

KOLVER®

K-TESTER

HERMES
TOOLS

Kolver srl ©, 2023 - all rights reserved

K-TESTER

New torque tester with external transducer



Self-powered unit with rechargeable lithium battery (up to 8 hour, 7,4W, 5200mA)

Fix and external transducer connectable through the supplied cable

FEATURES

Up to **64 different acquisition programs**

Automatic identification of the connected transducer

Standard external transducer of **1Nm, 5Nm, 20Nm, 50Nm and 100Nm** and other torques upon request.

The same unit is compatible with all the transducers, connectable one at a time and sold individually



FUNCTIONALITY

Possibility to work in **program mode or free run**

Display mode **peak value or instantaneous value**

Real-time torque trend **graph**

Possibility to set the unit and display the results on pc or tablet using the software **K-Torque Analyzer**

Saving and view of the tightening **report**, even on USB



VERSIONS

Model	Code	Torque [Nm]	Unit Dimensions [mm]	Weight kg	Input connector	Joint simulator
K-Tester KTI1	021406/F1	0,05 - 1	h82xd100	1,18	Male hexagon 13mm	M4
K-Tester KTI5	021406/F5	0,3 - 5	h82xd100	1,18	Male hexagon 13mm	M6
K-Tester KTI20	021406/F20	0,5 - 20	h82xd100	1,18	Male hexagon 13mm	M8
K-Tester KTI50	021406/F50	2 - 50	h82xd100	1,18	Female square 3/8"	M12 3/8"
K-Tester KTI100	021406/F100	5 - 100	h82xd100	1,18	Female square 1/2"	M12 1/2"
K-Tester KTEI5	021406/R5	0,5 - 5	h82xd100	0,2	Male hexagon 13mm	M6
K-Tester KTEI25	021406/R25	2 - 25	h82xd100	0,2	Male hexagon 13mm	M8
K-Tester KTEI50	021406/R50	2 - 50	h82xd100	0,84	Female square 3/8"	M12 3/8"
K-Tester KTEI100	021406/R100	5 - 100	h82xd100	0,84	Female square 1/2"	M12 1/2"

STATIONARY TRANSDUCER

Model	Code	Torque [Nm]	Unit Dimensions [mm]	External transducer dimension [mm]	Weight kg	Input connector	Joint simulator
KT11	023001/I	0,05 - 1	h82xd100	164 x 170 x 65	1,17	Male hexagon 13mm	M4
KT15	023005/I	0,3 - 5	h82xd100	164 x 170 x 65	1,17	Male hexagon 13mm	M6
KT120	023020/I	0,5 - 20	h82xd100	164 x 170 x 65	1,17	Male hexagon 13mm	M8
KT150	023050/I	2 - 50	h82xd100	164 x 170 x 65	1,17	Female square 3/8"	M12 3/8"
KT1100	023100/I	5 - 100	h82xd100	164 x 170 x 65	1,17	Female square 1/2"	M12 1/2"

