Torque Test User Guide

Models covered

MTS-3002 Software

MATATAKITOYO TORQUE TOOLS ®

- N-M
- KG-M
- FT-LB
- IN-LB

- TRACK
- AUTO RESET
- HOLD

0.0

ZERO   UNIT   MODE

⚠️ **WARNING**

Read all relative terms of the user manual thoroughly before performing any operation.

The company provides warranty to any flaws due to production causes. Warranty is applied only to the product and its accessories. Any flaws due to human behavior, assembly, adjustment or other non-production causes will not be protected under this warranty.

CONTENTS

Insert the "Torque Test" CD-ROM on your drive. Find the directory and choose a version to install (Win 7 or XP above). Inside the folder, double click on "setup.exe."
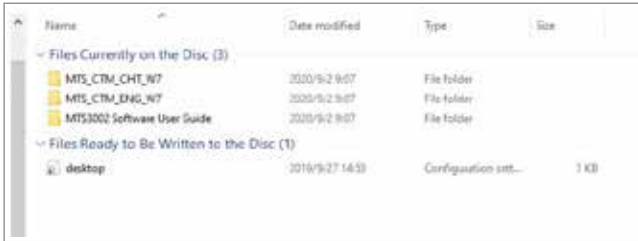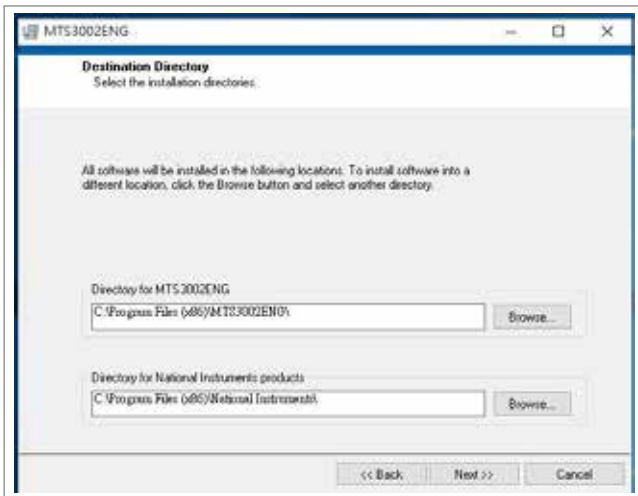

Choose a version to install (Win 7 or XP above).
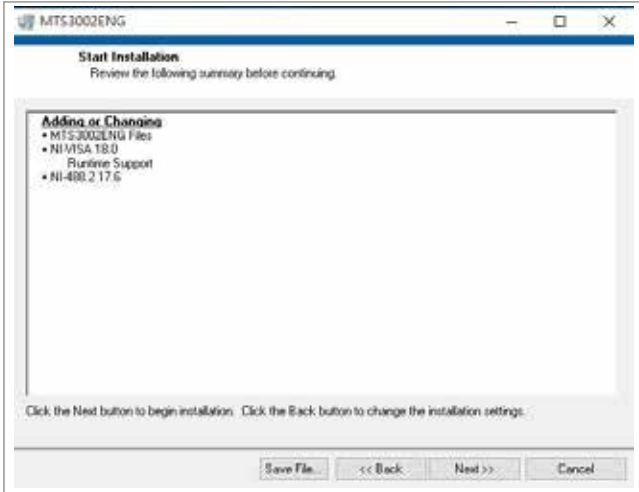

Double click on the "setup.exe" icon.

> **Note :** Make sure your CD-ROM drive and the Internet are properly connected. Improper connection may cause a failure on the installation process.

Choose a path to install and click on "Next."
(Do not change the path as this may cause errors.)

Click on "Next" to continue.
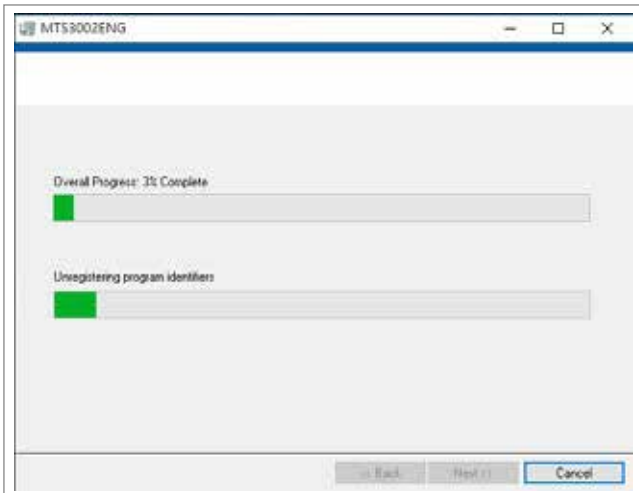
Please wait while the "Torque Test" installation is processing.

"Torque Test" installation has completed. Click on "Finish."

Installation process is complete. Click on "Restart" to restart your device.

