



Precision measuring devices in order to determine the

thickness strain rigidity





Series DM 2000

Thickness gauging with highest precision

Our thickness gauges of the model series 2000 have a stable and rigid base frame with an encapsulated, separate measuring block. The devices are top choice if you appreciate high precision (up to 0.001 mm), easy operation, automatic processing and objective, reproducible measurement results. The devices will be adapted to the materials to be measured according to your requirements. Thus, the calliper surfaces, the calliper materials and the measurement pressures fit in exactly with the guidelines of ISO, EN, DIN or also with your own test regulations. Our devices are also available with different measurement ranges. It does not matter whether you want to measure paper, leather, plastic films, geotextiles or floor coverings – our measuring devices of the series 2000 are suitable for all fabrics.

Of course, there are data outputs for the digital processing of the measurement results or for the transmission to a printer.

DM 2010



The DM 2010 is our standard measuring device which we offer you with the measuring ranges 0-10 mm, 0-25 mm and 0-50 mm (or with the equivalents in inch, switchable).

Model DM 2010 with measuring range 0 – 10 mm during the automatic zero point control $\,$

Features DM 2010 and DM 2020

- Scaling optionally 0.001 or 0.01 mm
- Gauging depth (centre of the stamp) 110 mm
- Illuminated graphic touch-screen with menu controlled operation (optionally in German or English)
- Individual measurements as well as measurement series with every specified number of measurement cycles are possible
- Always up-to-date and simultaneous display of the measurement value, the measurement cycle, the average value and the standard deviation

- The automatic zero point control can be selected by pressing the key
- Dwell times of 1 60 seconds are adjustable
- Motor-driven calliper movement with steady lowering speed (standard 2.5 mm/s)
- The measurement path can be preselected in order to save time
- Optionally with pedal
- Digital interface

DM 2020



Our DM 2020 combines all the advantages of the DM 2010, but additionally offers the possibility of a material infeed. You can adjust the infeed length and the infeed speed.

Model DM 2020 with measuring range $0-10\ \text{mm}$ after the measurement has been carried out

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DM 2005



Model DM 2005 with measuring range 0 - 10 mm and pedal

This alternative to the DM 2010 does not have an illuminated, menu controlled touch-screen with its statistics functions, instead it is equipped with a dial gauge with seven-segment display and individual keys. Of course, there is a data output for the digital processing of the measurement results. The model DM 2005 is also available with special equipment for

- calliper dwell time
- gauging range preselection.

DM 2000

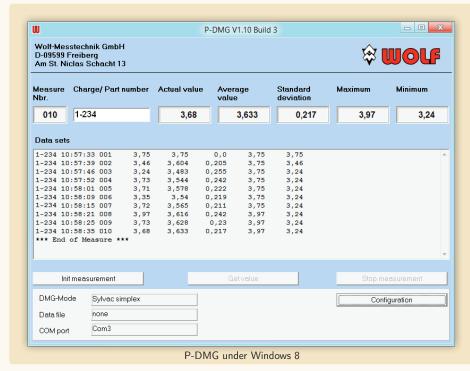


Model DM 2000 with measuring range 0-10 mm

The DM 2000 corresponds to the DM 2005, but uses a manual instead of a motor-driven calliper movement. The steadiness of the lowering speed is achieved by a detent in the guidance of the control lever.

Comparative table series DM 2000

	DM 2020	DM 2010	DM 2005	DM 2000		
Touch-screen with menu control in German or English	✓	✓	-	-		
Seven-segment display	_	_	✓	✓		
Display illumination	✓	✓	-	_		
Statistics display	✓	✓	_	_		
Automatic zero point control	✓	✓	-	-		
Preselection of the measurement cycles	✓	✓	_	_		
Preselection of the measuring range	✓	✓	optional	_		
Adjustable dwell time	✓	✓	optional	_		
Motor-driven calliper movement	✓	✓	✓	_		
Connection for pedal	✓	✓	✓	_		
Manual calliper movement via a control lever	-	_	-	✓		
Automatic material infeed, adjustable	✓	_	-	_		
Digital interface	✓	✓	✓	✓		
Available scale divisions	0.001 mm, 0.01 mm					
Possible measuring ranges	0 – 10 mm, 0 – 25 mm, 0 – 50 mm					
	300 × 300 × 320	300 × 200 × 300	300 × 210 × 300	300 × 240 × 300		
Weight (in kg, for measuring range 0 – 10 mm)	31.5	24.0	23.0	22.5		



SOFTWARE

Our statistics software P-DMG for Microsoft Windows enables you to record the measurement values of our measuring devices with digital interface on a PC. Besides the indication of the upper and lower limit, the average value and the standard deviation, it is possible to save the measurement values in an Excel table or as a CSV file – naturally, stating the date, the time and a freely assignable batch number.

The classic

For many years, our DM 100 has been proving itself in test laboratories all over the world. For this thickness gauging apparatus as well, the shape of the gauge as well as the test pressure are adjusted to the testing material in compliance with the applicable standards ISO, EN, DIN and their test respective specifications. An interface for the digital processing of the measured data is also available. The control is manual only.



Model DM 100 with measurement range 0 – 25 mm $\,$

- Digital dial gauge with seven-segment display, scaling 0.001 or 0.01 mm
 (or with the equivalents in inch, switchable)
- Available measuring ranges: 0 10 mm 0 25 mm

25 – 50 mm

- Measuring depth (centre of the stamp) 95 mm
- Manual gauge movement
- Interface at the dial gauge
- Length \times width \times height: 250 \times 180 \times 370 mm
- Weight: 12.0 kg

Extract from our range of goods

Besides our stationary thickness gauges, we also fabricate a large number of thickness gauges with measuring frames.



