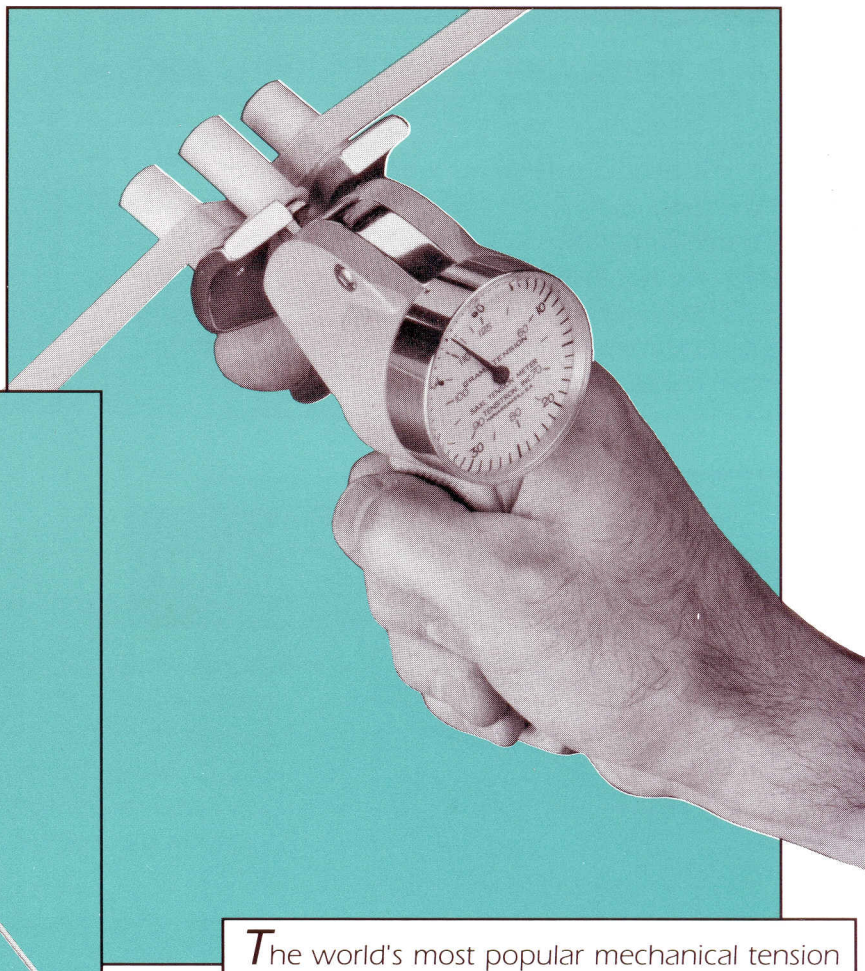
TENSITRON INC.

TRIGGER TENSION METER ▪▪



The world's most popular mechanical tension meter.

Utilized extensively in major wire, textile, coil winding, EDM, fiber optic and synthetic materials manufacturing and testing environments.

FEATURES:

- Portable
- Versatile
- Lightweight
- Easy Operation
- Automatic Guides
- Magnetic Damping
- Durable Construction
- Right- or Left-Hand Operation
- Can Also Be Permanently Mounted

▪ Patented
▪▪ Patent Pending

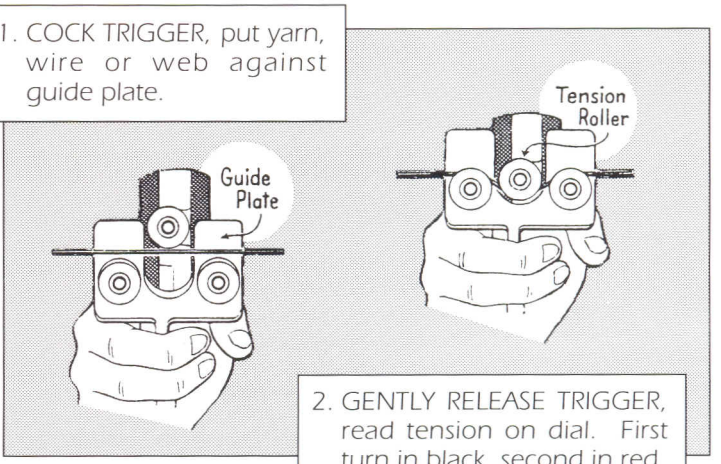
Makers of the original Saxl instruments. American made and serviced by U.S. craftsmen since 1935. Calibration traceable to the National Institute of Standards and Technology (N.I.S.T.).

