Capacitive and optical sensor technology in the USTER® TESTER 6 opens the door to spinning mill management. Showing spinners the full picture, with all the options for assured quality and cost-effective production.

**Elements** of the USTER® TESTER 6-S800 installation

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**Technical Data**
Basic installation
1 Test unit
   - Sensor CS, evenness unit
   - Sensor Temperature and Humidity (integrated)
1a Changer / Yarn feeder (only for UT6-S800/A)
2 Control unit
3 Single package carrier (only for UT6-S800/SA)
4 Table set

Options
5 Additional measuring units
   - Sensor OH, hairiness measuring unit
   - Sensor HL, hairiness length measuring unit
   - Sensor OM, multifunctional measuring unit
   - Sensor OI, impurity measuring unit
   - Sensor FA, yarn count measuring unit
6 Sensor MS120, coarse sliver evenness measuring unit (no illustration)
7 KBS, Knowledge Based System (no illustration)
8 FYP, Fancy Yarn Profile (no illustration)

Special Accessories
9 Package carrier
10 Large UNWINDING DEVICE
11 UNWINDING DEVICE with drive
Basic installation

Overall Installation

**Functions**

- Capacitive measurement of mass variations in staple yarns, rovings and slivers
- Capacitive measurement of imperfections in staple yarns
- Integrated USTER® QUALITY EXPERT for linking the laboratory instruments with online monitoring
- Analysis, evaluation and data storage of the measurement values
- Automatic comparison with the benchmarking tool USTER® STATISTICS
- Editor for customizing reports and settings of mill limits
- Smart view focusing on exceptions and outliers
- Filter functions for quick data selection and preparing of long-term reports
- Simulation of yarn boards, woven and knitted fabrics

**Versions**

- USTER® TESTER 6-S800/A (automatic version)
- USTER® TESTER 6-S800/SA (semi-automatic version)

**Included in the delivery**

- Test unit
- Control unit for USTER® TESTER 6 and USTER® QUALITY EXPERT
- Touchscreen
- Printer
- Application software
- Table set
- Large UNWINDING DEVICE
- Package carrier (USTER® TESTER 6-S800/A)

Subsystem of the USTER® TESTER 6-S800 basic version:

**Test unit (1)**

**Sensor CS**

- Capacitive measurement of mass variations in staple yarns, rovings and slivers
- Capacitive measurement of imperfections in staple yarns
- Measurement range: approx. 1 tex to 12 ktex (limitation according to fiber type is possible)

**Sensor Temperature & Humidity**

- Integrated sensor for measurement of temperature and humidity in the environment of the test unit
- Temperature: ±0.3 % at a temperature of 20 °C
- Humidity: ±3 % rH at a temperature of 20 °C

**Conveyor S**

- Material conveying system for yarn, roving and sliver
- Testing speed from 10 up to 800 m/min depending on the test mode

**Base S**

- Absorber for removal of tested yarn
Technical Data

Changer/
Yarn feeder (1a)

- Automatic selection of the yarn from the package changer and insertion into the measuring slot
- Setup of 24 feeder lines, run automatically even when a within fail
- Later continuation of the incomplete test

Control unit (2)

- USTER® TESTER 6 intuitive touch application software
- Windows Embedded 8.1 operating system
- System pre-configured and locked down
- Simple full system update process

- Industrial computer with Intel® processor
- 3 internal hard drives for data security and system redundancy
- 500 GB test data storage

- Large easy to read touch screen monitor
- Laser printer

- USTER® QUALITY EXPERT server software pre-installed
- USTER® QUALITY EXPERT client software 'Click Once' installation
- Windows Embedded 8.1 operating system
- System pre-configured
- Customer configurable networking

- Industrial computer with Intel® processor
- 3 internal hard drives for data security and system redundancy
- 500 GB quality data storage

Client

- provided by customer
- minimum Windows 7, Service Pack 1 operating system
- .NET Framework 4.6
## Options

