

Adhesion Tackiness Analyzer



The new generation of analyzing the adhesion and tackiness forces

1D measurement system made for the temperature-dependent determination of the mechanical properties of lubricants, greases or other viscous semi-solid fluids.

Benefits

+ Excellent value:

- Best performance and precision
- Complete approach and retraction curve
- Measuring forces in the mN range

+ Efficient:

- Programmable recipes
- Automatic calculation of pull-off force, thread length and dissipation energy
- Investigation of many different greases

+ Versatile:

- Build your test system from one base configuration, by adding additional stations
- Flexible software: user-programmable recipe with several parameters
- Adjustable temperature up to 100°C

+ Precise – 'Precision in a class of its own':

- Very high force and position accuracy
- High resolution and reproducibility



Technology

Our **Adhesion Tackiness Analyzer** saves you time and creates more and better data. The sample holder and software are designed with ease of use and efficient testing in mind. The specimen holder with 15 probe positions allows the characterization of up to 15 different greases in one recipe. Thus, a variety of several combinations and parallel tests can be performed. Both the testing and characterization operations are programmable.

Drives	Superior motion system for rotation and high-resolution force resolution
Sensors	Highest precision, low noise, optimized sensor ranges
Stations	Up to 15 tests or samples in one experiment
Sample Holder	Simple sample changing system for different grease samples
Software	Modular experiment build up and data visualization

Technical Parameters

	General parameters
Data acquisition rate	Up to 1000 Hz
Experimental movement range	10 mm
Resolution of position	0.004 mm
Experimental speed	0.01 – 10 mm/s
Dimensions (L x W x H)	170 mm x 110 mm x 270 mm

Drives	Nanotec Stepper Motor
Position resolution	0.01 mm
Number of samples	1 - 15

Sensors	Burster Präzisionstechnik Force Sensor
Principle of operation	High-precision extraction from the grease sample
Adjustable force	0 - 1 N
Measuring principle	Pull-off force
Effective resolution	0.001 N

Feature	Description
Adjustable temperature	Continuously adjustable between 0 - 90°C
Real time data acquisition	All force and position signals synchronized
Experiment software (GUI)	On separate PC via TCP/IP interface
Control system	External compact master PC

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Experiment configuration:

ExperimentID	Name	Description	Execution Date	Recipe
112	Basic Grease Basic Test 01	a	2020-01-17 14:53:40	Basic Test 0.1 to 1 mm per s

#	Pos.	Temp. (°C)	Vel. (mm/s)	Nom. Force(mN)	Cycles	S.Pos. (mm)	E.Pos. (mm)	Wait Time a. S.P.(s)	Hold Time a. Contact(s)
0	1	0	0.1	50	5	1	4	1	1
1	2	0	0.12	50	5	1	4	1	1
2	3	0	0.15	50	5	1	4	1	1
3	4	0	0.18	50	5	1	4	1	1
4	5	0	0.22	50	5	1	4	1	1
5	6	0	0.27	50	5	1	4	1	1
6	7	0	0.33	50	5	1	4	1	1
7	8	0	0.39	50	5	1	4	1	1
8	9	0	0.47	50	5	1	4	1	1
9	10	0	0.56	50	5	1	4	1	1
10	11	0	0.68	50	5	1	4	1	1
11	12	0	0.82	50	5	1	4	1	1

Experiment results:

