USTER® LVI 920
USTER® LVI 930
USTER® LVI 960
USTER® LVI 975
USTER® LVI 940

The cotton fiber analysis system

Technical Data

May 2017

USTER®
Think quality

Basic installation USTER® *LVI 920* Nep Tester

Overall installation

Functions

Measurement of raw cotton bale fiber, mat, sliver and roving for properties of neps and nep size.

Included in the delivery

- USTER® *LVI 920* testing unit
- Calibration materials
- Accessories

Application range

Naturally (white, cream) colored 100 % cotton samples in the form of bale or opened and cleaned material (card mat), sliver, and roving. Waste material cannot be tested on the USTER® *LVI 920*. Doing so can damage instrument components, and voids the instrument and component warranty.

Naturally colored, synthetic fibers can only be tested up to a 50/50 % blend with cotton fibers in sliver and roving form.

Uster Technologies does not guarantee test results on 100 % synthetic fibers. Maximum fiber length: 2 inches (app. 50 mm).

General

General ambient conditions	**Room climate**	According to ISO 139, the following ambient conditions must be maintained in the laboratory in order to get repeatable and comparable test results: – Temperature: 20±2 °C; 65 °F to 72 °F – Relative humidity: 65±2 % For consistent test results, fiber samples should be conditioned in the laboratory environment with the above mentioned ambient conditions for 24 hours. Samples should be laid out openly in the laboratory, and taken out of plastic bags, in order for the cotton to fully condition to the environment. Uster Technologies recommends use of a dedicated conditioning system for the laboratory to achieve this condition. USTER does not recommend the use of any spray atomizers as they could result in damage to the instruments, variability in lab conditioning, and may cause inconsistent test results. All USTER certified laboratories use dedicated conditioning systems.
Installation data	**Electrical connections**	Single phase mains with protective conductor
	Mains voltage	200 – 240 V
	Mains frequency	50 – 60 Hz
	Power consumption	Max. 600 VA
Dimensions		Length 69 cm, width 40 cm, height 25 cm
Weight of the basic installation		Net weight: approx. 31 kg

Basic installation USTER® *LVI 930* Length Tester

Overall installation	**Functions**	Measurement of raw cotton bale fiber, mat for properties of mean length, upper-half mean length, uniformity, short fiber by weight. Measurement of cotton sliver for properties of mean length, upper-half mean length, uniformity.
Installation data	**Included in the delivery**	– USTER® *LVI 930* testing unit – Calibration materials – USTER® *LVI 192* Fibrosampler – Accessories
	Application range	Naturally (white, cream) colored 100 % cotton samples in the form of bale or opened card mat, and sliver.

General

General ambient conditions	**Room climate**	According to ISO 139, the following ambient conditions must be maintained in the laboratory in order to get repeatable and comparable test results: – Temperature: 20±2 °C; 65 °F to 72 °F – Relative humidity: 65±2 % For consistent test results, fiber samples should be conditioned in the laboratory environment with the above mentioned ambient conditions for 24 hours. Samples should be laid out openly in the laboratory, and taken out of plastic bags, in order for the cotton to fully condition to the environment. Uster Technologies recommends use of a dedicated conditioning system for the laboratory to achieve this condition. USTER does not recommend the use of any spray atomizers as they could result in damage to the instruments, variability in lab conditioning, and may cause inconsistent test results. All USTER certified laboratories use dedicated conditioning systems.
Installation data	**Electrical connections**	Single phase mains with protective conductor
	Mains voltage	110 – 240 V
	Mains frequency	50 – 60 Hz
	Power consumption	Max. 220 VA
Dimensions		Length 58 cm, width 27 cm, height 18 cm
Weight of the basic installation		Net weight: approx. 12.2 kg

Basic installation USTER® *LVI 960* Color/Trash Tester

Overall installation

Functions

Measurement of raw cotton bale fiber, mat for properties of color Rd, +b, color grade (USDA), trash count, trash area, leaf grade.

Included in the delivery

- USTER® *LVI 960* testing unit
- Calibration tiles
- Sample weight

Application range

Naturally (white, cream) colored 100 % cotton samples in the form of bale or opened card mat.

