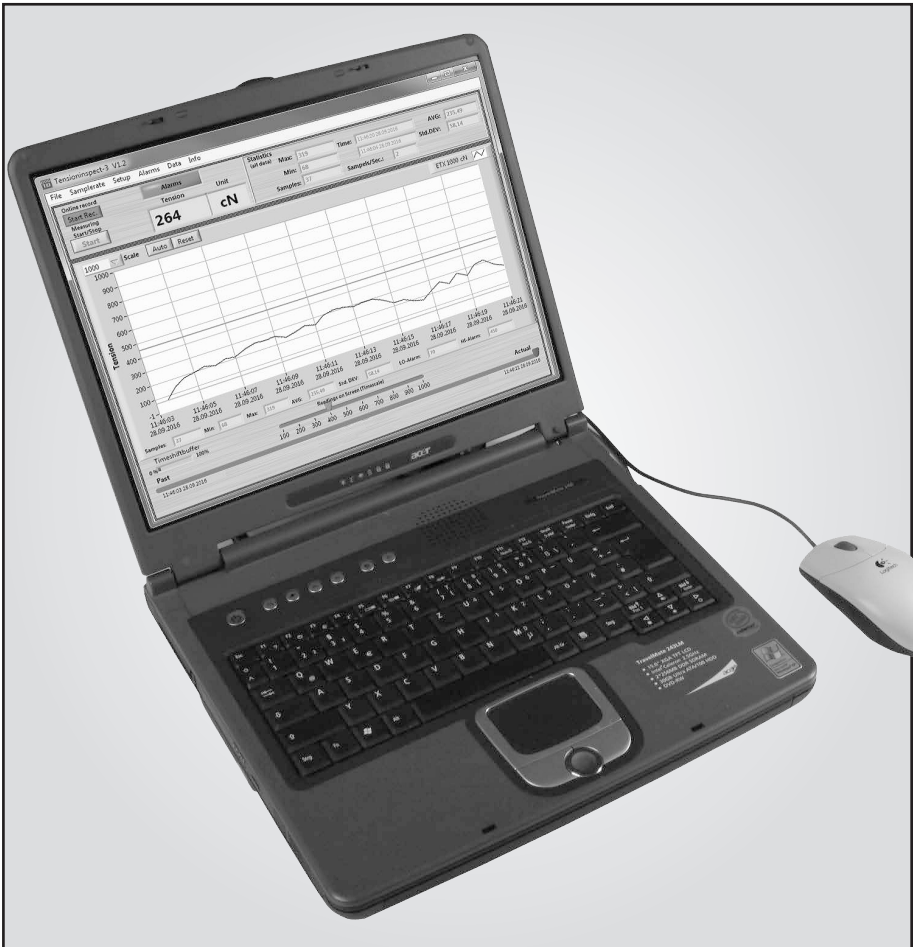


# TENSION INSPECT SOFTWARE



**Operating Manual**

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## 1.0 INSTALING TENSION INSPECT 3

### 1.1 System Requirements

Computer: PC

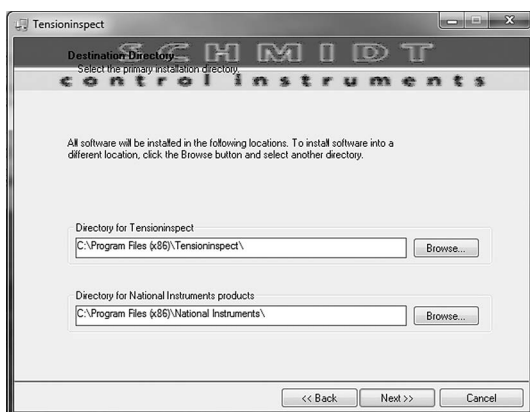
Operating system: Windows XP and higher (32 / 64 Bit)

Hard disk space: Approx. 200 MB

### 1.2 Installation: CD-ROM drive

To be able to restore the original files in case problems occur after the installation, you should make a backup of your hard disk contents before you start installing. In no event will Electromatic Equipment company be held liable for any data loss or damage.

