



Tension Meter DTX



Tension meter DTX-1000
 For use in textile and wire industry. Universal hand-held tension meter. Model with measuring head width 66 mm

Tension Meter DTX-1000
 with measuring head width 66 mm



12 Tension ranges available
 from 1 - 200 cN up to 0.6 - 60 daN



Applications in textile industry up to max. 60000 tex

Applications in wire industry copper wire 0.05 up to 3.0 Ø mm and other materials

Electronic tension meter for applications in textile and wire industry.

Versatile applicable hand-held unit.

**Tension meter with various helpful functions for detailed data recording and analyse -
Professional Instrument !**



Special Features

Additional functions in comparison to basic instrument DTS

- Memory for 60.000 readings
- USB interface
- Tension meter DTX with 5 different memory modes:
 - Mode S:** statistics only
 - Mode H:** storage of the X-Y-diagram for reviewing after finishing a series of measurement (e.g. short time spooling)
 - Mode C:** continuous logging over a user set time and different series of measurement (2 Hz)
 - Mode F:** fast, continuous logging over a user set time and different series of measurement (1000 Hz)
 - Mode D:** storage of single readings and statistic
- 9 Material memory locations for customer made calibrations
- Software Tension Inspect 3 for displaying real-time readings on a PC and to store them into a file
- Wi-Fi modul for wireless communication with a PC (optional)

Function of basic instrument DTS

- Tension meter DTX with large, backlight LCD-display
- 3 different display modes:
 - numeric
 - numeric with bargraph
 - numeric with graph (Time-Tension)
- The display rotates in 90° steps for better reading
- New, unique, force reduced material catching system
- Thickness compensation: to reach highest accuracy the diameter of the material to be measured can be set with a wheel and will be displayed in the screen (not available for all models)



- Automatic „Zero-Setting“ in each measuring position using a special sensor technique
- 4 Material memory locations for customer made calibrations
- Calibration adjustment for fine tuning of the calibration if material differs from the used calibration material
- Programmable MIN- and MAX alarms: indication in the display, if reading is out of limits
- High speed data sampling (internal 8 kHz) and recording of MIN-, MAX-, last reading, PEAKS, average and standard deviation

- Selectable units of measurement: cN, daN, g, kg, N, lb
- Menu set-up in English or German language
- Flexible menu set-up to meet operators demand
- Some functions of the tension meter DTX can be password protected

Standard Features

- Everything in operator's view:
 - the guide rollers
 - the measured material
 - the readings
- Filament guide and roller shifting mechanism ensure easy acquisition of the running material
- Ball-bearing mounted, V-grooved guide rollers
- Rubberized handle provides a secure hold in the operators' hand
- Tension meter DTX with rugged aluminium housing
- LiPo Accumulator (approx. 40 hours continuous operation) with AC adapter
- CE certified, interference resistant against static electrifications
- Certificate of Compliance with the order 2.1 according EN 10204 is included
- Optionally available: Inspection Certificate 3.1 according EN 10204 with calibration report



Available Models

Mode I	Tension Range	Resol ution	Meas uring Head Widt h*	Applicat ions Textile I ndustry e.g Yarn Count	Applicati ons Wire Indu stry e.g. soft-a nnealed Copper W ire	SCHMIDT Calibratio n Material PA**	SCHMIDT Calibratio n Material soft-anne aled copper wir e***	Materi al- Thickn ess Compe nsator
DTX-2 00	1 – 200. 0 cN	0.1 c N	66 m m	max. 200 tex	max. 0.15 mm Ø	0.12 mm Ø	0.10 mm Ø	

DTX-500	1 – 500.00 cN	0.1 cN	66 m	max. 500 tex	0.05 – 0.25 mm Ø	0.12 + 0.20 mm Ø	0.16 + 0.25 mm Ø	X
DTX-1000	10 – 1000 cN	1 cN	66 m	max. 1000 tex	0.10 – 0.40 mm Ø	0.20 + 0.40 mm Ø	0.25 + 0.40 mm Ø	X
DTX-2000	20 – 2000 cN	1 cN	66 m	max. 2000 tex	0.30 – 0.60 mm Ø	0.40 + 0.70 mm Ø	0.40 + 0.60 mm Ø	X
DTX-2500	25 – 2500 cN	1 cN	116 mm	max. 2500 tex	0.30 – 0.70 mm Ø	0.40 + 0.70 mm Ø	0.40 + 0.60 mm Ø	X
DTX-4000	40 – 4000 cN	1 cN	66 m	max. 4000 tex	0.35 – 0.90 mm Ø	0.50 + 0.80 mm Ø	0.50 + 0.80 mm Ø	X
DTX-5000	50 – 5000 cN	1 cN	116 mm	max. 5000 tex	0.40 – 1.00 mm Ø	0.60 + 1.20 mm Ø	0.60 + 1.00 mm Ø	X
DTX-10K	0.1 – 10000 daN	0.01 daN	116 mm	max. 10000 tex	0.70 – 1.40 mm Ø	0.80 + 1.40 mm Ø	0.70 + 1.20 mm Ø	X
DTX-20K	0.2 – 20000 daN	0.01 daN	166 mm	max. 20000 tex	1.00 – 2.00 mm Ø	1.20 + 1.80 mm Ø	steel rope 1.5 mm Ø steel rope 2.0 mm Ø	X
DTX-30K	0.3 – 30000 daN	0.01 daN	216 mm	max. 30000 tex	1.20 – 2.50 mm Ø	1.40 + 2.00 mm Ø	steel rope 1.5 mm Ø steel rope 2.5 mm Ø	X
DTX-50K	0.5 – 50000 daN	0.01 daN	216 mm	max. 50000 tex	1.40 – 3.00 mm Ø	steel rope 1.5 mm Ø (7 x 7 x 0.2)	steel rope 2.0 mm Ø (7 x 7 x 0.3)	
DTX-60K-V1	0.6 – 60000 daN	0.01 daN	280 mm	max. 60000 tex	1.80 – 3.50 mm Ø	steel rope 2.0 mm Ø (7 x 7 x 0.3)	steel rope 2.5 mm Ø (7 x 7 x 0.4)	

