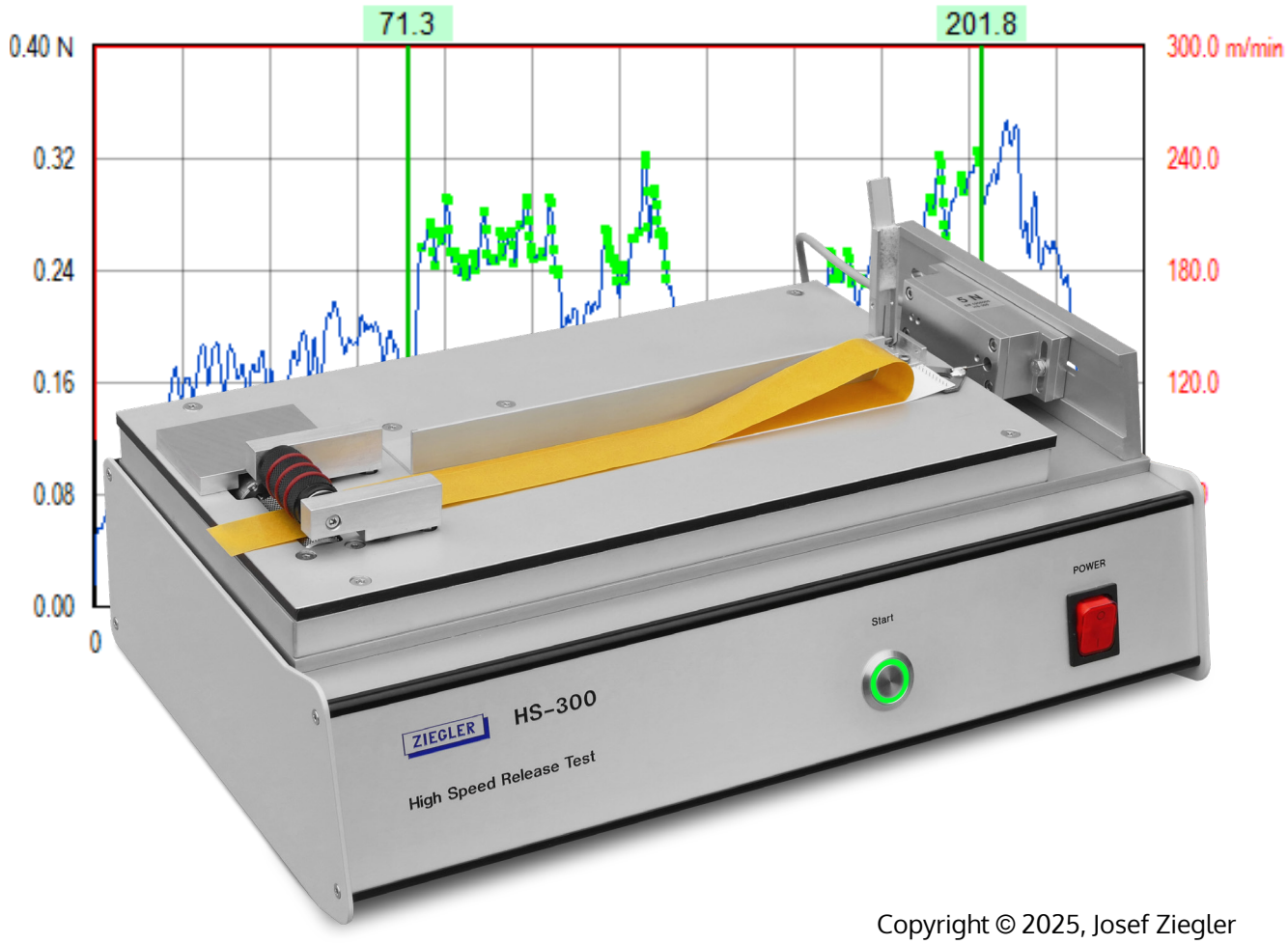
ZIEGLER

Data sheet

HS-300

High speed release tester



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simple to use – measure precisely – reproducible –
evaluate – protocol – print

Product description

The Ziegler High Speed Release Tester HS-300 is designed as a horizontal tensile tester. Its specifications correspond to the test standards of the FINAT* test method High Speed Release Force FTM 4 (5 - 300 m/min) and are tailored to the requirements of manufacturers, processors and users of adhesive composite materials.

