



## FERROSCOPE FS-6

The Ferroscope FS-6 analytical ferrography optical microscope is specially assembled by Trico with attachments and options that enhance particle identification and interpretation. The Ferroscope FS-6 comes with three magnification powers -100x, 500x, 1000x. A technician can scan a Ferrogram quickly at low power looking for obvious abnormal particles, interpret particle origin and wear mechanism at 500x, and gain more insight into stress directions at 1000x.

The Ferroscope FS-6 is equipped with reflective and transmitted light sources so that a Ferrogram can be illuminated from above and below. A red light source illuminated above the Ferrogram causes the light to be reflected off particles and a green light source below the Ferrogram causes light to be transmitted. Any metallic particles will reflect light and non-metallic particles will transmit light.



### FS-6 FERROSCOPE SPECIFICATIONS:

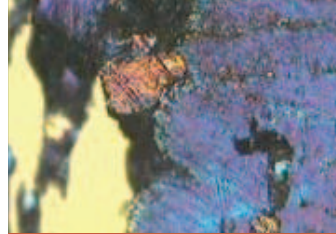
Depth	23.5"
Width	12"
Height	32"
Weight	40 lbs.
Power	100V or 220V AC

### BENEFITS:

- Field of view is 50% greater than previous ferrosopes, optics are infinity corrected eliminating focus problems
- Light source powers are increased in intensity over past models allowing better definition and much better photography (photomicroscopy)
- Tri-nocular system allows the addition of cameras, including video, and digital photography (microscopy)

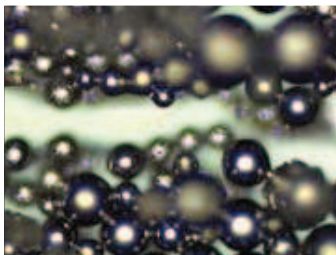


**Abrasive Wear**  
Long curved strips of metal. Heat treated

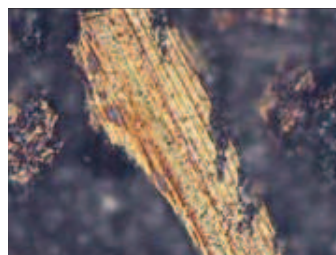


**Chunks**  
Flat striated particles. Heat treated

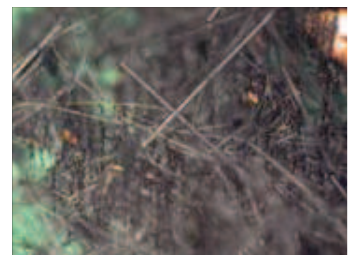
*\*photos based on  
ASTM D 7690*



**Spheres**  
Small spheres < 5 microns in diameter



**Severe Wear**  
Flat elongated > 20 microns with striations



**Fibers**  
Non-aligned and passes transmitted light

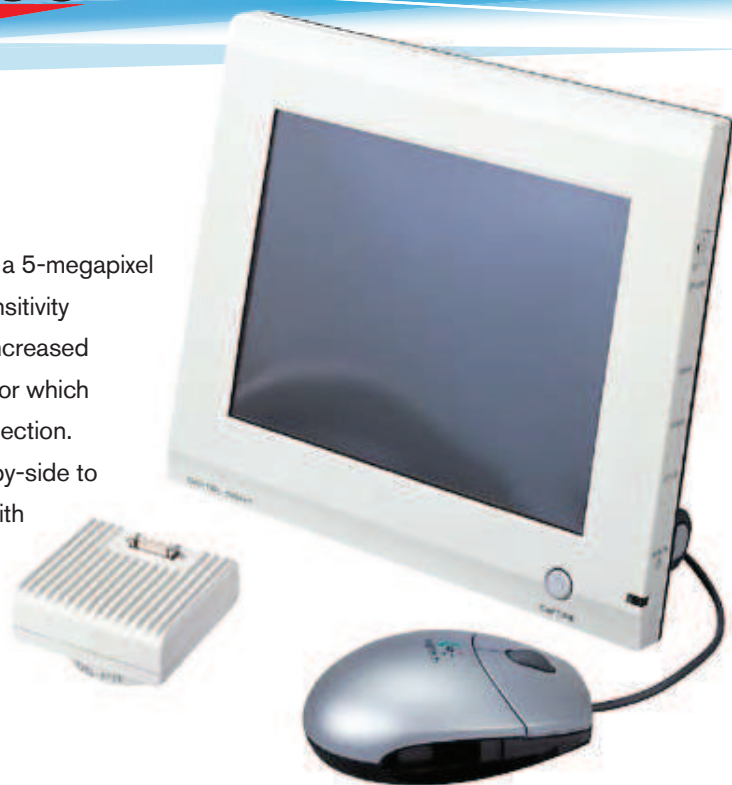
## FEATURES:

- Bi-chromatic light (two light sources, reflected and transmitted) for identifying metallic versus non-metallic debris
- Three magnification powers; 100x, 500x, and 1000x enable rapid scanning to minute detailing
- Red and green light filters aid in identification of particle
- Polarizer and analyzers help identify particulate and fibrous contamination
- Ergonomic design enables analyst to rest arms on table while adjusting focus



## DIGITAL CAMERA

The high-definition digital camera for the Ferroscope FS-6 features a 5-megapixel CCD that can capture wear particles. The camera improves red sensitivity by using a new IR cut filter and enhances image quality, including increased brightness through 4x binning. It features a large built-in LCD monitor which can observe samples and capture images without a computer connection. The monitor can be split in half to display still and live images side-by-side to compare and contrast a sample image that serves as a reference with a live image. The monitor has exceptional color representation with seven default gamma correction presets and another seven that can be registered by the user. It allows the user to create an original reference table.



## BENEFITS:

- Data can be saved to: USB memory stick, Compact Flash card, Mass storage class, Network
- All operations can be performed by clicking on-screen menus
- A wide variety of tools unique to this camera: Crosshairs, Measurement, Scale display

## FEATURES:

- Built-in LCD monitor—no computer required
- Contains two USB ports
- Scene mode enabling optimal image capture with a single click
- Supports direct printing; just connect the unit's USB port to a printer which supports the PictBridge standard

## CAMERA SPECIFICATIONS:

CCD	2/3 in high density CCD (total number of pixels 5.24 mil)
Recordable Pixels	2560 x 1920 pixels, 1280 x 960 pixels, 640 x 480 pixels
Dimensions	3" W x 3" D x 1.75" H
Weight	.5 lbs.

## CONTROL UNIT SPECIFICATIONS:

Digital Zoom	Up to 16x
Storage Format	BMP, JPEG (4 step compression), TIFF
Interface	USB device port x 1 (mass storage class support) USB host port x 2 (USB mouse, USB memory stick, USB keyboard, microscope connection)
Power Supply	AC100-240V 50/60 Hz
Power Consumption	70VA
Dimensions	9" W x 2.5" D x 7.875" H
Weight	3 lbs.
LCD Monitor	8.4" TFT color LCD XGA (1024 x 768) SXGA/XGA
Storage Media	Compact flash card (type 1, type II), USB memory stick, microdrive
Direct Printing	PictBridge printer (sold separately)





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## IMAGERY SOFTWARE

Imagery Software will streamline image capturing, measurement and enhancement, while improving the accuracy of your Photomicrographs. The software provides image acquisition from different software sources such as; AVI, MPG, MPEG, JPEG and movie files. Measurements are done and captured onto an MS Excel file for future analysis. The measurement scale bar can also be burned on each captured image automatically—quickly providing wear particle sizes. In addition, large wear particles difficult to bring into focus under high magnification conditions can be compensated by the software with a digital auto-correcting mode. Now you can count, size, and interpret wear particles in a matter of minutes with all of the features offered in the Imagery Software using a 32-bit/64-bit COM-based application for MS Windows which is easily expanded through plug-in components.

Combining Trico's Imagery Software with Ferrographic Instruments provides a fully capable and productive Ferrographic Laboratory with results that extend equipment health monitoring capabilities well beyond traditional methods.