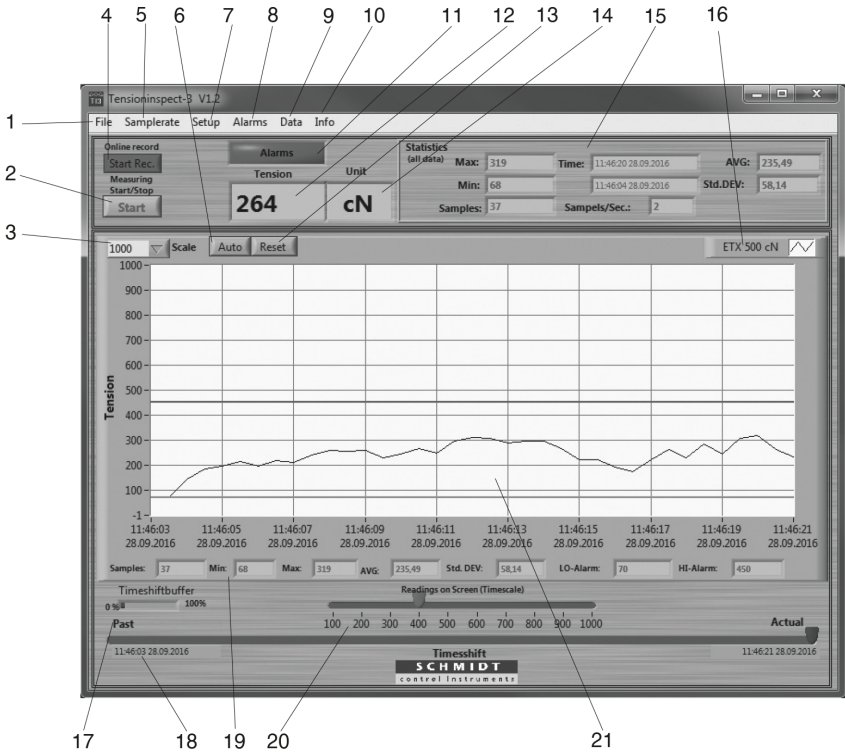
1. Insert the CD-ROM with the Tension Inspect 3 program into the CD-ROM drive.
2. Start the installation process by double-clicking the application file.



3. Follow the instructions on the screen, to install the software Tension Inspect 3 and the corresponding USB driver.
4. At the end, click the “Finish” button, to finish the installation process.

## 2.0 USING TENSION INSPECT 3

1. Double-click the TENSION INSPECT  icon to start the program. The program window opens



- |    |                 |                        |                            |
|----|-----------------|------------------------|----------------------------|
| 1. | Menu file       | SAVE AS CSV            | Section 8.0                |
|    | Menu file       | LOAD CSV               | Section 8.0                |
|    | Menu file       | EXIT Close             | Tension Inspect 3          |
| 2. | Button          | START/STOP             | Section 4.0                |
| 3. | Choice box      | SCALE                  | Section 6.0                |
| 4. | Button          | START REC.             | Section 7.0                |
| 5. | Menu samplerate | SAMPLERATE             | Select the sampling rate   |
| 6. | Button          | AUTO                   | Section 6.0                |
| 7. | Menu setup      | SETUP                  | Section 3.0                |
| 8. | Menu alarms     | ENABLE ALARMS          | Section 5.0                |
|    | Menu alarms     | SHOW ALARMS            | Section 5.0                |
|    | Menu alarms     | CLEAR ALARMS           | Section 5.0                |
| 9. | Menu data       | CLEAR DATA             | Clear all measuring values |
|    | Menu data       | CREATE HTML-REPORT     | Section 7.0                |
|    | Menu data       | EXPORT SCREEN TO EXCEL | Section 7.0                |
|    | Menu data       | MEMORY REVIEW          | Section 9.0                |

10	Menu info		Information about Tension Inspect 3
11	Display	ALARMS	Change to red, if the reading exceed or underrun the setpoint during a measuring
12	Display	TENSION	Current reading
13	Button	RESET	Section 6.0
14	Display	UNIT	Unit of measure of the readings
15	Display	STATISTICS	Display of statistical values of the measurement
16	Display	MODEL	Display the connected unit
17	Display	TIMESHIFTBUFFER	Section 6.0
18	Display	TIMESHIFT	Section 6.0
19	Display	STATISTICS DIAGRAM	Display the statistical values, shown currently at the graph.
20	Display	READINGS ON SCREEN	Section 6.0
21	Display	TENSION	Readings as graph, as well as the Hi/Lo Set-points (only when activated)

### 3.0 BASIC SETUP

#### Requirements:

1. The required measuring unit is connected to the PC.
2. The measuring unit is switched on

#### To edit the settings:

1. Click on the menu SETUP to open the dialog box.

You can now either keep the default values preset in the input boxes or customize them for your specific requirements.