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Application</th>
<th>Description</th>
</tr>
</thead>
</table>
| Sensor OH | Application range | Hairiness measuring unit (5)
| | | Determination of additional yarn parameters (simultaneous with the determination of mass variation and imperfections) |
| Sensor HL | Application range | Hairiness Length measuring unit (5)
| | | Measurement of yarn hairiness of staple fibers in the range of approximately 5 to 1000 tex (possible limitation according to the fiber type) |
| | | – Measurement of hairiness length of staple fibers in the range of approximately 5 to 100 tex (possible limitation according to the fiber type) |
| | | – Classification in 7 length classes |
| Sensor OM | Application range | Multifunctional measuring unit (5)
| | | Appearance: |
| | | Measurement of yarn diameter, shape, density and diameter variation of staple fibers |
| | | Twist: |
| | | Identify the level of yarn twist and twist variation for 100% CO, PES, CV, CMD, CLY and their blends, carded and combed for ring yarn and compact yarn |
| | | A sensor combination from CS, OH and OM is needed, not applicable for plied yarns, slub yarns, core-spun yarns, crepe yarns (high twist), siro-spun yarns, technical yarns |
| | | Frequent Occurrences: |
| | | Measurement of frequent occurrences (FO) for conductive staple fiber yarns |
| | | In the count range of approximately 5 to 200 tex (possible limitation according to the fiber type) |
| Sensor OI | Application range | Impurities measuring unit (5)
| | | Measurement of yarn trash and dust of cotton or cotton blends in the range of approximately 5 to 200 tex (possible limitation according to the fiber type and fiber color) |
**Sensor MS120**  
Coarse sliver evenness measuring unit (6)

**Application range**  
Additional measuring unit for measuring of coarse sliver, wool tops and converter tops in the range of approximately 12 ktex to 80 ktex (possible limitation according to the fiber type)

**Sensor FA**  
Yarn count measuring unit (5)

**Application range**  
- Measurement of absolute yarn count for single yarns in the range of approximately 5 to 100 tex
- Test length determination according ISO 2060 or selectable by the customer

**KBS**  
Knowledge Based System (7)

**Function**  
- Knowledge based software for the support of finding the cause of the periodical faults in the spectrogram
- KBS decide between defective machine parts and drafting faults

**FYP**  
Fancy Yarn Profile (8)

**Function**  
- Fancy Yarn Profile for the evaluation of slub yarns
- Measurement of quality data number of slubs, mass increase, slub distance, mass decrease after a slub.

### Special Accessories

**Package carrier**

**Application range**  
- Packages carrier for creeling and transportation up to 40 bobbins or 12 packages
- Available for short and long staple

**UNWINDING DEVICE with drive** (automatic)

**Application range**  
- UNWINDING DEVICE for roving, rubbing and sliver
- Possibility of automatic length determination and manual cutting device

**Take-up speed**

- 25, 50, 100 or 200 m/min

**Package dimensions**

- Roving tube Ø min. 50 mm, length max. 580 mm, weight max. 10 kg
### Application Software for USTER® TESTER 6-S800

#### Reports
- Standard test report of the measurement series
- Pre-defined table reports and graphical reports for different application
- Long-term reports
- Customized reports

#### Display and printout of the reports
- Live view report during the measurement
- Analysis tool with all measured data and graphical output
- Smart view report for exceptions and outliers
- Automatic printout possibility after the measurement

#### Limit values
- Setting of customized limits according to the USTER® STATISTICS, standard deviation, relative and absolute values
- Automatic verification of the measured values
- Measured values which exceed the limit will be marked with red color in the reports

#### Numerical results

<table>
<thead>
<tr>
<th>Sensor CS</th>
<th>Unevenness U</th>
<th>Measurement of mass unevenness by the help of the irregularity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient of variation CV&lt;sub&gt;m&lt;/sub&gt;</td>
<td>Measurement of mass unevenness by the help of the coefficient of variation</td>
</tr>
<tr>
<td></td>
<td>Coefficient of variation CV&lt;sub&gt;m&lt;/sub&gt; (L)</td>
<td>Measurement of mass unevenness for cut length of 1, 3, 10, 50 and 100 m</td>
</tr>
<tr>
<td></td>
<td>Deviation rate DR %</td>
<td>Measurement of DR of 1.5 m and 5 %</td>
</tr>
</tbody>
</table>
|           | Maximum mass deviation | - m(min) = maximum mass reduction
- m(max) = maximum mass increase
- Possible cut length of 1, 3, 10, 50 and 100 m |
|           | Index I | Relationship between the ideal and the actually measured unevenness of staple fibers |
|           | Imperfections | - Counting of thin places, thick places and nepes for several sensitivity levels in yarns:
- Thin places: -30 %, -40 %, -50 %, -60 %
- Thick place: +35 %, +50 %, +70 %, +100 %
- Nepes: +140 %, +200 %, +280 %, +400 %
- Total imperfections available for standard (ring/air-jet yarn -50, +50, +200 % and open end yarn -50, +50, +280 %) and sensitive settings (ring/air-jet yarn -40, +35, +140 %) and open end yarn -40, +35, +200 % |
|           | Relative count | Percentage count variation of the test material between single tests in a sample, with reference level to selectable material length |
**Numerical results**

