

# DTSF/DTXF

## Optic Fiber

## Hand-Held Digital Tension Meter

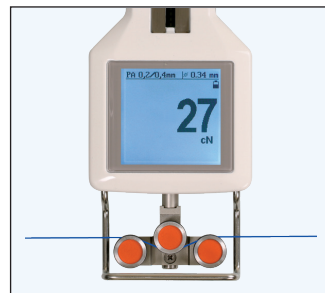
### Features

- 32mm diameter V-grooved rollers are lightweight and ball bearing mounted for material speeds up to 4000 m/min
- Large bending radius assures gentle handling of the material
- Large, backlight LCD-display rotates in 90° steps for optimal viewing
- 3 different display modes: Numeric, Numeric with bar graph, Numeric with trend graph (Tension vs Time)
- Automatic Zero-Setting in all measuring positions
- Material memory locations for custom calibrations: 4 (DTSF), 9 (DTXF)
- User-set Min and Max alarms with indication if reading is out of limits
- Hi-speed data sampling & recording of Min, Max, Hi-Peak, Lo-Peak, Average & Standard Deviation
- User-Selectable measurement units: cN, daN, g, kg, N, lb
- Setup parameters can be password protected.
- Rugged aluminium housing with rubberized handle provides a secure and comfortable grip
- CE certified with 1-Year Warranty

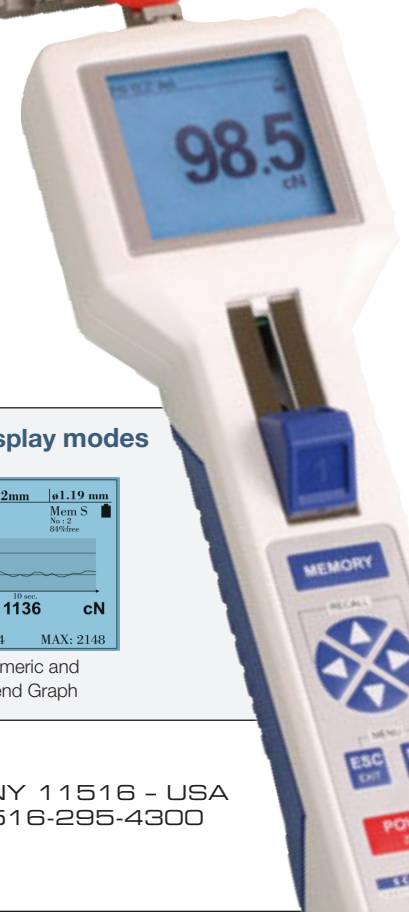
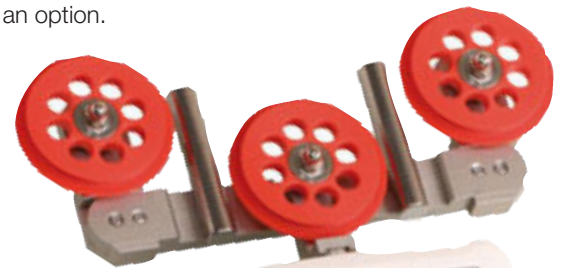
4 tension ranges from 1 – 200.0 grams up to 20 – 2000 grams

DTSF and DTXF hand-held tension meters are fitted with 32mm diameter lightweight rollers that minimize bend on fragile materials. Rollers are offered in hardcoat anodized aluminum or Delrin plastic.

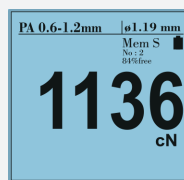
**DTXF (datalogging) model includes:** memory storage for 60,000 data points and USB output with sample rates up to 1kHz. Tension Inspect Software which displays real-time readings on a pc or allows downloading of stored data is included. WiFi for wireless communication is available as an option.



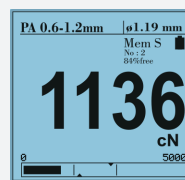
Depending on the measuring position the LCD display automatically rotates in 90° steps and locks in position.



