SCHMIDT
control instruments

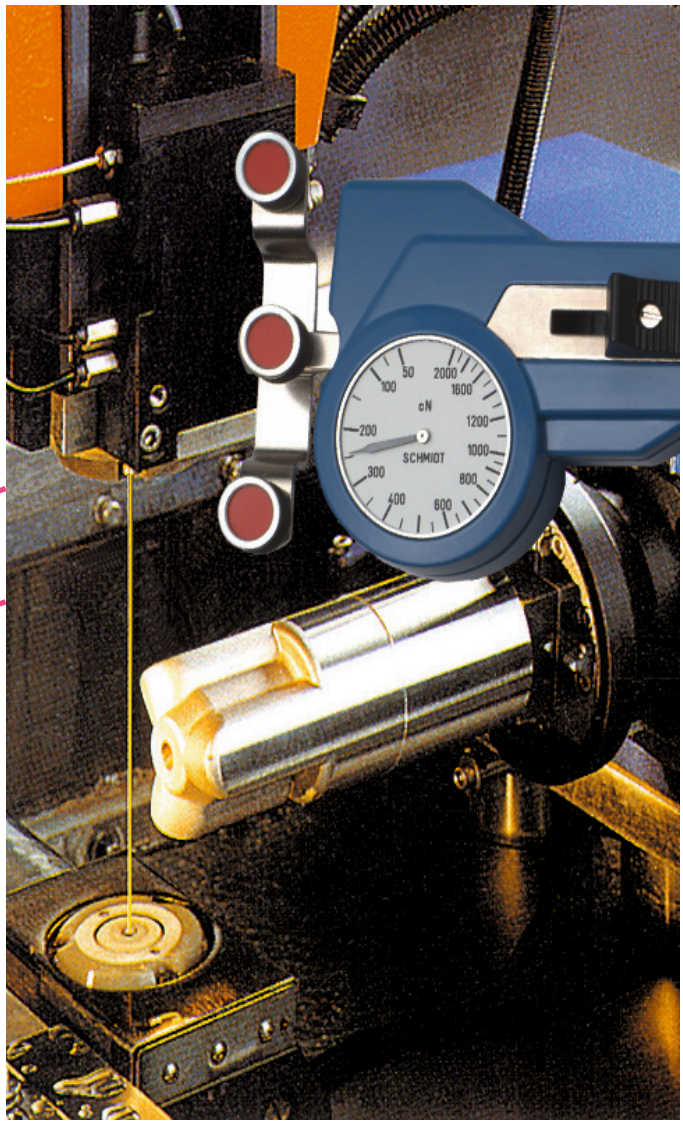
SCHMIDT Tension Meters for Wire EDM

The use of tension meters ensures optimum wire tension

- *Increases workpiece accuracy, reduces machine downtimes*
- *Optimum use of production times*
- *Increased lifetime of wire tensioning brakes*

You should therefore check the wire tension regularly

1st IN TENSION METERS WORLDWIDE



Proper tension is prerequisite for clean cuts

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EDM operator, please mind !

EDM wires are sensitive "tools" and any disturbance in the course of the wire becomes apparent in the cut.
Depending on the operating time and load feed traces and other signs of wear will occure on mechanical parts and cause vibration of the wire.
It is therefore necessary to regularly check the running smoothness of the electrode wire. This is done with a tension meter.
The correct tension of the EDM wires reduces wire vibration and ensures the maximum accuracy of your machines. (see fig. 1)

