

VNG-E

Universal Tensile Tester

- Bond strength
- Seam strength
- Slip
- Young's modulus

This compact universal tester is especially designed for testing flexible materials, such as paper or plastic films, as well as laminated materials produced therewith. All test methods are based on the automatic evaluation of the test chart.

The VNG-E uses new technology to fulfil the following requirements:

- Quality control during the production process
- Long-term quality control with data-storage capabilities (Microsoft Access®)
- Tests for research and development

Features

- **Universal Features:** Five different test methods can be established with one machine.
- **Easy to use:** Changing the test method is only a matter of minutes. All components required are shipped with the VNG-E.
- **Compact Design:** Thanks to its desktop design you can install the VNG-E almost everywhere.
- **Instant Access:** The external computer shipped with the VNG-E is fully configured.
- **PC Technology:** Use the external PC to control the VNG-E. All relevant data are processed by the PC using a special software.
- **Software:** The software runs on the operating systems Microsoft Windows 95/98 or higher and Microsoft Windows NT 4.0 or higher.
- **Data Transfer:** Test results are written to Access. You can easily export your VNG-E data to Office compatible programs.
- **Consistency:** The software of PC controlled Brugger machines share the same look and feel.
- **Future:** The VNG-E meets the increasing QC requirements for the packaging industry.



Service

- **Hotline:** Our support team helps you to determine the suitable equipment and assists you when troubleshooting issues arise. You can contact our support team by phone and by email.
- **Training:** This service consists of a brief introduction as well as a comprehensive training course on our premises or at the customer's site. The instructor introduces the technical background and real-life examples in the customer-specific environment. The training course also highlights troubleshooting issues. The duration of the training course depends on the customer's requirement. It usually lasts one to two days.
- **Customisation:** Let us tailor our devices and software to meet your specific lab and test requirements.

Test Methods

Bond strength

This test method establishes the force required to split the individual layers making up a laminated film. Two layers are separated at an angle of 90°. Bond strength is measured in Newton assuming a strip width of 15 mm (N/15mm).

Seam strength

This test method establishes the force required to separate sealed, glued or welded materials. Seam strength is measured in Newton assuming a strip width of 15 mm (N/15mm).

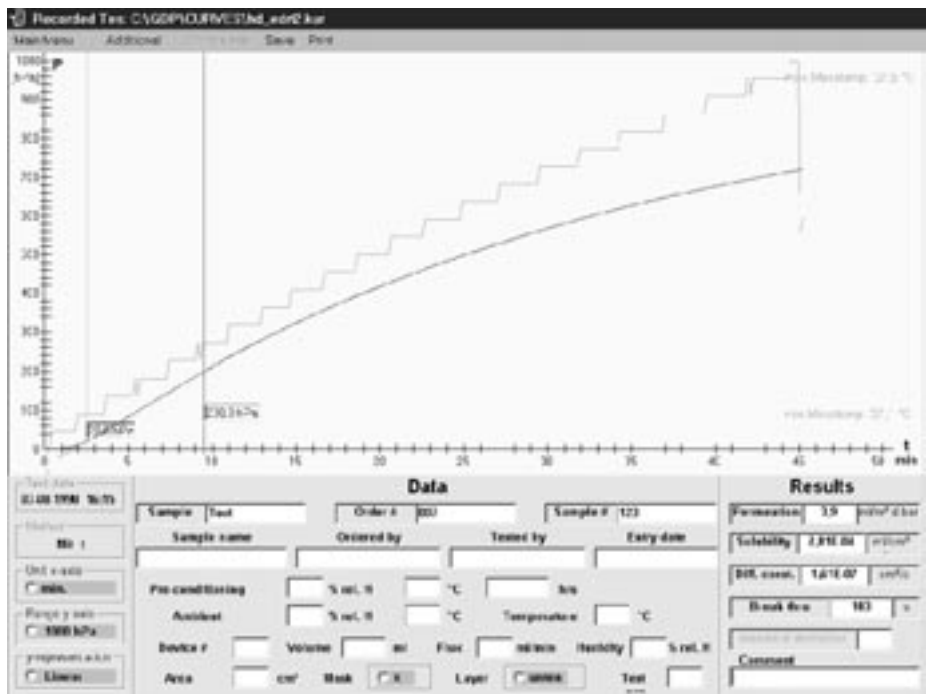
Slip

This test method establishes the resistance that two surfaces lying in contact with each other build up against sliding. A distinction is made between static friction and dynamic friction.

Tensile test (and Young's modulus)

This test method establishes the stretching strain behaviour of defined test specimens. The VNG-E enables you to determine tensile strength, strain at break and force at break up to a maximum traction of 100 N. Young's modulus, established by tensile testing, represents an important material constant for the test specimen. To exactly evaluate the stretching strain behaviour of materials with a very small Young's modulus, VNG-E allows you to use additional values for the elongation to determine the Young's modulus.

Sample Chart



Specifications

Electrical connection (VNG-E):	230 V, 50 Hz, power consumption 50 W, approx.
Measuring range:	0 - 100 N
Measured path:	400 mm
Dimension:	60 x 60 x 38 cm
Weight (w/o PC):	44 kg
Storage temperature:	0°C - 50°C
Test temperature:	room temperature (approx. 23°C)
Relative humidity:	max. 80%, non condensing
Accuracy:	(See table below)

Measuring Type	Tolerance	Resolution	Measuring Range
Force	+/- 0.1 N	0.01 N, 0.01 N, 0.1 N	0 N to 5 N, 10 N, 100 N
Path	+/- 2.5 µm	< 1% of the path	0 to 450 mm