



USTER® CLASSIMAT 5

Instrument for classification and analysis
of yarn faults in staple yarns

Technical Data

October 2021

USTER® CLASSIMAT 5

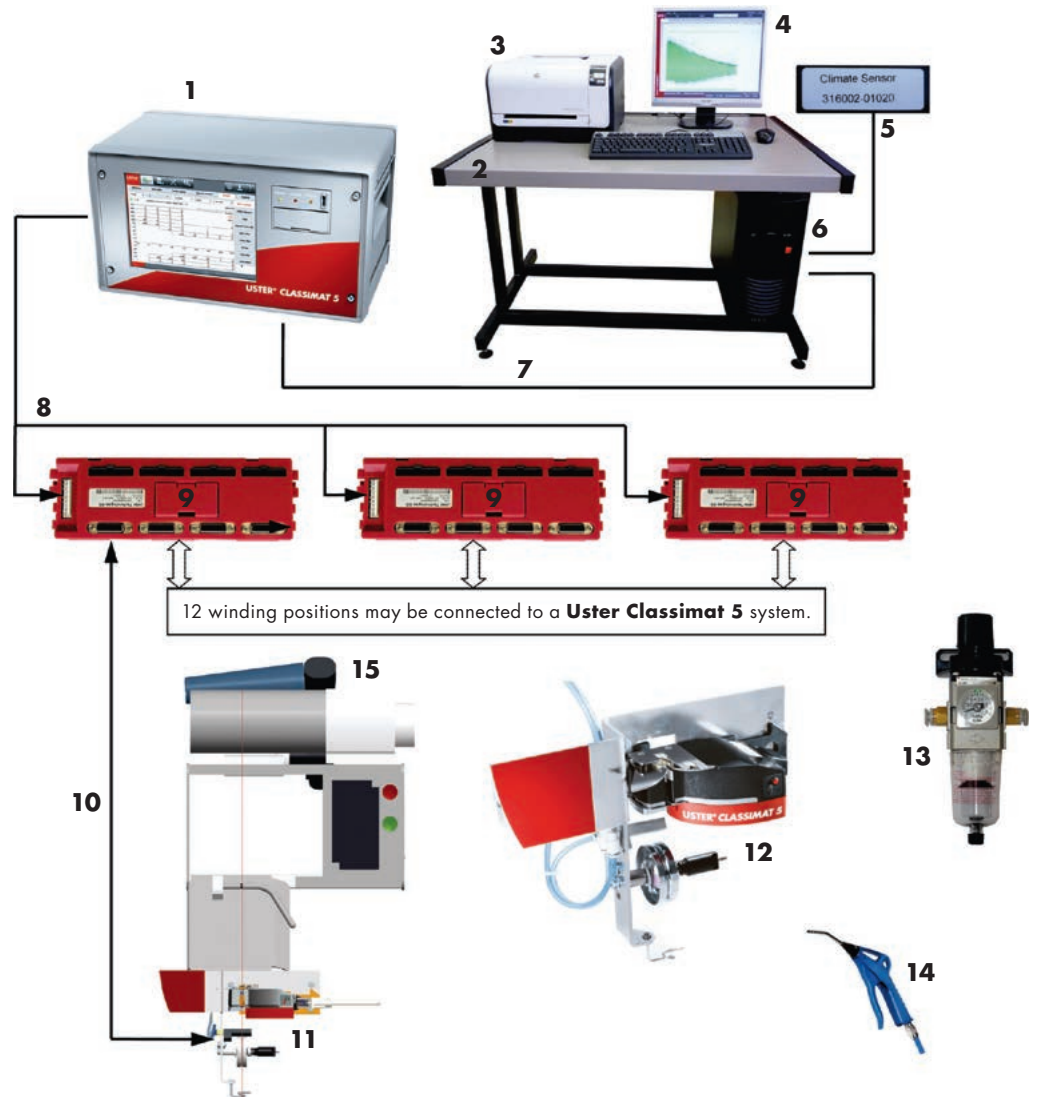
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System layout

