

**USTER® ZWEIGLE
HAIRINESS TESTER 5**

TECHNICAL DATA

THE YARN INSPECTION SYSTEM

November 2009

USTER®
Think quality

Testing and analyzing the length of protruding fibers

Basic Installation

- Overall Installation**
- Functions:*
- Optical measurement of the number of protruding fibers at various distances
 - The distances are 1, 2, 3, 4, 6, 8, 10, 12 and 15 mm
 - S3 value, the sum of all fibers which are 3 mm and longer (cumulative)
 - 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 UZHT5:**

- Hairiness Sensor:*
- Optical measuring unit for the determination of the number of protruding fibers at various lengths in staple yarns
 - Measurement range: approx. 5 tex to 100 tex (limitations according to the type of fiber are possible)

- Conveyor:*
- Material conveying system for yarns, without changing rollers
 - Material feeds: 50 m/min

Application Software

Reports	<i>Type of reports:</i>	<ul style="list-style-type: none">• Test reports of measurement series• Individual test results per test, per bobbin / cone• Statistics for individual mean test results per bobbin / cone• Statistics for the overall test results of all tests and bobbins / cones
Numerical Output of Results	<i>1,2,3,4,6,8,10, 12 and 15 mm:</i>	Individual count of fibers in each length zone
	<i>S3:</i>	S3 value, the sum of all fibers which are 3 mm and longer (cumulative)
	<i>S1+2:</i>	Sum of all fibers with the length of 1 mm and 2 mm (cumulative)
STATISTICS	<i>Statistical values:</i>	Overall result protocol with statistical data for each result column <ul style="list-style-type: none">• Mean value• Mean value/100m• Standard deviation s• Coefficient of variation CV• Min. value• Max. value• Variance analysis
Graphic Output	<i>Diagram:</i>	Overall result protocol with statistical data for each result column <ul style="list-style-type: none">• Available scales for Y axis: 20, 50, 100 and 200 [count]• Diagram includes all protruding fibers
	<i>Frequency distribution diagram:</i>	Representation of the parameter variations within single tests
Input of Data, Output of Results, Languages	<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>Test length:</i>	1 to 9999 m, variable
Self Test	<i>Function check:</i>	<ul style="list-style-type: none">• Initiated automatically when the PC-Software starts up.• A comprehensive system evaluation through integrated test programs can be initiated at any time via the diagnostic menu.

THE YARN INSPECTION SYSTEM

General

General Ambient Conditions	<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">• Humidity: (65±4)% relative humidity for standard atmosphere and (50±4)% for standard alternative atmosphere• Temperature: (20±2) °C for standard atmosphere and (23±2) °C for standard alternative atmosphere
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Installation Data	<i>Electrical connections:</i>	Single phase mains with protective conductor
	<i>Mains voltage range:</i>	110 to 230 VAC; +6/-10%
	<i>Mains frequency:</i>	48 to 62 Hz
	<i>Power consumption:</i>	Max. 150 VA
	<i>Compressed air connection:</i>	<ul style="list-style-type: none">• Air quality: according to ISO 8573.1, class 3• Min. pressure at inlet of air filter regulator: 5 bar (500 kPa)• Minimum air requirements with normal pressure: 8 m³/h<ul style="list-style-type: none">– with standard suction jet:• Min. internal diameter of the connection: 8 mm• Max. length of the connection: 5 m• Max. temperature difference between compressed and laboratory air: 10 °C

Dimension	Length 60 cm, width 30 cm, height 34 cm
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Gross Weight of the Basic Installation	<ul style="list-style-type: none">• Standard: approx. 40kg• Total: approx. 55 kg
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