The program stretches from handy fast-acting thickness gauges for the immediate test during the production...



Rapidometer RMU 50

...to devices with measuring heights up to 100 mm and measuring depths up to 650 mm.

Thickness gauges with standardised measuring pressures especially for leather, textiles and fleece are available.





DMD 3/1-V especially for fleece with a standardised measuring pressure of 0.5 kPa $\,$

Special devices such as depth gauges and tube wall thickness gauges are also elements of our range of goods.



Tube wall thickness gauge DMR 30

The digital versions can optionally be equipped with a data output for the processing of the measurement values with the help of our statistics software P-DMG.

For further information, ask for our brochure for portable measuring devices or visit wolf-messtechnik.com

Strain measurement

Standardised strain measurement

Our universal strain measurement apparatus UDG was developed in cooperation with leading German automotive manufacturers and the Saxon Textile Research Institute (STFI e. V. Chemnitz, Germany). The static strain as well as the constant strain of non-metallic fabrics are determined. The samples are loaded with constant force and an adjustable timer acoustically indicates the end of the testing time. There is a levelling possibility in order to align the device precisely.

Both designs have several test stations which can be operated completely independently from each other and with different adjustments – also simultaneously. Our UDG 6 has 6 test stations, while the UDG 3 has 3 test stations. Apart from that, they are identical in function.

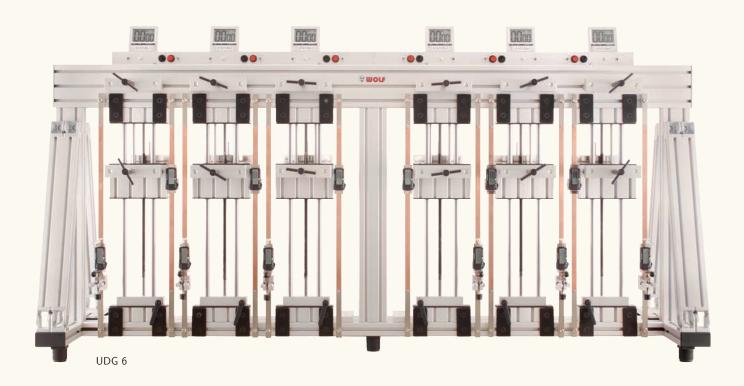
Our UDG are the reference testing devices according to the VW central norm PV 3909!

UDG 3



UDG 3 equipped with samples (clamping length 200 mm), station 1 and 3 are in service. In the image, both measurement modules are active in order to simultaneously determine the static and the constant strain at station 3.

UDG 6



Possible clamping lengths	100 mm & 200 mm (switchable)		
Maximal strain	up to 100 %		
Measurement values	static & constant strain (separate measurement modules), optionally in mm or inch, digital display, scaling 0.01 mm		
Measurement force per test station	25 N, can be increased up to 50, 75, 100 and 125 N by means of the delivered weights		
Movement of the load levels	step motor		
Lowering speed	100 mm/min		
Number of test stations	6 (UDG 6) 3 (UDG 3)		
Test stations are usable independently?	yes		
$Width \times depth \times height$	$1.75\times0.51\times0.91$ m (UDG 6) $0.96\times0.51\times0.91$ m (UDG 3)		

Compare the bending stiffness

Besides the strain, the softness is also an essential quality feature of textiles, leather, fleece and other limp materials. Here, the measurement parameter is called rigidity. Our Softometers KWS enable you to compare the rigidity of various materials without specifying device parameters.

Two different operating modes are available. On the one hand, an interval timer displaying a measurement value after 10 seconds. This is used for a normal quality test. On the other hand, there is the relaxation test for scientific research during which the measurement values are continuously indicated and change in dependence on the time. The operating modes can be switched freely by the user.

Of course, the Softometer KWS also has an interface for the digital processing of the measurement results. There is also a levelling possibility in order to adjust the measuring device precisely.

KWS



Softometer KWS in unoperated position

	KWS 500	KWS 2000	KWS 20K		
Measuring range (in mN)	0 – 500	0 – 2000	0 – 20000		
Scaling (in mN)	0.5	1	10		
Bending angle of the sample	30°				
Free bending length	15 mm				
Overload protection	yes, flashing display 50 % above the gauging range end				
Digital interface	yes, RS-232				
Operating modes	continuous (relaxation test), interval timer (10 seconds)				
	280 mm × 180 mm × 220 mm				
Weight	Approx. 2.4 kg				

Special requests

Sometimes, it has to be something special

Due to our wide product range, we have extensive know how in the field of machine equipment and hence, we are able to react flexibly to special requests. Furthermore, we have been working with a network of reliable partners for decades in order to be able to offer a solution for even the most unusual requests.

Besides trader-specific adaptations of our standard program (like colour and logo), we can also act as Original Design Manufacturer (ODM) and exclusively mass-produce measuring devices according to your drawings.

Ask us – we will make it possible!



Thickness gauge on the basis of DM 2000 with contact apparatus especially for the testing of geotextiles and geosynthetics; via weights, the thickness can be measured under different specified pressures according to EN ISO 9863-1:2005. The image shows the device with additional weights for the measuring pressure 200 kPa





Register no. of the certification: 12 100 14041 TMS

The best quality is very important with regard to test equipment. Therefore, we naturally use quality management. Since 2001, we have been certifying it in accordance with **EN ISO 9001**. Our current certificate is available at **wolf-messtechnik.com**

