

**Electronic tensile force measuring unit for foils and films**
**Type: M 1160**
**Electronic tensile force measuring unit for papermachine clothings,  
felts, foils, films, sieves and woven materials**


Increase the quality of your felts and reduce your costs by maintaining the proper tension:

- The drying rate increases
- Lifespan extends
- Product equability gets improved

For optimizing your clothing precise tensile force measurement with reproducible values is the basis.

With our measuring unit M1160 series we meet the request for a handy combination of an instrument and a measuring head.

**Operation:**

- The measuring head is lightly pressed against the material to be measured.
- The measured tensile force is indicated digitally on the display unit DMS-TENS.

**Measured value display:**

- The tensile force per 1 cm measured material width is indicated as measured value.
- Measuring range: from 0,1 daN/cm to 19,99 daN/cm in 0,01 daN/cm steps. Measuring accuracy: +-1%.
- The indication instrument DMS-TENS can be connected to the measuring head by a cable length 2 m (as shown on the picture), or it can be mounted stationary on the measuring head.
- The measuring unit is factory calibrated.  
Calibration can also be effected by the customer on-site with measured material.

**Measuring ranges :**

Most measuring tasks can be solved by the standard measuring unit with large measuring range up to 20daN/cm. The indication instrument DMS-TENS provides an analogue output signal of 0-1V in the process.

For an analogue output signal from 0-1V and tensile forces from 0 to 10 daN/cm or 0-5 daN/cm we also offer the tensile force measuring device identical in construction.

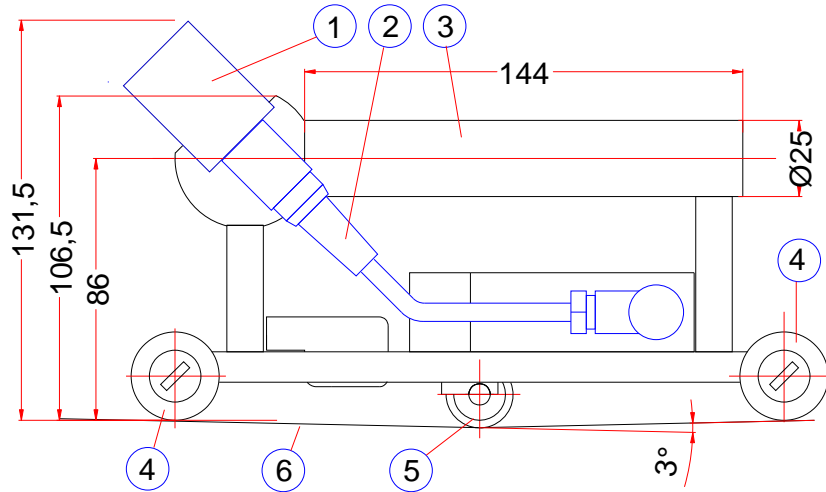
For measuring tensile forces < 20 N/cm the type series M 160 N is optimized.

**Characteristics:**

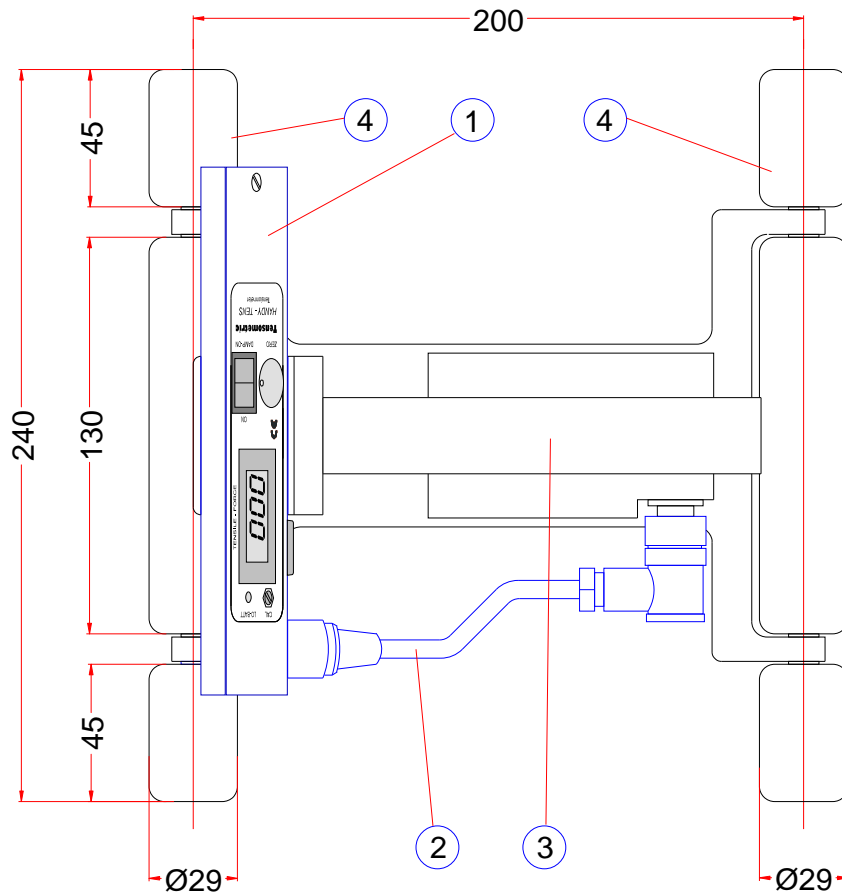
- The 2,5 cm wide sensor roller which is located in the middle of the measuring head is deviating the measured material by only 3° from its straight line, so any damage at the material is eliminated.
- The spiral-shaped groove in the outer rollers stabilizes the run even at high speeds
- All rollers are running in ball-bearings.
- The measuring head is splash-proof

**Dimensions Measuring head type M 1160, with mounting tensile force indication instrument DMS-TENS**

Side view:



Top view:



Legende:

- 1 Tensile Force Indication Instrument DMS-TENS
- 2 Connecting cable
- 3 Handhold
- 4 6 Rollers on 2 axles
- 5 Sensor Roller, width only 25mm
- 6 Measured material