- 1 CMT5-CCU
- 2 Table
- 3 Printer provided by the customer
- 4 Flat screen, keyboard, PC-mouse
- 5 Climate Sensor incl. cable
- 6 CMT5-CU
- 7 Network cable
- 8 UEVS Control Unit including touch screen
- 9 iCSA Quad group
- 10 iMH cable, Valve cable
- 11 Uster Classimat 5 Module complete
- 12 CMT5 iMH: C15F30, C20F30
- 13 Maintenance Unit
- 14 Air gun
- 15 Winding machine - is not part of the delivery

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Basic Installation

- Uster Classimat 5 Control Unit (CMT5-CCU) with installed software
- Table
- Flat screen, Keyboard and PC-mouse
- USTER® Lab Control Unit (CMT5-CU) with Microsoft Windows Operating system and Uster Classimat 5 specific hardware and software:
 - Backup Unit – 2nd Hard disk of identical capacity
 - Network card integrated
- Climate Sensor including cable
- Dongle
- Uster Classimat 5 Module complete
- Network cable (CMT5-CCU to CMT5-CU)
- Cable power/comm. CMT5-CCU – iCSA
- iCSA Quad group
- iMH cable, Valve cable
- CMT5 iMH: C15F30, C20F30
- Maintenance Unit
- Air gun
- Pneumatic kit (Air Inlet, Air Hose)
- Fastening material
- Accessories set:
 - Operating documentation, incl. yarn cards and USTER® Calculator
 - Maintenance tools
- Spares: One spare iMH and one iCSA is included in every shipment

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Functional scope

Three classification standards (for thick and thin places only)	<ul style="list-style-type: none">– Uster Classimat 5– Uster Classimat Quantum– Uster Classimat 3
Uster Classimat 5 classification	<ul style="list-style-type: none">– YARN BODY™ and scatter plot of yarn faults in the Uster Classimat 5 matrix– Classing of the yarn faults into 30 thick place classes and 15 thin place classes
Foreign-Matter	<ul style="list-style-type: none">– Dense area and scatter plot of the foreign fibers in the USTER® Foreign Class matrix– Classing of the foreign fibers into 32 classes– Classification of vegetable content into 32 classes (only for cotton and cotton blends)
Polypropylene	Short Polypropylene and long Polypropylene
Tailored classes	<ul style="list-style-type: none">– Customer-specific thick place and thin place class can be defined– Customer-specific Foreign-Matter class can be defined
Periodic faults (PF)	Classification of periodic faults and affected share
Evaluation	<ul style="list-style-type: none">– For individual and all winding positions– Cumulative or per class– Absolute or per 100 km
Disturbing faults	Outliers – neps, thick, thin, Foreign-Matter, Polypropylene, evenness (Cvm), imperfections and hairiness
Clearing limit analysis	Analysis of applied clearing limits and indication of clearing index to optimize clearing limits to reduce outliers
Quality comparison	Comparison of up to five articles according irregularity, outliers & Foreign-Matter to classify yarns for optimal use and thereby optimal price
Long-term analysis	Analysis of long term trends of all Uster Classimat 5 parameters and compare them to internal or international benchmarks. Graphical and tabular reports
Benchmarks	<ul style="list-style-type: none">– International benchmarks – Uster Statistics– Compare to internal benchmarks of the mill – Mill Statistics– Compare test results to the best results achieved over the last one year-‘52 week best’

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Climate measurement	Integrated sensor for measurement of humidity and temperature in the environment of the laboratory
Reports	Preconfigured standard reports
Data storage	Data storage and Backup
Diagnosis	Technical alarms, Log-files, Remote support possibilities
Languages (Application software)	EN, CN, DE, TR (Later VN, DE, FR, IT, ES)
Unit system	Nec, New, Nm, Tex, Denier

Sensor principle

Classification of thick and thin places	Capacitive measurement
Determination of quality data	Capacitive measurement
Detection of Foreign-Matter	Optical measurement
Detection of Polypropylene	Capacitive and Optical measurement

