

Smart Load Cell TRQ1/TPL torque / top load tester family



Serial numbers:

TRQ1 torque tester: ST-E.....

TPL-..... Top Load tester: ST-E.....

Date of purchase:

Warranty: 3 years

TRQ1 TORQUE- AND TPL TOP LOAD TESTER KIT



INSTALL

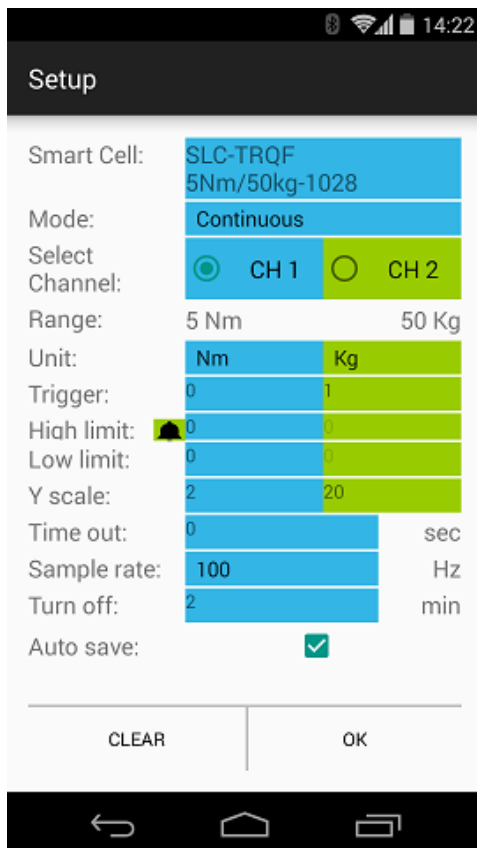
Download: [www.suretorque.eu / Support / Downloads / SmartLoadCell_Single - apk](http://www.suretorque.eu/Support/Downloads/SmartLoadCell_Single.apk)
System requirements: Android 4.4 or higher, 1 GB RAM, 1 GHz Processor, 4 GB ROM

Install the SmartLoadCell Android application on your device!

SETUP – QUICK OVERVIEW

Personalize your settings: Enter menu / setup

Pair your SmartLoadCell with your device and connect. When pairing, all the important SmartLoadCell parameters will be uploaded to the phone from the SmartLoadCell's memory (calibration data, load cell type, measuring range, etc.)



RECOMMENDED SETTINGS:

TPL1	TRQ1
Single peak	Chuck torque: continuous Cap release: single or double p
kg	Lbfln
1 - 3	0.5 - 3
optional	optional
optional	optional
30 kg	25 Lbfln (20-30)
-	2 - 5 - in double peak only
100 - 400	100 - 400
5 - 30	5 - 30

DOING A TEST

1. Make sure the unloaded value is 0. If not, hit **TARE** button
2. Tap the diagram area to start recording
3. Perform your test
Continuous and multiple tests can be stopped by tapping the diagram area again.
Single and Double peak tests will stop automatically.
4. After the test you may add a comment to the test. You can also add the same comment to more test with checking "Remember" field in the comment window
5. You may save the result with the save button (unless you have selected auto save)

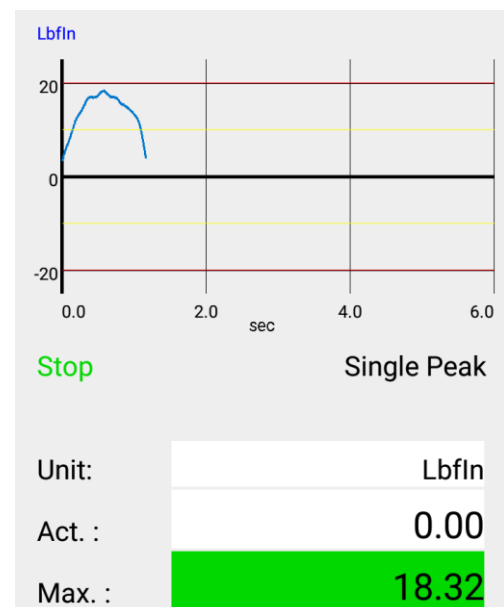
ENJOY THE FREEDOM OF TELEMETRY!

SETUP – A LITTLE MORE IN THE DETAILS

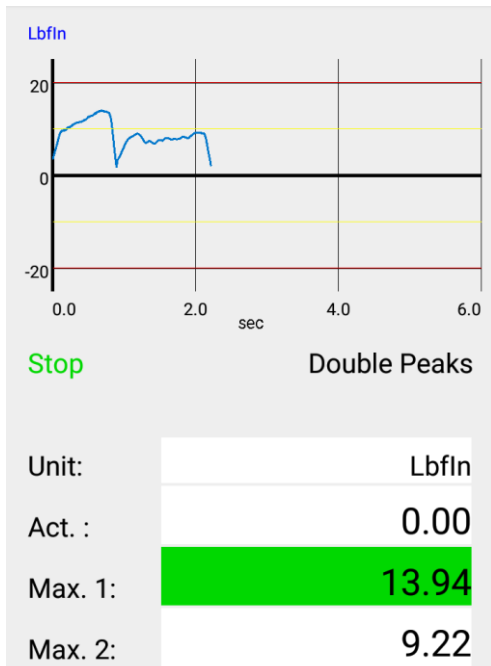
Measuring modes:



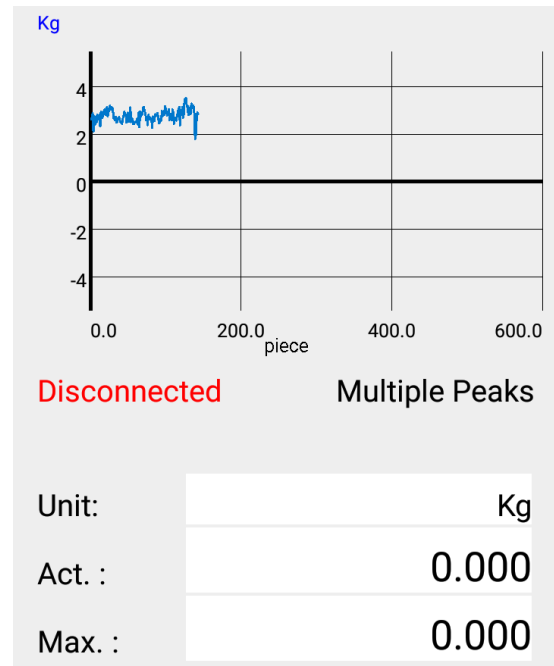
Continuous – records all measuring points from start to stop
Result: maximum value.
This mode is ideal for monitoring longer procedures with several peaks **as chuck torque testing**



Single peak – Measurement stops automatic after the 1st peak.
Result: maximum value
This mode is ideal for monitoring short procedures with only 1 peak **as cap release torque testing**



Double peaks – Measurement stops automatic after the 2nd peak.
Results: Max1, Max2
This mode is ideal for monitoring short procedures with 2 discrete peaks **as cap release and warranty ring break torque testing**



Multiple peaks – Records only the maximum values of the test cycles – 1 test cycle is represented by 1 point on the diagram. This test is generally used for testing hundreds of cycles
Result: maximum of the peaks

1. Select measuring unit
2. Set trigger level – Trigger level is a load level that starts and stops the measurement recording - "start-stop signal" of the measurement. As long as the measured value is under the trigger, recording will not be started. Measurement will be stopped (or paused), if the measured value drops under the trigger level. Recommended level is between 2-15% of the expected maximum value.
If you need range checking, set high and low limits. Values will be displayed with different colors:

blue	– under range
green	– in range
red	– over range

 (by 2-channel unit select the "primary" channel too)
 It is possible to switch on a sound signal for the exceeding of the high limit with the ring button.
3. Set time out (relevant only in double peaks mode) – This time defines how long the instrument waits for the start of the second peak's measurement. If time out elapses without value over the trigger, MAX2 will be 0.
4. Set Y scale for the diagram's scaling (default setting is the maximum of the cell, recommended value is a little above your expected maximum)
5. Select sample rate (6,25 – 400 Hz, recommended: 50-200 Hz)
6. Set turn off time (for automatic shut down after disconnecting)
7. Check Auto save box if you want to save all results automatic

FURTHER FEATURES

CLEAR button on the main screen will clear the screen

CLEAR button on the **SETUP** screen will clear all the setup parameters including the SmartLoadCell pairing.

Menu/History – All saved results can be reviewed. Results can be deleted one by one (or in bulk with hitting the trash button longer). Diagrams can be scrolled and zoomed.

Menu/Export to XML will create an export_11111_22222.xml file in the Download folder of your android device. Download file can be forwarded to PC via Bluetooth, email, internet or USB cable.

SHUTTING DOWN

Shutting down the SmartLoadCell – To turn off select the turn off button on the main screen or keep the power button pushed for 10 seconds on the SmartLoadCell unit.

CHARGING

Charging – SmartLoadCells can be charged with any micro USB charger. While charging the status led on the unit will be red. Battery state can be monitored by hitting the battery icon on the main screen. Battery is enough for about 10 hours of operation. Please note that when battery is almost discharged, it is possible that you experience some spikes in the measurement. It is recommended not to discharge batteries under 10%.

UNITS & CONVERSATION

TORQUE

inlb: inch-pound

ftlb: foot-pound

Nm: Newton-meter

dNm: deci newton-meter - 0,1 Nm

Ncm: Newton-cm, - 0,01 Nm

LbfIn	LbfFt	Nm	dNm	Ncm	KgfcM
1	0.083	0.113	1.13	11.3	1.1521
12	1	1.356	13.56	135.6	13.8255
8.851	0.738	1	10	100	10.1972
0.885	0.074	0.1	1	10	1.0197
0.089	0.007	0.01	0.1	1	0.1020
0.86796	0.072	0.09807	0.98066	9.80661	1

FORCE

N: Newton

Lb: Pounds force

Kg: Kilograms force

T: Ton

N	Kg	Lbf	Ton
1	0.102	0.225	0.0001
9.807	1	2.205	0.001
4.448	0.454	1	0.00045
9806.81	1000	2204.6	1

TROUBLESHOOTING

SmartLoadCell unit connected, but it seems not measuring:

It may happen that the pairing is not successful at the first time. In this case disconnect and connect again.

If it won't help: enter **MENU/SETTINGS** and **CLEAR** the settings, then select Smart Cell again and wait until the cell data's are uploaded (Range value will be filled and status led turns from green to blue)

SmartLoadCell application freezes:

Enter settings/apps in on your Android device and force stop the application. If this doesn't help it is recommended to uninstall the application and then reinstall it again.

Application was developed with English language settings. If you experience malfunction with different language setting, close the application, change language to English and run the application again.

MAINTENANCE

SmartLoadCells are precision measuring devices, handle them with care! In normal case SmartLoadCells will not require any preventive or systematic maintenance.

Battery is to be changed if it wears out. Battery type: Nokia BL-5C, 1000 mAh. Battery is located under the cover of the SmartLoadCell unit. If cover is sealed, pay attention on sealing it with clear silicone when reclosing the cover!

CONTACT

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