

# TENSIOMETER

**\*\* code 1836\_A \*\***

3 tension ranges from 0.5 – 50 cN to 1 – 200 cN. Cost-efficient electronic tension meter for measuring low tensions for measuring fibers and threads up to 200 tex, fine wires Ø 0.16 mm. Hand-held device with slim filament guide and small guide rollers groove Ø 7.4 mm for limited access space, Handy, light weight tension meter with digital display for precision measurements.



## Special Features

- Tension meter ZEF with easy to read LCD display.
- Automatic »Zero Setting« to zero the instrument in any measuring position.
- Adjustable electronic damping for better reading when tension is constantly fluctuating.
- Slim filament guide with small guide rollers – ideal for limited access space.
- Simple, trouble free operation.
- Filament guide and unique roller shifting mechanism ensure easy acquisition of the running material.
- Light weight hand-held unit.
- Powered by rechargeable Lithium Polymer battery (80 h battery life with 3.5 h charge time) with a universal voltage AC-charger.



Tensiometer with smooth running plastic rollers code **T** for measuring spandex (Lycra) filaments.

## Standard Features

- Everything in operator's view:
  - the guide rollers
  - the measuring material
  - the readings
- Ball-bearing mounted, V-grooved guide rollers.
- Tension meter with high-strength plastic housing.
- CE approved (tested for electromagnetic compatibility).
- Certificate of Compliance with the order 2.1 according EN 10204 is included.

\*Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding.  
\*Le immagini e le descrizioni del presente catalogo sono da ritenersi puramente indicative e non vincolanti.

# TENSIOMETER

**\*\* code 1836\_A \*\***

- Optionally available: Inspection Certificate 3.1 according EN 10204 with calibration report.

## Available models

MESDAN	Model	Tension Range	Resolution	Measuring Head Width*	Calibration Material **
Code		cN	cN	mm	
	ZEF-50	0.5 - 50.0	0.1 cN	43	PA: 0.12 mm Ø
<b>1836</b>	ZEF-100	0.5 - 100.0	0.1 cN	43	PA: 0.12 mm Ø
<b>1836A</b>	ZEF-200	1 - 200	1 cN	43	PA: 0.12 mm Ø

Other units of measure are available, such as g. \* Width of filament guide. \*\*Suitable for 95 % of applications - PA = Polyamide Monofilament

## Guide rollers

Guide rollers	Line speed	Roller material
	Vmax m/min	
Standard	900	Hard coated aluminium
Code K	2000	Hard coated aluminium
Code T	450	Plastic (POM) black
Code W	450	Nickel-plated steel

## Standard accessories



**USB AC adapter** with 4 adapters (EU/USA/UK/AUS-NZ) for 100 – 240 Vac and charging cable for loading the accumulator.



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

\*Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding.  
\*Le immagini e le descrizioni del presente catalogo sono da ritenersi puramente indicative e non vincolanti.

# TENSIOMETER

**\*\* code 1836\_A \*\***



## Delivery includes

Tension meter ZEF with carrying case, USB AC adapter with 4 adapters (EU/USA/UK/AUS-NZ), charging cable, operating instruction in German or English (as requested), Certificate of Compliance with the order 2.1 according EN 10204 free of charge.

## Specifications

<b>Calibration:</b>	According to factory procedure
<b>Accuracy:</b>	$\pm 1$ % full scale $\pm 1$ digit or better typical $\pm 0.5$ % full scale
<b>Overrange:</b>	Approx. 10 % full scale, without accuracy guarantee
<b>Overload protection:</b>	100 % full scale
<b>Measuring principle:</b>	Strain gauge bridge
<b>Measuring roller deflection:</b>	Max. 0.5 mm
<b>Damping:</b>	Adjustable electronic damping (15 values), averaging
<b>A/D converter:</b>	12 bit
<b>Signal processing:</b>	Digital
<b>Display:</b>	LCD 3 digit, 11 mm high, ZEF-100 3 ½ digit
<b>Display update rate:</b>	2 times per second
<b>Self-frequency:</b>	250 Hz
<b>Auto power off:</b>	After 3 minutes of non-use
<b>Temperature range:</b>	10 – 45 °C
<b>Air humidity:</b>	85 % RH, max.
<b>Power supply:</b>	LiPo accumulator (approx. 80 h continuous use, charging time approx. 3.5 h), USB AC adapter 100...240 V AC with 4 adapters (EU/USA/UK/AUS-NZ)
<b>Housing material:</b>	Plastic (POM)
<b>Dimensions:</b>	124(W) x 32(D) x 157(H) mm
<b>Weight, net (gross):</b>	Approx. 200 g (approx. 600 g)
*Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding. *Le immagini e le descrizioni del presente catalogo sono da ritenersi puramente indicative e non vincolanti.	

\*Photographs and descriptions of the present leaflet have to be considered as purely indicative and not binding.  
\*Le immagini e le descrizioni del presente catalogo sono da ritenersi puramente indicative e non vincolanti.