Find the Torque Test icon on your Desktop.
Or click on Start ➜ Program Files ➜ MTS3002ENG ➜ Torque Test

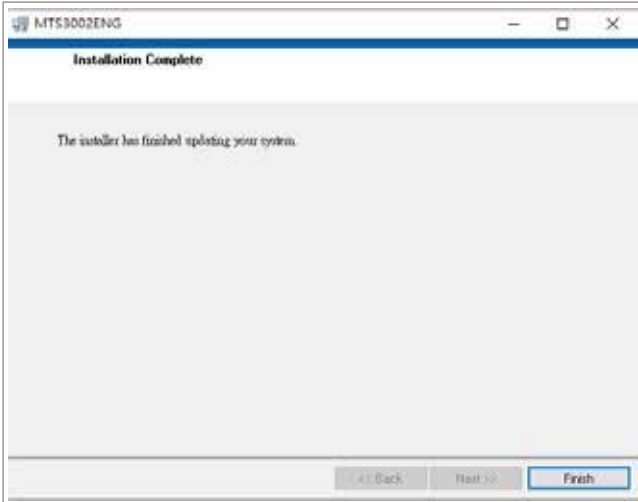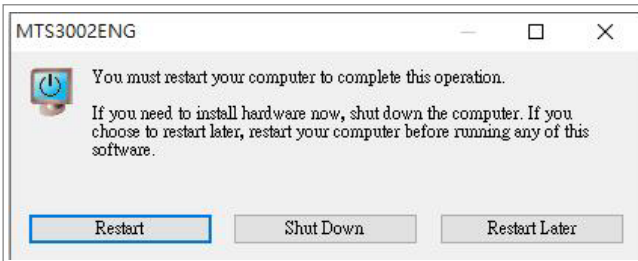As the program is running, you will see the window (shown as above).

Press the "Login" button to access the following window.

Single Test : Perform a single torque test on CW direction.

Standard Test : Perform multiple torque tests on CW or CCW direction, or both.
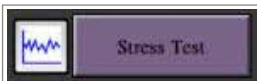
Stress Test : Find the stress value (durability) of a torque wrench.

Fracture Test : Find the maximum fracture value of a torque wrench.

Log in with an existing account. For initial login, enter "admin" for Name and "1234" for Password. Click on "OK" to start the program.

Switch Account

Press "Logout" and then repeat the Log-In process. Enter the account name and password to switch between accounts.

Add or Modify User :

For adding users or modifying a user access :

Click on "Add User" button to open up the window below :
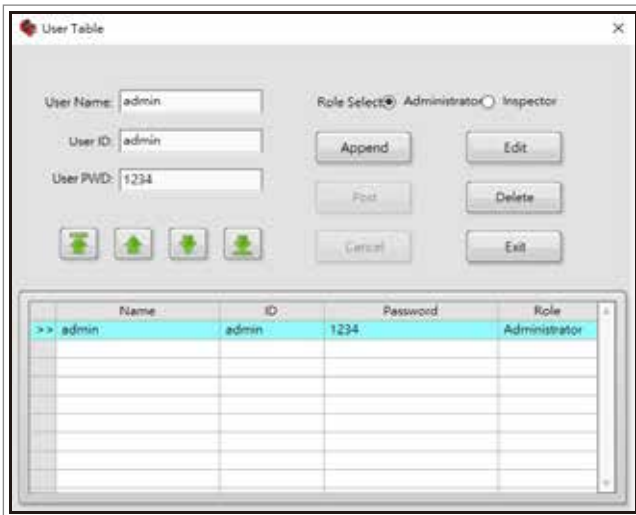

Specification :
User Name : Enter a user name
User ID : Enter a user ID
User PWD : Enter the user password

 Go to the Top

 Go Up

 Go Down

 Go to the Bottom

Role Select : Access Control
Administrator : Full Access
Inspector : Limited Access
Append : Add a new user
Post : Save user information
Cancel : Cancel modifications
Edit : Modify an existing user information
Delete : Delete a user
Exit : Leave the account setting

> **Note :** admin is a default user with full-access. Please keep this account for maintaining or finding the lost accounts or passwords.

Add Model
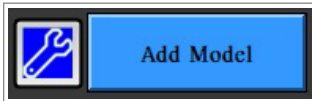
Press Add Model to start the window. Enter a new model information :

Specification :
Model Name : Enter a model name
Model ID : Enter a model ID
Max Capacity : Max torque value
Torque 1 : set up a value for the 1st torque test.
Torque 2 : set up a value for the 2nd torque test.
Torque 3 : set up a value for the 3rd torque test.
Torque 4 : set up a value for the 4th torque test.
Torque 5 : set up a value for the 5th torque test.

 Go to the Top

 Go Up

 Go Down

 Go to the Bottom

Edit : Modify a model
Append : Add a new model
Delete : Delete a model
Post : Save model information
Cancel : Cancel modifications
Exit : Leave the model setting

> Note : Please set up the 1st, 3rd, or 5th torque test.
> Setting up the 2nd or 4th test will not be valid.

Add Customer

On the Main Screen, press the "View Customer" icon to add a customer info :

Specification :
Name : Enter a customer name
Customer ID : Enter a customer ID
Telephone : Enter customer's contact number
Address : Address of the customer
E-Mail : E-mail address of the customer
Export File : Choose a file path to export

 Go to the Top

 Go Up

 Go Down

 Go to the Bottom

Edit : Modify an existing customer
Append : Add a new customer
Delete : Delete a customer
Post : Save customer information
Cancel : Cancel modifications
Exit : Leave the customer setup window

Database Backup

On the Main Screen, click on "Backup" to access the following window :
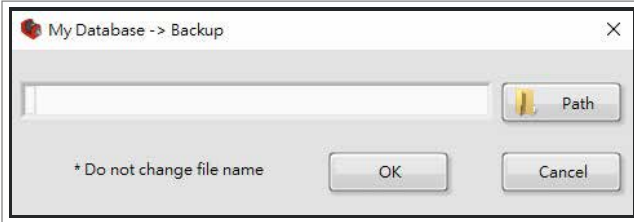
Specification :
Path : Choose a destination folder to export the database.
OK : Click to back up the database.
Cancel : Cancel the action.

