

Basic Operating Procedure for the Video Extensometer

1. Turn on the video extensometer with the main power switch located on the back of the machine. On the desktop, first disable the virus scan on the bottom right hand corner of the computer screen then open up the Blue Hill program.
2. From the home screen click the Video extensometer setup dialog icon at the top right corner of the screen.
3. On the Video Set Up home page click on the "Use Area of Interest" option then enable the axial channel by clicking the "enable" box. The video extensometer should flash its lights once and the red lights should be showing on the pneumatic grips. Now the specimen must be placed and marked correctly in the pressure controlled grips. Mark the specimen with the special black marker as follows; imagine a two-dimensional diamond on the specimen and make a small black dot at the four ends of the diamond. Make the longer on the vertical axis than it is on the horizontal axis. Once that is completed the specimen can now be properly placed in the grips using the video extensometer. The grips' width may have to adjusted to fit the specimen correctly.
4. While viewing the display on the computer carefully place specimen in the grips aligning the two vertical dots along the yellow dotted line. Once the vertical dots are aligned close the grips to lock the specimen in position.
5. Right now the axial channel is selected from step three, now click and drag on the video display screen making a just large enough box to encapsulate the two dots aligned on the yellow dotted line. Clicking the little hand gun called "Measure strain" will assure that the axial view of the extensometer is aligned. Now relick the "enable" box under the axial channel and click the "enable" box under the transverse field. The lights on the video extensometer should shut off but come back on again once the "enable" box under the transverse channel has been selected. Click and drag on the video display screen making a just large enough box encapsulating the two dots aligned on the horizontal plane. Click the "Measure strain" icon again to assure the alignment of the transverse field.
6. The video extensometer is now properly aligned and ready to use on a sample.

7. Close the video setup box and from the Blue Hill home screen click on test. Double click on one the existing test to open it up and the program will start loading. Name the sample that is being tested by clicking the “Browse” icon on the left side of the screen. Once saved the test will load and the actual test screen appears. Before starting the test measure the length, width, and thickness of the sample and fill in that information towards the bottom of the test screen in the correct fields.
8. Load the sample in the grips and click start.
9. To recall an old sample’s data simply go back the Blue Hill home screen and click the “test” icon. On the left hand side of the screen click on “Continue sample”, the most recent samples that were tested will appear, double click on the desired test.

Commissioning and Calibrating

1. Turn on the video extensometer with the main power switch located on the back of the machine. On the desktop, first disable the virus scan on the bottom right hand corner of the computer screen then open up the Blue Hill program.
2. From the home screen click the Video extensometer setup dialog icon at the top right corner of the screen. On the Video Set Up home page click on the “Set up wizards” icon located near the left side of the screen. Click on “Commissioning”, the bottom option on the menu.
3. AVE Commissioning Wizard is the screen that appears and a summary of tasks to be completed follows. Click the “next” button. A warning will appear stating one must recalibrate the system if choosing to continue, click “next.”
4. Do not change any information on this screen for it has been predetermined, click “next.”
5. Remove the calibration bar from the accessory case, insert into the grips, and open the protective door to show the spot grid on the video display. Open the door on the side of the video extensometer and adjust the aperture ring to fully open. Click “next.”

6. The focus needs to be adjusted to maximum number of green segments on the focus indicator. Slightly rotate the focus ring to obtain this maximum focus. Click “next.”
7. Close the protective door on the on the calibration door and rotate the polarizing ring to obtain maximum segments on the indicator bar. The image should be black. Click “next.”
8. Click the “adjust window” icon and the camera will automatically align the calibration bar in the center of the image window. Click “next”, then “finish.”
9. Return to the “Setup Wizards” and click “Calibration.”
10. A summary of what is to come appears, read through then click “next.”
11. This next step was already finalized in the commissioning so click “next.”
12. Close the protective door on the calibration bar and remove it from the grips inserting it back into the accessory case. Insert one the previously marked specimen into the grips and using the video display, align the vertical dots along the yellow dotted line. You may have to adjust the polarizing ring to be able to see the specimen and the marks. Click “next.”
13. Insert the calibration bar back into the grips, open the protective door and click “adjust window.”
14. Read the warning and click “Calibrate”, then “Finish.”