* Depending on model, either width of filament guide or outer distance between outside guide rollers

** Suitable for 95 % of applications

*** Accuracy: ± 3 % full scale (FS) and ± 1 digit



Tension Meter DTX can be reconverted for special applications.

Find further information at [special design](#)

Specifications

Calibration:	According SCHMIDT factory procedure
Accuracy:	For PA from 5 % up to 100 % FS*: ± 0.5 % FS* ± 1 digit remaining tension range and other calibration materials: ±3 % full scale and ±1 digit
Memory for material curves:	2 for SCHMIDT calibration plus 9 for customized calibrations
Measuring units:	Force (switchable): cN, daN, g, kg, N, lb Thickness (switchable): mm, inch
Overrange:	Approx. 10 % FS*, full scale, without accuracy guarantee
Overload protection:	100 % full scale
Measuring principle:	Strain gauge bridge
Signal processing:	Digital, 16 bit A/D converter
Measuring frequency:	Max. 1 kHz (1000 measurings/sec.), intern 8 kHz
Measuring roller deflection:	Max. 0.2 mm
Display:	Graph LCD
3 different displays:	Numeric, Numeric with graph (time-tension) X-Y-diagram
Display update rate:	Approx. 2 times per second
Memory:	MIN, MAX, PEAK, AVG and LAST
Output signal:	USB
Memory:	60.000 values split up to 255 measuring positions
Memory modes:	5 memory modes with statistical evaluation
Damping:	Adjustable electronic damping (averaging)
Cal. Adjustment:	± 10 steps in 1 % increment
Thickness compensation:	Max. 2.5 mm (not available for all models)

Auto power off:	Approx. 3 minutes of non-use
Temperature coefficient:	Gain: less than ± 0.01 % FS* /°C
Zero point:	Less than ± 0.03 % FS* /°C
Temperature range:	10 – 45 °C
Air humidity:	85 % RH, max.
Power supply:	LiPo accumulator (approx. 40 h continuous use), charging time approx. 3 1/2 h, USB AC adapter 100 – 240 V AC with 4 adapters (EU/USA/UK/AUS-NZ)
Housing material:	Die-cast aluminium
Housing dimensions:	See Dimensions
Weight, net (gross):	Up to DTX-50K approx. 875 g / 1550 g DTX-60K-V1 approx. 1040 g / 2700 g

Specifications subject to change without notice!

Guide Rollers

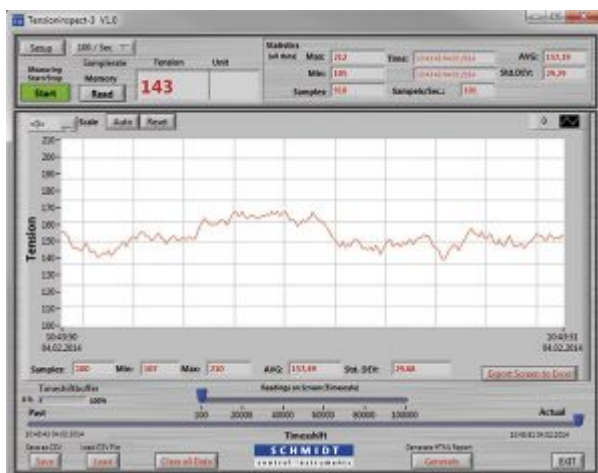
Order-Code	Line Speed $v_{\max.}$... m/min	Roller Material
<u>Standard</u>	2000	Hard-coated aluminium
<u>Code K</u>	3500	Hard-coated aluminium
<u>Code H</u>	5000	Plasma-coated aluminium
<u>Code T</u>	1000	Plastic (POM) black
<u>Code W</u>	1000	Nickel-plated steel
<u>Code ST</u>	1000	Hardened steel
<u>Code B</u>	1000	Tempered steel
<u>Code CE</u> <u>2</u>	1000	Aluminium ceramic-coated
<u>Code AS</u> <u>Y</u>	1000	Hard-coated aluminium, asymmetrical groove (not for model DTX-200)

