

**KOLVER®**

# K-TESTER & K-TORQUE ANALYZER

Kolver srl ©, 2023 - all rights reserved



SLOVAKIA s.r.o.

**INTOOL**

# K-TESTER

Our new torque analyser with an external transducer



Self-powered unit with lithium battery  
(up to 10 hours)

External  
transducer with  
cable connection

## K-TESTER



Self-powered unit with lithium battery  
(up to 10 hours)

External rotary  
transducer with  
cable connection

# FEATURES

Up to **64 different programs**

**Auto-detection** of the different external transducers

Static external transducers  
(need joint simulator):

**1 - 5 - 20 - 50 - 100 Nm**  
**(8.8 - 885 lbf-in)**

Different torque options available on request



# FEATURES

Up to **64 different programs**

**Auto-detection** of the different external transducers

Rotary external transducers:

**5 - 25 - 50 - 100 Nm**  
**(42 - 885 lbf-in)**

Different torque options up to 500Nm available on request

Torque and angle rotary transducer available soon



# FUNCTIONALITY

Works in **program mode** or **free-run mode**

Torque displaying: **peak value** or **real-time tracking**

Real-time **graph** visualization, both directly on the control unit as well as on any tablet or PC running the **K-Torque Analyzer** companion software

**Advanced reporting** capabilities, including archiving to USB





# STATIC MODELS

K-TESTER Complete Kit	Kit part number (reader + KTI transducer + joint simulator)	KTI transducer	Part number	Joint simulator	Part number
K-TESTER KTI1	021406/F1	KTI1 0,1 - 1 Nm	023001/I	M4	240640
K-TESTER KTI5	021406/F5	KTI5 0,3 - 5 Nm	023005/I	M6	240600
K-TESTER KTI20	021406/F20	KTI20 0,5 - 20 Nm	023020/I	M8	240800
K-TESTER KTI50	021406/F50	KTI50 2 - 50 Nm	023050/I	M12 3/8"	240901
K-TESTER KTI100	021406/F100	KTI100 5 - 100 Nm	023100/I	M12 1/2"	240902

# ROTARY MODELS



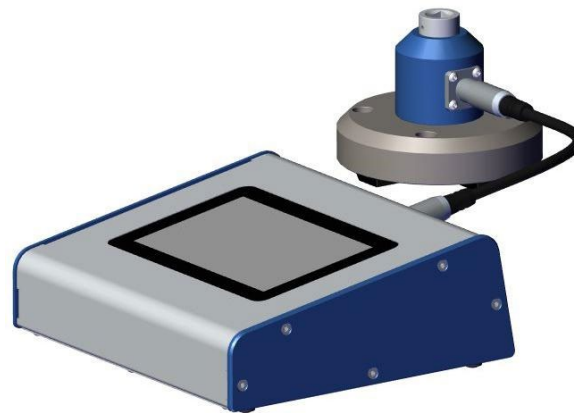
K-TESTER Complete Kit	Kit part number (reader + KTE transducer + KTEI board)	KTE transducer	Part number	KTEI board part number
K-TESTER KTEI5	021406/R5	KTE5 4.42 – 44.2 lbf-in	022405	020079
K-TESTER KTEI25	021406/R25	KTE25 17.7 – 221 lbf-in	022425	020079
K-TESTER KTEI50	021406/R50	KTE50 44.2 – 442 lbf-in	022450	020079
K-TESTER KTEI100	021406/R100	KTE100 88.5 – 885 lbf-in	022411	020079



# JOINT SIMULATORS

**Included** M4, M6, M8, M12 joint simulators

- \_ M4 slim with bearings and cup washers (new)
- \_ M6 & M8 with cup washers
- \_ M12 with bearings and cup washers (new)



# JOINT SIMULATORS - LOW & MICRO-TORQUE

1 Nm, Slim M4 joint simulator with bearings and cup washers

Code	Model	Max Torque	Input	Output	Included with	Optional on-request
240640	Hex 13-1/4" M4	8.8 lbf-in	Hex 1/4" male	Hex 13mm female	KT1 KT11	MiniK1 K1



Microtorque threaded-hole joint simulators, M1.6, M2, M3 (special order only)