* Féderation internationale des fabricants et transformateurs d'adhésifs et thermocollants sur papiers et autres supports.

Areas of application

- The device enables the evaluation of the adhesive bond release force that occurs during label production and machine dispensing at common release speeds.
- The use of the FTM 4 allows you a higher validity for label processing than FTM 3.
- Very low values indicate premature delamination of labels during the manufacturing or dispensing process.
- On the other hand, high values can indicate tearing when the punched grid is printed or can lead to dispensing problems with automatic dispensing.

Your advantages

- Precise readings
- 2000 measuring points along the measuring section
- Unlimited number of measurements
- The software program HighSpeedSoft works with Windows® 11
- Maximum comfort when processing your data
- Reproducible measured values
- Clearly designed user interface
- Intuitive with quick info
- Reduces training to a minimum of time
- Fast data transfer
- Clear measurement log with graphic display
- Handy device with low weight (5.8 kg)
- Mobility between different workplaces
- Robust design for laboratory and production applications
- Service and support (we are developers and manufacturers)

Structure of the device – technical specifications

The device is equipped with the following mechanical and electronic components:

Force measurement:	Highly sensitive strain gauge load cell (measuring cell) with a measuring range of 5 N
Drive:	▪ High quality brushless motor with Hall sensors ▪ Speed ramp 5 – 300 m/min ▪ **Predefined peel speeds:** 5, 10, 50, 100, 150, 200, 250, 300 m/min (5m/sec), also 7.62 m/min (300 ipm) ▪ **Adjustable trigger speed:** In addition to the pull-off speeds listed above, you can also precisely define your own speed value between 5 and 300 m/min in the HS-300 software.
Force display:	The data of the determined tensile force are evaluated in the HS-300 software both graphically and in the form of a table.
Accuracy:	▪ **Reading Accuracy:** < 1% of reading ▪ **Measuring range:** 5 N, resolution 0.0025 N ▪ **Speed:** < 2% of selected speed ▪ **Path resolution:** 0.25 mm > approx. 1000 readings per 250 mm

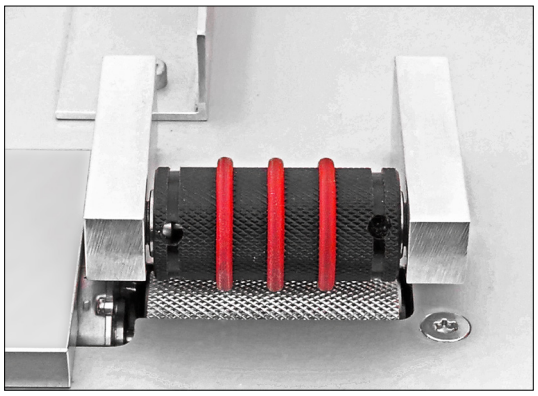
Connection, dimensions and weight:	**Operating voltage:**	100–240 V / 50–60 Hz
	Power Consumption:	100 VA
	Fuse:	2 x 4 AT (5 x 20 mm glass tube fuse)
	Dimensions:	Width 400mm x Depth 260mm x Height 200mm
	Weight:	5.8 kg
	Data Connection:	USB port
Data acquisition:	▪ Software HighSpeedSoft for Windows® 11 ▪ Data collection ▪ Graphic display ▪ Evaluations ▪ Storage ▪ Print ▪ Individual measurement protocols ▪ Excel Export ▪ Custom options on request	

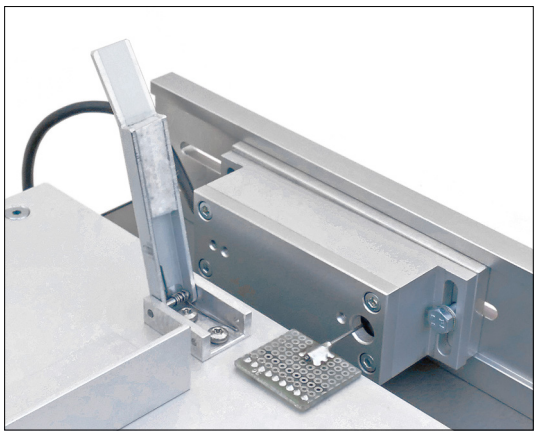
Sample:	**Sample length:**	ca. 600 mm
	Sample width:	50 mm
	Peel length:	280 mm max. (standard)
Maintenance:	▪ The device is maintenance-free. ▪ The calibration report can be created either internally or externally.	