> **Note 1 :** The export file path cannot be under the same program directory.
> **Note 2 :** The export file path should be easy to memorize for future access.

Database Restore

On the Main Screen, click on "Restore" to access the following window :
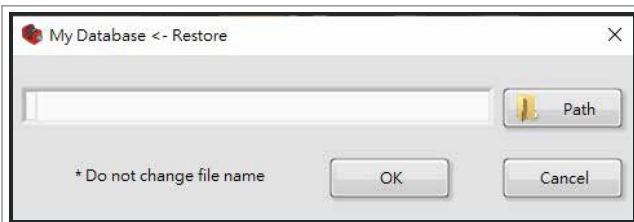
Specification :
Path : Choose a source folder to import the database.
OK : Click to restore the database.
Cancel : Cancel the action.

> **Note :** Restore database will replace the current one.
>   Proceed only if necessary.

On the Main Screen, press "About" to access the following window :
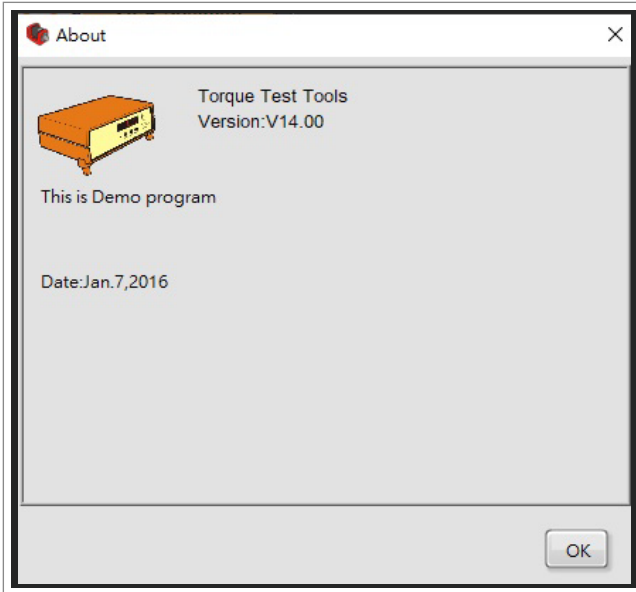
Note : This window shows the program version and related information.

On the Main Screen, press "Exit" to leave the program.

This is a preserved feature. The feature may be limited to certain operation systems. Do not perform this feature.

On the Main Screen, press "Single Test" to access the following window :
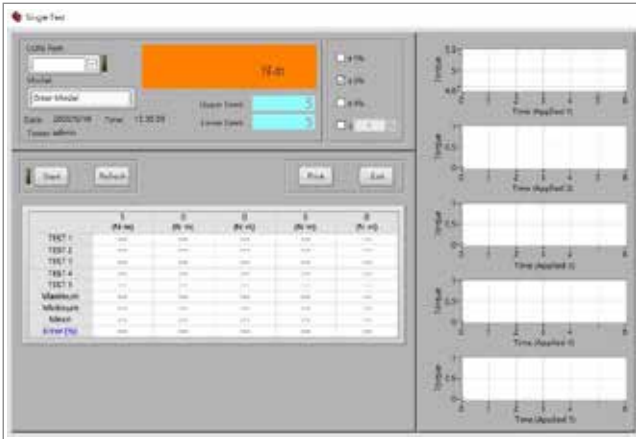
A confirmation window pops out with the MTS-3002 Single Test Window :
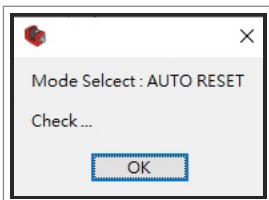
Press "OK" to confirm MTS-3002 setting.

Button Specifications :
ZERO : Use zero key to reset MTS-3002 to zero.
UNIT : Use unit key to change the unit of measurements (Default is N-M).
MODE : Use mode key for mode setting. Please set to AUTO RESET (Default is TRACK).

Track Mode

100 Nm ▶

Torsion

0

Time
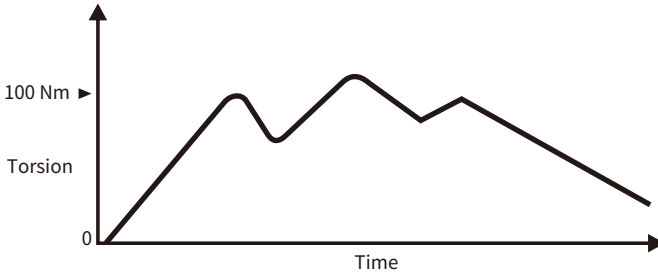
Auto Reset Mode

✳ **Each test require release torque from 0** ✳

Example for click type torque wrench with a single measurement

100 Nm ▶

Torsion

0

100.0

Delay time
2 Seconds

Rcsct
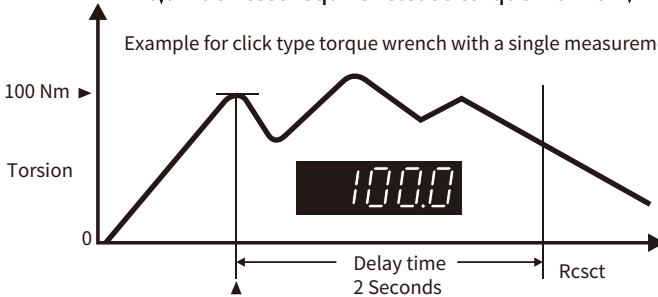
1 st peak value (Peak hold)