The Trigger Tension Meter was designed to check tension of all wire or yarn preparatory operations, fiber optics, film, tape, narrow fabrics and flat materials. The contact elements are recessed into the trigger shield which effectively stops material from catching and breaking behind the rollers. The internal magnetic damping makes for balanced movement that is accurate in any position the meter is held.

OPERATION INSTRUCTIONS

Squeeze the trigger to separate the rollers. Insert the material against the trigger shield between the contact elements and slowly release the trigger. Your material drops automatically in place. The center roller deflects as the tension in the material increases. Readings are made on the black outer dial for the first revolution. Should the pointer begin a second revolution, read the red inner dial. To release the material, slowly squeeze the trigger and remove the tension meter.

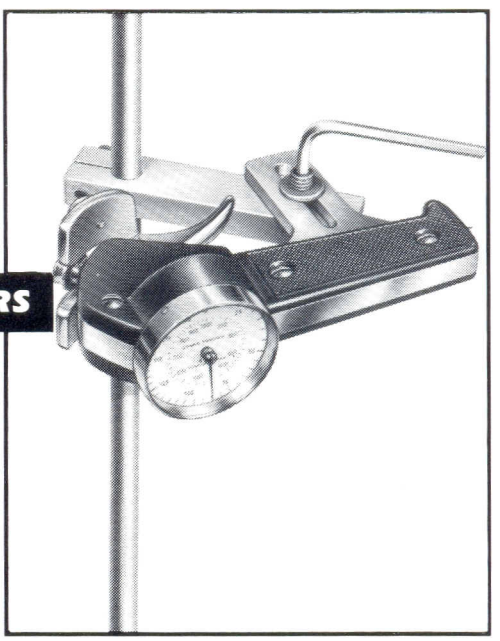
1. COCK TRIGGER, put yarn, wire or web against guide plate.



2. GENTLY RELEASE TRIGGER, read tension on dial. First turn in black, second in red.

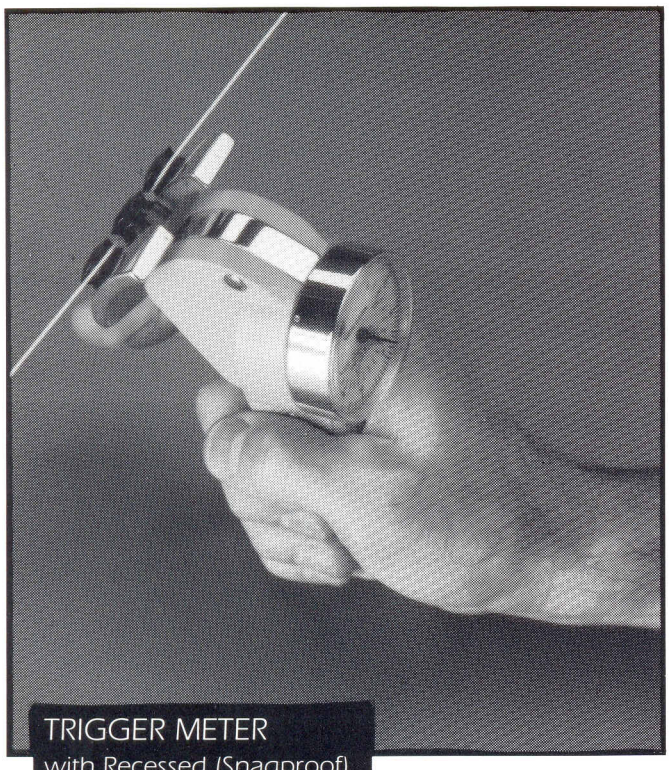
AIR DAMPED TRIGGER TENSION METER

For extreme vibrations, the Model "TD" series has an added external dashpot to supplement the internal damping. The precise air dashpot, which operates on the upstroke as well as the downstroke, provides substantial damping of oscillating pointer movement. By adjusting the knurled head valve attached to the dashpot, various rates of damping can be achieved. Consequently, the pointer stays still for a practical readout.



