

### TNC Series Torque Cap Tester

**The TNC Digital Torque Cap Tester is a simple operation test instrument** for quickly measuring Open and Close torque values up to 14.8 ft-lbs (20 N-m) on a wide range of test samples with diameters ranging from 0.77" (19.5 mm) to 7.48" (190 mm). The TNC meter is used in medical, pharmaceutical, industrial quality control, R&D and countless other torque applications.

The TNC's provide long operation life and power flexibility with the ability to work from the internal rechargeable battery or included AC adapter. The TNC's have six modes of operation: Track for live readings, Peak which records the highest level over a test, First Peak which records a reading after a programmed decrease, Auto Peak which resets after a period of time, Auto First Peak which resets the first peak after a period of time, Double Peak which provides two separate peak readings from programmed decreases. Preset operation with programmable tolerance thresholds for a quick pass/fail test is available in all modes.

The analog bar graph on the backlit, reversible LCD aids users by providing the resultant torque's current position compared to the full-scale range along with the direction of the force. Pass/fail icons produce live test feedback allowing instant determination of the results.

Every tester comes standard with USB and RS-232 outputs. The TNC's software enables the uploading of data and the additional statistical analysis with its auto-calculation of the selected values. These excellent features make the TNC Torque Cap Testers a valuable and versatile addition to the production, R & D and quality control departments.



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## Features

- Precise  $\pm 0.3\%$  of reading accuracy ensures exact results
- Strong, light-weight, compact aluminum enclosure allows portability and usage in any lab or production environment
- Quick & Easy set up with removable chuck pins and size adjustment knob enables testing of samples with diameters from 0.77" (19.5 mm) up to 7.48" (190 mm).
- 1000 unit memory data storage plus free software provides easy data transfer
- Flexible seven modes of operation: Track, Preset, Peak, First Peak, Auto Peak, Auto First Peak, Double Peak
- Preset operation with Pass-Fail icons enable quick determination of performance acceptance
- Backlit graphical, reversible display with analog bar graph plus CW/CCW directional indication provides fast interpretation of test response. Selectable chart display mode aids viewing performance over the entire test
- Units come standard with USB or RS232 communication output for data upload
- Recharge batteries with included 120/240V AC adapter/charger or utilize adapter for continuous line use
- Factory Calibration certificate with data guarantees performance upon purchase

**SEALS USA, Inc.**

**Instruments Division**

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## TNC Series Specifications

<b>Measuring Range</b>	See Ordering Details chart below
<b>Accuracy</b>	± 0.3% of reading over 5 to 100% capacity
<b>Test Sample Diameter Range</b>	0.77" – 7.48" (19.5 – 190 mm)
<b>Units of Measure</b>	N-cm, N-m, in-lb, ft-lb, kg-cm (depending on range)
<b>Measure Modes</b>	Track, Preset, Peak, First Peak, Auto Peak, Auto First Peak, Double Peak
<b>Overload Protection</b>	120% of Full Scale
<b>Sampling Rate</b>	2000 Hz
<b>Display</b>	160* 128 Dot matrix backlit LCD
<b>Display Update Rate</b>	10 times/sec
<b>Resolution</b>	See Capacity & Resolution chart on last page
<b>Memory</b>	1000 data points
<b>Set Point</b>	Programmable High and Low Limits in Preset mode
<b>Output</b>	USB, serial port RS-232, High and low limit NPN
<b>Battery Indication</b>	Battery icon flashes when low
<b>Battery Life</b>	Approx. 25 Hours continuous on full charge
<b>Charger Adapter</b>	Universal USB charger, input 110 - 240 V ac 50/60 Hz
<b>Power</b>	3.6 V dc 1600 mAH Ni-MH battery pack
<b>Operating Temperature</b>	14 to 104°F (-10 to 40°C)
<b>Humidity Limit</b>	20 - 80% RH
<b>Dimensions</b>	7.75 x 7.87 x 5.59" (197 x 200 x 142 mm)
<b>Product Weight</b>	5.5 lb (2.5 kg)
<b>Package Weight</b>	7.7 lb (3.5 kg)
<b>Warrenty</b>	1 year
<b>Certification</b>	CE
<b>Included Accessories</b>	4 torque pins, USB cable, charger adapter, 2 mounting bolts, table-top rubber pads, cal. cert.
<b>Optional Accessories</b>	RS-232 cable, printer

## Ordering Details

Model	N-m	N-cm	kgf-cm	in-lbf	ft-lbf
<b>TNC-2</b>	0.1 - 2 (0.0002)	10 - 200 (0.02)	1 - 20 (0.002)	0.89 - 17.7 (0.002)	0.07 - 1.5 (0.0002)
<b>TNC-5</b>	0.25 - 5 (0.0005)	25 - 500 (0.05)	1 -20 (0.002)	2.2 - 44.3 (0.005)	0.18 - 3.7 (0.0005)
<b>TNC-10</b>	0.5 - 10 (0.001)	50 - 1000 (0.1)	5 - 100 (0.01)	4.4 - 88.5 (0.01)	0.37 - 7.4 (0.001)
<b>TNC-20</b>	1 -20 (0.002)	100 - 2000 (0.2)	10 - 200 (0.02)	8.9 - 177 (0.02)	0.7 - 14.8 (0.002)

## Accessories

<b>TNC-TP30</b>	Set of 4 torque pins, 30 mm long (1.18")
<b>TNC-TP40</b>	Set of 4 torque pins, 30 mm long (1.57")
<b>TNC-TP80</b>	Set of 4 torque pins, 30 mm long (3.15")
<b>NIST-TORQUE</b>	NIST traceable certificate of calibration with data

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