Code	Model	Input	Output	Special order, only for
240620	Hex 13/M1.6	Female threads <b>M1.6</b>	Hex 13mm female	MiniK1 K1 KT1 KT11
240621	Hex 13/M2	Female threads <b>M2</b>		
240622	Hex 13/M3	Female threads <b>M3</b>		



# JOINT SIMULATORS MID TORQUE

5 Nm, M6 threads with cup washers (existing 240600 model)

20 Nm, M8 threads with cup washers (existing 240800 model)

Code	Model	Max Torque	Input	Output	Included with
240600	Hex 13- 1/4" M6	44 lbf-in	Hex 1/4" male	Hex 13mm female	MiniK1-5 K1-5 KT5 KTi5
240800	Hex 13- 1/4" M8	177 lbf-in	Hex 1/4" male	Hex 13mm female	MiniK20 K20 KT20 KTi20



# JOINT SIMULATORS - HIGH TORQUE

50 & 100 Nm, M12 threads with bearing and cup washers

Code	Model	Max Torque	Input	Output	Included with
240901	3/8" M12	442 lbf-in	Sq 3/8" female	Sq 3/8" male	KT50 KT150
240902	1/2" M12	885 lbf-in	Sq 1/2" female	Sq 1/2" male	KT100 KT1100



# TARGET TORQUE MODE

In **target torque mode** you can set one or more programs to use, and display & archive all results, statistics and reports



# TARGET TORQUE MODE

## SETTINGS

**TARGET, MIN, MAX**

**TOLERANCE (%)**: used for stats generation


**MODE:**


**peak**: shows the max value



**track**: shows the value in real time

**SCREWS**: screw count for current program

**CLEAR**: how long until value on display is cleared

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

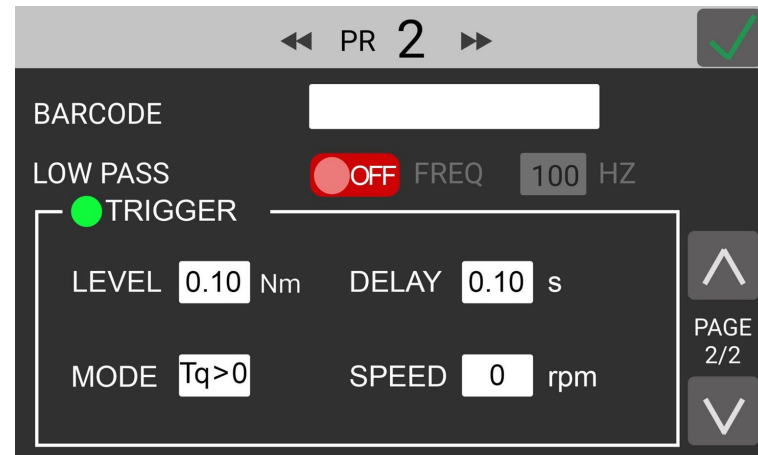
**BARCODE:** load programs via barcode scan

**LOW PASS:** noise-reduction filters

ON with lower value leads to smoother graph

OFF is same as ON with 2000 Hz (max frequency)

effect is mostly only evident when looking at the graphs in the included PC software



Navigation: << PR 2 >> [Checkmark]

BARCODE: [Input field]

LOW PASS: [Red OFF toggle] FREQ [100] HZ

[Green TRIGGER indicator]

LEVEL [0.10] Nm    DELAY [0.10] s

MODE [Tq>0]    SPEED [0] rpm

Navigation: [Up arrow] PAGE 2/2 [Down arrow]

# TARGET TORQUE MODE

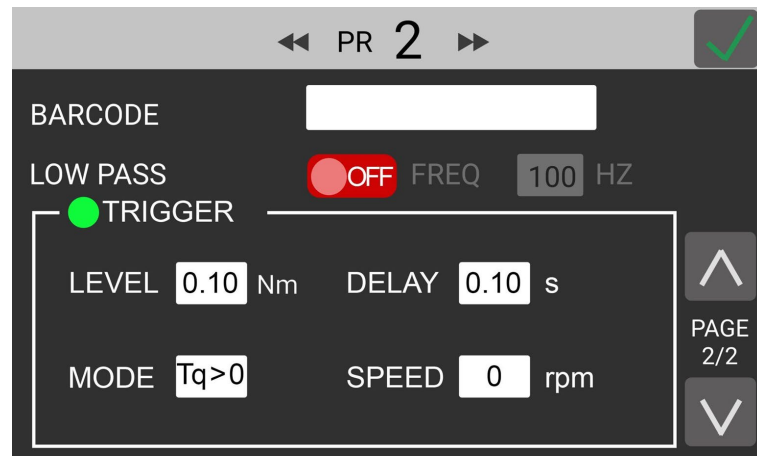
**TRIGGER:** defines start and stop points for each measurement