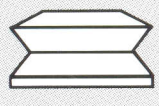
BRACKET FOR TRIGGER TENSION METERS

The Trigger Tension Meters can be mounted in fixed positions for in-line tension monitoring by means of a universal bracket which is sold separately. This allows either intermittent or continuous readings, as required.



TRIGGER METER
with Recessed (Snagproof)
Ball Bearing V-Pulleys

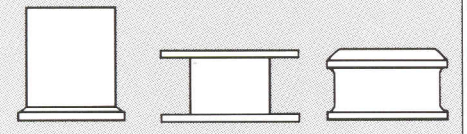
CONTACT ELEMENTS
AVAILABLE FOR
TRIGGER TENSION METER
MODEL "TR" SERIES



STANDARD V-PULLEY

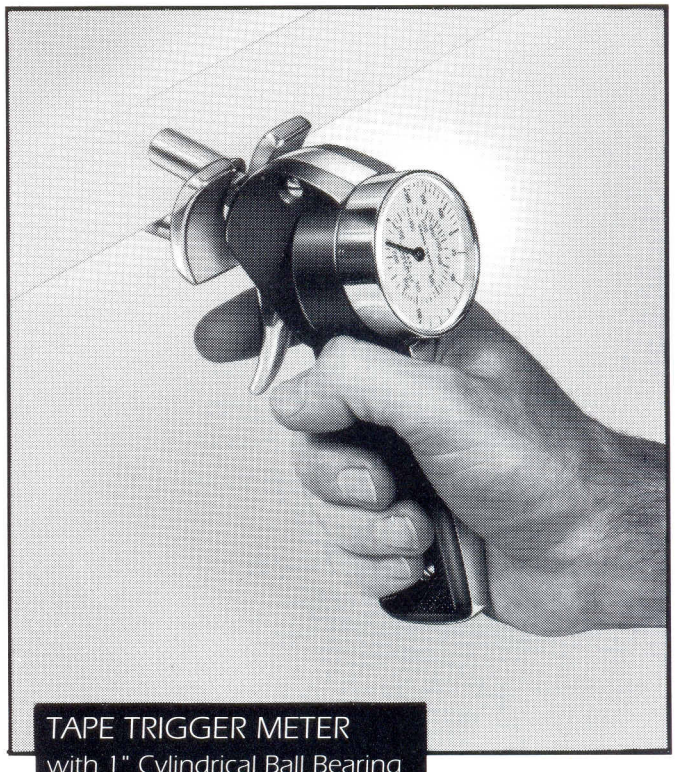
MODEL #	- RANGE -	
TR-25	5-25 GRAMS	SINGLE RANGE
TR-125	5-50/125 GRAMS	DUAL RANGE
TR-250	10-100/250 GRAMS	DUAL RANGE
TR-1000	10-220/1000 GRAMS	DUAL RANGE
TR-2000	25-440/2000 GRAMS	DUAL RANGE
TR-4000	25-600/4000 GRAMS	DUAL RANGE
TR-5000	100-700/5000 GRAMS	DUAL RANGE

CONTACT ELEMENTS
AVAILABLE FOR
TAPE TRIGGER METER
MODEL "TM" SERIES



CYLINDRICAL FLANGED SCOOPED

MODEL #	- RANGE -	
With 1/2" Cylindrical Rollers, Scooped or Flanged		
TM-250	10-100/250 GRAMS	DUAL RANGE
With 1/2", 1" Cylindrical, Scooped or Flanged		
TM-1000	10-220/1000 GRAMS	DUAL RANGE
TM-2000	25-440/2000 GRAMS	DUAL RANGE
TM-4000	25-600/4000 GRAMS	DUAL RANGE
TM-5000	100-700/5000 GRAMS	DUAL RANGE



TAPE TRIGGER METER
with 1" Cylindrical Ball Bearing
Nonstick Rollers

CORROSION RESISTANT - MODEL "RT" SERIES

For moist materials or operation in a damp atmosphere, the Model "RT" series has internal parts made of stainless steel, plastic, gold-plated steel, copper and other materials and treatments which minimize the damage due to moisture. Although the instrument is not waterproof, it should give excellent service under conditions where it is exposed to an occasional spray. All trigger meter tension ranges are available in the "RT" series.

