MAIN TASKS TO TAKE AN IMAGE:

STEPS NECESSARY TO RUN AND SAVE MECH. TESTING DATA TO A FILE

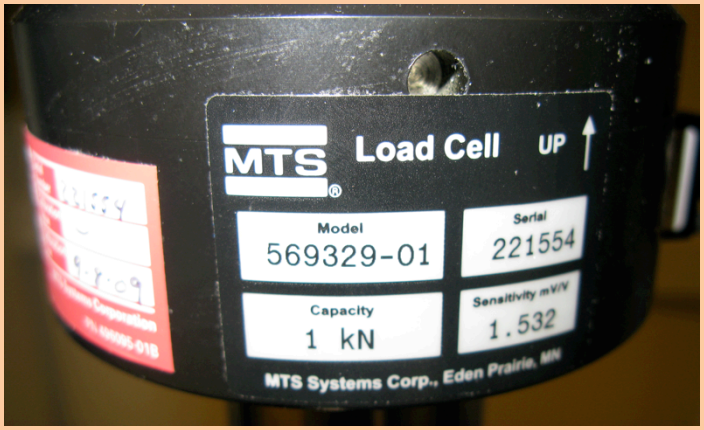
1. CHOOSE LOAD CELL & ATTACH TO FRAME (PG 2, step 1)
2. SET LIMITS & LOCATE EMERGENCY STOP BUTTON & TURN ON POWER (PG 3, step 3)
3. OPEN TESTWORKS 4 (PG 3, step 5)
4. LOGIN TO USER PROFILE & OPEN APPROPRIATE TESTING METHOD (PG 3, step 1)
5. ADJUST CROSSHEAD POSITION FOR GIVEN SPECIMEN (PG 3, step 4) EXTENSOMETER INFO (PG 5)
6. ADJUSTING ANY NECESSARY TESTING PARAMETERS (PG 3, step 5)
7. PRESS START BUTTON TO BEGIN TEST & ENTER SPECIMEN NAME & DIMENSIONS (PG 4, step 2 & 3)
8. PRESS F10 TO SAVE DATA, GO TO FILE|EXPORT PREVIEW| SAMPLE TO EXPORT DATA (PG 4, step 5 & 6)
9. DETAILED INFORMATION ON EXTENSOMETER (PG 5)

PLEASE KEEP THIS COPY WITH THE MTS

STARTING UP MTS LOADFRAME

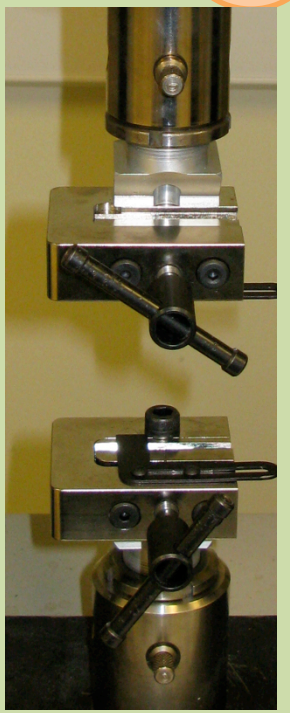
1. Before testing calculate the maximum load conditions of your sample to determine if the machine load cell is appropriate. See MSE Tech staff to change load cell.

- 2 different load cells are available:
  - **1kN**
  - **10kN**



2. Several different testing grips and platens are available for use. Make sure grips are appropriate and correctly installed.

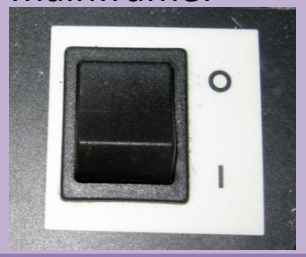
See MSE Tech Staff for options.



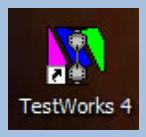
3. Set load frame limits so that the grips/platens cannot collide and cause damage to the load cell or frame.