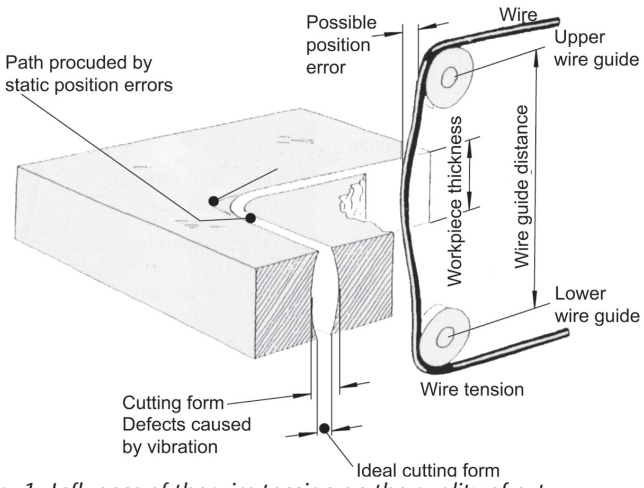

fig. 1: Influence of the wire tension on the quality of cut

Handling:

Checking the tension must be carried out on the running wire in setup mode with the generator
switched off. An unsteady deflection of the tension meter pointer is also a sign of possible winding faults in the electrode wire coil.
Wire EDM manufacturers recommend testing the EDM wire tension at least once a week.

Selection criteria:

For most conventional wire EDMs, the use of a test instrument with an analog display is sufficient.
For thin-wire EDMs, a digital display tension meter is recommended since the wire tension must be precisely adjusted within a very small tolerance of just a few cN.

fig. 2 Tension meter
Model: DX2-3500-C0072
Special purpose tension meter with small measuring head width for limited access space