General

General ambient conditions	**Room climate**	According to ISO 139, the following ambient conditions must be maintained in the laboratory in order to get repeatable and comparable test results: – Temperature: 20±2 °C; 65 °F to 72 °F – Relative humidity: 65±2 % For consistent test results, fiber samples should be conditioned in the laboratory environment with the above mentioned ambient conditions for 24 hours. Samples should be laid out openly in the laboratory, and taken out of plastic bags, in order for the cotton to fully condition to the environment. Uster Technologies recommends use of a dedicated conditioning system for the laboratory to achieve this condition. USTER does not recommend the use of any spray atomizers as they could result in damage to the instruments, variability in lab conditioning, and may cause inconsistent test results. All USTER certified laboratories use dedicated conditioning systems.
Installation data	**Electrical connections**	Single phase mains with protective conductor
	Mains voltage	110 – 240 V
	Mains frequency	50 – 60 Hz
	Power consumption	Max. 110 VA
Dimensions		Length 39 cm, width 26 cm, height 27 cm
Weight of the basic installation		Net weight: approx. 17.4 kg (plus 2.2 kg for sample weight)

Basic installation USTER® *LVI 975* Micronaire Tester

Overall installation

Functions

Measurement of raw cotton bale fiber, mat for property of micronaire.

Included in the delivery

- USTER® *LVI 975* testing unit
- Calibration plug
- Calibration materials

Application range

Naturally (white, cream) colored 100 % cotton samples in the form of bale or opened card mat.

General

General ambient conditions	**Room climate**	According to ISO 139, the following ambient conditions must be maintained in the laboratory in order to get repeatable and comparable test results: – Temperature: 20±2 °C; 65 °F to 72 °F – Relative humidity: 65±2 % For consistent test results, fiber samples should be conditioned in the laboratory environment with the above mentioned ambient conditions for 24 hours. Samples should be laid out openly in the laboratory, and taken out of plastic bags, in order for the cotton to fully condition to the environment. Uster Technologies recommends use of a dedicated conditioning system for the laboratory to achieve this condition. USTER does not recommend the use of any spray atomizers as they could result in damage to the instruments, variability in lab conditioning, and may cause inconsistent test results. All USTER certified laboratories use dedicated conditioning systems.
Installation data	**Electrical connections**	Single phase mains with protective conductor
	Mains voltage	110 – 240 V
	Mains frequency	50 – 60 Hz
	Power consumption	Max. 220 VA
Dimensions		Length 58 cm, width 27 cm, height 18 cm
Weight of the basic installation		Net weight: approx. 12.2 kg

Basic installation USTER® *LVI 940* Control System

Overall installation

Functions

Calibration and operation of individual USTER® *LVI* testing units. Collection, evaluation and storage of measurement data. Editor for configuring, viewing, and printing test data. Filter functions for quick data retrieval and for the preparation of reports.

Included in the delivery

- USTER® *LVI 940* software
- Computer/monitor
- Keyboard
- Mouse
- Operation manual

Application software

Reports	**Type of reports**	Application reports
		– Critical nep size for ring yarns
		– Critical nep size for rotor yarns
		– Removal efficiency
		
		Control charts
		– Control chart individual (parameter)
		– Control chart multiple (parameters)
		
		Data reports
		– Individual rep histograms
		  – Fibrogram
		  – Length distribution
		  – Individual nep histogram
		– Summary histograms
		  – Color chart
		  – Summary nep histogram
		  – Summary fibrogram
		  – Summary length distribution
		– Summary tables
		  – Summary table

Numerical out-put of results		Neps – Total nep count – Total nep size (average) Length – Amount – Mean length – Upper-half mean length – Uniformity Index – Short fiber (by weight, 12.7 mm or 16.5 mm, bale/mat material only) Color/Trash – Reflectance – Yellowness – Color grade (USDA) – Trash count – Trash area – Leaf grade Micronaire – Micronaire

Statistics	**Statistical values**	– Mean value – Standard deviation – Coefficient of Variation CV – Confidence limits (Q99) – Minimum value – Maximum value
Graphic output	**Nep histogram, length fibrogram, length distribution**	Each individual value is placed into a category based on its measured or calculated value.
	Color chart	Each individual measured color value (Rd/+b) is plotted on a USDA color chart to show the distribution of grades.
Languages, units	**Dialogue and report languages**	English, Chinese
	Possible units	– Weight units: g – Textile units: 1/g (count/g) – Length: mm, µm, in
Self-Test	**Function test**	– Initiated automatically when the installation is switched on. – Comprehensive function checks and special test programs can be initiated at any time via the diagnostics menu.

General

Operating unit

Computer software

The USTER® *LVI 940* Control System software has a menu driven design that allows quick access and selection of the testing, setup, calibration and data management. These features include:

- Windows 10 operating system with icon based software
- Simple user interface
- Error messages for trouble-shooting
- Network capabilities

Computer hardware

Computer system consisting of the following components:

- Keyboard
- Mouse
- Monitor

Uster Technologies has made all possible efforts to ensure that all information is accurate at the time of publication. Hereby it is declared that alterations to the product may be possible at any time. In these cases the information contained in this technical datasheet is subject to change without notice.

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