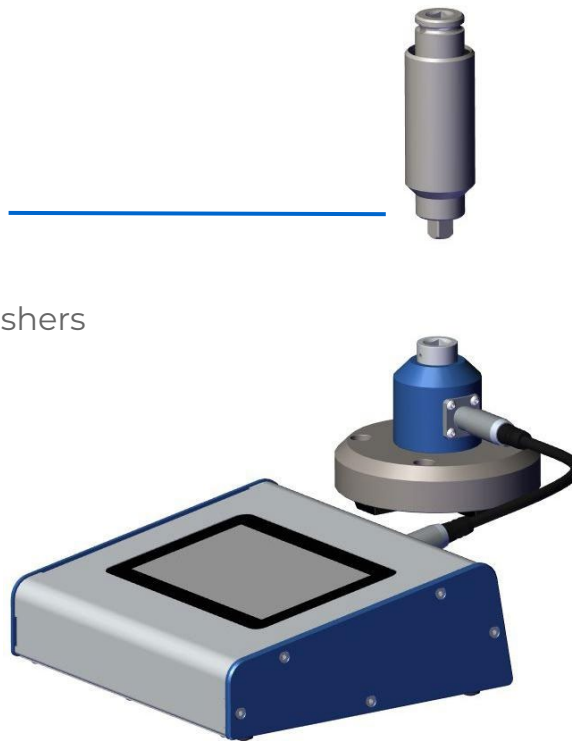
ROTARY TRANSDUCER

Model	Code	Torque [Nm]	Unit Dimensions [mm]	External transducer dimension [mm]	Weight kg	Input connector	Joint simulator
KTEI5	022405/I	0,5 - 5	h82xd100	Ø 25 x 92	0,2	Male hexagon 13mm	M6
KTEI25	022425/I	2 - 25	h82xd100	Ø 25 x 92	0,2	Male hexagon 13mm	M8
KTEI50	022450/I	2 - 50	h82xd100	52 x 62,8 x 89,5	0,84	Female square 3/8"	M12 3/8"
KTEI100	022411/I	5 - 100	h82xd100	52 x 62,8 x 89,5	0,84	Female square 1/2"	M12 1/2"

JOINT SIMULATOR

Joint simulator (M4, M6, M8, M12) **included:**

- _ thread M4 with bearings and spring washers
- _ thread M6 and M8 with bearings and spring washers
- _ thread M12 with bearings and spring washers



JOINT SIMULATOR - MICRO AND LOW TORQUE

Joint simulator **threads M4 with bearings and spring washers - 1 Nm**

Code	Model	Max Torque	Input	Output	Included with	Upon request
240640	Hex 13-1/4" M4	1Nm	Hex 1/4" Male	Hex 13mm Female	KT1 KT11	MiniK1 K1



Joint simulator **threads M1.6, M2, M3 with spring washers** (special order) – **micro torque**

Code	Model	Input	Output	Upon request
240620	Hex 13/M1.6	M1.6	Hex 13mm Female	MiniK1 K1 KT1 KT11
240621	Hex 13/M2	M2 Female		
240622	Hex 13/M3	M3 Female		



JOINT SIMULATOR - MEDIUM TORQUE

Joint simulator **threads M6 with spring washers** (existing model 240600) - **5 Nm**

Joint simulator **threads M8 with spring washers** (existing model 240800) - **20 Nm**

Code	Model	Max Torque	Input	Output	Included with
240600	Hex 13- 1/4" M6	5 Nm	Hex 1/4" Male	Hex 13mm Female	MiniK1-5 K1-5 KT5 KTi5
240800	Hex 13- 1/4" M8	20 Nm	Hex 1/4" Male	Hex 13mm Female	MiniK20 K20 KT20 KTi20



JOINT SIMULATOR - HIGH TORQUE

Joint simulator **threads M12 with bearings and spring washers - 50 and 100 Nm**

Code	Model	Max Torque	Input	Output	Included with
240901	3/8" M12	50 Nm	Sq 3/8" Female	Sq 3/8" Male	KT50 KT150
240902	1/2" M12	100 Nm	Sq 1/2" Female	Sq 1/2" Male	KT100 KT1100



TARGET TORQUE MODE

The **Target torque mode** allows to set the program to use, calculate the statistics and archive all results, statistics and reports



TARGET TORQUE MODE

SETTINGS

TARGET, MIN, MAX: desired torque, minimum and maximum

TOLERANCE (%): used in calculating statistics

MODE:

peak: shows the max value recorded from start to end of tightening

track: shows the value in real time

SCREWS: screw count for current program

CLEAR: amount of time after which the torque acquired in peak mode and displayed on the main screen is reset

PR 1

DESCRIPTION	P1				
TARGET	3.0	Nm	MIN	2.5	MAX 3.5
TOLERANCE	15	%			
MODE	PEAK				
SCREWS	10				
CLEAR	OFF	AFTER	1.5	s	

PAGE 1/2

TARGET TORQUE MODE

BARCODE: link and load programs via barcode scan

LOW PASS: you can set a filter on the acquisition of torque samples, thus obtaining more detailed graphs.