The figure below shows the factory-preset defaults for a tension meter model ETX-500.

The screenshot shows the 'TENSION INSPECT setup' dialog box. The settings are as follows:

- Description:** Instrument: ETX, Selected model: ETX, Range: 500, Unit: cN, Sample rate: 50 / Sec, Damping: 10.
- Serial Speed:** 19200
- Communication port:** COM4
- Test Connection:** Test button
- Timeshift Buffer:** 1000
- Enable Alarm:** Checked
- LO-Alarm:** 70
- HI-Alarm:** 450
- Data directory:** %D:\online recording
- Background color:** White-on-Black (selected)

Callout boxes provide the following explanations:

- Enter text for the header describing the stored data (points to Description field)
- For testing the connection between the PC and the connected tension meter (points to Test button)
- Select the tension meter model (points to Instrument dropdown)
- Transfer speed of the serial interface (points to Serial Speed dropdown)
- Enter the COM PORT (1-4) to which the tension meter is connected (points to Communication port dropdown)
- Activates recording of the values which exceed or underrun the Hi/Lo set-points (points to Enable Alarm checkbox)
- Determine the file for saving data of online recording (points to Data directory text box)
- Select the max. number of readings, displayed at the graph (points to Timeshift Buffer dropdown)
- Enter the Hi/Lo set-points (points to LO-Alarm and HI-Alarm input boxes)
- Select the tension range (points to Range dropdown)
- Select the unit of measure. (points to Unit dropdown)
- Select the sample rate (points to Sample rate dropdown)
- Damping (points to Damping dropdown)
- Changing the background colour to black (points to White-on-Black radio button)

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## 4.0 START AND STOP THE TENSION VALUE DISPLAY

### Requirements:

1. Click on CLEAR DATA in the menu DATA. All readings shown in the TENSION display, if any, are cleared.

### Start:

1. Click the START button to activate the display of tension values.

The button shows STOP.

### Tension value display:

1. TENSION display Current graph, as well as high set-point (red) and low set-point, if activated in the menu ALARMS or SETUP

**TENSION display** Current digital value

**STATISTICS display** Continuously updated statistics

**STATISTICS DIAGRAM display** Continuously updated statistics, of readings, shown in the graph

### Stop:

1. Click the now STOP button. The display of the tension values stops.  
The button shows START..

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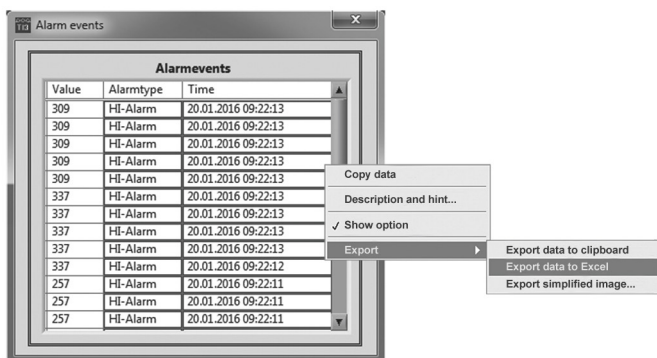
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## 5.0 HI / LO SET-POINTS

Tension Inspect 3 has a comparison function. Thereby the displayed value will be compared with the preset set-points. During exceeding or underrunning a set-point, the background of the display TENSION change to red. The background of the display NO ALARMS change the colour permanently to red and shows now ALARMS after exceeding or underrunning a setpoint for one time.

**ENABLE ALARMS** Activates recording of the values which exceed or underrun the Hi/Lo set-points

**SHOW ALARMS** By clicking SHOW ALARMS at the menu ALARMS the window „Alarm events“ will be opened.



By opening the context menu in the window „Alarm events“ the values exceeding or underrunning the set-points can be exported to excel by using the menu items „Export“ and „Export data to excel“.

**CLEAR ALARMS** By clicking CLEAR ALARMS in the menu ALARMS all values in the window „Alarm events“ will be cleared.

## 6.0 GRAPH ADJUSTMENTS

<b>SCALE</b>	The maximal tension value of the diagram can be adjusted (Y-axis, starts at zero).
<b>AUTO</b>	Automatic scaling of the Y-axis depending to the measured tension values.
<b>RESET</b>	Change of scaling from mode AUTO to SCALE
<b>READINGS ON SCREEN</b>	To set the number of readings to be shown in the diagram
<b>(Timescale)</b>	(X-axis). The scroll bar turns to red, if more readings are selected for the diagram than measured.
<b>TIMESHIFTBUFFER</b>	Indicates in % the fill level of the memory. The maximal numbers of readings will be set in the SETUP.
<b>TIMESHIFT</b>	To select the timeframe of a series of measurements, that should be displayed in the diagram. Is the setup Value of
<b>READINGS ON SCREEN</b>	bigger or equal to the recorded readings, the scroll bar cannot be moved.