Also make sure you are aware that the emergency stop button is located to the left of the power button

4. Turn power on the mainframe:



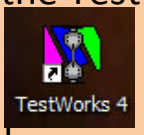
5. Open the MTS Testworks 4 Software:



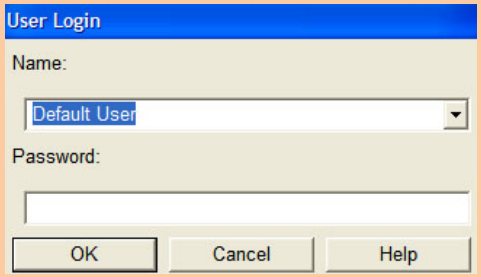
6. **TIP: It is important to always wear safety glasses and use safety shield/machine guard when operating the MTS Insight 10**

STARTING UP THE TESTWORKS 4 SOFTWARE

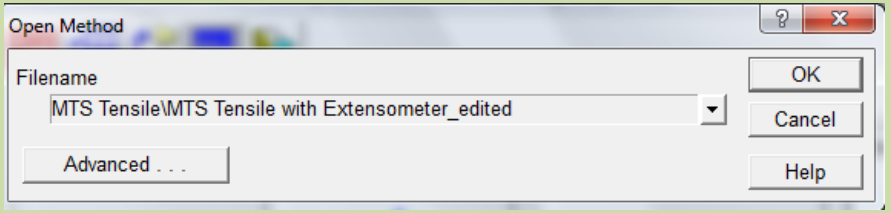
1. Once the Testworks 4 software has been opened



You will be prompted to login to a user profile, use either the "MSE 360-365" user or "Default User"

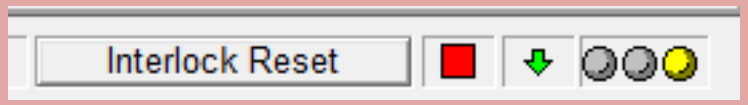


2. You will next be prompted to load the desired test method.



For our purpose, load the **MTS Tensile with Extensometer Edited.**

3. To initialize the crosshead and allow the frame to move for testing, the Interlock needs to be reset:



Press the "Interlock Reset" button

4. If the position of the crosshead needs to be adjusted, use either the software or the remote.

In the software:

- Use the up/down arrows

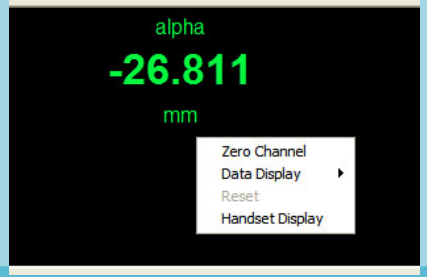
On the remote control:

- Use the up/down arrows for large adjustments
- Use the scroll wheel for smaller adjustments.

5. Review the front input panel making sure the correct settings are in place.

Panel Inputs	Value	Units
Data Acq. Rate	10.0	Hz
Extensometer Gage Length	50.800	mm
Test Speed	5.000	mm/min

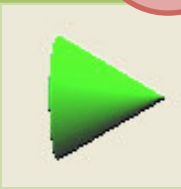
6. **TIP:** To zero out any given channel, right click on that channel and click on the "Zero Channel"



RUNNING A TEST AND SAVING DATA

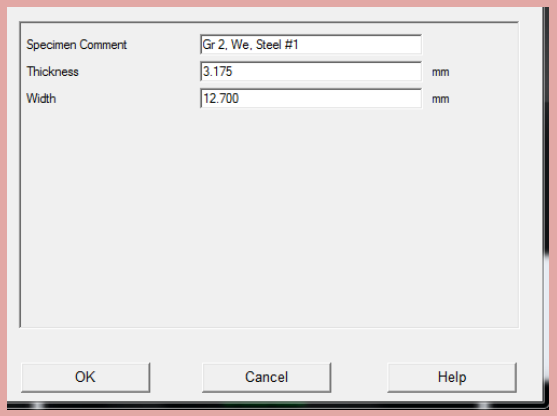
1. Attach the extensometer if using one and for safety, **place Plexiglas shield/machine guard in front of MTS**

