

NDS

Low-Pressure Heat Sealer

The Low-Pressure Heat Sealer NDS allows you to determine the sealability of coated paper, aluminium foils and laminates as well as other heat-sealable multi-layer films.

You can easily determine the optimum sealing parameters for any film types used for pressure-sensitive charge with packaging machines.

Our concept is based on proven technology to fulfil the following requirements:

- Tests for research and development
- Quality control during the production process

Features

- **Five sealing units with individual temperature settings:** Up to five sealings with different temperature settings can be run simultaneously in one operation.
- **Broad temperature range:** For each of the 5 sealing units, you can preset a sealing temperature within the range of ambient temperature up to 200°C.
- **Fast determination of temperature profiles:** By choosing five different sealing temperatures, you can create a complete temperature profile of the sealability in a single test operation.
- **Dwell time selectable for a wide range:** For all 5 sealing units, you can preset a dwell time within the range of 0.1 seconds to 99.9 seconds.
- **Variable sealing pressure:** The sealing pressure will be adjusted using sets of weights. By replacing the different sets of weights you can cover a sealing pressure within the range of 0.15 N/cm² to 2 N/cm².
- **User-friendly:** The sealing process is initiated with the press of a button.
- **Good reproducibility of the sealing results:** High-quality components and an auto-optimising PID temperature control ensure reliable results.
- **Simple Test Equipment Monitoring:** To assure the reliability of the test results (according to ISO 9001), the NDS uses an external connector for the display of the dwell time. With our calibrated test equipment monitoring device NDS-P you can easily verify that your NDS is working within the acceptable tolerances.



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.
- **Introduction:** This service is free of charge and lasts approximately three to four hours. Thanks to the real-life operation demonstrated by the instructor, participants will be able to operate the unit in a reliable way.
- **Customisation:** Let us tailor our devices and software to meet your specific lab and test requirements.

Principle

The NDS simulates the low-pressure heat sealability under real-life conditions. The two key sealing parameters - temperature and time - can be exactly set at the NDS. Using our standard set of weights (5 x 214 g), the NDS puts a sealing pressure of 0.35 N/cm² on the entire sealing area

(30 mm x 20 mm). This sealing pressure corresponds to real-life circumstances during the packing process for pressure-sensitive goods.

The special construction of the set of weights guarantees exact parallelism and an evenly distributed sealing pressure across the entire sealing area at all sealing units. The five separately adjustable and self-optimising PID temperature controls ensure a high exactitude of the selected sealing temperatures. Therefore, the NDS ensures an excellent reproducibility of your tests.



Examples of use

During the development process for new heat-sealable films, you can record a complete temperature profile with only one sealing process. To do this, simply choose five different temperature settings at the sealing units. Then, after the sealing process, evaluate the corresponding seam strength under the respective temperature condition. This is a quick and easy way for obtaining the most suitable sealing parameters for your new heat-sealable film.

Specifications

Electrical connection:	230 V/50 Hz, power consumption 700 W, approx.
Compressed air:	external pressure of 3 to 10 bar (internally 6 bar max.) limited to 4 bar to ensure best operation
Dimensions:	75 x 50 x 37 cm (L x W x H)
Weight:	25 kg
Storage temperature:	5°C to 50°C
Operating temperature:	10°C to 40°C
Relative humidity (RH):	not more than 80%, non-condensing
Sealing temperature:	from ambient temperature up to 200°C
Sealing pressure: (entire sealing area)	0.35 N/cm ² (0.035 bar) corresponds to 214 g across 6 cm ² Customised version from 0.15 N/cm ² (0.015 bar) up to 2 N/cm ² (0.2 bar)
Dwell time:	0.15 s to 99.9 s tolerance ± 0.15 seconds
Sealing areas:	30 mm x 20 mm per station

Optional Accessories

- Sets of weights for a sealing pressure of 0.15 N/cm² up to 2 N/cm²
- Testing device NDS-P for test equipment monitoring
- Strip cutter STR to prepare samples for the evaluation of the seam strength
- Universal Tensile Tester VNG-E for the determination of the seam strength