



B.N.C.TOOLING Co.,Ltd.

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SCHMIDT
control instruments



A Hand-Held, mechanical
DN Series

DN SERIES

12 Tension ranges
from 20 - 120 cN to 5 - 50 daN

Durable tension meters for a wide range of applications in the textile, fiber and wire industries



**1st IN TENSION
METERS
WORLDWIDE®**

For high tensions up
to 50 daN – large, easy
to read scale

Model DN1-400

Actual size

Special features:

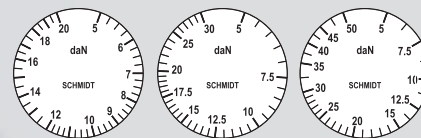
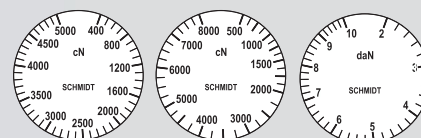
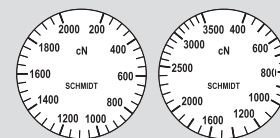
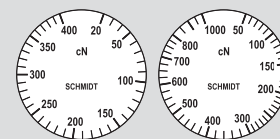
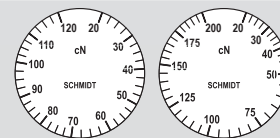
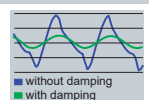
- + Large, easy to read scale (54 mm Ø)
- + Linearized scale provides a better reading
- + Shock-resistant movement
- + Built-in material thickness compensator improves accuracy for changing diameters on DN1-1000 and higher ranges
- + Filament guide and roller shifting mechanism ensure easy acquisition of the running material

Standard features:

- Everything in operator's view:
 - the guide rollers
 - the measured material
 - the readings
- Ball-bearing mounted,
- V-grooved guide rollers
- Each instrument is individually calibrated
- for highest accuracy
- Special calibration is available
- Rugged aluminium housing
- Inspection Certificate with Calibration Report optionally available



Adjustable damping (Code A) to provide steady tension readings



SCHMIDT scales are manufactured according to the most stringent quality requirements. Printed scales are not used. Instead, each scale is individually marked for the instrument involved. This ensures highest quality. Our special procedure makes it possible to provide tension meters fine tuned to a specific tension range, or calibrated to customer supplied material, or units of measure such as g or kg.



Material thickness compensator with material sample inserted



Model DN1

Available Models

MODEL	Tension Ranges cN	Measuring Head Width* mm	SCHMIDT- Calibration Material**	Material thickness com- pensator included
DN1-120	20-120	65	PA: 0.12 mm Ø	
DN1-200	20-200	65	PA: 0.12 mm Ø	
DN1-400	20-400	65	PA: 0.20 mm Ø	
DN1-1000	50-1000	65	PA: 0.30 mm Ø	
DN1-2000	200-2000	116	PA: 0.50 mm Ø	
DN1-3500	400-3500	116	PA: 0.80 mm Ø	
DN1-5000	400-5000	116	PA: 0.80 mm Ø	
DN1-8000	500-8000	116	PA: 1.00 mm Ø	
DN1-10K	2-10 daN	116	PA: 1.00 mm Ø	
DN1-20K-L	5-20 daN	216***	PA: 1.50 mm Ø	
DN1-30K-L	5-30 daN	265***	PA: 1.50 mm Ø	
DN1-50K-L	5-50 daN	265***	Steel rope: 1.50 mm Ø (7x7x0.20)	

Other tension ranges and measuring head widths available on request.

Other units of measure available – g or kg.

* Depending on model, either width of filament guide or outer distance between outside guide rollers

** Suitable for 95% of applications (see also chart on page 11)

PA = Polyamide Monofilament

*** Deviating measuring head width 285mm with Code V 1

Guide Rollers

	Line Speed v _{max} ... m/min	Roller Material
V-grooved		
Standard	2000	Hard-coated aluminium
	1000	Model DN1-30K and DN1-50K
Code K	3500	Hard-coated aluminium
Code H	5000	Plasma-coated aluminium (not available for DN1-30K and DN1-50K)
Code T	1000	Plastic (POM) black
Code W	1000	Nickel-plated steel
Code ST	1000	Hardened steel
Code B	1000	Tempered steel for tire cord
Code CE2	1000	Aluminium ceramic-coated
Code ASY	1000	Hard-coated aluminium
Code ASYB	1000	Tempered steel for tire cord
asymmetrical groove		– Gauge without filament guide –
Code V 1	1000	Hard-coated aluminium*
		*only for DN1-20K up to DN1-50K
U-grooved		
Code U	2000	Hard-coated aluminium