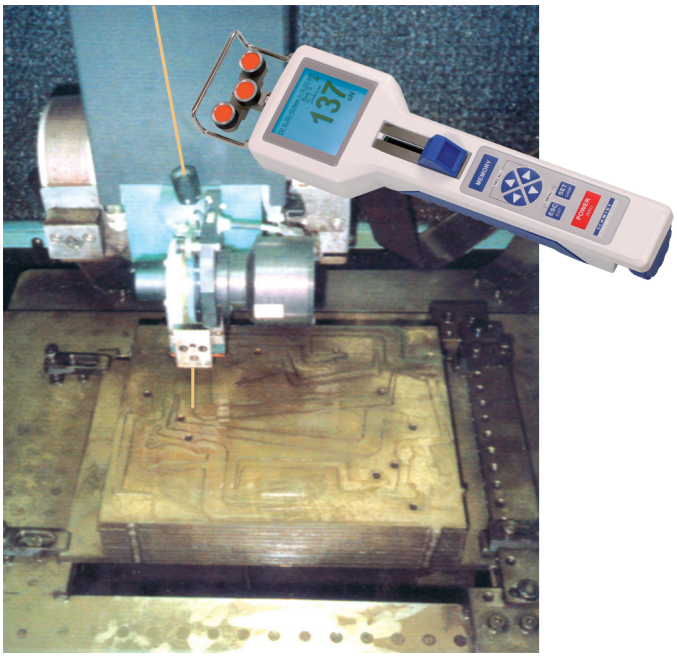

fig. 3 Erosive cutting of feelers

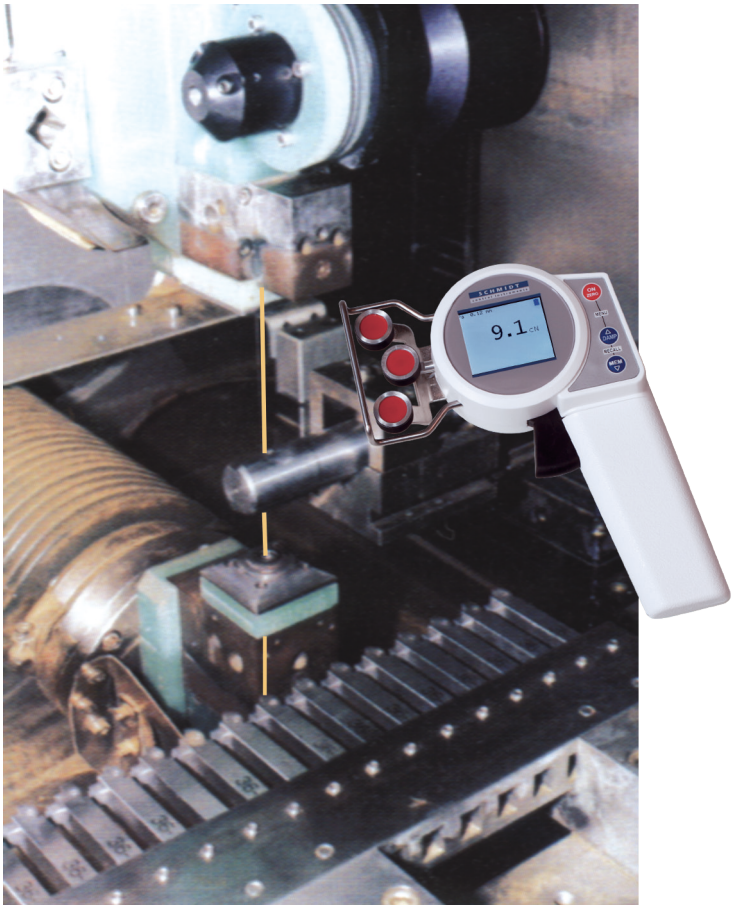

fig. 4: Machining of tools, such as cutting tools

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DX Series

Model DX2-EDM

- Easy to operate
- Everything in operator´s view:
  - the guide rollers
  - the measured material
  - the readings
- Ball-bearing mounted, V-grooved rollers

Available Models	Measuring Ranges cN	Measuring Head Width mm	Wire Guide
Model			
DX2-2000-EDM	50 - 2000	91	
DX2-3000-EDM	100 - 3000	91	
DX2-4000-EDM	200 - 4000	116	✓

Guide Rollers	Line Speed max. ... m/min	Roller Material
V-grooved		
Standard	2000	Hardcoated Aluminium

Specification	
Calibration:	SCHMIDT - factory procedure
Accuracy:	± 1% full scale or ± 1 graduation on scale
Temperature range:	10 - 45 °C
Housing material:	Die-cast aluminium
Housing dimensions:	188 x 85 x 45 mm (L x W x H)
Weigth, net (gross):	approx. 470 g (approx. 1000 g)

Mecanical tension meter for most EDM machines for wire diameter app. 0.25 mm

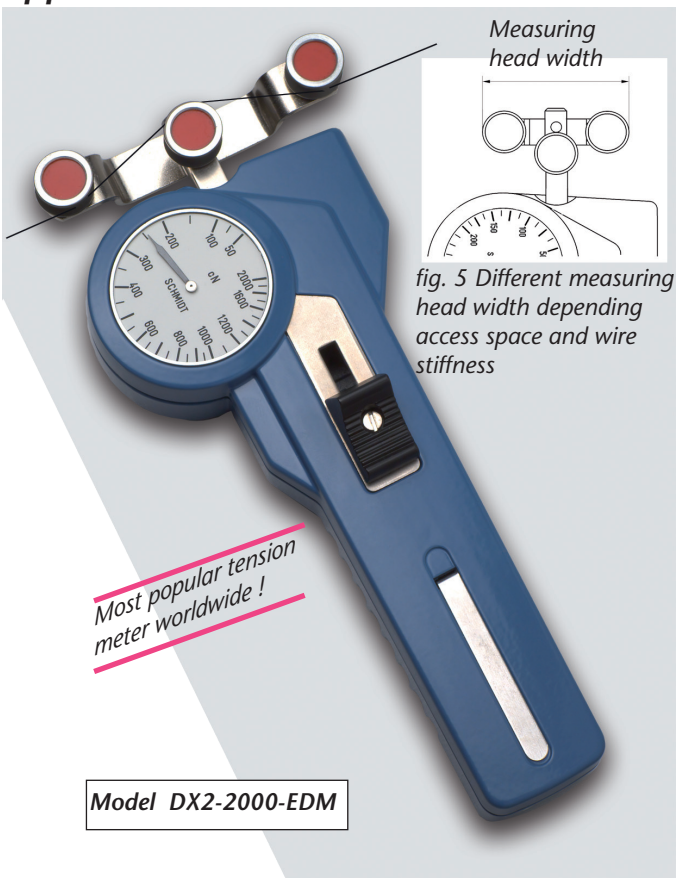

fig. 5 Different measuring head width depending access space and wire stiffness

ZE Series

Model ZED

- Simple handling
- „ZERO SETTING“ using a push button for measurement in different measuring positions
- Everything in operator`s view:
  - the guide rollers
  - the measuring material
  - the measuring material