**Sensor OH**

**Hairiness H**  
Measurement of yarn hairiness

**Standard deviation sh**  
Standard deviation of yarn hairiness

**Standard deviation sh (L)**  
Standard deviation of hairiness for cut length of 1, 3, 10, 50 and 100 m

**Maximum hairiness deviation**  
- \( m(\text{min}) \) = maximum hairiness reduction
- \( m(\text{max}) \) = maximum hairiness increase
- Possible cut length of 1, 3, 10, 50 and 100 m

**Numerical results**

**Sensor HL**

1, 2, 3, 4, 6, 8 and 10 mm  
Individual count of fibers in each length zone, normalized to 100 m yarn length

\( S3u \)  
Sum of all fibers which are 3 mm and longer (cumulative), normalized to 100 m yarn length

\( S1+2u \)  
Sum of all fibers with the length of 1 mm and 2 mm (cumulative), normalized to 100 m yarn length

**Numerical results**

**Sensor OM – Appearance**

**Diameter \( \Phi \)**  
Measurement of the yarn diameter over the test length

**Coefficient of variation CV2D**  
Determination of the cross-sectional variation of 8 mm and 0.3 mm

**Coefficient of CV FS**  
Relationship between cross-sectional variation of 8 mm and 0.3 mm

**Shape**  
Measurement of the roundness of the yarn body

**Density**  
Calculation of the yarn density

**Numerical results**

**Sensor OM – Twist**

**\( Tu \)**  
Measurement of twist in T/m and T/inch

**\( TMu \)**  
Measurement of twist multiplier in \( \alpha_e \) and \( \alpha_m \)

**\( \Delta Tu \)**  
Measurement of deviation of twist absolute T/m and T/inch and relative in %

**Numerical results**

**Sensor OM – Frequent Occurrences**

**Frequent Occurrences**  
Counting of Frequent Occurrences (FO) for several sensitivity levels in conductive yarns

**FO-**  
\( \text{FO-: } S, M, L, \text{XL} \)

**FO+**  
\( \text{FO+: } S, M, L, \text{XL} \)

**FO spots**  
\( \text{FO spots: } S, M, L, \text{XL} \)
Numerical results

Sensor OI

**Trash and dust particles**
- Measurement of trash and dust particles
- Classification of trash and dust particles according to the ITMF Definition (smaller 500 µm dust, bigger 500 µm trash)

Numerical results

Sensor FA

**Absolute count**
Absolute count in the pre-selected yarn count unit

Statistics

**Statistical values**
Overall result protocol with statistical data of the test results
- Mean value
- Standard deviations
- Coefficient of variation CV
- 95% confidence interval
- USP™ (USTER® STATISTICS percentile)
- Min. value
- Max. value

**USTER® STATISTICS**
- Comparison of the measured values with the USTER® STATISTICS
- Material dependent USTER® STATISTICS chapter are stored in the data base
- Possible setting of limits based on USTER® STATISTICS

Graphic output of results:

- **Diagram**
  - Selectable ranges for x-axis and y-axis (1, 2, 4)
  - Cut length: normal, 1, 3, 10, 50, 100 m (1, 2, 4)
  - Zoom function in the single diagram (1, 2, 4)
  - Position of imperfections marked in the mass diagram (1)
  - Possibility of representing single diagram, multiple diagram and serial diagram (1, 2, 4)

- **Spectrogram**
  - 220 channels (1, 2, 4)
  - Possibility of representing single spectrogram and multiple spectrogram (1, 2, 4)

- **Length variance curve LVC**
  - Possibility of representing single LVC and multiple LVC (1, 2, 4)

- **Histogram**
  - Representing of the parameter variations in percentage (1, 2, 4)
  - Possibility of representing single histogram and multiple histogram (1, 2, 3, 4, 5)
### Fabric simulation – Application range (Software version 1.7)