## 7.0 PRINT AND DATA TRANSFER

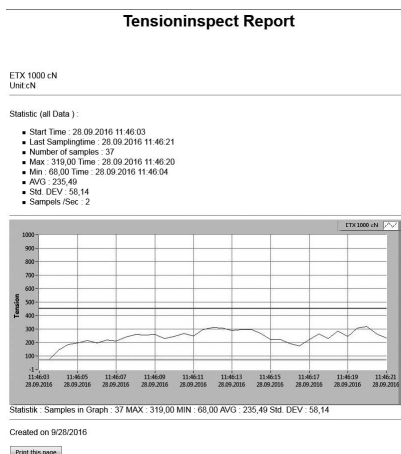
### Print:

1. Click CREAT HTML-REPORT in the menu DATA to open the print preview.
2. Click the PRINT THIS PAGE button to open the printer setup box.

The print-out includes the statistical data of the series of measurements, the current displayed graph and the statistical values of the graph.

### Data transfer:

1. Clicking EXPORT SCREEN TO EXCEL in the menu DATA copy the readings, which are displayed at the graph to an excel file (reading, date, time). With the infixed readings, a graph can be created in the Excel file.





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## 8.0 SAVE AND LOAD THE READINGS

### Save:

The statistical data, as well as the single readings of a measuring can be saved after the measuring ends as CSV file, by clicking **SAVE AS CSV** in the menu **FILE**.

### Load:

Click **LOAD CSV** in the menu **FILE** and open the required file. The statistical data of the saved measuring, the graph and the statistical data of the graph are displayed in **Tension Inspect 3**



It is possible to add readings to an existing file. In this case open the file and start a new series of measurements. The new readings will be added in the diagram. After this store the complete CSV file again. If any readings are in the internal memory before opening the existing file, the internal memory will be overwritten.

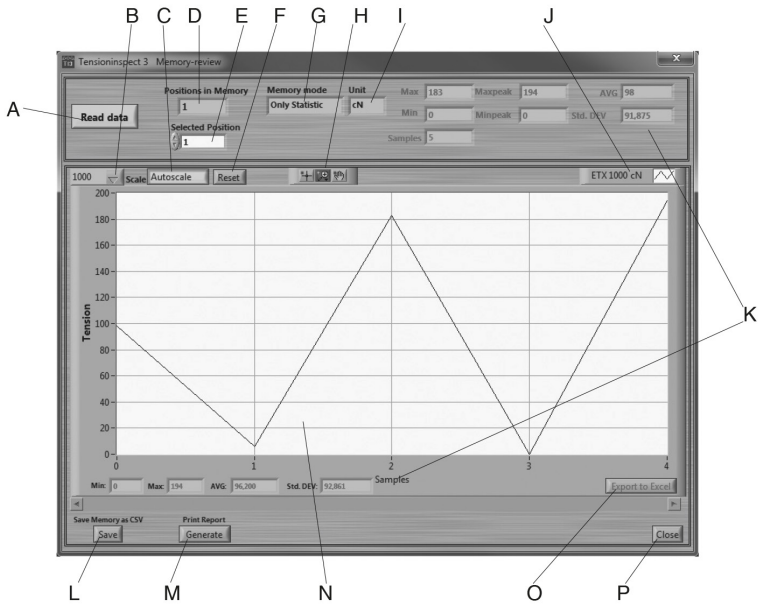
## 9.0 MEMORY REVIEW

(Available only for ETX, ETPX and DTX)

With the TENSION INSPECT 3 program you can download all the tension data stored in the memory of the connected tension meter.

1. Start the DOWNLOAD
2. Click MEMORY REVIEW in the menu DATA.

The MEMORY-REVIEW window opens.