Hold Mode

✳ **Each test require release torque from 0** ✳

Example for click type torque wrench with a single measurement

100 Nm ▶

Torsion

0

100.0

Infinite loop

Press Zero button to Reset
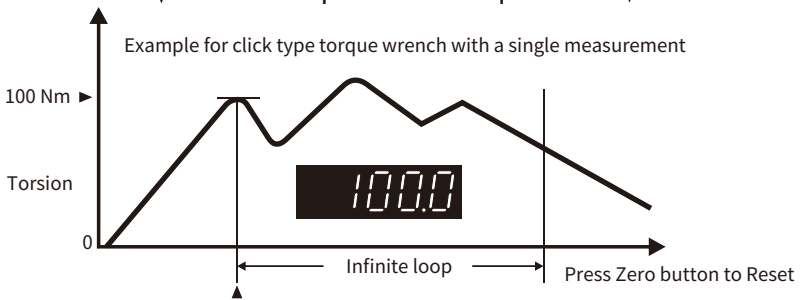
1 st peak value (Peak hold)

COM Port Setting :

Press the dropdown icon (above) to start COM Port Setting :

A list of connected COM Port will be shown. If not, click on "Refresh."

Choose the corresponding Port. Watch the light ▮ turn up ▮ to show connections.

If the light remains off, do the following steps :
1. Confirm MTS-3002 are properly connected and wires are in good condition.
2. Reselect COM Port and watch the light to turn on.

Model Setting :
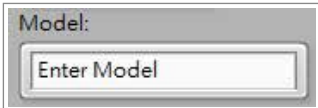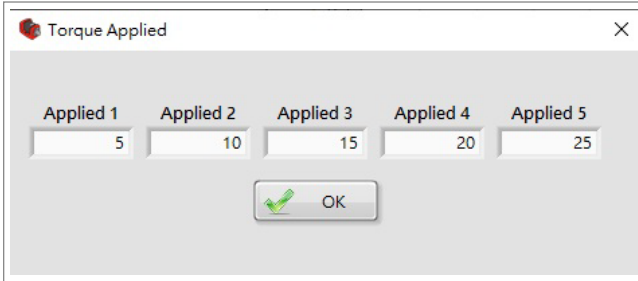
Click into the box. Enter model number. Press ENTER to display torque value preset.

Enter the torque values by order.

Torque Applied
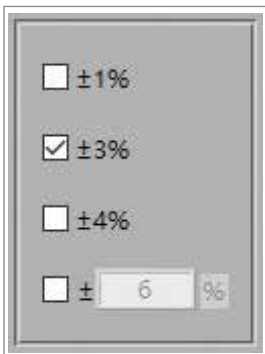
Applied 1	Applied 2	Applied 3	Applied 4	Applied 5
5	10	15	20	25

OK

Press "Enter" to access the following window :

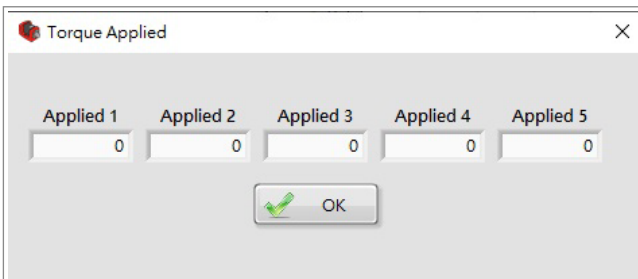|	5 (N-m)	0 (N-m)	0 (N-m)	0 (N-m)	0 (N-m)
TEST 1	---	---	---	---	---
TEST 2	---	---	---	---	---
TEST 3	---	---	---	---	---
TEST 4	---	---	---	---	---
TEST 5	---	---	---	---	---
Maximum	---	---	---	---	---
Minimum	---	---	---	---	---
Mean	---	---	---	---	---
Error (%)	---	---	---	---	---

Tolerance Setting :

☐ ±1%

☑ ±3%

☐ ±4%

☐ ± 6 %

Select a preset error rate, or check the customization box to enter a value (maximum of 20%).

The setting is now complete. Start a Single Test.