**level:** value above which tightening is considered to have begun. Anything below this threshold is ignored

**delay:** time interval from the last read value (above the trigger level) after which the tightening is considered finished

**mode:** display positive or negative values depending on rota

**speed:** min speed (for rotational transducers only); anything under this speed is ignored.



The screenshot shows the K-TESTER interface in Target Torque Mode. At the top, there are navigation arrows, 'PR 2', and a green checkmark icon. Below this is a 'BARCODE' field with a white input box. The 'LOW PASS' section has a red 'OFF' toggle and 'FREQ 100 HZ'. The 'TRIGGER' section is highlighted with a green dot and contains a box with 'LEVEL 0.10 Nm', 'DELAY 0.10 s', 'MODE Tq>0', and 'SPEED 0 rpm'. On the right side, there are up and down arrow icons and the text 'PAGE 2/2'.

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



# FREE-RUN MODE

When the target torque is not set (OFF), the device will display the **peak value** encountered

**No statistics are shown**

# GRAPHS

The graphs is plotted in **real time**

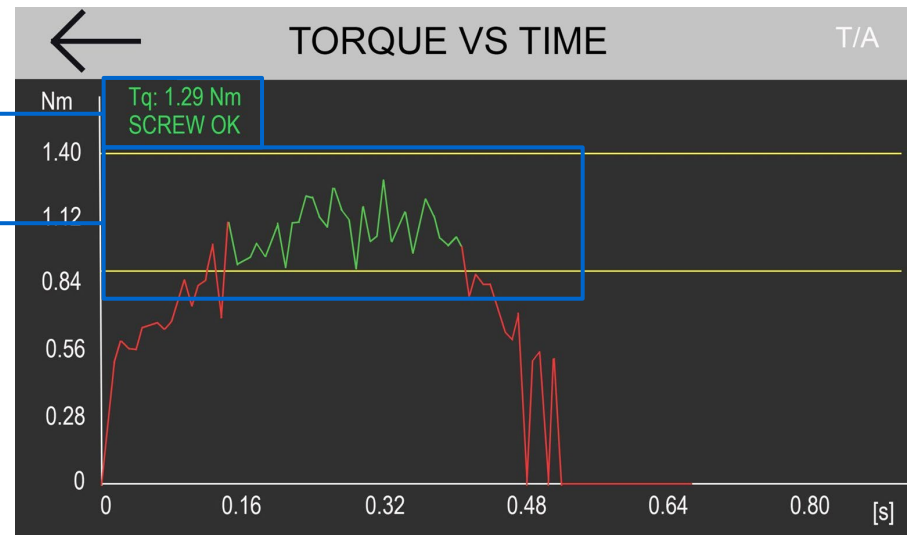
If working in target torque mode, the **min/max boundaries** are shown

Graph 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 as the OK/NOK result of the tightening operation



# REPORTING

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

Reports available for:

- \_ **current program** (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	2.05	Nm	Peak	OK