A	Button	READ DATA	Section 10
B	Choice box	SCALE	Section 10
C	Button	AUTOSCALE	Section 11
D	Display	POSITION IN MEMORY	Number of saved series of measurement
E	Choice box	SELECTED POSITION	Selected series of measurement
F	Button	RESET	Section 10
G	Display	MEMORY MODE	Used memory mode during the measuring
H	Button	ZOOM	Section 10
I	Display	UNIT	measuring unit of the readings
J	Display	GERÄTETYP	Display the connected unit
K	Display	STATISTICS	Statistical data of the displayed series of measurement
L	Button	SAVE	Section 12
M	Button	GENERATE	Section 11
N	Display	TENSION	Readings as graph
O	Button	EXPORT TO EXCEL	Section 11
P	Button	CLOSE	Close MEMORY-REVIEW

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## 10.0 DOWNLOAD TENSION DATA FROM THE ETX, ETPX, DTX TO A PC

### Requirements:

1. Tension meter connected to the PC.
2. Tension meter switched on.

### To download the tension data:

1. Click the READ DATA button. The tension data stored in the tension meter are read into the PC.

### Tension value display:

Display TENSION Graph of the displayed series of measurements

Display STATISTICS Statistical data of the displayed series of measurements

### Graph adjustments

**SCALE** Manual scaling of the Y-axis which starts at „zero“. This feature can be activated by pressing RESET.

**AUTOSCALE** Automatic scaling of the Y-axis depending to the displayed readings of the diagram.

**RESET** Activates the scaling, which is set in the pop-up SCALE.

**ZOOM** A big number of zoom features can be selected to enlarge a selected frame of the diagram.

**NOTE:** The button ZOOM and RESET work only if AUTOSCALE is not activated.

## 11.0 PRINT AND DATA TRANSFER

### Print:

1. Click the GENERATE button to open the print review.
2. Click the PRINT THIS PAGE button to open the printer setup box.

The print-out includes the statistical data of the series of measurements and the current displayed graph.

### Data transfer:

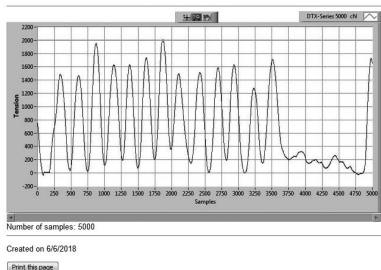
1. The EXPORT SCREEN TO EXCEL button copies the readings of the desired series of measurements to an Excel file (reading, date, time). With the infixed readings, a graph can be created in the Excel file.

### Tension Inspect Report

DTX-Series 5000 cH  
Unit: cH  
Memory readout

Statistic (all Data):

- File #: 1
- Material: PA-0.6-1.2mm
- Start: 12:29:08 06.06.18
- Stop: 12:29:13 06.06.18
- Last: 290
- Avg: 573
- Max: 1004
- Min: 243
- Std.dev: 577
- Peak max: 2016
- Peak min: 0
- HI-Alarm: 3000
- LO-Alarm: 2000
- Records: 5000



## 12.0 SAVE THE READINGS

With the button SAVE stored values (statistics and series of measurements) of the connected tension meter can be downloaded and stored as CSV file. The individual series of measurement can be selected.

Readings which have been downloaded and stored as CSV file cannot be related to Tension Inspect 3.

## 13.0 ONLINE RECORDING

1. Click first the button START/STOP and afterwards START/STOP REC to start the continuously data recording. The recorded data is now saved as CSV file. If the file reaches a size of 10 MB, a new CSV file will be generated automatically for further data acquisition and saving.
2. By clicking the button START/STOP the continuously data acquisition is paused. Clicking START/STOP again will continue the recording. The data will be saved in the last CSV file.
3. By clicking the button START/STOP REC the continuously data acquisition is finished. After clicking START/STOP REC again the recorded data will be saved in a new CSV file.
4. The location for saving the files can be determined in the menu SETUP.

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## **14.0 WARRANTY**

ELECTROMATIC Equipment Co., Inc. (ELECTROMATIC) warrants to the original purchaser that this product is of merchantable quality and confirms in kind and quality with the descriptions and specifications thereof. Product failure or malfunction arising out of any defect in workmanship or material in the product existing at the time of delivery thereof which manifests itself within one year from the sale of such product, shall be remedied by repair or replacement of such product, at ELECTROMATIC's option, except where unauthorized repair, disassembly, tampering, abuse or misapplication has taken place, as determined by ELECTROMATIC. All returns for warranty or non-warranty repairs and/or replacement must be authorized by ELECTROMATIC, in advance, with all repacking and shipping expenses to the address below to be borne by the purchaser.

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