

**USTER® ZWEIGLE  
FRICTION TESTER 5**

**TECHNICAL DATA**

**THE YARN INSPECTION SYSTEM**

## Testing and analyzing of the friction levels for knitting and weaving application

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### Basic Installation

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#### Overall Installation

*Functions:*

- Measurement of the coefficient of friction in yarns and sewing threads
- Collection, evaluation and storage of measurement values

*Included in the delivery:*

- TESTING INSTRUMENT
  - Single-package carrier
  - Application software
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#### TESTING INSTRUMENT Subsystems of the UZFT5:

*Friction Sensor:*

- Friction sensor for the determination of friction level
- Measurement range: approx. 1 tex to 200 tex (limitations according to the type of fiber are possible)

*Conveyor:*

- Material conveying system for yarns
  - Material feeds: 200 m/min for normal count and 12.5 m/min for sewing threads
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## Application Software

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<b>Reports</b>	<i>Type of reports:</i>	<ul style="list-style-type: none"><li>• Test reports of measurement series</li><li>• Individual test results per test, per bobbin /cone</li><li>• Statistics for individual man test results per bobbin /cone</li><li>• Statistics for the overall test results of all tests and bobbins/cones</li></ul>
<b>Numerical Output of Results</b>	<i>μ:</i>	Determination of the friction value μ
<b>STATISTICS</b>	<i>Statistical values:</i>	Overall result protocol with statistical data for each result column <ul style="list-style-type: none"><li>• Mean value</li><li>• Coefficient of variation CV</li><li>• Min. value</li><li>• Max. value</li></ul>
<b>Graphic Output</b>	<i>Diagram:</i>	Overall result protocol with statistical data for each result column <ul style="list-style-type: none"><li>• Diagram range 0 to 1</li><li>• Diagram depicted with the absolute or relative values</li><li>• Diagram of results in parallel or serial form</li></ul>
<b>Input of Data, Output of Results, Languages, Units</b>	<i>Dialog and report languages:</i>	English, German, French, Italian, Spanish, or Turkish can be selected via the operating menu (other languages on request)
	<i>Possible units:</i>	Count: ktex, tex, dtex, Nm, Nec
	<i>Test time:</i>	10 seconds to 6000 seconds, variable
<b>Self Test</b>	<i>Function check:</i>	<ul style="list-style-type: none"><li>• Initiated automatically when the PC-Software starts up.</li><li>• A comprehensive system evaluation through integrated test programs can be initiated at any time via the diagnostic menu.</li></ul>

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## General

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<b>General Ambient Conditions</b>	<i>Room climate:</i>	The ambient conditions must be maintained in order to avoid any influence on the test material (ISO 139) <ul style="list-style-type: none"><li>• Humidity: (65±4)% relative humidity for standard atmosphere and (50±4)% for standard alternative atmosphere</li><li>• Temperature: (20±2) °C for standard atmosphere and (23±2) °C for standard alternative atmosphere</li></ul>
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<b>Installation Data</b>	<i>Electrical connections:</i>	Single phase mains with protective conductor
	<i>Mains voltage range:</i>	230 VAC; +6/-10%
	<i>Mains frequency:</i>	48 to 52 Hz
	<i>Power consumption:</i>	Max. 50 VA
	<i>Compressed air connection:</i>	<ul style="list-style-type: none"><li>• Air quality: according to ISO 8573.1, class 3</li><li>• Min. pressure at inlet of air filter regulator: 5 bar (500 kPa)</li><li>• Minimum air requirements with normal pressure: 8 m<sup>3</sup>/h</li><li>• Min. internal diameter of the connection: 8 mm</li><li>• Max. length of the connection: 5 m</li><li>• Max. temperature difference between compressed and laboratory air: 10 °C</li></ul>

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<b>Dimension</b>	Length 65 cm, width 36 cm, height 24 cm
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<b>Gross Weight of the Basic Installation</b>	<ul style="list-style-type: none"><li>• Standard: approx. 26 kg</li><li>• Total: approx. 30 kg</li></ul>
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