# INTERFACE

Intuitive interface with touch-screen display



# GENERAL SETTINGS

**TARGET TORQUE MODE:** toggle on/off to switch between this and free-running mode

**MODEL / SERIAL NUMBER / CYCLES:** not editable

**FATc:** calibration factor (not editable)

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

**RESET:** applies to current screw or entire program

**BARCODE**

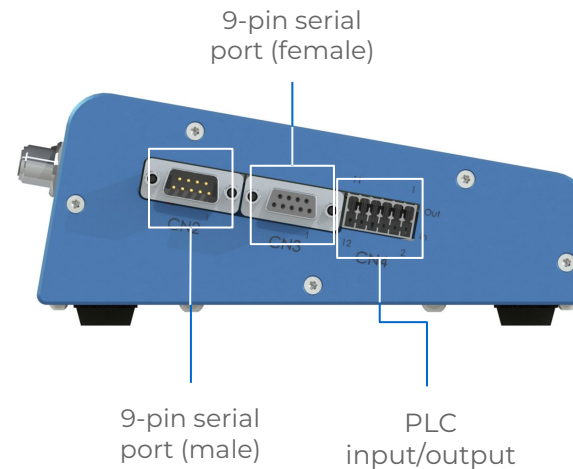
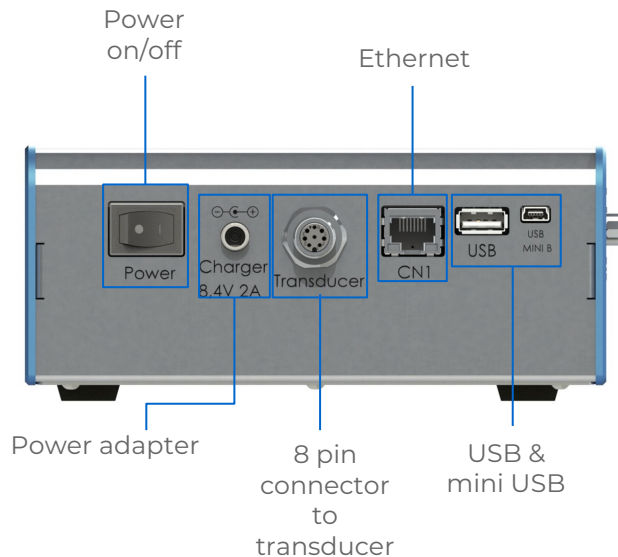
**NETWORK SETTINGS**

## GENERAL SETTINGS

TARGET TORQUE MODE	<input checked="" type="checkbox"/>	
SHOW AVG	<input checked="" type="checkbox"/>	
MODEL	KDS-PL6	
SERIAL NUMBER	1817366	
CYCLES	1324	
FATc	905	
UNIT	< NM >	

PAGE 1/2

# PORTS/CONNECTIONS



# K-TORQUE ANALYZER

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

## FUNCTIONALITY

- **real-time displaying and archiving** of data from the K-TESTER
- **analysis and comparison** of tightening operations and torque data
- **reporting**
- managing of **device settings and programs**

# K-TORQUE ANALYZER

## INTERACTIONS

### ACTIONS

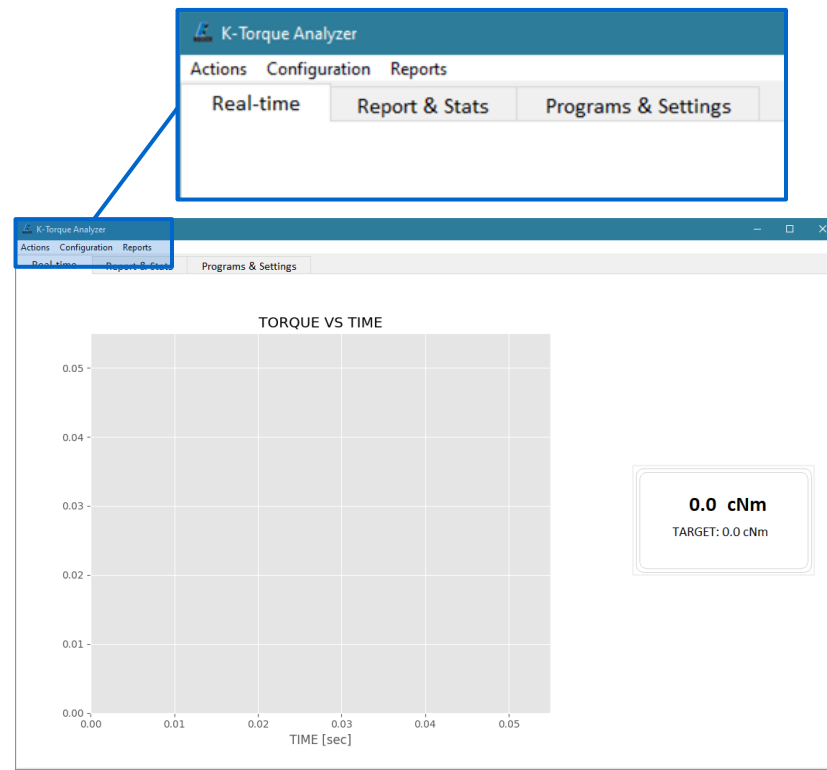
- \_ connect/disconnect from controller
- \_ download/upload configuration from/to controller

