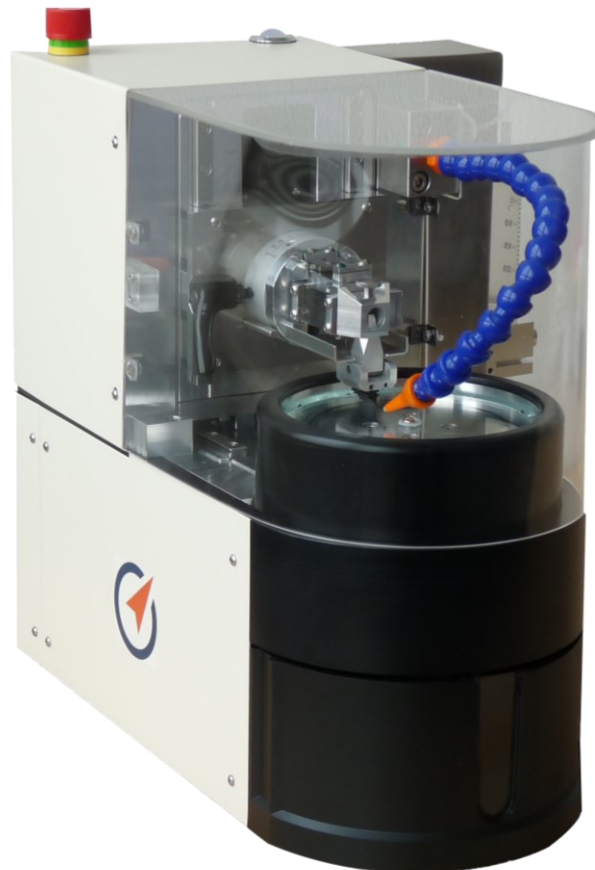


## Pin-on-Disc Friction Analyzer



The new generation of analyzing friction forces

2D measurement system made for the universal determination of the friction coefficient of compliant sample materials like rubber or elastomers.

## Benefits

### + Excellent value:

- Best disc performance up to 500 RPM
- 2D force measurement up to 10 N
- Controlled normal force in the mN range
- Guided and easy calibration for all axes

### + Efficient instrument:

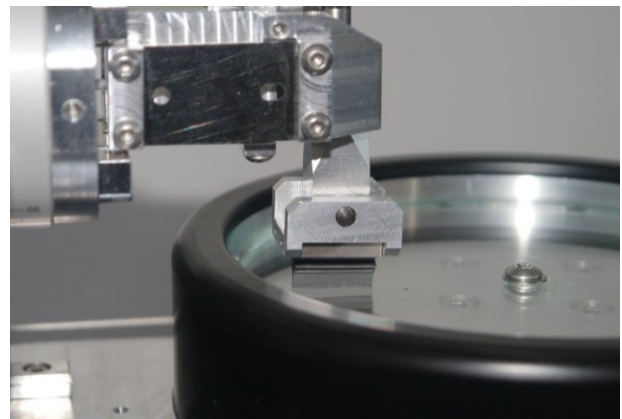
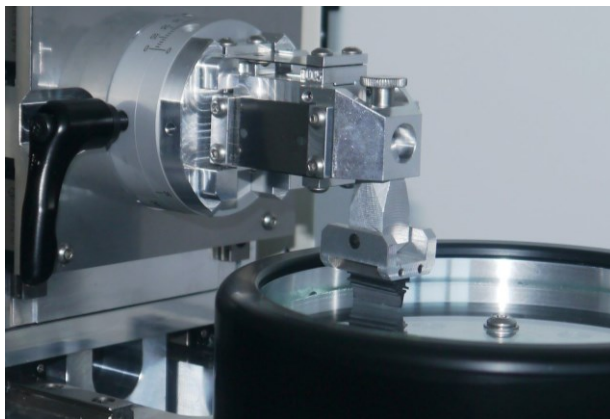
- Fast measurement and analysis
- Small footprint of 350 x 250 x 340 mm<sup>3</sup>
- Low weight with only 20 kg

### + Versatile measurement:

- Uni and bi-directional motion
- Highly flexible experiment configuration
- Investigation of parameter influences
- Fully automated measurement process
- Cycle and experiment-based visualization

### + Dispensing function:

- Adjustable water drop dispensing
- Controllable down to 0.05 ml per drop
- Easy water discharging box



