back

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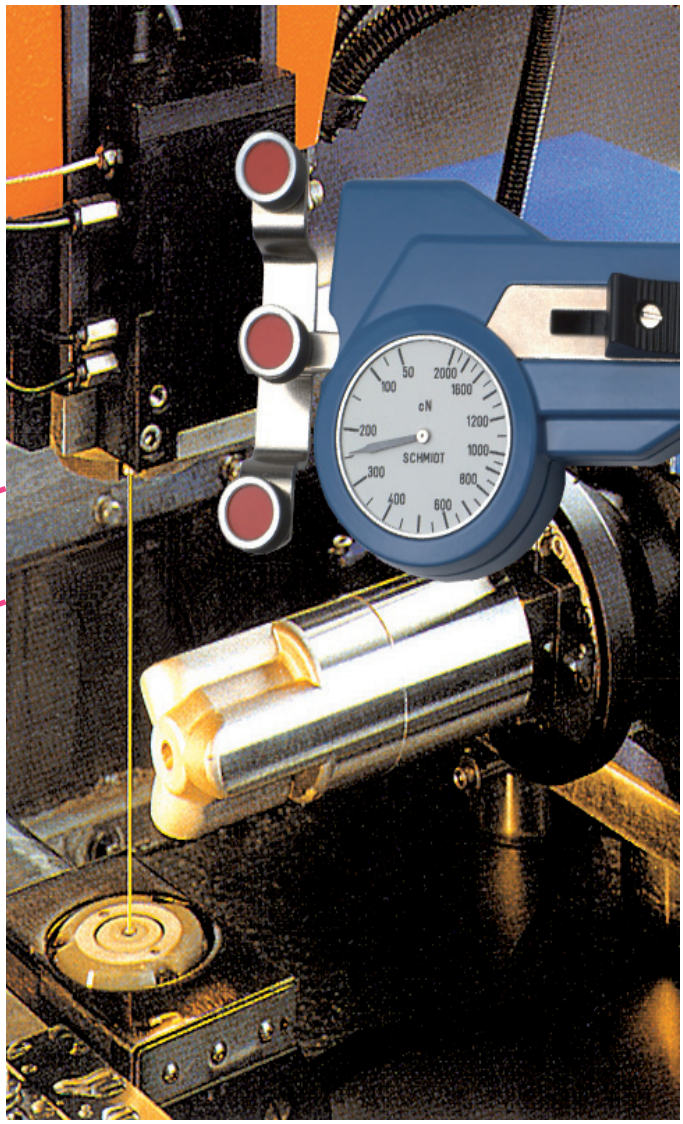
SCHMIDT Tension Meters for Wire EDM

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-03-E

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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)

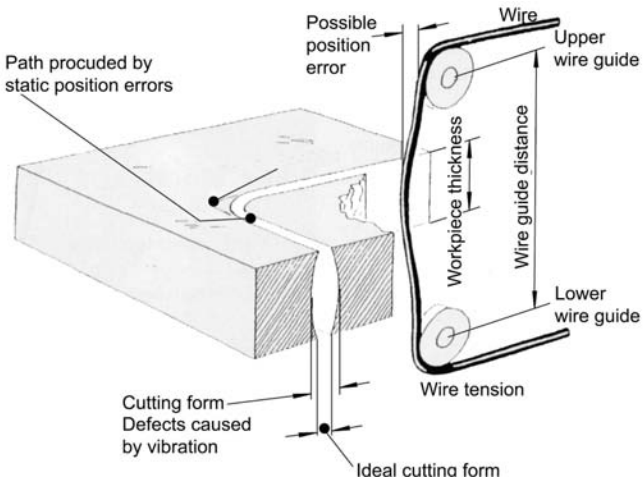

fig. 1: Influence of the wire tension on the quality of cut

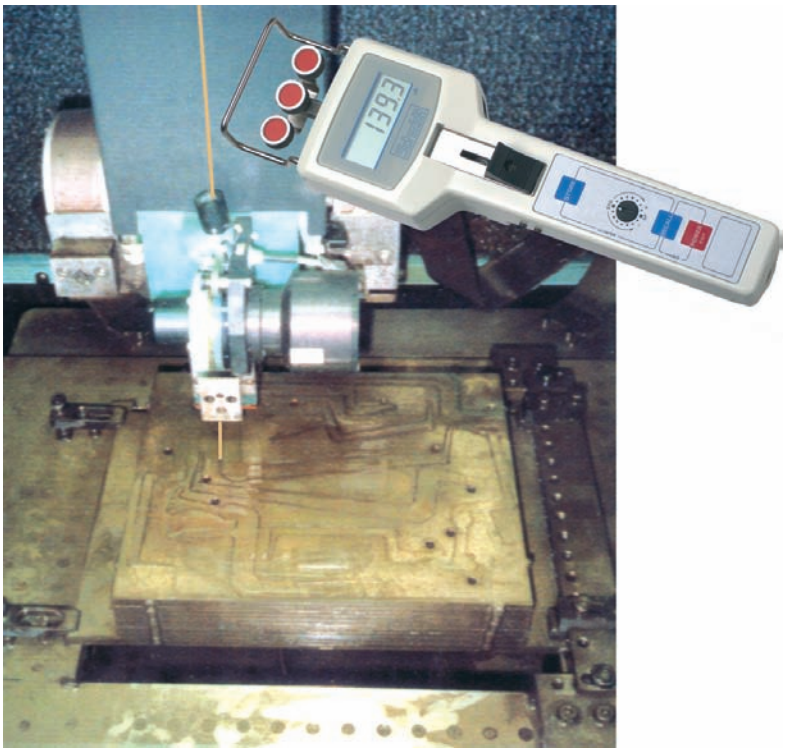

fig. 3 Erosive cutting of feelers

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.