<table>
<thead>
<tr>
<th>Material type</th>
<th>Ring Yarn count (Ne)</th>
<th>Compact Yarn count (Ne)</th>
<th>Of Yarn count (Ne)</th>
<th>Airjet Yarn count (Ne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 % CO carded</td>
<td>Ne 12 – Ne 40</td>
<td>Ne 16 – Ne 100</td>
<td>Ne 6 – Ne 32</td>
<td>Ne 40</td>
</tr>
<tr>
<td>100 % CO combed</td>
<td>Ne 18 – Ne 40</td>
<td>Ne 20 – Ne 60</td>
<td>Ne 20 – Ne 30</td>
<td>Ne 20 – Ne 40</td>
</tr>
<tr>
<td>100 % CV carded</td>
<td>Ne 20 – Ne 60</td>
<td>Ne 30 – Ne 80</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 20 – Ne 40</td>
</tr>
<tr>
<td>100 % CMD carded</td>
<td>Ne 30 – Ne 60</td>
<td>Ne 6 – Ne 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % Li carded</td>
<td>Ne 6 – Ne 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % PES carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td>Ne 16 – Ne 40</td>
</tr>
<tr>
<td>70/30 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 6 – Ne 32</td>
<td></td>
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</tr>
<tr>
<td>67/33 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td></td>
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</tr>
<tr>
<td>65/35 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td></td>
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</tr>
<tr>
<td>60/40 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td></td>
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</tr>
<tr>
<td>52/48 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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</tr>
<tr>
<td>50/50 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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<tr>
<td>45/55 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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<tr>
<td>40/60 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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<tr>
<td>35/65 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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</tr>
<tr>
<td>25/75 PES/CO carded</td>
<td>Ne 20 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
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<tr>
<td>70/30 PES/CV carded</td>
<td>Ne 30 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td></td>
<td>Ne 20 – Ne 40</td>
</tr>
<tr>
<td>65/35 PES/CV carded</td>
<td>Ne 30 – Ne 40</td>
<td>Ne 12 – Ne 40</td>
<td></td>
<td>Ne 20 – Ne 40</td>
</tr>
<tr>
<td>50/50 CO/CMD carded</td>
<td>Ne 30 / Ne 40 / Ne 60</td>
<td>Ne 20 – Ne 40</td>
<td></td>
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<tr>
<td>45/55 CO/CMD carded</td>
<td>Ne 30 / Ne 40 / Ne 60</td>
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</tbody>
</table>

**Important Information:** Fabric Simulation can not be applied to the following yarns: Fancy yarns, core yarns, plied (folded) yarns and siro yarns.
Graphic output of results:

**Diagram**
- Mass diagram with slubs
- Mass diagram with marked mass decreases
- Possibility of representing single diagram and multiple diagram

**Scatter plot**
Scatter plot sequence and frequency

**3D histogram**
Representing the distribution and the frequency of the slubs

**Sequence diagram**
Representing the slub length and the slub distance

**Histogram**
Representing the distribution of slub length, slub distance and mass increase

**Classification**
Representing the slub length and the mass increase as a numeric number in classes

**Spectrogram**
- 220 channels
- Possibility of representing single spectrogram and multiple spectrogram, without slubs

**Data protection**

**Backup**
- Automatic data backup to dedicated internal hard drive every 15 minutes
- Data export to external USB or other network devices supported

**Input data, output of results, languages, units**

**Dialog and report languages**
English, German, French, Italian, Spanish, Portuguese, Turkish, Russian, Chinese or Japanese can be selected (other languages on request)

**Possible units**
- Yarn counts: Ne, Nm, New, den, tex, dtex
- Sliver counts: ktex, tex, Ne, Nm, grains/yard, g/5 m
- Roving counts: ktex, tex, Ne, Nm, grains/yard, g/10 m
- Speed: m/min or yd/min

**Test time**
Selectable between 6 seconds to 20 minutes depending on the test mode

**System security**

**Protection function**
- System protected from viruses, network and other security threats
- Remote support capabilities built-in
- Diagnostic tools with extensive event logging
- Automated system recovery
Application Software for USTER® QUALITY EXPERT

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<th>Feature overview</th>
<th>Value Modules</th>
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<td>– Dashboard</td>
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<td>– Alarm center</td>
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<td>– Mill analysis</td>
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<td>– Quality</td>
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<td>– Management</td>
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<td>– Yarn prognosis</td>
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<td></td>
<td>– Total Contamination Control</td>
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<td></td>
<td>– Ring Spinning Optimization</td>
</tr>
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<td></td>
<td>– Mill management</td>
</tr>
<tr>
<td></td>
<td>– System</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Display and printout of the reports</th>
</tr>
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<tr>
<td></td>
<td>Reports can be printed on demand</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Limit values</th>
<th>Statistical values</th>
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<tbody>
<tr>
<td>– USTER defined alarms, applied automatically</td>
<td>Overall result protocol with statistical data of the test results</td>
</tr>
<tr>
<td>– Setting of customized alarm: to strict, moderate and open setting</td>
<td>– Mean value</td>
</tr>
<tr>
<td></td>
<td>– USP™ (USTER® STATISTICS Percentile)</td>
</tr>
</tbody>
</table>

