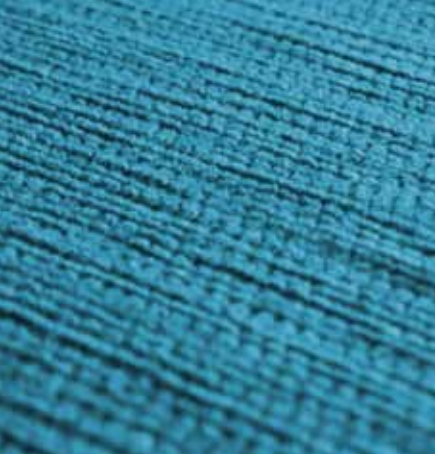
Textechno
textile testing technology

COVAMAT

Automatic Capacitive Evenness Tester
for Filament Yarn



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Automatic capacitive evenness tester for filament yarn

Nowadays a high degree of automation in filament yarn laboratories as well as a short response time to irregularities in the production process are key factors of a state-of-the-art quality control system.

Textechno's new COVAMAT meets all those requirements and matches the global standards for yarn evenness control measurements. The tester features a novel capacitive sensor design, a high-speed yarn twister and testing speeds up to 800 m/min in combination with an automatic package changer for 24 yarns.

As an alternative, the COVAFIL+ capacitive evenness tester without package change is still available either as a stand-alone unit or in combination with Textechno's well-proved filament yarn testers DYNAFIL ME+ and COMCOUNT.

COVAMAT
Automatic capacitive evenness tester for filament yarn

Technical Data

Test methods

- Measurement of mass variation with constant twist, speed, and pretension (standard test)
- Measurement of mass variation with variable twist, constant speed and constant pretension

System components

- Automatic package changer with 24 positions
- Adjustable yarn guides for optimum yarn positioning in capacitive sensor
- Capacitive sensor with integrated electronics
- Self-threading high-speed yarn twister
- Yarn feeder with nip roller
- Integrated temperature- and humidity sensors to monitor the laboratory climate

TESTCONTROL System

- State-of-the-art WINDOWS®-PC
- WINDOWS® operating system
- Open and documented data structure for easy data access, transfer and backup

Cabinet

- Textechno Aluminium cabinet on castors
- Dimensions HWD: 1950/ 830/ 700 mm
- Weight: approx. 145 kg
- Lacquer finish: RAL 9006/5002

Further technical data

- Linear-density range: 10 to 4000 dtex, other ranges on request
- Yarn speed: 1 to 800 m/min
- Twister speed: Up to 35000 rpm
- Power consumption: 230 V, 50 (60) Hz
- Compressed-air supply: 5 bar, 150 l/min (depending on settings)

Test Report

Statistics

Values displayed or printed

- Mean value (average)
- Median
- Standard deviation S
- Coefficient of variation Cv
- Confidence range (95%)
- U% (unevenness)
- Minimum value
- Maximum value

Sensor with Twister

Graphics

Mass/length-diagram
- Freely programmable cut lengths from 0.01 to 1000 m
- Half-inert and inert
- Optional 3D diagrams*

Spectrogram
- Max. wavelength: 1/4 of tested yarn length 160 channels, more channels on request
- Optional 3D spectrograms*

Length-variation curve
- Cut lengths from 2 cm to 1000 m
- Optional 3D variance length curve*

Data storage

Test results
- All measured data are stored on the hard disk of TESTCONTROL System.

Parameter storage
- All settings, group- and test-parameters are stored on hard disk

* in preparation

Backup
- Data and parameters can easily be copied to backup media, network devices etc. using WINDOWS® functionality
- Backup can be automated

Data transfer
- Data structure is open and documented. Data can be transferred to LIMS-, Quality-, and other data base systems

General

Languages
- German, English, Chinese, other languages on request

Units
- Linear density: dtex, den, tex, other units on request
- Speed: m/min, other units on request

Testing time
- 5 seconds to 12 minutes, longer times on request

The above technical contents can be subject to changes by Textechno.

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