PR 2

✓

BARCODE

LOW PASS

OFF

FREQ

100

HZ

● TRIGGER

LEVEL

0.10

Nm

DELAY

0.10

s

MODE

Tq>0

SPEED

0

rpm

^

PAGE
2/2

v

TARGET TORQUE MODE

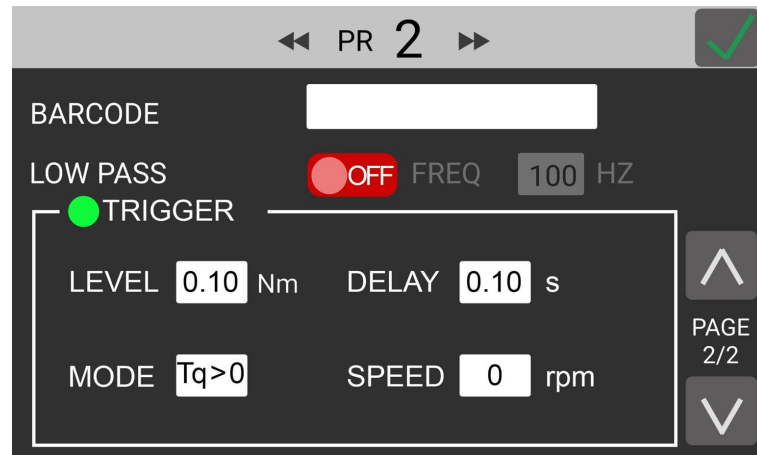
TRIGGER: these settings define the beginning and end points of a measurement

LEVEL: the minimum torque above which a new measurement begins.
Anything below this threshold is ignored.

DELAY: amount of time that the torque readings must remain below the LEVEL value, for the measurement to be considered finished

MODE: positive or negative torque values, according to the rotation.

SPEED: minimum speed (just for rotary transducers).
Anything below this threshold is ignored.



The screenshot shows the K-TESTER interface with the following settings:

- Navigation: PR 2 (Previous/Next buttons)
- Barcode: [Empty input field]
- LOW PASS: [Red OFF button] FREQ 100 HZ
- TRIGGER: [Green indicator light]
- LEVEL: 0.10 Nm
- DELAY: 0.10 s
- MODE: Tq>0
- SPEED: 0 rpm

Navigation buttons (Up/Down arrows) and PAGE 2/2 are visible on the right side.

FREE RUN MODE

When the Target torque MODE is OFF, the system works **by default in peak mode** (registered maximum value)

The unit will only display the instantaneous torque reading, **positiv** (> 10cNm) **and negativ** (< -10cNm), without statistics.

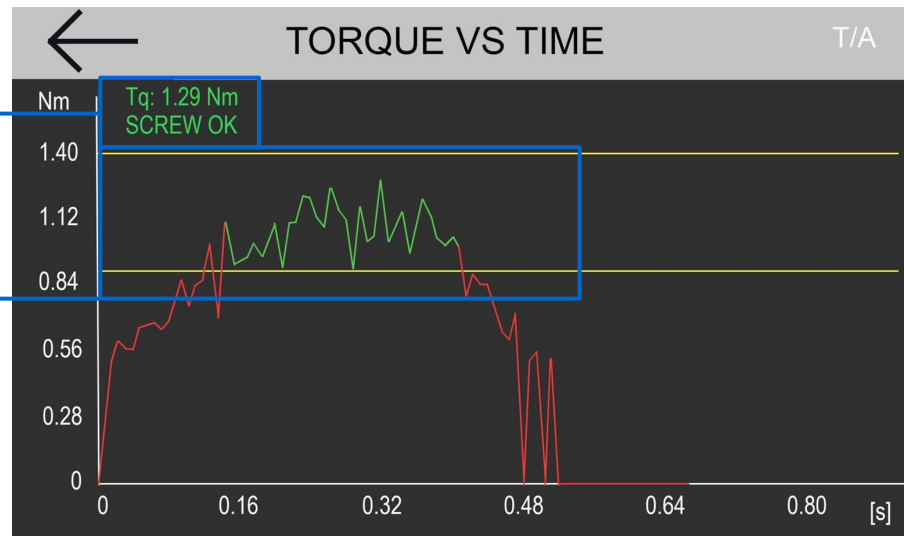
GRAPHS

The graph shows the torque trend
in real time

If working in target torque mode, the
min/max boundaries are shown

The torque trend is shown with colors:
green when within min/max boundaries
red when outside min/max boundaries

When working in **peak mode**, the maximum
value is shown as well the result of the
tightening operation



REPORTING

K-TESTER records all torque values, tightening results and graphs

Reports available for:

