

VNG-E

Universal Tensile Tester

- Adhesion Test (according to DIN 55543-5:2017-10)
- Determining seal strength of flexible barrier materials (according to DIN 55529 / ASTM F88)
- Determining the coefficients of friction (according to ISO 8295 / ASTM D1894)
- Determining tensile properties (according to DIN EN ISO 527-1 and 527-3 / ASTM D882)

This compact universal tester is especially designed for testing four essential properties of flexible materials, such as plastic films or laminated materials. Thus, it is possible to determine the coefficients of friction, the sealed-seam strength of sealings and the tensile properties (up to a total load of 100 Newton). By means of the adhesion test it is possible to determine the adhesion of single layers within a multi-layer film. The VNG-E is connected to a PC via the serial interface (RS232) for control and data logging. The data received is displayed continuously in a force-distance diagram during testing. For all test methods, evaluation can optionally take place automatically (i.e. in compliance with the standards specified above) or can be done individually by the user.

Our concept has been in use for years and has proven itself for the following criteria:

- Quality control and thus process control during the production process
- Long-term quality control by additional data documentation compatible to MS Access®
- Accompanying measurements during development

Features

- **Universal Use:** One single unit covers four different test methods.
- **Easy to Use:** The VNG-E can be adjusted to the relevant test method without any noteworthy effort. All components required are included.
- **Newest Technology:** Through use of latest electronics and motion control, power consumption and noise emission are kept very low.
- **Compact Design:** Thanks to its compact dimensions you can install the unit almost everywhere.
- **PC Operation:** Control and measured data logging, and also data evaluation, are completely software-controlled.
- **Several User Profiles:** A separate user profile can be defined for each user, whose defaults are then loaded automatically when the user logs in.
- **Simple Data Backup:** Test results are written to an additionally file, compatible to Microsoft Access database.
- **Flexible Data Access:** Measured data is saved in the ASCII format and can be imported at any time to Office-compatible applications (such as EXCEL).
- **Investment for the Future:** The unit meets the increasing QC requirements for the packaging industry.



Test Methods

Adhesion Test (according to DIN 55543-5:2017-10)

This test method establishes the force required to split the individual layers making up a laminated film. Two layers are separated at a constant angle of 90° or 180°. The adhesion strength is measured in Newton assuming a strip width of 15 mm (N/15mm).

Determining the seal strength of flexible barrier materials (according to DIN 55529 / ASTM F88)

This test method determines 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).

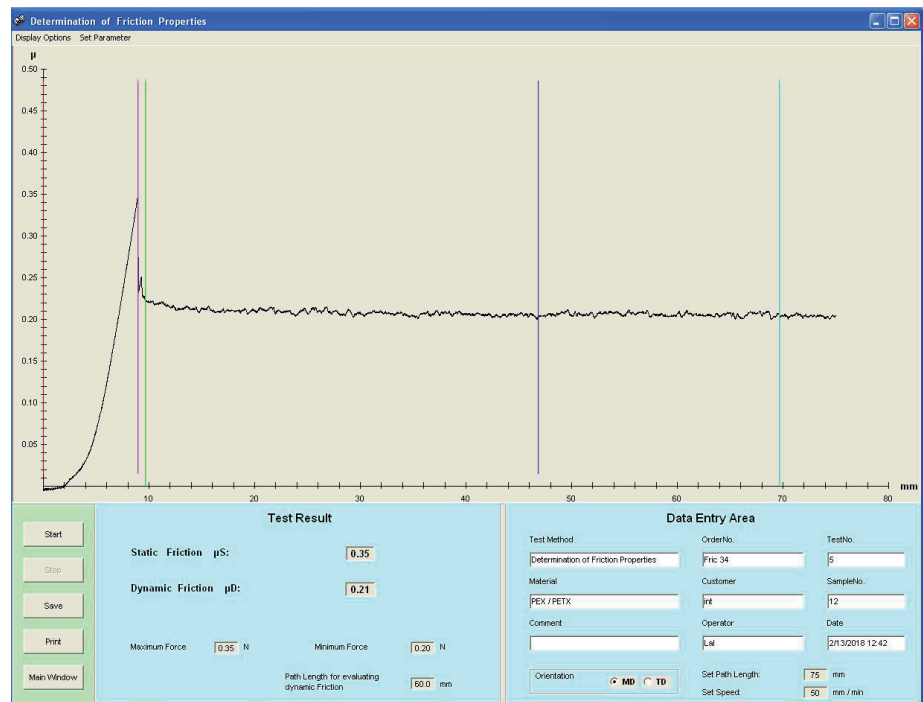
Determining the coefficients of friction (according to ISO 8295 / ASTM D1894)

This test method establishes the resistance that two surfaces lying in contact with each other build up against sliding. A distinction is made between the static coefficient of friction and the dynamic coefficient of friction. The coefficient of friction is the ratio of friction force to the normal force that acts perpendicularly on the two surfaces lying one on top of the other.

Determining tensile properties (according to DIN EN ISO 527-1 und 527-3 / ASTM D882)

This test method establishes the tensile strain behavior of defined test specimens. The VNG-E enables you to determine tensile strength, stress at break, percent elongation at failure and the elongation at tensile strength up to a maximum tensile load of 100 N.

Software User Interface with Sample Chart



Specifications

Electrical connection:	110-240 V / 50-60 Hz, power consumption max.20W
Measuring range:	0 - 100 N
Resolution:	0.01 N
Measured path:	400 mm
Resolution:	0.01 mm
Speed:	up to 1000 mm/min
Dimensions:	71 x 50 x 27 cm
Weight (w/o PC):	27 kg
Storage temperature:	0°C - 50°C
Test temperature:	15°C to 30°C (or standard climate)
Relative humidity:	max. 80%, non condensing