### CONFIGURATION (programs and settings)

- \_ import from file
- \_ export to file

### REPORTS

- \_ save last program (i.e. last batch) results to CSV
- \_ save all results to CSV
- \_ enable/disable autosave
- \_ clear all 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 is displayed on the screen

Right-click on graph to navigate the graph via the available **functions**:

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

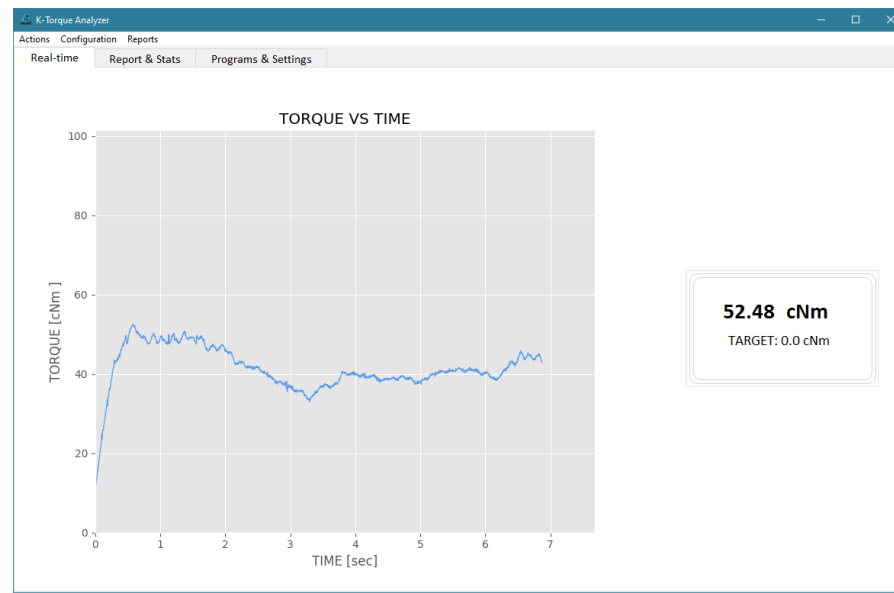


# K-TORQUE ANALYZER

With **TORQUE TARGET** mode **OFF**, a plain graph is shown and the peak value is highlighted on the right side of the screen

Right-click on graph to navigate the graph via the available **functions**:

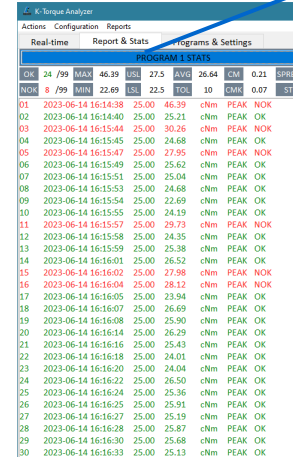
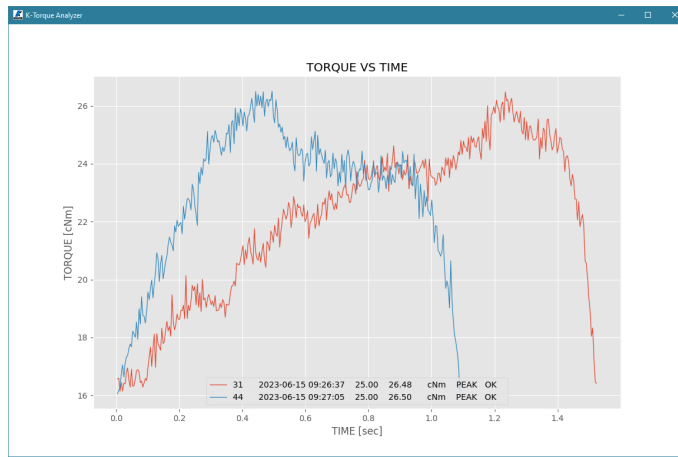
- \_ **Home**: return to home view
- \_ **Back**: return to previous view
- \_ **Forward**: return to last view
- \_ **Move**: pan the view
- \_ **Zoom**: select an area to zoom
- \_ **Save**: save a picture of the graph to a file



# K-TORQUE ANALYZER

## REPORTS AND STATS

Review all the recorded results so far, relevant statistics such as Cm and Cmk.  
Select one or more results to graph and visualize superimposed for comparison (right-click to bring up graph controls).