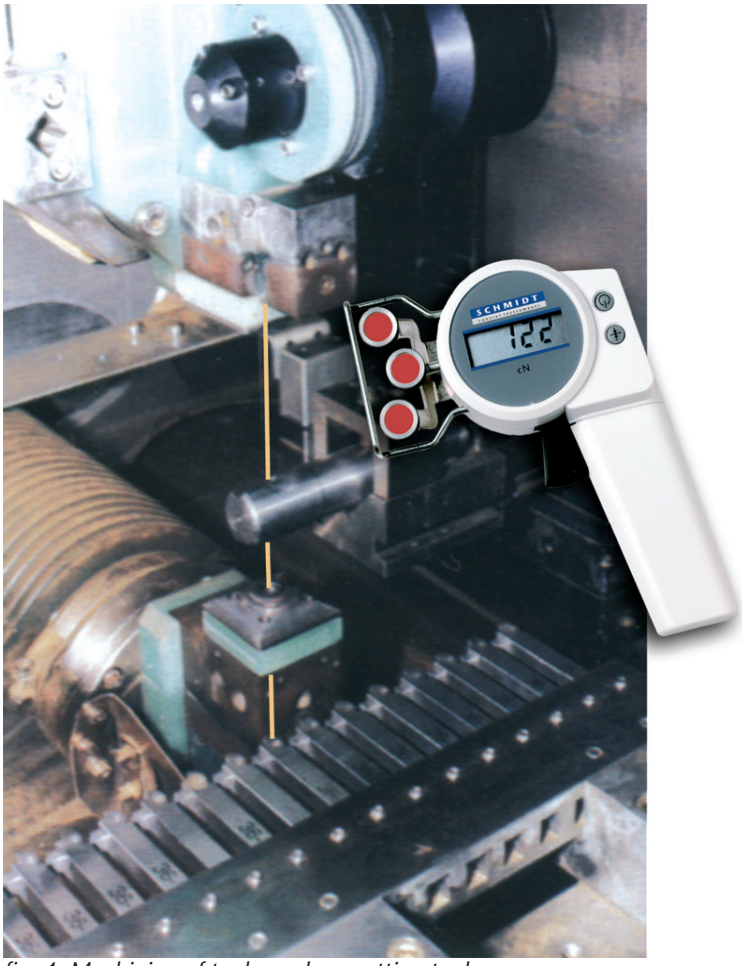

fig. 4: Machining of tools, such as cutting tools

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

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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

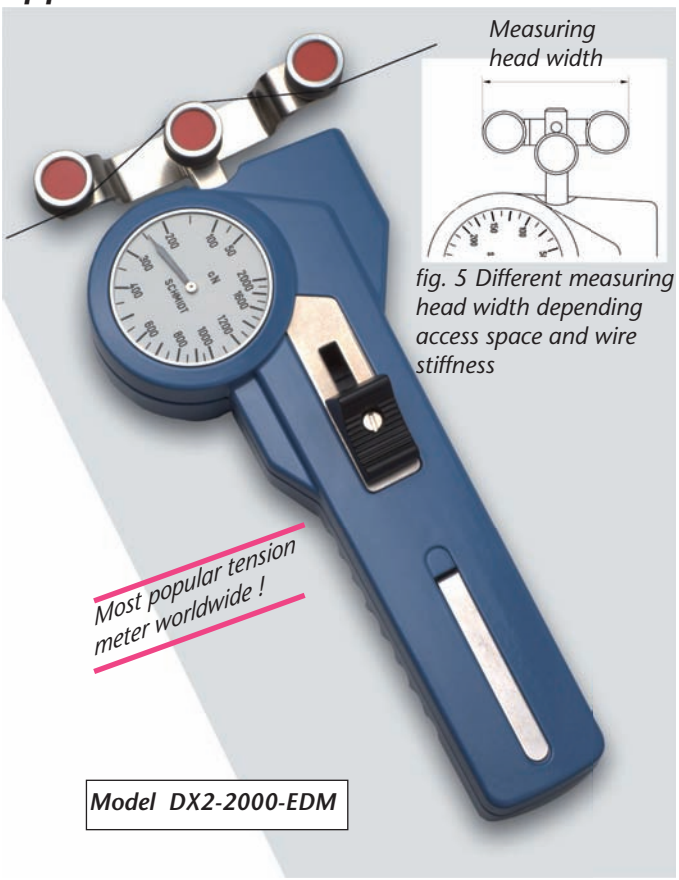

fig. 5 Different measuring head width depending access space and wire stiffness

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-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:	3-digit LCD, 10 mm high
Temperature range:	10 - 45 °C
Power supply:	2 size AAA 1,5 V
Housing material:	Plastic (POM)
Housing dimensions:	157 x 85 x 32 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 DTMB

