Standard Halogen lamp 24V/20W

Base dimensions: 14"W x 31"L x 16"H

Weight: 62 lbs. (900 kg)

Power Input: 110V 6A

Standard Color Light Gray



Small tool holder .078" to .787" (2MM to 20MM)



36X lens



20X lens



Certified alignment bar



Triple nose turret



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Made in USA

Specifications subject to change as product improvements are incorporated.