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.

Developed and manufactured by IGT emus GmbH, Leipzig / Germany
**VDM 01**

**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 vdm01 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).

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**VDM 01**, for the measurement of voluminous fleece and plastic materials of the same kind

<table>
<thead>
<tr>
<th>Thickness measuring range:</th>
<th>Repeatability of the zero point:</th>
<th>Dimensions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 50 mm</td>
<td>&lt; ± 0,01 mm</td>
<td>H x W x D: 200x300x160 mm</td>
</tr>
<tr>
<td>Scale interval:</td>
<td>Pressure plate: 2500 mm²</td>
<td>Weight: approx. 3 kg</td>
</tr>
<tr>
<td>0,001 mm</td>
<td>Reference plate: 1000 mm²</td>
<td>Power supply: 100 - 240 V AC / 5 V DC</td>
</tr>
<tr>
<td>Sample dimension: round, 100 mm Ø</td>
<td></td>
<td>Options: Foot switch, std. interface RS 232C, test socket, water vessel</td>
</tr>
</tbody>
</table>

**VDM 01**, for preliminary tests
Tech. data same as VDM 01, but differs as follows:
Measuring pressure: 0,10 kPa
Pressure plate: 8895 mm²
Reference plate: 2500 mm²
Applied standard: DIN EN ISO 9073-2 point 8 and point 5.1

**VDM 01**, for normal fleece, paper, plastics
Tech. data same as VDM 01, but differs as follows:
Measuring pressure: 0,50 kPa
Pressure plate: 8895 mm²
Reference plate: 2500 mm²
Applied standard: DIN EN ISO 9073-2 point 5.1

**DATA VDM 01**, for tissue paper
Tech. data same as VDM 01, but differs as follows:
Measuring pressure: 2,00 kPa
Applied standard: DIN EN ISO 12625-3

**Dimensions**

<table>
<thead>
<tr>
<th>H x W x D:</th>
<th>Weight:</th>
</tr>
</thead>
<tbody>
<tr>
<td>200x360x220 mm</td>
<td>approx. 6 kg</td>
</tr>
</tbody>
</table>