**USTER® STATISTICS**

– Material dependent USTER® STATISTICS chapter are stored in the data base
– Comparison of the measured values with the USTER® STATISTICS
– Classification based on USTER® STATISTICS
Graphic output of results

**Dashboard**
Display of 6 key indicators with customizable selections
- Active alarms
- Lab efficiency
- Production (kg)
- Hard waste (%)
- Running products
- Carding efficiency
- Number of ejections
- FD and PP cuts
An arrow indicates the current trend of each value

**Spider chart**
- Shows the product comparison based on the USTER® STATISTICS values of selected parameters

**Trend diagram**
- Showing the trend over time for selected parameters

**TCC Benchmark**
- Shows the potential of optimization in fiber clearing and winding

**Cop build-up**
- Shows the speed curve of the ring spinning machine and its relation to the following:
  - End breaks recorded from USTER® SENTINEL
  - Relative Humidity %, Temperature recorded from USTER® SENTINEL
  - Cuts from USTER® QUANTUM 3
  - Quality parameters from USTER® QUANTUM 3

**Lab efficiency chart**
- Graphical representation of utilization of each connected lab instrument in a bar chart

**Yarn prognosis**
- Representation of yarn grades in graphical form in a scale of 1 to 5 for
  - Fabric appearance
    with CS, OM, OH and HL sensor combination
  - Pilling resistance
    with CS, OH and HL sensor combination

Weaving performance
with the instrument combination of
- USTER® TESTER 6
- USTER® TENSOJET 4/5
- USTER® QUANTUM 3 via USTER® QUANTUM EXPERT
(only possible with Foreign-Matter/Vegetable-Matter Clearing Option as well as the advanced classification of USTER® QUANTUM 3 clearers)
## USTER® GRADES – Application range (Software version 3.0)

<table>
<thead>
<tr>
<th>Material type</th>
<th>Grade for Fabric Appearance</th>
<th>Grade for Pilling Resistance</th>
<th>Grade for Weaving Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 % CO carded</td>
<td>Ring</td>
<td>Compact</td>
<td>Rotor</td>
</tr>
<tr>
<td>100 % CO combed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % PES carded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % CV carded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % CMD carded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 % CLY carded</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>100 % Li carded</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 – 65 / 80 – 35 PES/CO*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 – 55 / 65 – 45 PES/CO*</td>
<td>*</td>
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</tr>
<tr>
<td>25 – 70 / 75 – 30 PES/CO*</td>
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<tr>
<td>35 – 70 / 65 – 30 PES/CO*</td>
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<tr>
<td>15 – 80 / 85 – 20 PES/CO*</td>
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<tr>
<td>45 – 55 / 55 – 45 CO*/CMD</td>
<td>*</td>
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</tr>
<tr>
<td>48 – 60 / 40 – 52 CO*/CMD</td>
<td>*</td>
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</tr>
<tr>
<td>55 – 75 / 45 – 25 PES/CV</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 – 75 / 55 – 25 PES/CV</td>
<td>*</td>
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</tr>
<tr>
<td>50 – 90 / 50 – 10 PES/CV</td>
<td>*</td>
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<td></td>
</tr>
</tbody>
</table>

*Applies for carded/combed Cotton.

Important Information: USTER® GRADES cannot be applied to the following yarns:
- Fancy yarns, core yarns, plied (folded) yarns and siro yarns

### Alarm report
- Display of alarm summary per product step
- Active
- Acknowledged
- Done
- Alarm summary over time
- Alarm summary by product
Data connection

<table>
<thead>
<tr>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>USTER® AFIS PRO 2</td>
</tr>
<tr>
<td>USTER® TESTER 5</td>
</tr>
<tr>
<td>USTER® TENSOJET 4/5</td>
</tr>
<tr>
<td>USTER® TENSORAPID 4/5</td>
</tr>
<tr>
<td>USTER® JOSSI VISION SHIELD 2/T via USTER® VISION SHIELD EXPERT</td>
</tr>
<tr>
<td>USTER® SENTINEL</td>
</tr>
<tr>
<td>USTER® QUANTUM 2/3 via USTER® QUANTUM EXPERT 3</td>
</tr>
</tbody>
</table>