Code AS YB	1000	Tempered steel (for tire code), asymmetrical groove (not for model DTX-200)
Code V1	1000	Hard-coated aluminium (only for model DTX-60K-V1)
Code U	2000	Hard-coated aluminium, radius R3 (not for model DTX-200)

Standard Accessories

➤ SW-TI3 - Software Tension Inspect 3

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Tension Inspect 3 Info (PDF)

Software to display and save readings on a PC (Win 7 and higher; 32 bit and 64 bit)

Features:

- Real-time reading
- The readings are also shown in a X-Y-diagram (time/date-tension)
- For data analysing the buffered diagram can be zoomed and scaled

- Recording of the buffered readings as CSV-file (on user request)
- Download of values to Excel

Order number: SW-TI3

➤ K50202 - USB AC Adapter

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USB AC adapter with 4 adapters (EU/USA/UK/AUS-NZ) for 100 – 240 V AC and USB cable for loading the accumulator and data transfer to a PC.

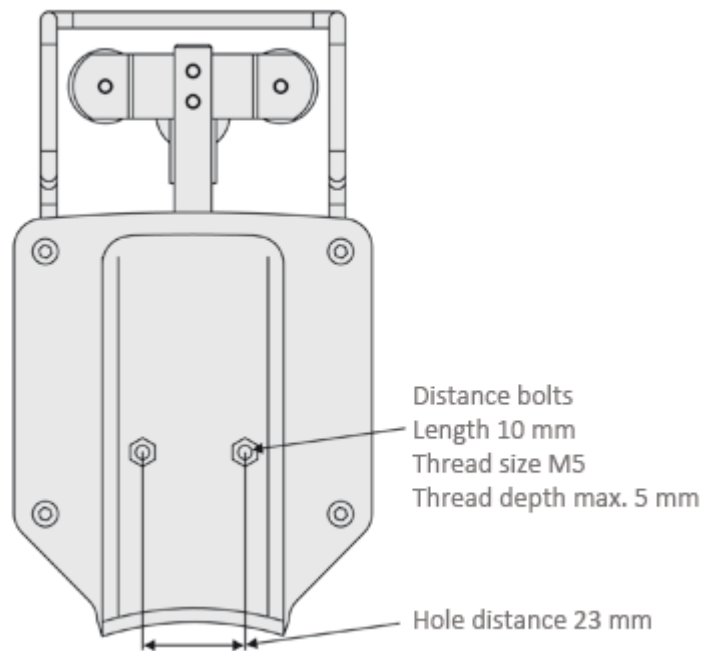
Order number: K50202



Optional Accessories

➤ Code MH - Online Mounting Code MH

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To mount the gauge for online use, the housing

can be equipped with mounting threads. There are two bolts with M5 female thread on the rear side. This feature cannot be installed afterwards.

➤ Code WL - Wi-Fi Signal



The instrument can be equipped with a Wi-Fi module for WLAN data transfer. This feature cannot be installed afterwards.

The Wi-Fi module is not licensed for all countries. Please contact us for further information!

Calibration Report

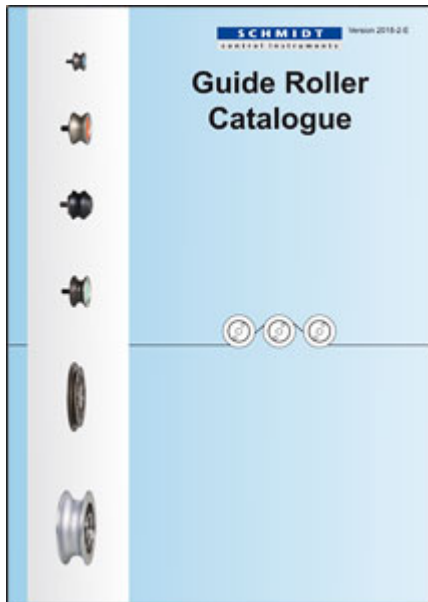


Inspection Certificate 3.1 according DIN EN 10204 including a calibration report is optional available.

[Inspection Certificate 3.1 \(PDF\)](#)

Spare Rollers

Download an overview for the guide rollers:



[Guide Roller Catalogue \(PDF\)](#)

Memory Content

Detailed information about the memory modes and a printout of the memory

[Memory Content \(PDF\)](#)

Dimensions

Dimensions of tension meter DTX for download:

[Drawing \(PDF\)](#)

Delivery Includes



Tension meter DTX with carrying case, accumulator and USB AC adapter with 4 adapters (EU/USA/UK/AUS-NZ), USB cable, Software Tension Inspect 3, Certificate of compliance with the order 2.1 according EN 10204 free of charge, instruction manual in German or English (as requested)

How To Order

To order tension meter DTX:

Please indicate the complete order number e. g.:

Model with tension range		Code for guide rollers (if not standard)		Code attachment		Complete Order No.
DTX-5000	+	T	+	WL	=	DTX-5000-T-WL


Instruction Manual


Download the instruction manual of tension meter DTX and software Tension Inspect 3:


[Instruction Manual DTX \(PDF\)](#)

[Instruction Manual TI3 \(PDF\)](#)

If you want to get a quote or want to place an order please contact us.

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 [Contact us](#)