



**D** Stationary, electronic  
TS Series



Special tension sensors feature large rollers to minimize bending of materials like fiber optics, single carbon fibers and technical fibers etc.

## Model TSL

5 Tension ranges from 0-50 cN  
to 0-1000 cN

32 mm Ø guide rollers mini-  
mize material deflection



Model TSL-50-T

with guide rollers (Code T)

**Special features:**

- + Gentle handling of sensitive material during measurement
- + Extremely light weight, low inertia guide rollers
- + Best suitable for low tension ranges
- Apart from that the instrument relates to model TS1

**Available Models**

MODEL	Tension Ranges cN	Measuring Head Width* mm	SCHMIDT Calibration Material**
TSL-50	0-50	150	PA: 0.12 mm Ø
TSL-100	0-100	150	PA: 0.12 mm Ø
TSL-200	0-200	150	PA: 0.12 mm Ø
TSL-500	0-500	150	PA: 0.20 mm Ø
TSL-1000	0-1000	150	PA: 0.30 mm Ø

Other tension ranges and measuring head widths available on request.

Other units of measure available, such as g.

\* Outside dimensions of front plate

\*\* Suitable for 95% of applications (see also chart on page 11)

PA = Polyamide Monofilament

**Guide Rollers**

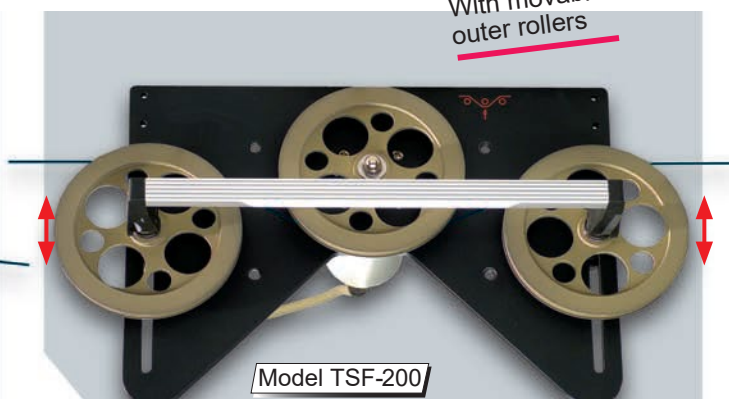
Guide Rollers	Line Speed v <sub>max</sub> ... m/min	Roller Material
V-grooved		
Standard	4000	Hard-coated aluminum
Code T	4000	Plastic (PVC) red (same dimensions as standard roller)

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## Model TSF

6 Tension ranges from 0-100 cN  
to 0-5000 cN

With movable  
outer rollers



Model TSF-200

**Special features:**

- + Large bending radius for gentle handling of sensitive material
- + Ball-bearing mounted, V-Grooved guide rollers with 70 mm Ø
- + The outer rollers can be moved downwards to minimize contact in case of non-measurements
- Apart from that the instrument relates to model TS1

**Available Models**

MODEL	Tension Ranges cN	Measuring Head Width* mm	SCHMIDT Calibration Material**
TSF-100	0-100	270	PA: 0.12 mm Ø
TSF-200	0-200	270	PA: 0.12 mm Ø
TSF-500	0-500	270	PA: 0.20 mm Ø
TSF-1000	0-1000	270	PA: 0.30 mm Ø
TSF-2000	0-2000	270	PA: 0.50 mm Ø
TSF-5000	0-5000	270	PA: 0.80 mm Ø

Other tension ranges available on request.

Other units of measure available, such as g.

\* Outer distance between outside guide rollers

\*\* Suitable for 95% of applications (see also chart on page 11)

PA = Polyamide Monofilament

**Guide Rollers**

Guide Rollers	Line Speed v <sub>max</sub> ... m/min	Roller Material
V-grooved		
Standard	5000	Hard-coated aluminum

→ see page E →

Special calibration using customer supplied samples is available Please supply a sample of at least 5 m in length.

**Output Signal** **Power Supply** **Specifications** Models TSL and TSF same as Model TS1 (see page D2 and D14)