## Technology and parameters

<b>Drives</b>	Superior motion systems for rotational and linear high-resolution positioning (1µm)
<b>Sensors</b>	2D force sensor based on strain gauges with high resolution (5 mN)
<b>Software</b>	GUI for experiment configuration, execution, calibration and data export
<b>Data export</b>	Data easily exportable via Ethernet und customizable file formats
<b>Peripherals</b>	Comes with a PC & Display, Ethernet and 220V/120W Power Supply

## Partners in Science, Service and Technology

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GUI – Experiment configuration:

**FRICITION TESTER**

Project Settings | Experiment Configuration | Experiment Execution | Force Sensor Calibration | Device Information

Experiment Step Table:

You can define your experiment step plan below. Please use drag'n'drop actions to add, move, copy, duplicate and delete a step.

Type	Name	Duration	Water consumption	Cumulative volume
●	Mandatory step - referencing	20.00 s	0.00 ml	0.00 ml
○	Reference syringe [automatic insert]	120.00 s	0.00 ml	0.00 ml
○	1	10.45 s	0.50 ml	0.50 ml
○	2	16.67 s	0.05 ml	0.55 ml
○	3	16.67 s	0.05 ml	0.60 ml
○	4	16.67 s	0.05 ml	0.65 ml
○	5	16.67 s	0.05 ml	0.70 ml
○	6	16.67 s	0.05 ml	0.75 ml
○	7	16.67 s	0.05 ml	0.80 ml
○	8	16.67 s	0.05 ml	0.85 ml
○	9	16.67 s	0.05 ml	0.90 ml
○	10	16.67 s	0.05 ml	0.95 ml
○	11	16.67 s	0.05 ml	1.00 ml
○	12	16.67 s	0.05 ml	1.05 ml
○	13	16.67 s	0.05 ml	1.10 ml
○	14	16.67 s	0.05 ml	1.15 ml
○	15	16.67 s	0.05 ml	1.20 ml
○	16	16.67 s	0.05 ml	1.25 ml

Exp. steps: 26, Ref. steps: 2, Interrupts: 1 | Total runtime: 00h : 09m : 4 | Total volume: 1.75 ml | Volume resets: 1

Parameterize experiment steps:

You can edit and parameterize the selected step in the fields below. Changes will be saved immediately.

- Horizontal Axis**
  - Radius (sample center): 45.0 mm
- Normal Force**
  - Force value (FN): 0.272 N
  - Controlled:
  - Lift off before step:
  - Lift off after step:
- Pre-alignment**
  - Enabled:
  - Pre-alignment cycles: 10
  - Dispensing enabled:
- Measurement**
  - Record data:
- Rotation Table**
  - Experiment mode: unidirectional
  - Rotational speed: 128 RPM
  - Acceleration: 640 RPM/s<sup>2</sup>
  - Starting direction: clockwise
  - Velocity (sample center): 603 mm/s
  - Acceleration time: 0.20 s
  - Cycles: 25

GUI – Experiment execution & results:

**FRICITION TESTER**

Project Settings | Experiment Configuration | Experiment Execution | Force Sensor Calibration | Device Information

Controls: Start | Stop (warning)

Experiment state:

FN [N]: 0.00

FT [N]: 0.00

CoF: 0.00

Plot Scale:

Autoscale Cycle Graph

	Min	Max	Steps
X	0.00	360.00	20.00
Y			

Autoscale Experiment Graph

	Min	Max	Steps
X	0.00	25.00	
Y			

Cycle Graph: FN, FT, CoF

Experiment Graph: FN, FT, CoF

Type	Name	Duration	Fn warning
●	Mandatory step - referencir	20.00 s	
○	Reference syringe [automat	120.00 s	
○	1	10.45 s	
○	2	16.67 s	
○	3	16.67 s	
○	4	16.67 s	
○	5	16.67 s	
○	6	16.67 s	
○	7	16.67 s	
○	8	16.67 s	
○	9	16.67 s	
○	10	16.67 s	
○	11	16.67 s	
○	12	16.67 s	
○	13	16.67 s	
○	14	16.67 s	
○	15	16.67 s	
○	16	16.67 s	
○	17	16.67 s	
○	18	16.67 s	
○	19	16.67 s	
○	20	16.67 s	

Total runtime: 00h : 09m : 4