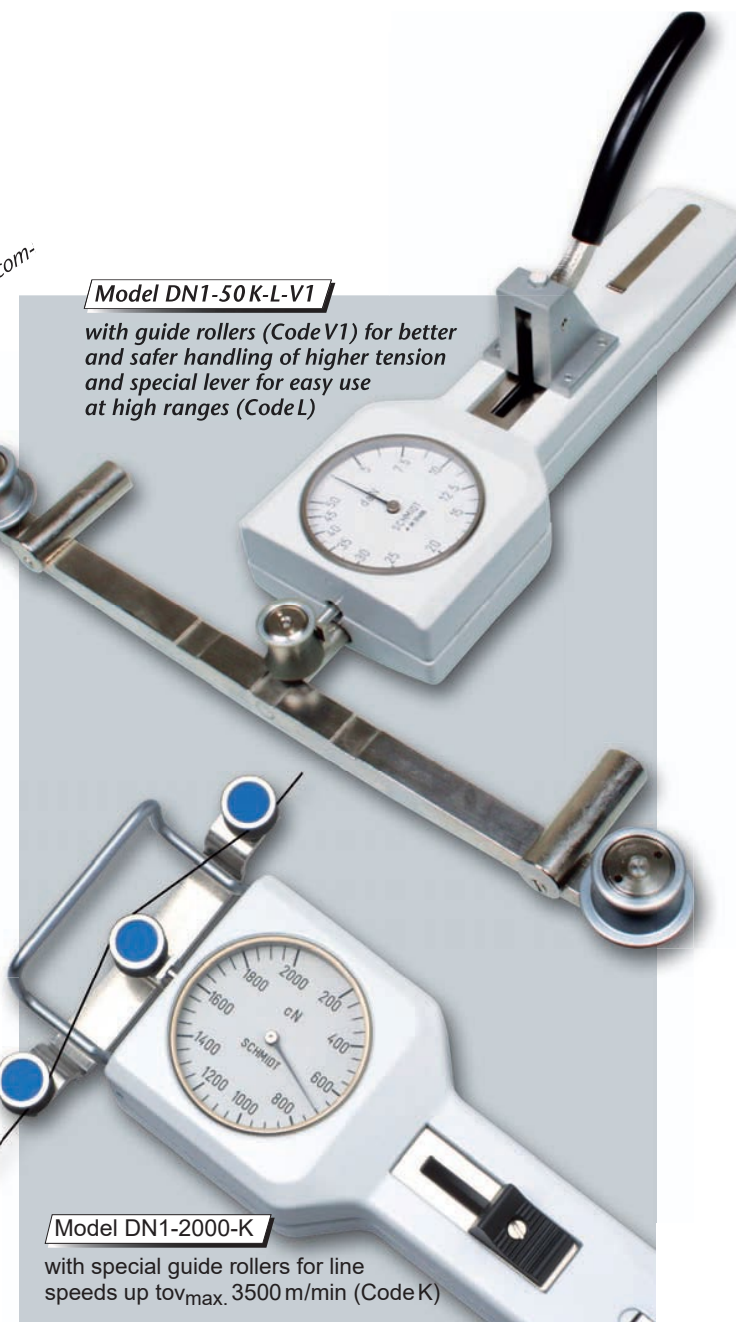
Optional Accessories

Code A	Air damping (Models DN1-120 to DN1-5000 only)
Code L	Special lever (standard for DN1-20K and higher ranges) – recommended for DN1-10K –

Special calibration using customer supplied samples is available:
Please supply a sample of at least 5m in length.

Model DN1-50K-L-V1

with guide rollers (Code V1) for better and safer handling of higher tension and special lever for easy use at high ranges (Code L)



Model DN1-2000-K

with special guide rollers for line speeds up to v_{max} 3500 m/min (Code K)

Specifications

DN Series

Calibration:	According to SCHMIDT factory procedure
Accuracy:	±1 % full scale or ±1 graduation on scale
Scale diameter:	54 mm
Temperature range:	10 - 45°C
Air humidity:	85% RH, max.
Housing material:	Die-cast aluminium
Housing dimensions:	220 x 74 x 42 mm (L x W x H)
Weight, net (gross):	up to DN-10 K approx. 700 g (1200 g)
(approx.)	DN1-20 K-L and higher ranges 900 g (2200 g)