2. Press the green start button to begin the test.



3. Put the specimen information and sample dimensions (thickness and width) in the pop-up dialogue box.

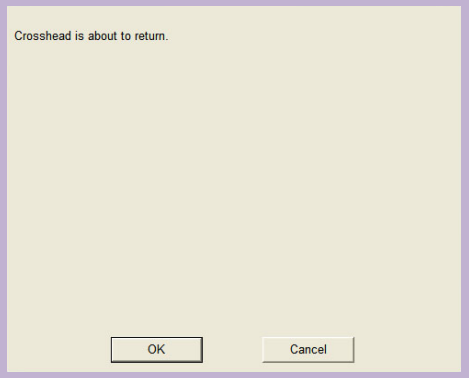
Then click "OK".



4. While testing, the screen is continually updated with an x-y graph.

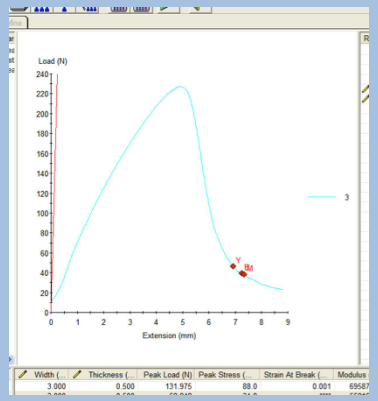
When testing is complete a dialogue box opens informing you that the "Crosshead is about to return". By clicking OK, the crosshead will return to its initial point.

*****Click OK only after removing any specimens from the grips*****



5. The screen goes to the "Review" tab allowing you to see the x-y plot.

To save data, **click F10 or File|Save As**



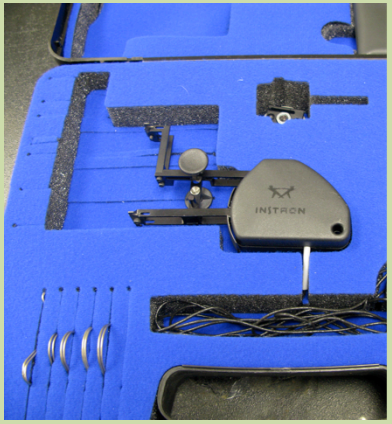
6. **TIP**: To export data, File|Export Preview|Sample*
This will open up Notepad to review data before saving.

Specimen: a single test piece
***Samples:** collection of specimens

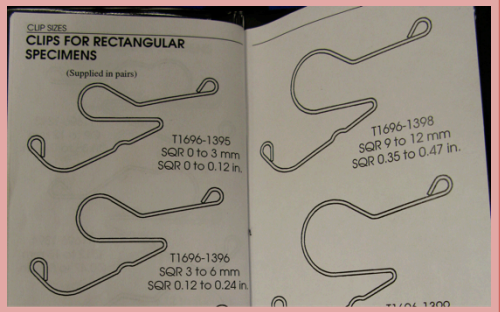
USING EXTENSOMETER & ATTACHING SPECIMEN

1. The Instron 2 inch gauge length extensometer is stored in the locked cabinet next to the MTS. See the MSE Tech Staff to gain access to the device.

2. For detailed instructions, see the manual inside the box

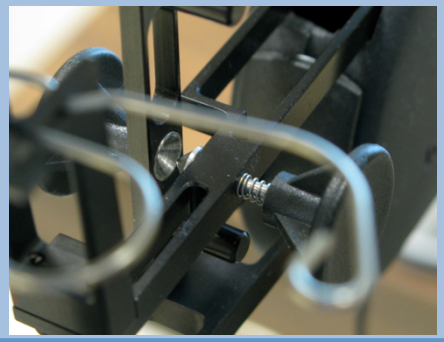


3. Choose the appropriately sized clips for the given samples dimensions.
- Rectangular or Round
- 0to3mm, 3to 6mm, etc



4. After aligning and placing specimen in between the grips, attach the extensometer as pictured (more images in manual)

5. Remember to place the cup and cone together to zero the extensometer. Then zero out the channel in the software.



6. **TIP**: Place lines on the specimen, the length of the gauge to look for any slipping