HOW TO CHOOSE YOUR BEST DIAL RANGE

Tensions should be read on the black dial (first revolution) between 2 o'clock and 10 o'clock. The second revolution (red figures) is for overtravel, and protects the meter against shock or surges in the line that might damage the meter. The expanded dial with two revolutions provides not only better resolution in the lower end where tensions are most critical but also permits occasional overtravel. If your readings fall consistently in the red, an instrument in the next higher range should be used.

■

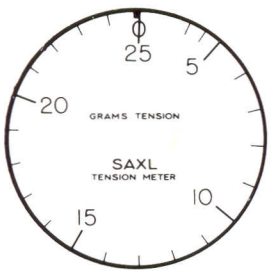
WIRE

Safe operating tension reference table and recommended Tension Meter for annealed copper wires:

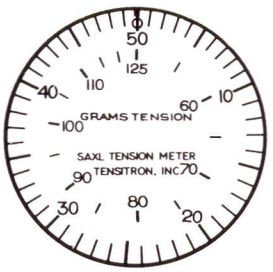
AWG	INCH	SAFE TENSION	MODEL #
48 - 52	.0013 - .0008	9 - 3 GRAMS	TR-25
43 - 47	.0022 - .0014	27 - 11 GRAMS	TR-125
39 - 42	.0035 - .0025	66 - 34 GRAMS	TR-250
35 - 38	.0056 - .0039	166 - 84 GRAMS	TR-1000
30 - 34	.0100 - .0064	560 - 206 GRAMS	TR-2000
27 - 29	.0142 - .0113	1100 - 730 GRAMS	TR-4000
24 - 26	.0201 - .0159	2265 - 1100 GRAMS	TR-5000

YARN

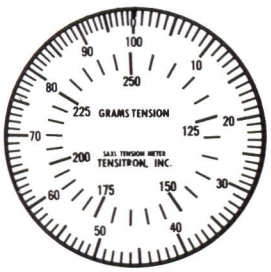
As a rule-of-thumb method, the right tension for a yarn is in the vicinity of .15 to .35 grams per denier. If your yarn is rayon and you are running 100 denier 40 filament, tensions probably lie between 15 and 35 grams. Safe tensions change with the material of the yarn and its number of filaments (e.g., nylon requires a lower tension while cotton permits the use of higher tension). For proper coverage of 15-35 grams, the TR-125 instrument is recommended.



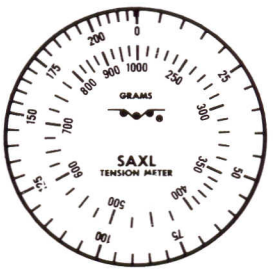
Model TR-25



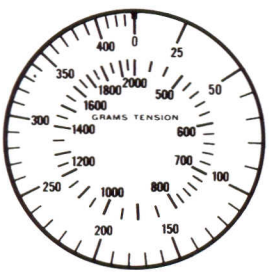
Model TR-125



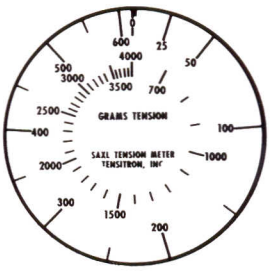
Model TR-250



Model TR-1000

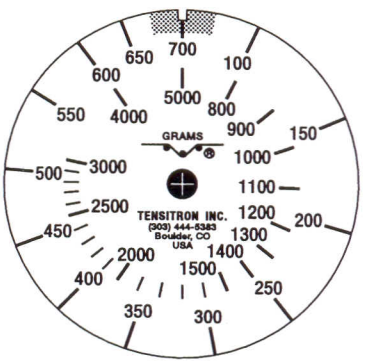


Model TR-2000



Model TR-4000

Actual Size of Dials



Model TR-5000

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