No. of positions Uster Classimat 5 is available for 6 or 12 positions

Measuring head type Choice between iMH type C15F30 and C20F30 depending on the count range

Yarn count range and measuring head types

CMT5 iMH C15/F30	– Nm 20 to 340 – Nec 12 to 200 – 3 to 50 Tex
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CMT5 iMH C20/F30	– Nm 5 to 135 – Nec 3 to 80 – 7 to 200 Tex
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Application

Classification of yarn faults and outliers of staple-spun yarns (natural, synthetic fibers and blends)

	Yarn speed winding	200 to 1,200 m/min
	Recommended sample length per test	200 km
Sample conditioning	Recommended humidity	– (65±2)% relative humidity
	Recommended temperature	– (20±2) °C in moderate zones – (27±2) °C in tropical zones
Electrical connection	Mains	Single phase mains with protective conductor
	Mains voltage range	– 220–240 VAC – In case of 100–120 VAC a transformer is supplied
	Mains frequency	50Hz-60Hz
	Power consumption – typical operation	200 VA
	Power consumption – peak operation	650 VA (when printing is active)
		Uninterrupted power supply (UPS) recommended
Compressed air connection	Air quality	According to ISO 8573.1, class 3
	Min. pressure at inlet of air filter regulator	5 bar
	Max. pressure at inlet of air filter regulator	7 bar
	Air consumption per position per hour	210 liters

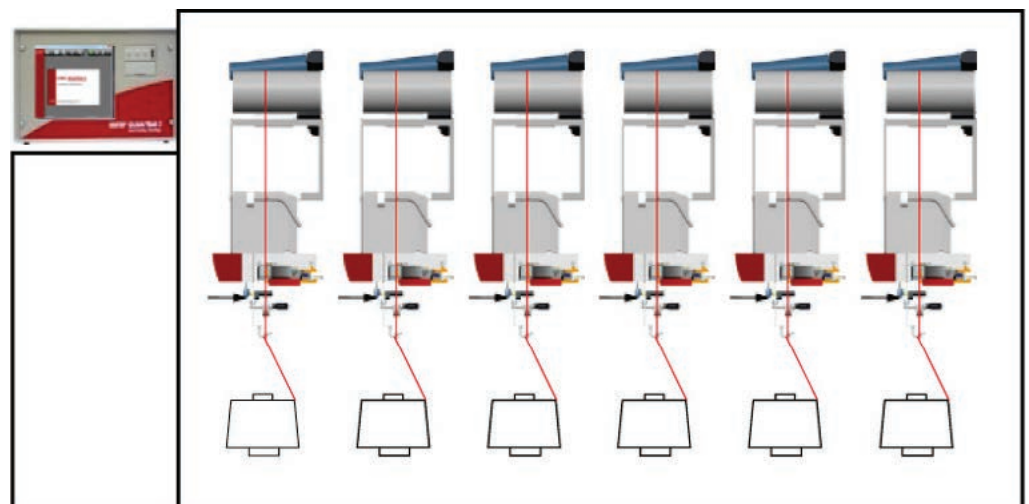
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Operating climate	Temperature	15 – 30 °C.
	Humidity	45 – 85% relative humidity, noncondensing
Packing dimensions and weight	Dimensions	126 x 87 x 93 cm
	Volume	1.019 m ³
	Weight	152 kg (incl. Mounting modules, Uster Lab Control Unit, Uster Classimat 5 Control Unit, printer, peripherals, table, etc.)
	Table dimensions	122 x 79 x 11 cm unmounted and packed
Winder		<ul style="list-style-type: none">– Manual precision winders are recommended for accuracy and stability reasons e.g. SIMET, MOTOCONO, SSM (CN), PS VERSA, RESHMI (IN), MILHAN (TR)– Further winder types – Please contact USTER® Service
Note		<ul style="list-style-type: none">– Specific machine adaptation materials have to be provided by user as necessary, at the time of installation– Stable and straight yarn-path– Precise drive and assembly that provides winding with minimal vibration

