



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

## Feltest TensioMaster



## Instruction manual

Version 2020-04



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

## Description

The Feltest TensioMaster is an instrument for measuring tension in flexible thin webs generally encountered in paper mills, such as:

FORMING FABRICS

PRESS FABRICS

DRYER FELTS

PRESS FELTS

DRYER FABRICS

*SOME(!) PAPER SHEETS*

The operation is based on the principle that the amount of deflection of a flexible fabric under load is dependent upon the tensile stresses in the fabric. The load is provided by an internal spring, and the amount of web deflection is measured by a dial indicator. The deflection is converted to tension in N/mm.

The design of the instrument is such that the reading is hardly affected by the amount of pressure applied by the operator.

The Feltest TensioMaster can be used on fabrics running in any angular attitude, and it can be applied on either side of the fabric. The magnitude of readings is also independent of speed or moisture content of the web.

The instrument can be used safely in wet surroundings since the internal mechanisms are protected by seals and rubber bellows.

The range of tension measurable with the instrument is 0.5 to 20 N/mm with an accuracy of  $\pm 8.5\%$  of the tension reading.



## First use

The instrument is shipped with a locking screw in place to protect the mechanics during transport. Before the first use, remove this locking screw by hand and store it in the carrying case for future use.



Immediately place the normal screw, which can be found in the plastic bag at the handgrip. Tighten it **mildly**, just to make sure the instrument is waterproof.



## Operation

1. Set the pointer of the dial indicator to the zero mark by moving the sliding pointer back, rotating it **counterclockwise**.
2. Hold the instrument by the outer housing assembly. Do not contact the base plate/frame while taking measurements.

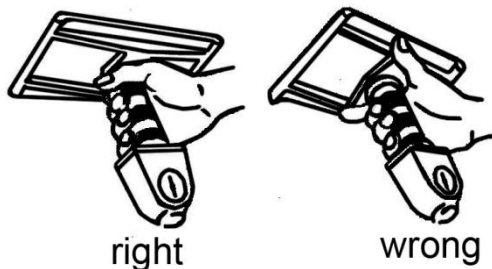


fig. 1



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

3. With the longer side of the frame oriented in the machine running direction.

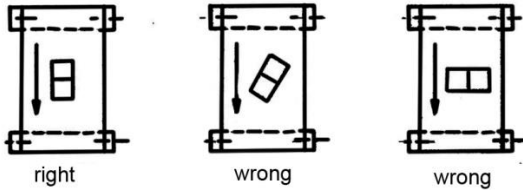


fig 2.

4. Let one short side of the TensioMaster gently rest on the running fabric, then gently twist your wrist until the other side touches the fabric too. Do not press hard!
5. Remove the instrument and read the dial.  
Reset the pointer of the dial to the zero position and perform the measurement at least once more to check repeatability.

## Recommendations

To ensure your own safety and to prevent machine damage, do not apply the instrument near an ingoing nip.



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

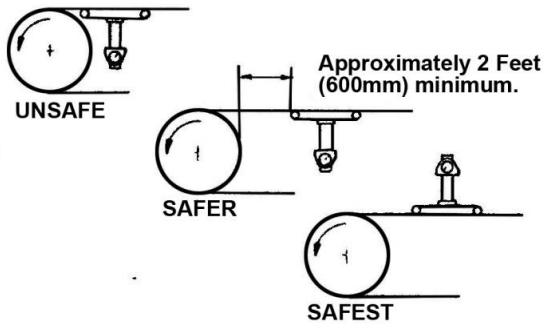


Fig. 3

Where lapped seams are present, avoid seam impact on the instrument by timing the measurement to correspond with web cycles.

When measuring slack spans, avoid wrinkling the web by measuring close to a support roll.

Apply the TensioMaster gently

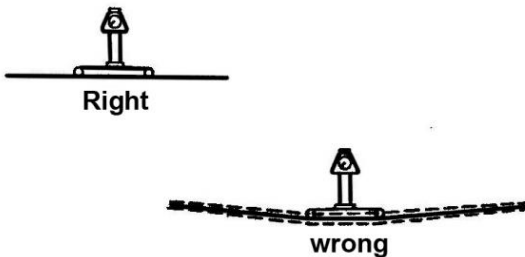


Fig. 5



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

Do not use the TensioMaster on top of a roll

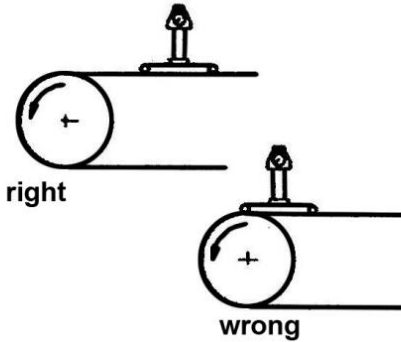


fig. 6

## Safety

Please consult site safety systems before using the Feltest TensioMaster. Avoid ingoing nips.

## Maintenance

No special maintenance procedures are required. However, the Feltest TensioMaster should be externally cleaned and dried after use. If necessary apply a small quantity of silicone grease to the spindle where it enters the rubber bellows seal. This is required to ensure smooth operation.

DO NOT DISASSEMBLE THE INSTRUMENT



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

## Service

For service (exchange / refurbishment) please contact:

Feltest Equipment BV

T: +31 313 652 215

F: +31 313 654 068

E: [info@feltest.com](mailto:info@feltest.com)

W: [www.feltest.com](http://www.feltest.com)



# FELTEST

INNOVATION | TECHNOLOGY | EQUIPMENT