Button Specifications :
Start : Start a test
Refresh : Clear a test result
Print : Print the test results (an example shown as below)
Exit : Close the test window
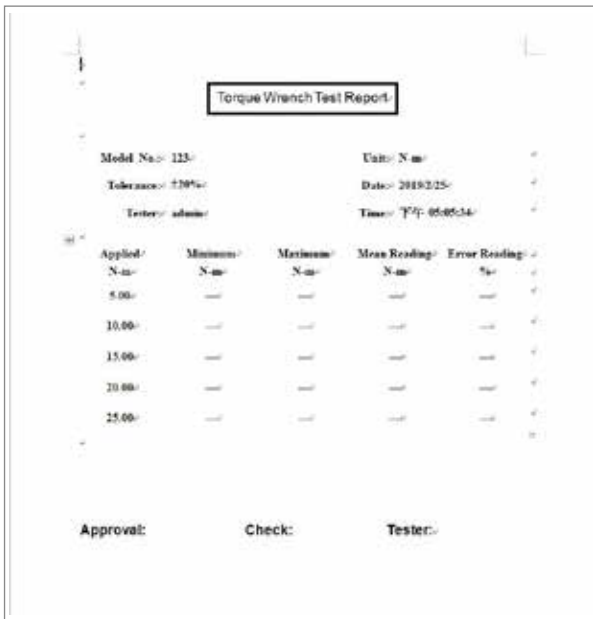
On the Main Screen, press "Standard Test" to access the following window :
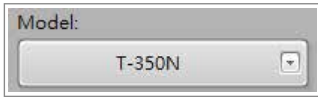
A confirmation window pops out with the MTS-3002 Standard Test Window :
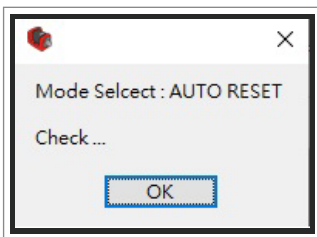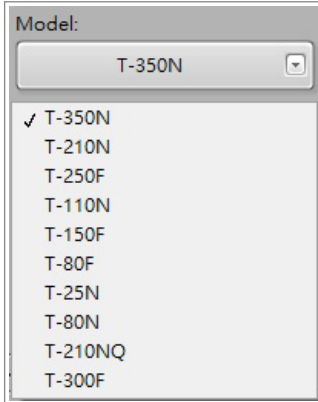
Press "OK" to confirm MTS-3002 setting (For errors, repeat steps on P.15).

Model Setting :

Click on the drop-down menu to choose a model, or refer to P.8 for setup.

Customer Setting :

Click on the drop-down menu to choose a customer, or refer to P.10 for setup.

Order Number Setting :

Order:

Order Number

Enter an order number or a customized serial number, or skip this process.
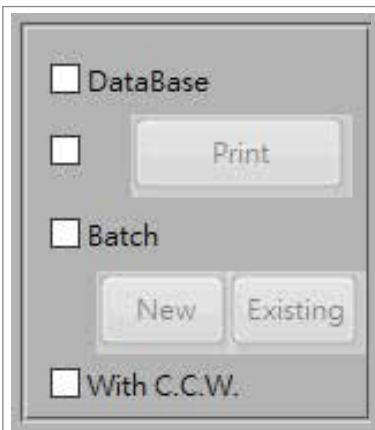
Tolerance Setting :

☐ ±1% ☑ ±3%

☐ ±4% ☐ ± 6 %

Select a preset error rate, or check the customization box to enter a value
(maximum of 20%).

Export Setting :

☐ DataBase

☐   Print

☐ Batch

        New   Existing

☐ With C.C.W.

Specification :
Database : Save test results in a database without being printed out.

Print : Print a single test result. Click on "Print" to access the window :
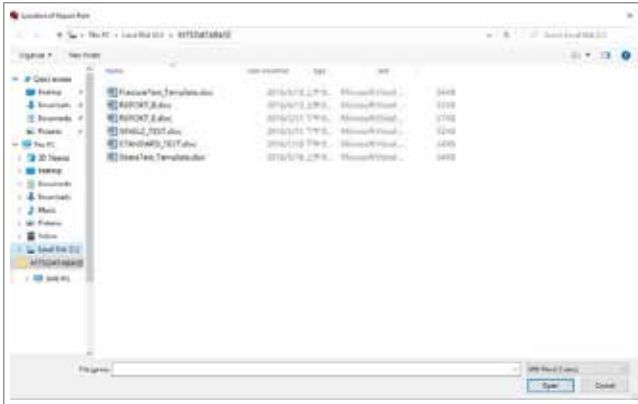
Choose a template under "C : \MTSDATABASE\" or design a template
(see Appendix for codes).

Once a test is complete, click on "Done" to convert the data and print out the result.

Click on "Print" to print the result.

Batch : Printing a batch test data. Select either "New" or "Existing."

New : Click "New" to create a bulk test data, with a window shown as below :
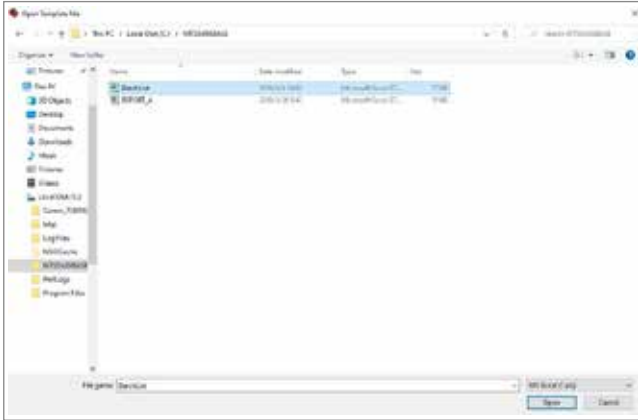
Choose a template under "C : \MTSDATABASE\" or design a template (see Appendix for codes).
Double click open the template with the following window:
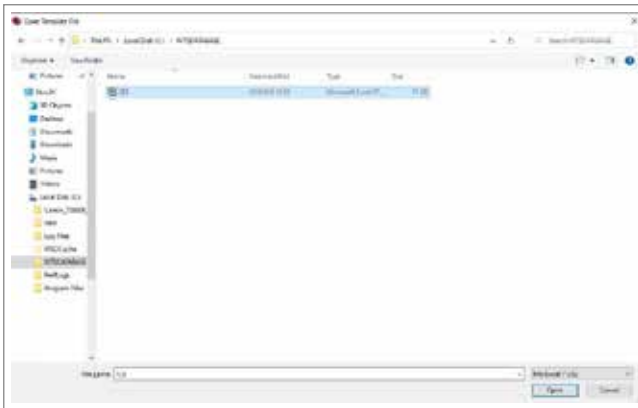
Choose a destination folder. Enter a file name and click "Save" to finish the setting.