Operating principle

The High Speed Release Tester works according to the principle of a horizontal tensile testing machine. Measured values are recorded, evaluated, saved, printed, exported and processed with the HighSpeedSoft program.

- A rotating roller generates pull-off forces by pulling off the carrier material, which acts as a fixed clamp on a low-displacement strain gage force transducer (load cell).





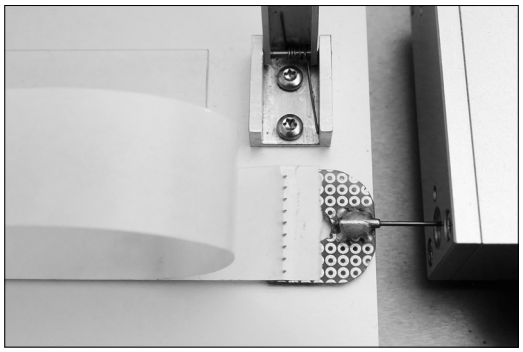
- The force acting on the load cell is converted into an electrical signal and amplified.

- This signal is processed as an instantaneous value.

The measurement process

1. Start **HighSpeedSoft** on the PC.

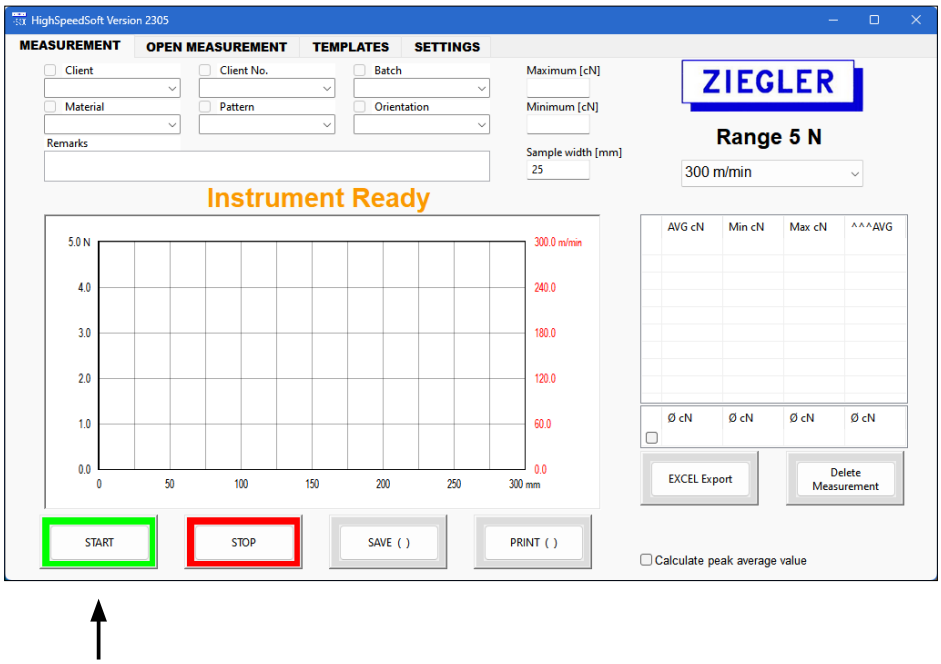
2. Guide the test strips along the stop rail to the measuring cell sample clamp.



3. Place the end of the test strip centrally on the sample clamp and fix it with the clamping lever. When released, the clamping lever folds back into the starting position.