- _ **current programs** (saved to internal RAM memory)
- _ **previous programs** (saved to USB) - swiped left and right to move between programs

USB reports can be exported to CSV

REPORT						
PR 1	STATS					
OK 8/10	MAX 3.15	USL 3.57	AVG 3.30	CM 1.01	SPREAD 0.30	
NOK 2/10	MIN 1.85	LSL 3.11	TOL 10%	CMK 1.1	STD 0.0115	
N	TIME	TARGET	ACTUAL	UNIT	MODE	RESULT
1	11/08/2022 13:15:21	3.00	3.05	Nm	Peak	OK
2	11/08/2022 13:15:27	3.00	3.15	Nm	Peak	OK
3	11/08/2022 13:15:35	3.00	3.11	Nm	Peak	OK
4	11/08/2022 13:15:45	3.00	3.01	Nm	Peak	OK
5	11/08/2022 13:15:55	3.00	3.00	Nm	Peak	OK
6	11/08/2022 13:16:04	3.00	1.85	Nm	Peak	NOK
7	11/08/2022 13:16:20	3.00	3.05	Nm	Peak	OK

INTERFACE

Colour intuitive interface with touch screen display



GENERAL SETTINGS

TARGET TORQUE MODE: measurement with or without program

MODEL / SERIAL NUMBER / CYCLES:
referred to the transducer (not editable)

FATc: calibration factors (not editable)

UNIT: cNm, Nm, kgf.cm. e lbf.in

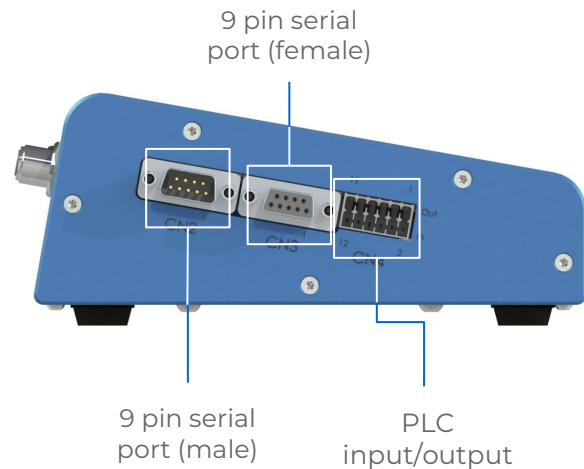
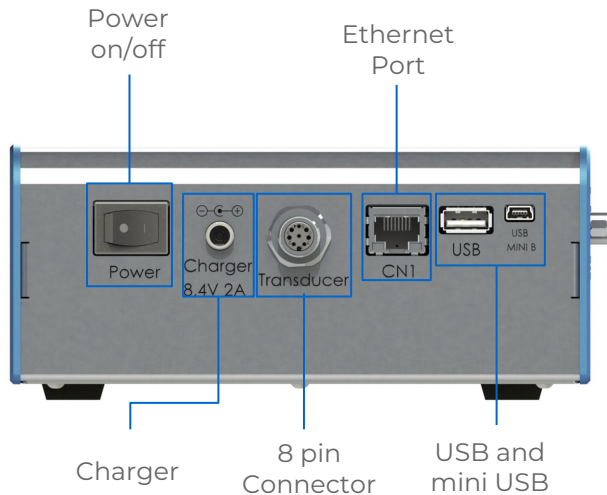
RESET: applied to the screw or to the program

BARCODE

IMPOSTAZIONE DI RETE

GENERAL SETTINGS		✓
TARGET TORQUE MODE	<input checked="" type="checkbox"/>	
SHOW AVG	<input checked="" type="checkbox"/>	
MODEL	KDS-PL6	
SERIAL NUMBER	1817366	⬆
CYCLES	1324	PAGE 1/2
FATc	905	
UNIT	< NM >	⬇

PORTS / CONNECTIONS



K-TORQUE ANALYZER

K-TORQUE ANALYZER is the **software** for managing the K-TESTER and visualizing graphs and reports from a pc/tablet connected via ethernet to the unit

FUNCIONALITY

- **Real-time displaying and archiving** of the data from the K-TESTER
- **Analysis and comparison** of the data
- **Reporting**
- Managing of the unit **settings and programs**