Save : Save test data and continue the test.
Click "Open" to open the following window :
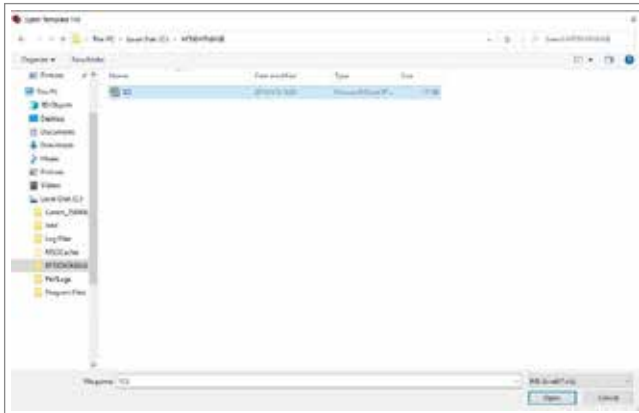
Select an old data and click "OPEN" to complete the setting.

With C.C.W. : Check the box to conduct a counterclockwise test.

> **Note : C.C.W. cannot be added to a batch test once the batch test is complete.
> If a C.C.W. test is to be conducted with a batch test, check this box
> beforehand.**

	350 (N·m)	350 (N·m)	350 (N·m)	350 (N·m)	350 (N·m)
TEST 1	----	----	----	----	----
TEST 2	----	----	----	----	----
TEST 3	----	----	----	----	----
TEST 4	----	----	----	----	----
TEST 5	----	----	----	----	----
Maximum	----	----	----	----	----
Minimum	----	----	----	----	----
Mean	----	----	----	----	----
Error (%)	----	----	----	----	----

Button Specifications :
Start : Start a test.
Refresh : Clear a test result and restart a new one.
Done : Finish and print the test results.
Exit : Close the test window.
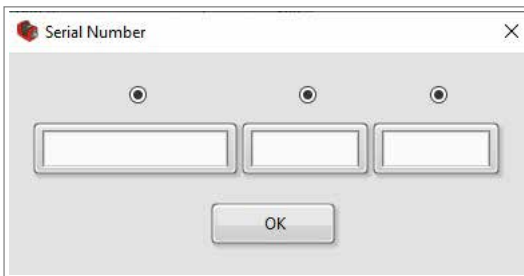
Note 1. After performing a batch test, click finish and enter a customized serial number.
　　　Start ➜ Test ➜ Done ➜ Serial Number ➜ Refresh ➜ Start
Note 2. Once a test is complete, click on "Finish" to convert data.

On the Main Screen, press "Stress Test" to access the following window :
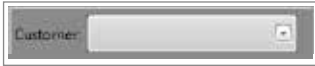
A confirmation window pops out with the MTS-3002 Stress Test Window :
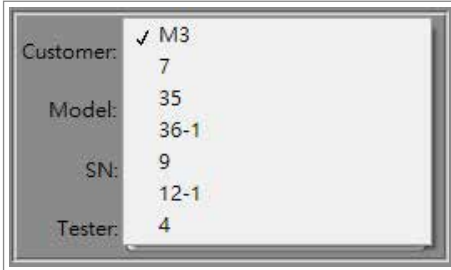
Press "OK" to confirm MTS-3002 setting (For errors, repeat steps on P.14).

Customer Setting :

Click on the drop-down menu to choose a customer, or refer to P.10 for setup.

Model Setting :

Click on the drop-down menu to choose a model, or refer to P.8 for setup.

Serial Number Setting :

Enter a serial number for a test, or skip this process.

Parameter Setting :

Load : Enter the torque value to test.

Times : Enter the number of times the torque is to be tested.

Maximum : Enter the maximum torque test range in a line chart.

Minimum : Enter the minimum torque test range in a line chart.

Select a preset error rate, or check the customization box to enter a value (maximum of 20%).

Button Specifications:
Start : Start a test.
End : Finish the test (the line chart will be saved in a spread sheet.)
Reset : Reset the parameter and setting.
Save As : Save the test result.
Print : Print test results.
Exit : Close the test window.

