

## Features

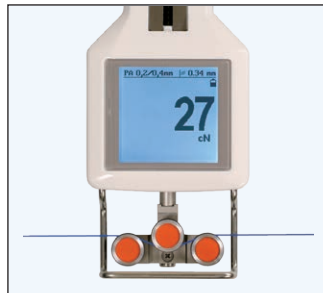
- Dual-flanged outer guide rollers with widths from 7mm to 41mm fabricated from Hardcoat Anodized Aluminum
- Special coatings available for carbon fibers & adhesive-backed materials
- Large, backlight LCD-display with 3 different displays: numeric, numeric with bar graph, numeric with trend graph (tension vs.time)
- Built-in Diameter Compensator System is used to adjust calibration curve for highest accuracy.
- Automatic "Zero-Setting" in all measuring positions
- Material memory locations for custom calibrations: 4 (DTSB), 9 (DTXB)
- Stores Min, Max and Last reading as well as Hi-Peak, Low-Peak, average and standard deviation
- High speed internal data sampling captures Min & Max Peaks
- User-set Min and Max alarms indicate out of limit readings on LCD
- User-adjustable DAMPING is used to minimize tension fluctuations
- User-Selectable measurement units: cN, daN, g, kg, N, lb
- Setup parameters can be password protected so they are not accidentally changed by the user
- Re-chargeable Lithium Polymer battery lasts 40 hours (continuous use, approx)

# DTSB/DTXB Narrow Tape/Tow Hand-Held Digital Tension Meters

10 tension ranges available from 5.0 - 500 g up to 0.5 - 50 Kg (110 Lbs)

DTSB and DTXB tension meters are fitted with flat cylindrical rollers with flanges for use with tapes/bands, ribbon cables, carbon fiber and fiberglass tows and similar flat materials.

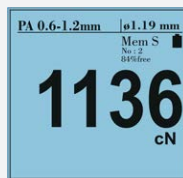
**DTXB (datalogging) models include:** memory storage for 60,000 data points and USB output with sample rates up to 1kHz. Tension Inspect Software which displays real-time readings on a pc or allows downloading of stored data is included. WiFi for wireless communication is available as an option.



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



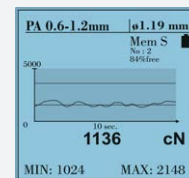
### Large backlit LCD with 3 user-selected display modes



Numeric



Numeric, Bar Graph with set point markers



Numeric and Trend Graph

# Specifications

<b>Accuracy</b>					
- Factory Cal Mat'l	±1% FS ±1-digit, from 5% to 100% Full scale				
- Other Materials	±3% FS ±1-digit				
<b>Calibration Memory</b>					
- DTSB	1 for factory calibration plus 4 for customized calibrations				
- DTXB	1 for factory calibration plus 10 for customized calibrations				
<b>Measuring units</b>	<i>Tension:</i> cN, daN, g, kg, N, lb				
	<i>Thickness:</i> mm, inch				
<b>Overrange</b>	Approx. 10% FS*, without accuracy guarantee				
<b>Overload protection</b>	200% Full Scale				
<b>Measuring principle deflection</b>	Strain gauge bridge				
<b>Measuring roller</b>	0.2mm, maximum				
<b>Sampling rate</b>	200Hz: AVG, MIN and MAX				
<b>Display update rate</b>	Approx. 2 times per second				
<b>LCD Display</b>	Color-TFT 128 x 160				
<b>Display modes</b>	Numeric, Numeric with Bargraph, X-Y Trend Graph (time vs. tension)				
<b>Memory</b>	Min, Max, Hi-Peak, Lo-Peak, Average & Standard Deviation (per measuring interval)				
<b>Cal. adjustment</b>	±10 steps in 1% increments				
		<b>Thickness compensation</b>	Max. 0.1" (2.5mm)		not available for all models
		<b>Auto power off</b>	Approx. 3 minutes of non-use		
		<b>Temperature coefficient</b>	Gain: less than ±0.01% FS* /°C Zero point less than ±0.3% FS* /°C		
		<b>Temperature range</b>	50 to 113°F (10 – 45 °C)		
		<b>Air humidity</b>	85% RH, max.		
		<b>Built-in battery</b>	Lithium Polymer		
		- Battery Life	40 hours continuous use (approx.)		
		- Recharging Time	3½ hours (approx.)		
		- Battery Charger	100-240V AC, swappable plug adapters		
		- Plug Adapters	USA, Euro and UK		
		<b>Housing material</b>	Die-cast aluminium		
		<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 DTSB-50K approx. 1.93 lbs (875g) / 3.42 lbs (1550g)		
		<b>Additional specifications model DTXB</b>			
		<b>Output signal</b>	USB		
		<b>Memory</b>	60,000 values at 255 measuring periods		
		<b>Memory modes</b>	4 memory modes with statistical evaluation		
					*Full scale

## Complete Kit



**Delivery of DTSB / DTXB includes** tension meter in foam-fitted carrying case, built-in rechargeable battery, AC-Adapter/Charger (with US and Euro plug adapters) and operating instruction manual.

*Note:* DTXB model also includes USB cable and Tension Inspect software.

## Tension Ranges

Model	Tension Range*	Resolution	Measuring Head Width**	Roller Widths
DTSB-500 / DTXB-500	0.5 - 500	0.1 g or cN	55 mm	7, 10, 15, 20, 30, 41 mm
DTSB-1000 / DTXB-1000	10 - 1000	1 g or cN	55 mm	7, 10, 15, 20, 30, 41 mm
DTSB-2000 / DTXB-2000	20 - 2000	1 g or cN	55 mm	7, 10, 15, 20, 30, 41 mm
DTXB-2500 / DTXB-2500	25 - 2500	1 g or cN	117 mm	7, 10, 15, 20, 30, 41 mm
DTSB-4000 / DTXB-4000	40 - 4000	1 g or cN	55 mm	7, 10, 15, 20, 30, 41 mm
DTSB-5000 / DTXB-5000	50 - 5000	1 g or cN	117 mm	7, 10, 15, 20, 30, 41 mm
DTSB-10K / DTXB-10K	0.1 - 10 Kg	0.01 Kg or daN	117 mm	7, 10, 15, 20, 30, 41 mm
DTSB-20K***/DTXB-20K***	0.2 - 20 Kg	0.01 Kg or daN	167 mm	7, 10, 15, 20, 30 mm
DTSB-30K***/DTXB-30K***	0.3 - 30 Kg	0.01 Kg or daN	217 mm	7, 10, 15 mm
DTSB-50K***/DTXB-50K***	0.5 - 50 Kg	0.01 Kg or daN	217 mm	7, 10 mm

\* Factory calibration material textile ribbon or film, depending on tensions range and roller width.

\*\* Outer distance between outside guide rollers. \*\*\* Lever no longer required for high-capacity models.

## Roller Guides

Roller Width	Line Speeds *max...m/min	Roller Material*
7 mm	1000	Nickel-plated steel
10 mm	1000	Hard-coated aluminum
15 mm	1000	Hard-coated aluminum
20 mm	1000	Hard-coated aluminum
30 mm	1000	Hard-coated aluminum
41 mm	1000	Hard-coated aluminum

\* Other roller materials (nickel-plated steel or plastic), as well as special coatings (Code CF – for carbon fiber optimized coating, NAV optimized, Code CE – ceramic, Code AAC – anti adhesive coating) are available on request.