K-TORQUE ANALYZER

CONTROLS

ACTIONS

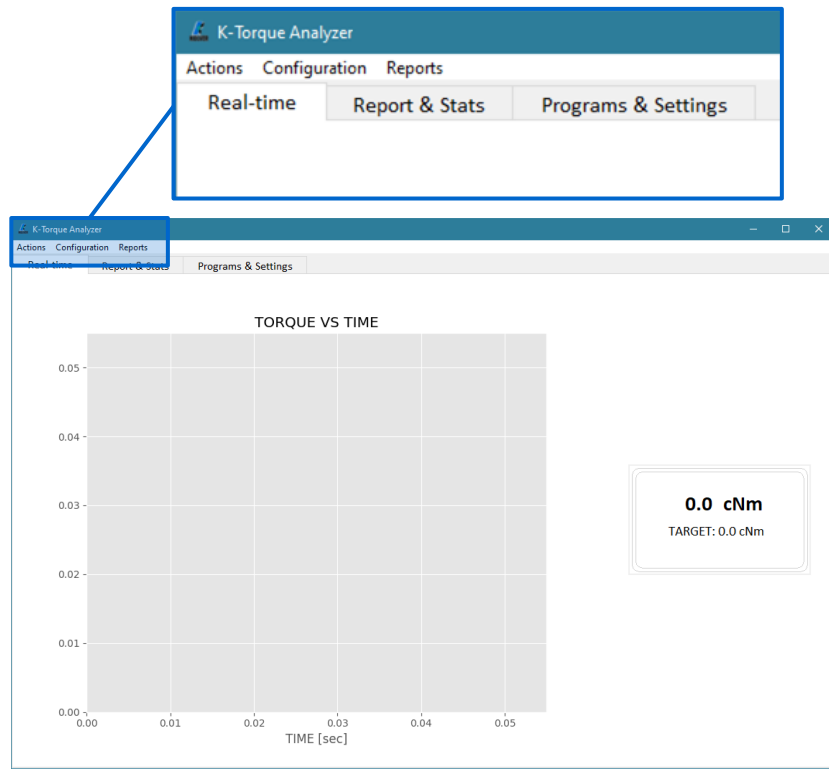
- _ connection/disconnection
- _ programs and settings download/upload

CONFIGURATION

- _ import from file
 - _ export to file
- Loading configuration files into the software and generating from the set parameters

REPORTS

- _ save last program as CSV
- _ save all the results
- _ enable report autosave
- _ clear all the results



K-TORQUE ANALYZER

TABS

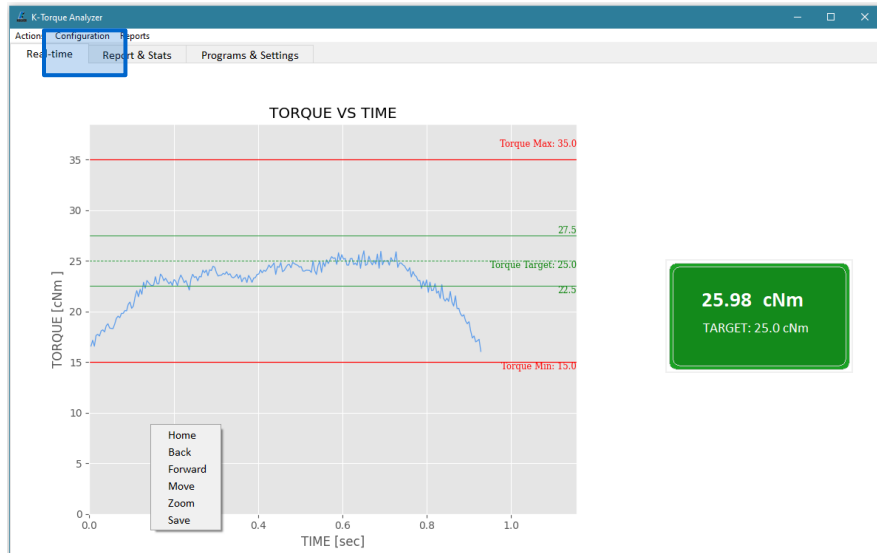
REAL TIME

Visualize the graph and results in real time.