The following Value Modules are available if the required sensor/instrument combinations exist:

- Total Contamination Control based on the combination of: USTER® JOSSI VISION SHIELD, USTER® VISION SHIELD EXPERT, USTER® QUANTUM 3, USTER® QUANTUM EXPERT 3 and USTER® TESTER 6

- Ring Spinning Optimization based on the combination of: USTER® SENTINEL, USTER® QUANTUM 3, USTER® QUANTUM EXPERT 3 and USTER® TESTER 6

RSO is available for link winders only

Backup

- Automatic data backup to dedicated internal hard drive every 15 minutes
- Data backup to external USB or network devices supported

Dialog and report languages

- English, German, French, Italian, Spanish, Portuguese, Turkish, Russian, Chinese, Japanese and Vietnamese can be selected (other languages on request)

Input data, output of results, languages, units

- Yarn counts: Ne, Nm, New, den, tex, dtex
- Fiber units: micron, micronaire, dtx, den, tex, mtex
- Twist: T/m, T/", T/10 cm, TM Twist multiplier (alpha m), alpha m, alpha e

System security

Protection functions

- System protected from viruses, network and other security threats
- Remote support capabilities built-in
- Diagnostic tools with extensive event logging
- Automated system recovery
## Installation conditions

<table>
<thead>
<tr>
<th>General ambient conditions</th>
<th>Room climate</th>
<th>The ambient conditions must be maintained in order to avoid any influences on the test material according to ISO 139 (2011).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humidity</td>
<td>65±4%</td>
</tr>
<tr>
<td></td>
<td>Temperature</td>
<td>20±2 °C Standard atmospheres</td>
</tr>
</tbody>
</table>

### Installation

<table>
<thead>
<tr>
<th>Installations</th>
<th>Electronical connections</th>
<th>Single phase with protective conductor</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Mains voltage range</th>
<th>100 – 240 VAC</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Mains frequency</th>
<th>50/60 Hz</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Power consumption</th>
<th>Max. 1000 VA</th>
</tr>
</thead>
</table>

### Compressed air connection

- Air quality: according to ISO 8573.1, class 3
- Connection:
  - Min. pressure at inlet of air filter regulator: 6 bar
  - Max. pressure at inlet of air filter regulator: 10 bar
  - Requirement compressed air: Standard
    - S800 Automatic: 12 m³/h
    - S800 with Module FA: 18 m³/h
    - S800 Semiautomatic: 9 m³/h
  - 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

### Gross weight of the basic function

<table>
<thead>
<tr>
<th>Semi-automatic version</th>
<th>Test unit: 60 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Furniture: 118 kg</td>
</tr>
<tr>
<td></td>
<td>Complete system: 208 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Automatic version</th>
<th>Test unit: 78 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Furniture: 118 kg</td>
</tr>
<tr>
<td></td>
<td>Sensor FA: 24 kg</td>
</tr>
<tr>
<td></td>
<td>Complete system: 249 kg</td>
</tr>
</tbody>
</table>
Uninterrupted power supply (UPS)

UPS must be provided by the customer

<table>
<thead>
<tr>
<th>UPS Model</th>
<th>Tower</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPS Bypass Type</td>
<td>ON-Line</td>
</tr>
</tbody>
</table>

**Electrical Input**

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>120 VAC, 220 – 240 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage range</td>
<td>90 – 138 VAC</td>
</tr>
<tr>
<td>120 VAC</td>
<td></td>
</tr>
<tr>
<td>Voltage range</td>
<td>160 – 276 VAC</td>
</tr>
<tr>
<td>230 VAC</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
</tr>
</tbody>
</table>

**Output**

<table>
<thead>
<tr>
<th>Nominal Output Voltage</th>
<th>120 VAC, 230 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Capacity</td>
<td>1000 VA (1 kVA)/900 W</td>
</tr>
<tr>
<td>Voltage regulation</td>
<td>+/- 3 %</td>
</tr>
</tbody>
</table>

**Environment**

<table>
<thead>
<tr>
<th>Safety markings 120/208 V</th>
<th>UL, CUL, VCCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety markings 230 V</td>
<td>CE, GS</td>
</tr>
</tbody>
</table>

**Ambient operating temp.**

Laboratory condition are acceptable

**Relative humidity**

Laboratory condition are acceptable

Note: It is not permitted to connect a Laser Printer.
Space required for the installation of USTER® TESTER 6-S800/A

— At a vibration free location
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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