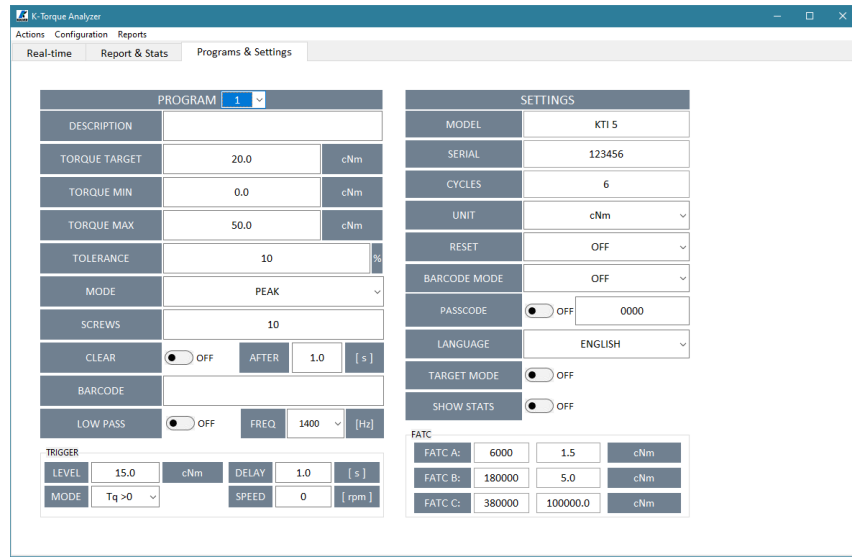
OK	NOK	MAX	MIN	USL	LSL	AVG	TOL	CM	CMK	STD	SPREAD
OK	34	99	MAX	46.39	USL	27.5	AVG	26.64	CM	0.21	SPREAD
NOK	8	99	MIN	22.69	LSL	22.5	TOL	10	CMK	0.07	STD



# K-TORQUE ANALYZER

## PROGRAM AND SETTINGS

View and modify all program parameters and settings



The screenshot displays the 'K-Torque Analyzer' software interface, specifically the 'Programs & Settings' tab. The interface is organized into two main columns: 'PROGRAM' and 'SETTINGS'.

**PROGRAM Section:**

- PROGRAM 1** (selected)
- DESCRIPTION:** Empty field
- TORQUE TARGET:** 20.0 cNm
- TORQUE MIN:** 0.0 cNm
- TORQUE MAX:** 50.0 cNm
- TOLERANCE:** 10 %
- MODE:** PEAK
- SCREWS:** 10
- CLEAR:** OFF (radio button), AFTER 1.0 [s]
- BARCODE:** Empty field
- LOW PASS:** OFF (radio button), FREQ. 1400 [Hz]
- TRIGGER:**
  - LEVEL:** 15.0 cNm, DELAY 1.0 [s]
  - MODE:** Tq > 0, SPEED 0 [rpm]

**SETTINGS Section:**

- MODEL:** KTI 5
- SERIAL:** 123456
- CYCLES:** 6
- UNIT:** cNm
- RESET:** OFF
- BARCODE MODE:** OFF
- PASSCODE:** OFF (radio button), 0000
- LANGUAGE:** ENGLISH
- TARGET MODE:** OFF (radio button)
- SHOW STATS:** OFF (radio button)
- FATC:**
  - FATC A: 6000, 1.5, cNm
  - FATC B: 180000, 5.0, cNm
  - FATC C: 380000, 100000.0, cNm



**THANKS FOR WATCHING**

Intool Slovakia s.r.o.  
ul. Národná 814/4  
010-01 Žilina, Slovakia



Tel. (00421) 41-700-1030  
e-mail: [intool@intool.sk](mailto:intool@intool.sk)  
[www.intool.sk](http://www.intool.sk)