Installation layout

Example: CMT5-CCU and mounting modules mounted on the manual winder



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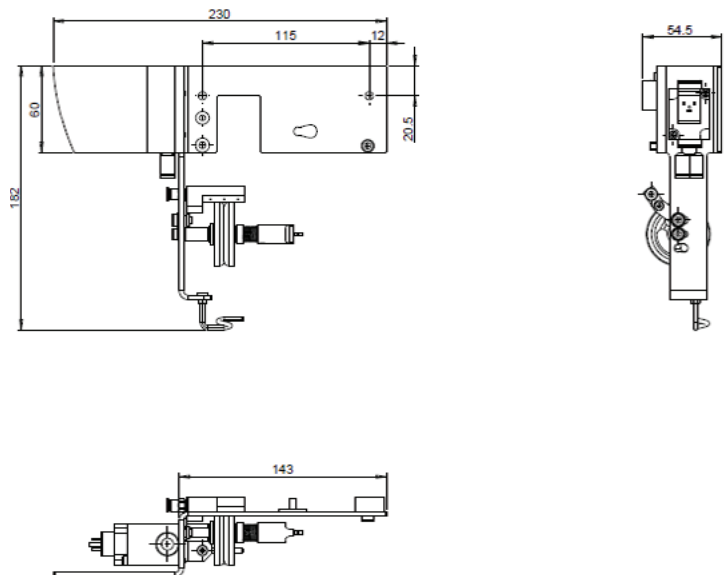
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Space requirements **CCU mounting**

- Space for mounting the Uster Classimat 5 Control Unit (CMT5-CCU) on the winder should be provided.
- Dimensions of the CMT5-CCU:
300 x 515 x 300 mm (depth x width x height).



Dimensions of the mounting module for each position



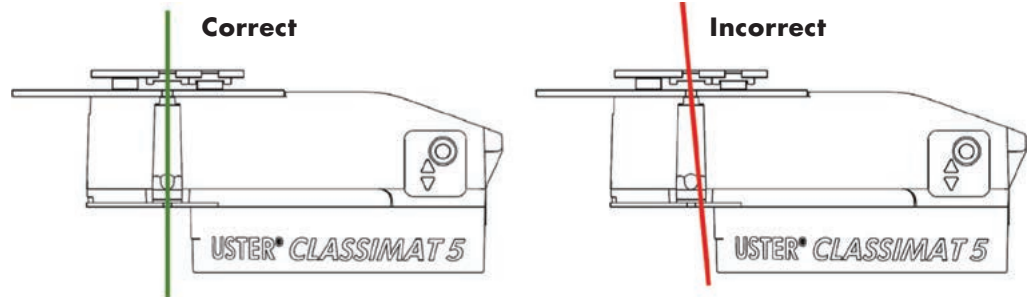
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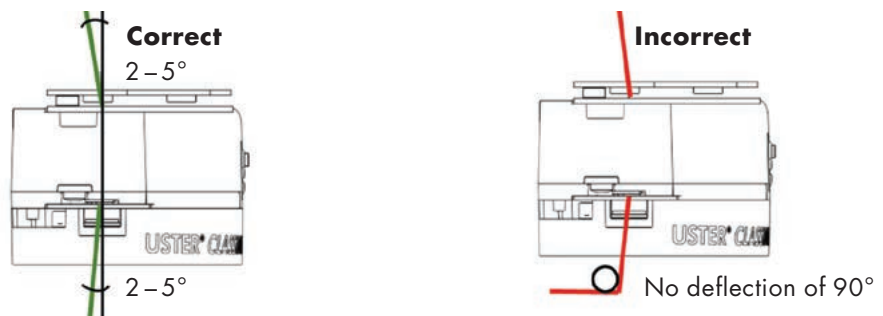
Yarn path

When optimizing the thread line, the following must be observed:

