

## Digital TENSION METER

### Model ZEF

0.5–100.0 g  
1–200 g

### Model ZED

1–500 g

The New CHECK•LINE® models ZEF and ZED employ a strain-gauge system for accurately measuring the running line tensions on a wide variety of yarns, fibers and fine wires. Its trigger-operated roller shifting mechanism makes it easy to acquire the running material.

Single-button *automatic zero* permits operation in any orientation while maintaining highest accuracy.

Strain Gauge  
Sensing for  
Highest  
Accuracy



## FEATURES

- Easy-to-read LCD display with auto power off
- Simple 2-key operation
- Powered by rechargeable batteries
- ZEF V-grooved guide rollers are rated for speeds up to 900 m/min or, optionally, 2000 m/min
- ZED V-grooved guide rollers are rated for speeds up to 2000 m/min or, optionally, 3500 m/min
- Supplied in an attractive foam-fitted carrying case
- NIST Calibration available

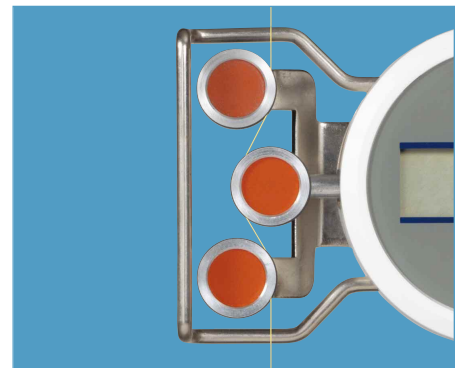
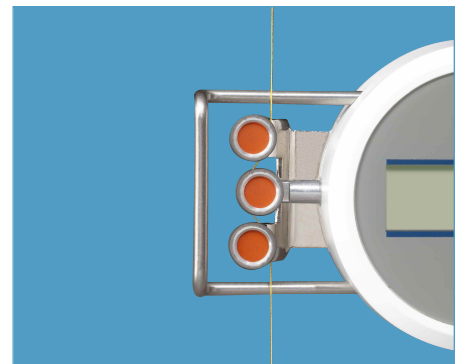
### ZEF Models

Miniature rollers make these models ideal for delicate yarns/fibers and fine wires as well as those applications where access space is limited.

*For Spandex and similar materials, specify model ZEF-100-T.*

### ZED Model

This model is recommended for all other applications where miniaturized rollers are not necessary.



## Tension Ranges

### ZEF Models

Model Number	Tension Range
ZEF-100-G	0.5–100.0 grams
ZEF-200-G	1–200 grams

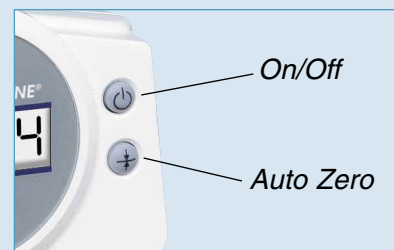
### ZED Model

Model Number	Tension Range
ZED-500-G	1–500 grams

- Notes:**
1. All models can be calibrated in cN. Replace suffix "G" with suffix "CN". Example: ZED-500-CN.
  2. ZEF models are calibrated using a 0.12 mm diameter monofilament. ZED models are calibrated using a 0.2 mm diameter monofilament.
  3. Custom calibration with customer-supplied samples is optionally available. Inquire

## Specifications

<b>Measuring Principle</b>	Strain Gauge
<b>Accuracy</b>	±1% Full Scale, ±1 digit
<b>Outer Roller Distance</b>	<b>ZEF:</b> 22mm (c:c) <b>ZED:</b> 38mm (c:c)
<b>Overrange Readings</b>	10% Full Scale
<b>Overrange Protection</b>	100% Full Scale
<b>Sensing Roller Deflection</b>	0.5mm (maximum)
<b>Display Type</b>	LCD, 10mm height
<b>Display Update Rate</b>	0.5 seconds
<b>Natural Frequency</b>	250 Hz
<b>Auto Zero</b>	±20% Full Scale
<b>Battery Type</b>	Built-in Li-On
<b>Battery Life</b>	80 Hours Continuous Use (Approx.)
<b>Roller Material</b>	Hard-coated Aluminum (standard) POM Plastic (Optional), specify suffix "-T"
<b>Max Linear Speed</b>	
<b>ZEF:</b>	900 m/min (standard) 2000 m/min (optional), <i>specify suffix "-K"</i> 450 m/min (option "T")
<b>ZED:</b>	2000 m/min (standard) 3500 m/min (optional), <i>specify suffix "-K"</i>
<b>Operating Temperature</b>	50 to 100 °F (10 to 45 °C)
<b>Housing Material</b>	High-Impact Plastic (POM)
<b>Dimensions</b>	6.2 x 3.3 x 1.3" (157 x 85 x 32 mm)
<b>Weight</b>	200 grams (Approx.)



All models are supplied in a foam-fitted carrying case

## CHECK•LINE® – PRECISION QUALITY CONTROL INSTRUMENTS

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