

## HAND-HELD TENSION METER APT - APH - APW

for wire-textile filament-fibre optic

Bullettin 517/APT

Edition: March/2000

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- **Measurement accuracy**
- **Threading facility on running wire**
- **No wire stressing**

The microprocessor hand-held tension meter is manufactured based on the most advanced technology in the fields of measurement and signal control electronics.

The tension measurement is achieved by means of a high-precision load cell mounted on the middle pulley. The two side pulleys guide the wire during measurement.

Tension display is carried out by means of digital indicator, which enables an easy reading in any position of the meter.

Meter frame is especially stiff to ensure the highest stability during measurement presenting minimal weight. Re-chargeable batteries feed the meter.

Tension meter characteristics and functions make it suitable for use on production lines as well as for product technological features.

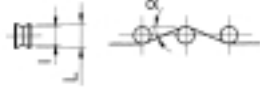
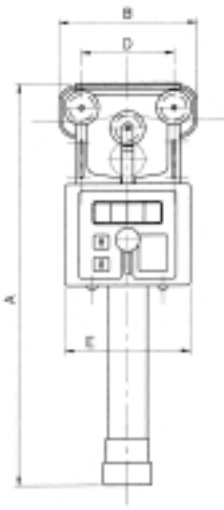
### In detail:

- the device can be easily threaded with moving wire, even in the most difficult points and on the multiwire machines.
- the wire wrap angles on the pulleys are minimised in order to prevent stresses. The wire passage axis is not modified during measurement.
- wire contact pulleys are available; they consist of different materials and dimensions with high-sliding bearings.
- wire diameter setting facility with automatic compensation of error measurement due to wire diameter variation.
- compensation of error measurement due to ball bearing friction of pulleys at different line speed.

The tension meter can be easily calibrated using certified test weight and can be checked while keeping calibration in a very simple manner.

V guide pulleys for wire and filament tension measurement are available on the meter, as well as rollers for strip and tape measurement.





Type	A	B	C	D	E	F	G	I	L	$\alpha^\circ$
APT	259	72	44	50	88	141	72	10	14	23
APH	284	96	44	65	88	141	72	18	24,5	6
APW	297	144	44	110	88	141	72	24	30	4

GENERAL CHARACTERISTICS (1cN = 1,02 grams)			TEXTILE APPLICATIONS			WIRES (COPPER/STEEL)			POLYAMIDE FILAMENTS OPTICAL FIBRES ELECTRIC CABLES		
TYPE	Diameter (mm)	Max Tension N.L. (grams)	Tex	Tension (grams)	Accuracy % (N.L.)	Diameter (mm)	Tension (grams)	Accuracy % (N.L.)	Diameter (mm)	Tension (grams)	Accuracy % (N.L.)
APT	0,01÷0,15	125	-	-	-	-	-	-	-	-	-
APT2	0,02÷0,25	250	10÷250	5÷250	±1%	0,02÷0,10	5÷250	±1%	0,02÷0,25	5÷250	±1%
APT5	0,03÷0,35	500	10÷500	10÷500	±1%	0,03÷0,25	10÷500	±1%	0,03÷0,35	10÷500	±1%
APT10	0,05÷0,50	1000	10÷1000	10÷1000	±1%	0,03÷0,25	10÷1000	±1%	0,05÷0,40	10÷1000	±1%
APH5	0,03÷0,35	500	-	-	-	0,03÷0,35	25÷500	±1%	0,03÷0,35	10÷500	±1%
APH10	0,05÷0,5	1000	-	-	-	0,05÷0,50	25÷1000	±1%(0,05÷0,25) ±2%(0,40÷0,50)	0,05÷0,50	25÷1000	±1%
APH25	0,10÷1,00	2500	-	-	-	0,10÷0,60	25÷2500	±1%(0,10÷0,35) ±2%(0,40÷0,60)	0,10÷1,00	25÷2500	±1%(0,10÷0,60) ±2%(0,70÷1,00)
APH50	0,10÷1,50	5000	-	-	-	0,10÷0,60	25÷5000	±1%(0,10÷0,35) ±2%(0,40÷0,60)	0,10÷1,00	25÷5000	±1%(0,10÷0,60) ±2%(0,70÷1,00)
APW50	0,16÷1,50	5000	-	-	-	0,16÷1,00	100÷5000	±1%(0,10÷0,60) ±2%(0,70÷1,00)	0,16÷1,50	100÷5000	±1%(0,16÷1,00) ±2%(1,10÷1,50)
APW100	0,20÷2,00	9999	-	-	-	0,20÷1,20	200÷9999	±1%(0,20÷0,70) ±2%(0,90÷1,20)	0,20÷2,00	200÷9999	±1%(0,20÷1,20) ±2%(1,30÷2,00)

• Conformity to CE specification (IEC 801-2 / 801-4 / 801-6 / EN50081-2)

- Mechanical protection against overload = 500%N.L.
- Display = LCD 4 digit
- Push bottoms ZERO/HOLD
  - ZERO = ZERO adjustment for instrument used in any measuring position
  - HOLD = • tension peak memory working.
  - reading value filter.

• Guide pulleys: aluminium with ceramic coating (standard solution)  
on request:

D. = derlin  
S. = steel  
T. = guide roller for: tapes - strip - bands

- Power supply = N° 3 x 1.2V /1800mA - rechargeable batteries
- Weight (with batteries) = type APT (450g) - type APH (500g) - type APW (550g)
- Serial port RS232 (on request) = data printer - PC connection

• Battery charger: power supply 220V / 50-60Hz (on request - different voltage / frequency)