Available Models	Measuring Range cN	Measuring Hed Width mm	Wire Guide
Model			
ZED-200	1 - 200	63	✓
ZED-500	1 - 500	63	✓

Guide Rollers	Line Speed max. ... m/min	Roller Material
V-grooved		
Standard	2000	Hardcoated Aluminium

Specification	
Calibration:	SCHMIDT factory procedure
Accuracy:	± 1 % FS* ± 1 Digit or better
Display:	Farb-TFT 128 x 160
Temperature range:	10 - 45 °C
Power supply:	LiPo accumulator (25 h cont. use)
Housing material:	Plastic (POM)
Housing dimensions:	157 x 130 x 33 mm (L x W x H)
Weigth, net (gross):	approx. 200 g (approx. 600 g)

*FS = Full Scale

Electronic tension meter for fine wires app. 0.05 mm Ø

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DT Series

Model DTS

- 3 different display modes:
  – numeric
  – numeric with bargraph
  – numeric with graph (Time-Tension)
- The display rotates in 90° steps
- Force reduced material catching system
- To reach highest accuracy the diameter of the material to be measured can be set with a wheel and will be displayed in the screen
- Automatic „Zero-Setting" in each measuring position
- 4 Material memory locations for customer made calibrations
- Measuring frequency 1000 measurings/sec.
- Recording and displaying MIN-, MAX-, last reading, PEAKS, average and standard deviation
- Calibration adjustment for fine tuning of the calibration if material differs from the used calibration material
- Programmable MIN- and MAX alarms

Available Models

Model	Measuring Range cN	Measuring Head Width mm	Wire Guide
DTS-500	0.5 - 500.0	66	✓
DTS-2000	20 - 2000	66	✓
DTS-2500	25 - 2500	116	✓

Guide Rollers

V-grooved	Line Speed max. ... m/min	Roller Material
Standard	2000	Hard-coated aluminium

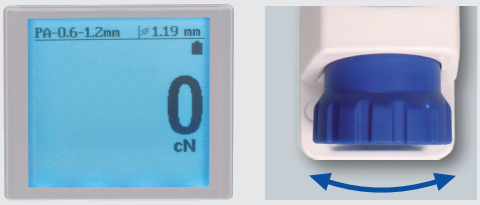
Specifications

Calibration:	According SCHMIDT factory procedure
Accuracy:	For PA from 5 % up to 100 % FS*: ± 0.5 % FS* ± 1 digit remaining tension range and other calibration materials: ± 3 % FS* ± 1 digit
Memory for material curves:	1 for SCHMIDT calibration plus 4 for customized calibrations
Measuring units:	Force (switchable): cN, g, kg, N, lb Thickness (switchable): mm, inch
Measuring roller deflection:	Max. 0.2 mm
Measuring frequency:	1000 measurings/sec.
Display:	Graphic LCD
Display update rate:	Approx. 2 times per second
Memory:	MIN, MAX, PEAK, AVG and LAST
Damping:	Adjustable electronic damping
Thickness compensation:	Max. 2.5 mm
Temperature range:	10 - 45 °C
Air humidity:	85 % RH, max.
Power supply:	LiPo accumulator
Housing material:	Die-cast aluminium
Housing dimensions:	265 x 78.5 x 46 mm (L x B x H)
Weight, net (gross):	Approx. 875 g (1550 g)

* FS = Full Scale

Electronic tension meter providing detailed data

Model **DTS-2500**
With wire catcher for easier acquisition of the wire



Displays the measured material and the adjusted material diameter

Request Your Free Catalog Today!

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