- Microprocessor controlled for best accuracy
- Selectable display update rates
- Measuring frequency 62 measurments / second
- Recall of measured MIN, MAX and PEAK values

Electronic tension meter providing detailed data

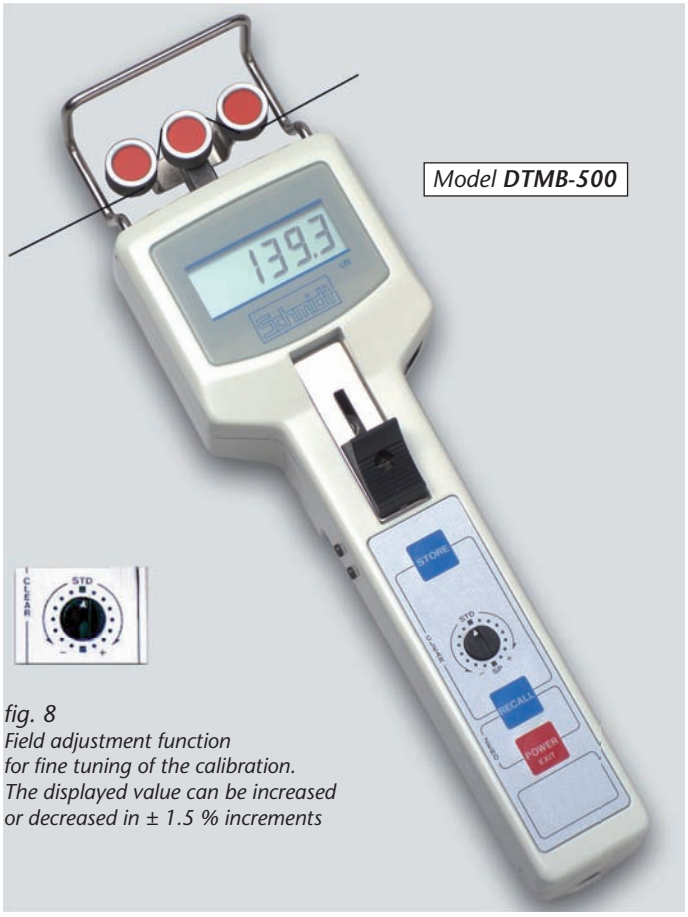

fig. 8
Field adjustment function
for fine tuning of the calibration.
The displayed value can be increased
or decreased in ± 1.5 % increments

Available Models Model	Measuring Range cN	Measuring Head Width mm	Wire Guide
DTMB-500	0.1 - 500.0	65	✓
DTMB-2000	200 - 2000	65	✓
DTMB-2500	250 - 2500	116	✓

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

Specification

Calibration:	SCHMIDT factory procedure
Accuracy:	
10 % to 90 % of range:	± 0.5 % FS* und ± 1 Digit
Remaining range and other calibration material:	± 3 % FS* and ± 1 Digit
Measuring Frequency:	62 measuruments / sec.
Display:	4-digit LCD, 12 mm high
Display update rate:	0.5 - 1 - 2 or 4 seconds selectable
Memory:	Last, MIN, MAX, PEAK values
Temperature range:	10 - 45 °C
Power supply:	4 size AA batteries 1,5 V
Housing material:	Die-cast aluminuim
Housing dimensions:	235 x 76 x 45 mm (L x W x H)
Weigth, net (gross):	approx. 680 g (approx. 1500 g)

*FS = Full Scale

60

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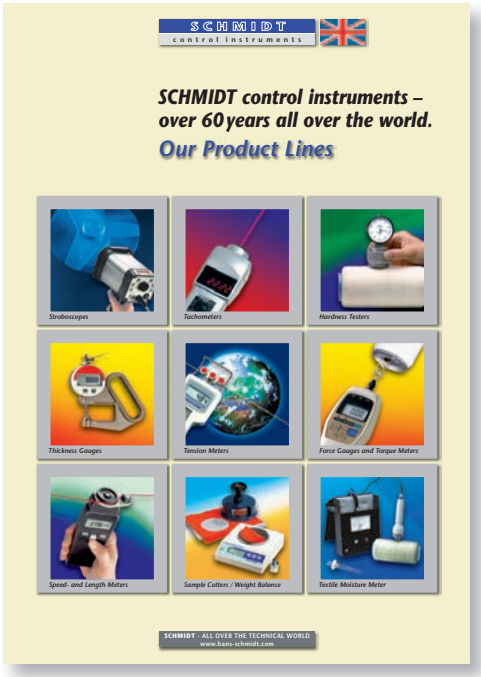

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