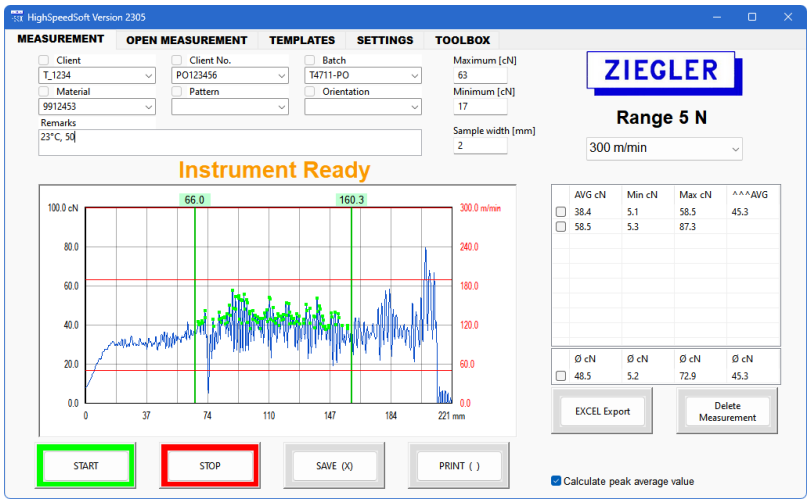
4. Slide the backing paper into the gap between the rollers.

5. Clicking the START button in the "HighSpeedSoft" program.

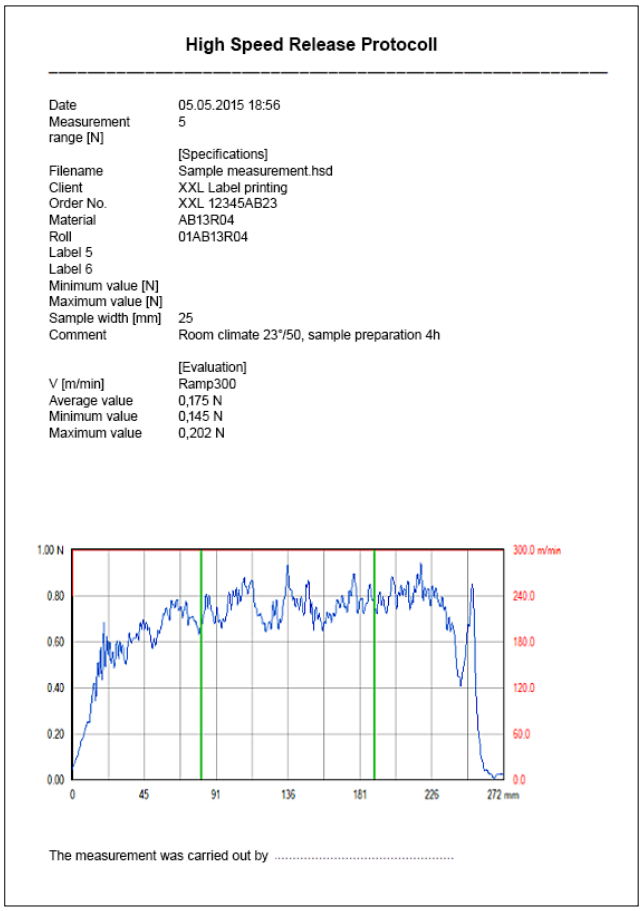


6. The indicator lamp of the START button lights up green. Press button - the measurement process is started.

7. The current measured values – the AVERAGE, MINIMUM, MAXIMUM VALUE and/or the PEAK AVERAGE VALUE – are evaluated in the HighSpeedSoft program. The average values are also directly evaluated and displayed.



8. The measurement can be saved and printed or exported to an Excel spreadsheet.



High Speed Release Protocoll

Date	05.05.2015 18:56
Measurement range [N]	5
	[Specifications]
Filename	Sample measurement.hsd
Client	XXL Label printing
Order No.	XXL 12345AB23
Material	AB13R04
Roll	01AB13R04
Label 5	
Label 6	
Minimum value [N]	
Maximum value [N]	
Sample width [mm]	25
Comment	Room climate 23°/50, sample preparation 4h
	[Evaluation]
V [m/min]	Ramp300
Average value	0,175 N
Minimum value	0,145 N
Maximum value	0,202 N

The measurement was carried out by .....

Scope of delivery

- High Speed Release Tester HS-300
- Load cell 5 N
- Power cord
- USB cable
- Calibration angle
- Test weight
- User Manual HS-300
- HighSpeedSoft software, compatible with Microsoft Windows® 11
- Works test certificate
- CE certificate

Warranty

The manufacturer's warranty is 2 years.

Manufacturer and copyright

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Technical data and equipment are subject to change and correspond to the knowledge on the day of printing. They can be changed at any time and without notice.