If working with **TORQUE TARGET** mode, relevant information such as min/max limit (red) and tolerance (green) is displayed on the screen

With double-click on graph, you open the **menu** :

- _ **Home**: back to home
- _ **Back**: back to the previous view
- _ **Forward**: back to the last view
- _ **Move**: pan the view
- _ **Zoom**: select an area to zoom
- _ **Save**: save a picture of the graph

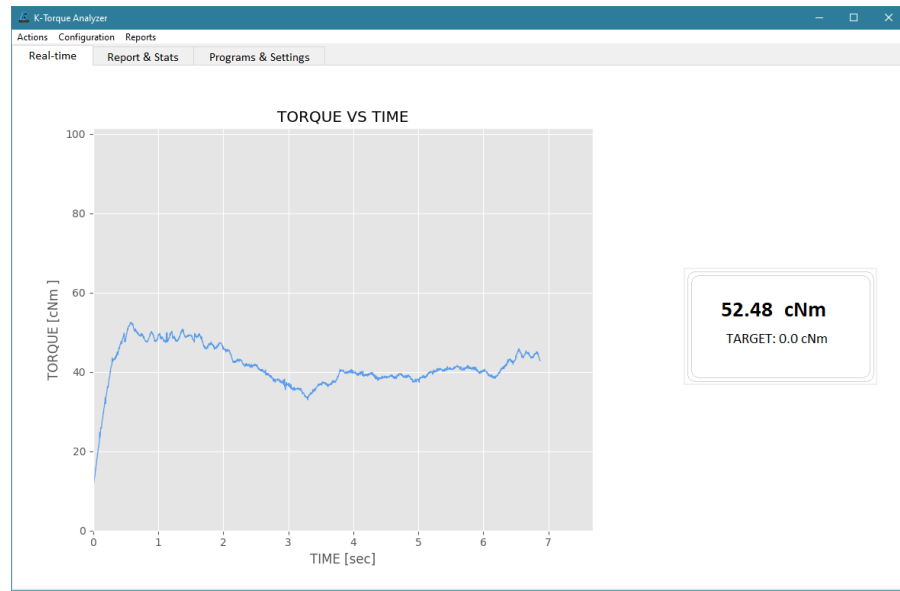


K-TORQUE ANALYZER

If working with **TORQUE TARGET OFF** mode, only the acquired samples are shown, and no evaluations and statistics are processed.

With double-click on graph, you open the **menu**:

- _ **Home**: back to home
- _ **Back**: back to the previous view
- _ **Forward**: back to the last view
- _ **Move**: pan the view
- _ **Zoom**: select an area to zoom
- _ **Save**: save a picture of the graph



K-TORQUE ANALYZER

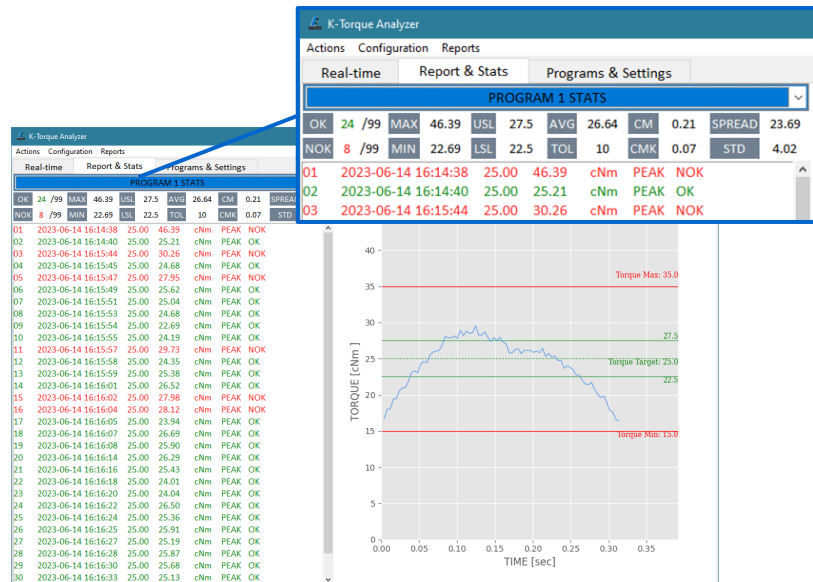
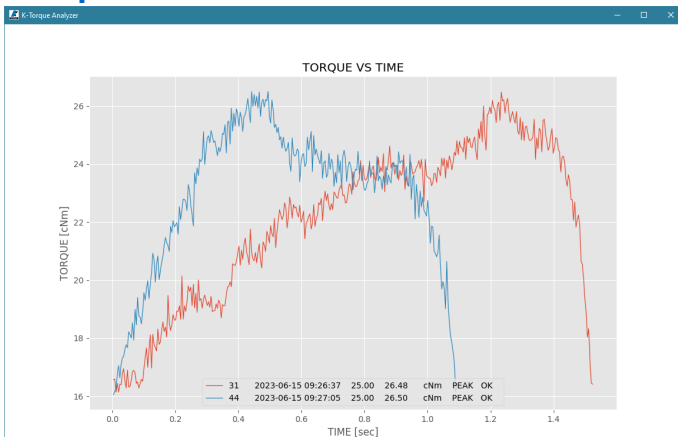
REPORTS AND STATS