> **Note: All parameters in the Stress Test must be set up each time before using this test, whether the parameters remain the same or not.**

On the Main Screen, press "Fracture Test" to access the following window :
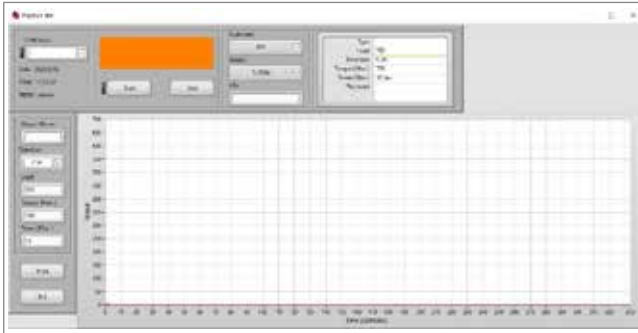
A confirmation window pops out with the MTS-3002 Fracture Test Window :
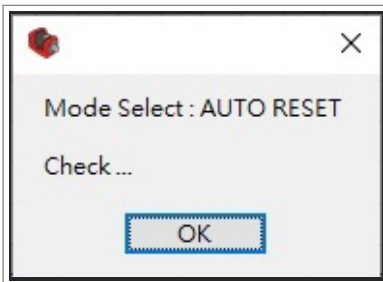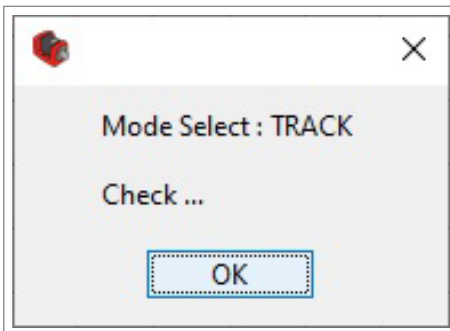

Press "OK" to confirm MTS-3002 setting.

Button Specifications :
ZERO : Use zero key to reset MTS-3002 to zero.
UNIT : Use unit key to change the unit of measurements (Default is N-M).
MODE : Use mode key for mode setting. Please set to TRACK.

COM Port Setting :

Press the dropdown icon (above) to start COM Port Setting :
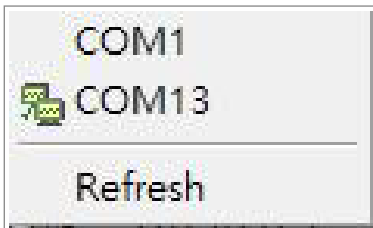
A list of connected COM Port will be shown. If not, click on "Refresh."

Choose the corresponding Port. Watch the light turn up to show connections.

If the light remains off, do the following steps :
1. Confirm MTS-3002 are properly connected and wires are in good condition.
2. Reselect COM Port and watch the light to turn on.

Customer Setting :
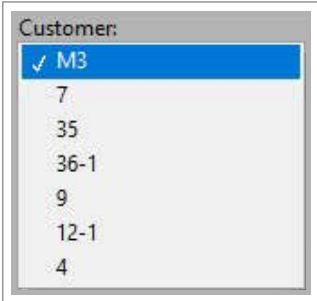
Click on the drop-down menu to choose a customer, or refer to P.10 for setup.
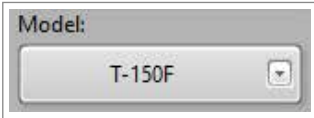
Model Setting :

Click on the drop-down menu to choose a model, or refer to P.8 for setup.
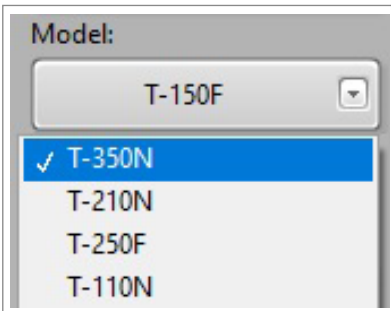
Serial Number Setting :

Enter a serial number for a test, or skip this process.

Parameter Setting :

Enter an object name or leave it blank.

Select to perform a C.W. or C.C.W. test.

Enter the maximum torque value to test. The value cannot be 0.

Enter the maximum torque force. The value cannot be 0.

Enter the time for the torque test. The value cannot be 0.
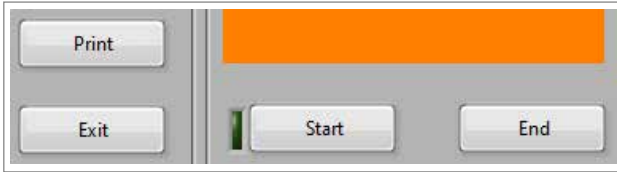
Button Specifications :

Start : Start a test.
End : Stop the fracture test.
Print : Print the test results (an example shown as below).
Exit : Close the test window.
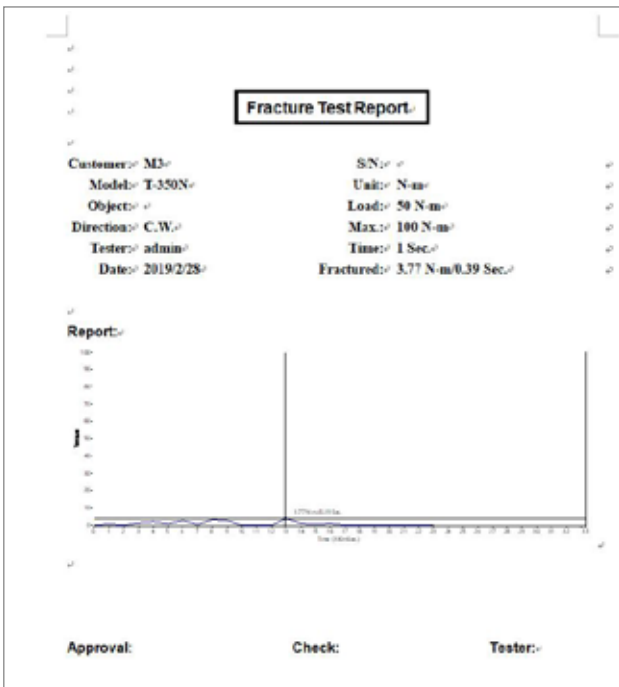
VIII. VIEW STANDARD TEST RESULT

Search and find the Standard Test Results that are saved in the database.
If the database is getting overwhelming, use the filter to find specific results.

