

VDM 01



The thickness measurement of nonwovens should be accurate, reproducible and operator friendly.

These demands are fulfilled by the VDM 01, which is a laboratory instrument for the determination of thickness of fleece, paper, tissue and plastic materials.

VDM 01 is a vertical measuring system, which consists of a digital micrometer with a pressure plate and a precision stored reference plate. The digital micrometer with the pressure plate is moved in the direction of the reference plate. The measurement is initialised when the preset and standardized pressure is reached between the pressure plate and the reference plate.

By applying a constant low pressure, a high reproducibility is achieved and the fiber structure of the sample is maintained.

The vertical position of the sample eliminates any influence of the sample weight on the thickness measurement.

VDM 01 is ideal also for the thickness measurement of samples in the wet state, nonwovens with sensitive surfaces and tissue papers.

Additionally to VDM 01, there are also other VDM models. The difference between the instruments is made up of the applied pressure, which varies depending on the tested material. All models are standardised according to DIN EN ISO and EDANA.

Scope:

Determination of the thickness of nonwoven materials such as fleece cloths, tissue, paper and plastics according to DIN EN ISO and EDANA.

Method:

The sample is hung vertically between the pressure plate and the reference plate. The digital micrometer with the pressure plate is twisted in the direction of the reference plate until the predefined pressure is achieved and the measurement is initialised.

Results:

VDM 01 can be connected to a PC and by means of the vdmopc software, the measurement readings can be displayed in a test report. The software allows for a choice of either single measurement or difference measurement (dry and wet measurement, repetition measurement after load with different pressures).

VDM 01_{.02} for the measurement of voluminous fleece and plastic materials of the same kind

Thickness measuring range:

0 - 50 mm

Repeatability of the zero point:

< ± 0,01 mm

Dimensions:

H x W x D: 200x300x160 mm
Weight: approx. 3 kg

Scale interval:

0,001 mm

Pressure plate:

2500 mm²

Power supply:

100 - 240 V AC / 5 V DC

Measuring pressure:

0,020 kPa

Reference plate:

1000 mm²

Battery:

SR - 44

Sample dimension:

round, 100 mm Ø

Applied standards:

DIN EN ISO 9073-2 point 5.2,
EDANA 30.5-99 point 4.2,
DIN EN ISO 54540 point
10:2007-02 (wet tests)

Options:

Foot switch, std. interface RS
232C, test socket, water vessel

VDM 01_{.10}

for preliminary tests

Tech. data same as VDM 01_{.02},
but differs as follows:

Measuring pressure:

0,10 kPa

VDM 01_{.50}

for normal fleece, paper, plastics

Tech. data same as VDM 01_{.02},
but differs as follows:

Measuring pressure:

0,50 kPa

DATA VDM 01_{.2.0}

for tissue paper

Tech. data same as VDM 01_{.02},
but differs as follows:

Measuring pressure:

2,00 kPa

Pressure plate:

8895 mm²

Pressure plate:

8895 mm²

Applied standard:

DIN EN ISO 12625-3

Reference plate:

2500 mm²

Reference plate:

2500 mm²

Applied standard:

DIN EN ISO 9073-2
point 8 and point 5.1

Applied standard:

DIN EN ISO 9073-2
point 5.1

Dimensions

VDM 01_{.10}, VDM 01_{.50}, VDM 01_{.2.0}:

H x W x D: 200x360x220 mm
Weight: approx. 6 kg