Archiving of data from the K-TESTER, equipped with **graphs and statistical information** like cm, cmk, medium value

You can select the program to be analyzed from the menu bar

FUNCTIONALITY

- graph visualization of a **single tightening**
- comparison** between two or more measurements



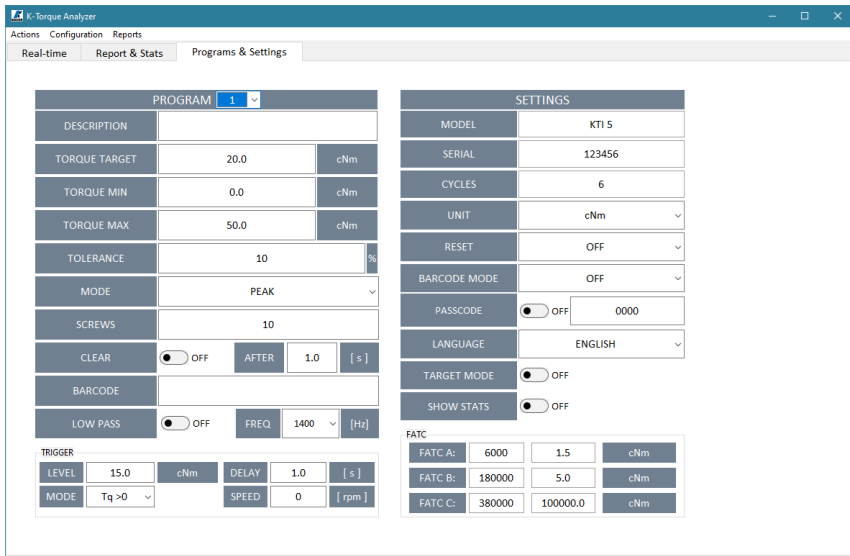
K-TORQUE ANALYZER

PROGRAM AND SETTINGS

Reporting all the **program parameters** and the **general settings of the unit**

FUNCTIONALITY

- _ loading previously saved programs
- _ updating parameters



The screenshot shows the 'K-Torque Analyzer' software interface with the 'Programs & Settings' tab selected. The interface is divided into two main sections: 'PROGRAM' and 'SETTINGS'.

PROGRAM 1

DESCRIPTION		
TORQUE TARGET	20.0	cNm
TORQUE MIN	0.0	cNm
TORQUE MAX	50.0	cNm
TOLERANCE	10	%
MODE	PEAK	
SCREWS	10	
CLEAR	<input type="radio"/> OFF	AFTER 1.0 [s]
BARCODE		
LOW PASS	<input type="radio"/> OFF	FREQ. 1400 [Hz]

TRIGGER

LEVEL	DELAY	MODE
15.0 cNm	1.0 [s]	Tq > 0
	SPEED 0 [rpm]	

SETTINGS

MODEL	KTI 5	
SERIAL	123456	
CYCLES	6	
UNIT	cNm	
RESET	OFF	
BARCODE MODE	OFF	
PASSCODE	<input type="radio"/> OFF	0000
LANGUAGE	ENGLISH	
TARGET MODE	<input type="radio"/> OFF	
SHOW STATS	<input type="radio"/> OFF	

FATC

FATC A:	6000	1.5	cNm
FATC B:	180000	5.0	cNm
FATC C:	380000	100000.0	cNm