List a number of filtered conditions to display :

 (Figure 1)

All filtered conditions will be displayed in the output window :

 (Figure 2)

Button Specifications :

 Add the item into the list. (see Figure 1.)
 Remove the item from the list. (see Figure 1.)

Query : Search in the listed conditions (Figure 1) and display the result (Figure 2).
Clear : Clear all listed conditions (Figure 1).
Delete : Remove a data from the database.
Item View : View a single data in the database and display the result.
Batch List : Display the result (Figure 2) and export as a file format.
Template (Word) : Choose a template for files to be exported.
Issue (Word) : Publish the file with the chosen template.

Exit : Close the test window

Search and find the Stress Test Results that are saved in the database or view a file (.mstr) that is loaded into the database.
If the database is getting overwhelming, use the filter to find specific results.

List a number of filtered conditions to display :

 (Figure 1)

All filtered conditions will be displayed in the output window :

 (Figure 2)

Button Specifications :

 Add the item into the list. (see Figure 1.)
 Remove the item from the list. (see Figure 1.)

Query : Search in the listed conditions (Figure 1) and display the result (Figure 2).
Clear : Clear all listed conditions (Figure 1).
Open : Open up a data from the database.
Load (mstr) : load a file (.mstr) and display the result.
Print : Print a result from the database.
Delete : Remove a data from the database.
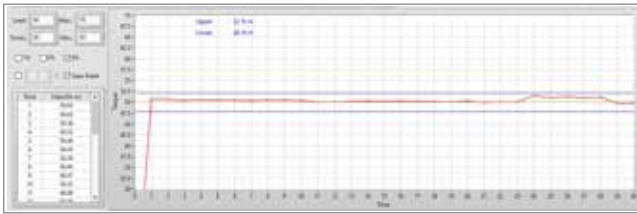
Parameter Setting :

Load : Enter the torque value to test.
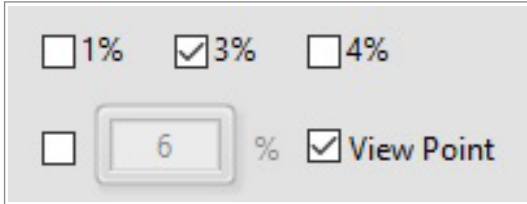
Max : Enter the maximum torque test range in a line chart.

Times : Enter the number of times the torque is to be tested.

Min : Enter the minimum torque test range in a line chart.

Select a preset error rate, or check the customization box to enter a value (maximum of 20%).
View Points : Add data labels for each point in the line chart of a stress test.

Appendix:

	C.W. Approve Test :		

Annotation:	Code	Annotation:	Code
Customer	<CUSTOMER>	Approve 1 : Tolerance 1	<A1-T1>
Order	<ORDER>	Approve 1 : Tolerance 2	<A1-T2>
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Tolerance	<TOL>	Approve 1 : Tolerance 4	<A1-T4>
Unit	<UNIT>	Approve 1 : Tolerance 5	<A1-T5>
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Approve Test 2	<APP2>	Approve 1 : Min Tolerance 1–5	<A1-MIN>
Approve Test 3	<APP3>	Approve 1 : Mean 1–5	<A1-MEAN>
Approve Test 4	<APP4>	Approve 1 : Mean Error 1–5	<A1-ERROR>
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Approve Serial Number	<SN>	Approve 2 : Tolerance 3	<A2-T3>
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Approve 2 Max Tolerance	<A2-TOL+>	Approve 2 : Max Tolerance 1–5	<A2-MAX>
Approve 2 Min Tolerance	<A2-TOL->	Approve 2 : Min Tolerance 1–5	<A2-MIN>
Approve 3 Max Tolerance	<A3-TOL+>	Approve 2 : Mean 1–5	<A2-MEAN>
Approve 3 Min Tolerance	<A3-TOL->	Approve 2 : Mean Error 1–5	<A2-ERROR>
Approve 4 Max Tolerance	<A4-TOL+>	Approve 3 : Tolerance 1	<A3-T1>
Approve 4 Min Tolerance	<A4-TOL->	Approve 3 : Tolerance 2	<A3-T2>
Approve 5 Max Tolerance	<A5-TOL+>	Approve 3 : Tolerance 3	<A3-T3>
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		Approve 4 : Max Tolerance 1–5	<A4-MAX>
		Approve 4 : Min Tolerance 1–5	<A4-MIN>
		Approve 4 : Mean 1–5	<A4-MEAN>
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Appendix:

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C.C.W. Approve Test :

Annotation:	Code
Approve 5 : Tolerance 1	<B5-T1>
Approve 5 : Tolerance 2	<B5-T2>
Approve 5 : Tolerance 3	<B5-T3>
Approve 5 : Tolerance 4	<B5-T4>
Approve 5 : Tolerance 5	<B5-T5>
Approve 5 : Max Tolerance 1–5	<B5-MAX>
Approve 5 : Min Tolerance 1–5	<B5-MIN>
Approve 5 : Mean 1–5	<B5-MEAN>
Approve 5 : Mean Error 1–5	<B5-ERROR>