The thread line must be parallel to the measuring field



Thread line in the measuring field



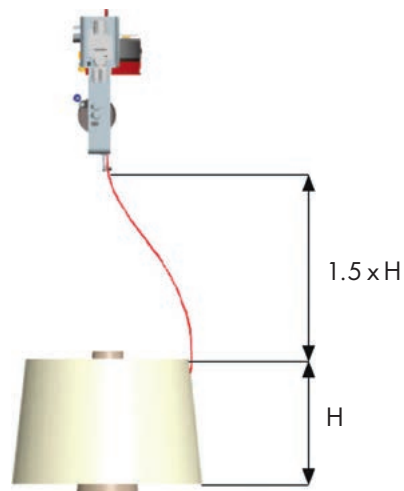
Positioning of yarn package

Distance

Check the distance from the top of the package to the thread guide

Recommendation

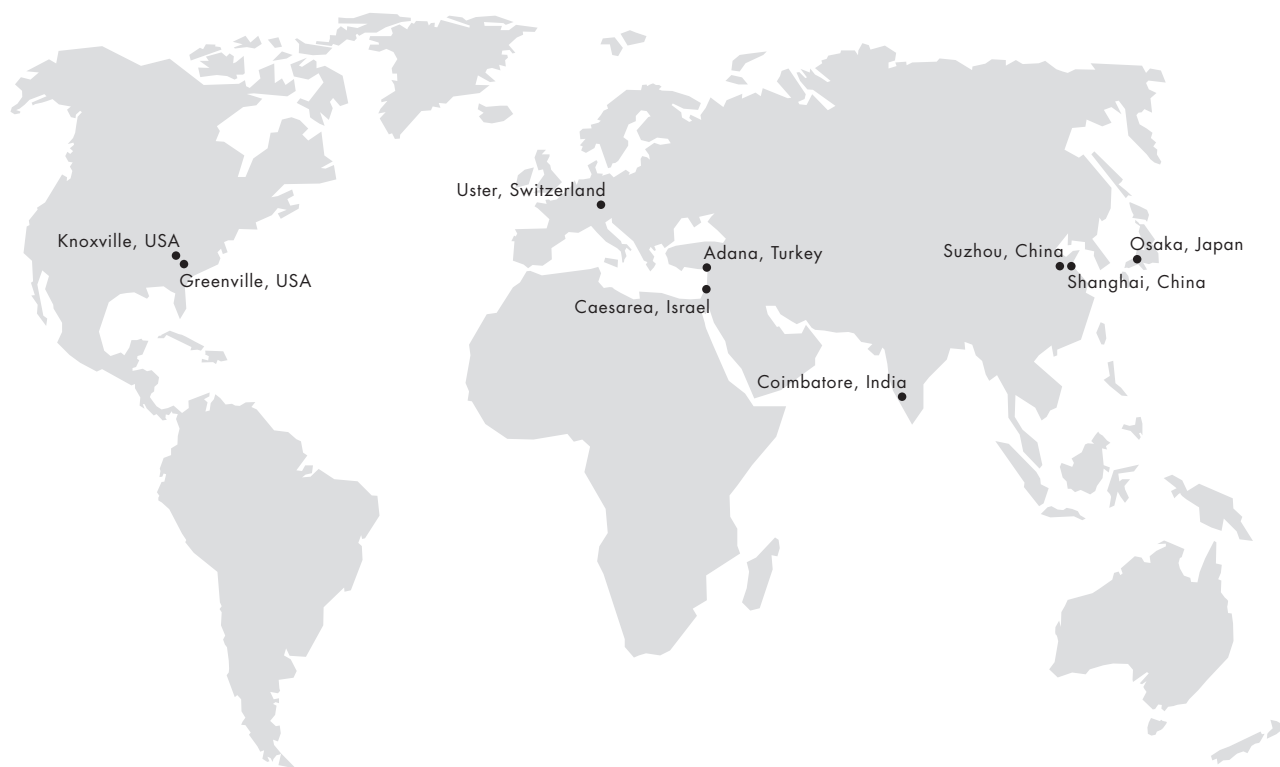
Positioning of yarn package: Recommended distance is one and a half times of the package height (H). See figure above



Positioning yarn package

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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