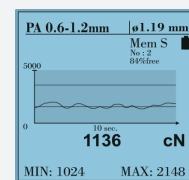
### Large backlit Display with 3 user-selected display modes



Numeric



Numeric, Bar Graph with set point markers



Numeric and Trend Graph

# Specifications

<b>Accuracy</b>	- <b>Factory Cal Mat'l</b> ±1% FS ±1-digit, from 5% to 100% Full scale - <b>Other Materials</b> ±3% FS ±1-digit	<b>Damping</b>	User-adjustable electronic damping (averaging)
<b>Calibration Memory</b>	- <b>DTSF</b> 1 for factory calibration plus 4 for customized calibrations - <b>DTXF</b> 1 for factory calibration plus 10 for customized calibrations	<b>Cal. adjustment</b>	±10 steps in 1% increments
<b>Measuring units</b>	<i>Tension:</i> cN, daN, g, kg, N, lb <i>Thickness:</i> mm, inch	<b>Auto power off</b>	Approx. 3 minutes of non-use
<b>Overrange</b>	Approx. 10% FS*, without accuracy guarantee	<b>Temperature coefficient</b>	Gain: less than ±0.01% FS* /°C Zero point less than ±0.3% FS* /°C
<b>Overload protection</b>	200% Full Scale	<b>Temperature range</b>	50 to 113°F (10 – 45 °C)
<b>Measuring principle</b>	Strain gauge bridge	<b>Air humidity</b>	85% RH, max.
<b>Measuring frequency</b>	Max.1 kHz (1000 samples/sec.)	<b>Built-in battery</b>	Lithium Polymer
<b>Measuring roller</b>	0.2mm, maximum	- <b>Battery Life</b>	20 hours continuous use (approx.)
<b>Sampling rate</b>	200Hz: AVG, MIN and MAX	- <b>Recharging Time</b>	3½ hours (approx.)
<b>Display update rate</b>	Approx. 2 times per second	- <b>Battery Charge</b>	100-240V AC, swappable plug adapters
<b>LCD Display</b>	Color-TFT 128 x 160	- <b>Plug Adapters</b>	USA, Euro and UK
<b>Display modes (3)</b>	Large Numeric, Numeric with bar graph, Numeric with trend graph (tension vs time)	<b>Housing material</b>	Die-cast aluminium
<b>Memory</b>	Min, Max, Hi-Peak, Lo-Peak, Average & Standard Deviation (per measuring interval)	<b>Housing dimensions</b>	10.45" x 3.09" x 1.81" (265 x 78.5 x 46mm)
		<b>Weight, net / gross</b>	Up to DTSF-50K approx. 1.93 lbs (875g) / 3.42 lbs (1550g)
		<b>Additional specifications model DTXF</b>	
		<b>Output signal</b>	USB
		<b>Memory</b>	60,000 values at 255 measuring periods
		<b>Memory modes</b>	5 memory modes with statistical evaluation



## Complete Kit

DTSF models include tension meter in a foam-fitted carrying case, built-in rechargeable battery, AC-adapter/Charger (with US and Euro plug adapters) and operating instruction manual.

DTXF models also include USB cable and Tension Inspect software.

## Tension Ranges

Model	Tension Range	Resolution	Measuring Head Width*	Factory Calibration Material***
DTSF-200 / DTXF-200	1 - 200.0 g or cN	0.1 g or cN	140mm	0.12 mm Ø (PA)
DTSF-500 / DTXF-500	1 - 500.0 g or cN	0.1 g or cN	140 mm	0.20 mm Ø (PA)
DTSF-1000 / DTXF-1000	10 - 1000 g or cN	1 g or cN	140 mm	0.30 mm Ø (PA)
DTXF-2000 / DTXF-2000	20 - 2000 g or cN	1 g or cN	140 mm	0.50 mm Ø (PA)

\* Outer distance between outside guide rollers. \*\* Suitable for 95 % of applications. \*\*\* PA is Polyamide Monofilament

## Roller Guides

Roller Width	Line Speeds *max...m/min	Roller Material*
Standard	4000	Hard-coated aluminum
Code T	4000	Plastic (PVC) red