



AUTOMATIC CUT AND WEIGH DENIER VARIATION ACCESSORY

Fineness (dtex, den) and evenness are two main key figures for the quality of filament yarns. But the time gap between the moment they leave the spinning position and their determination in the laboratory can cause the production of large lots of low quality yarn.

Such losses can be avoided. The special design of **ACW 600** in combination with the **DVA** module realizes the measurement of fineness and evenness of filament yarns only moments after they have left the spinning position - enabling fastest possible reaction to production irregularities.

The instrument shows an exceptionally high level of automation and flexibility since all essential parts of the measurement device are totally computer controlled - that includes fast change of testing parameters, automatic

data transfer, optimized handling and a sophisticated evaluation software including an expert system. This expert system automatically monitors the quality of the yarn. That liberates experts in the laboratory from evaluating the graphs of most individual samples, which is enormously time consuming and prevents them from taking care of further quality issues. **ACW 600/DVA** stands for faster testing, higher accuracy, automatic string up and sample removal, integrated automatic calibration, totally computer controlled and exceptionally easy handling. That means efficient process control in terms of high speed testing of differing yarn types with automatic data transfer in an instream process. **ACW 600/DVA** conforms to ASTM D6612 and D6587.

FILAMENT TESTING



Scope:

Automated evaluation of fineness and evenness of filament yarns by an expert system immediately after their production, with the aim of:

- Fast reaction to irregularities
- Independence from subjective influence in the judgement of measurement results
- High percentage of production tested
- Minimal man power for operation
- No impact from moisture on yarn (spin finish)
- Evenness and fineness of the same sample within one test run

Method:

The titer of the yarn is obtained by automatically cutting a certain length of yarn and weighing it onto an integrated balance - **ACW 600** - in compliance with ASTM D6587.

Evenness is determined by capacitive sensors. These sensors are automatically selected by the system according to the momentary fineness value - **DVA** - in accordance with ASTM D6612.

Results:

Results are displayed numerically and graphically in the software together with special key figures. These special key figures enable easy troubleshooting and make it easy to determine the source for any quality deviations.

ACW 600 Automatic Cut & Weigh

Titer range:

Titer determination:
up to 9444 dtex (8500 den)

Testing speed:

Up to 1300 m/min

Testing time:

20 - 35 sec/test
(depending on test modus, cut length and yarn speed)

Accuracy:

± 0.1 %

Sample feeding:

Automatic string-up and removal

Calibration:

Fully automatically in-between test runs

Pretension:

- Self-adjusting for textile yarns
- Servo-controlled yarn break for BCF-yarn

Power supply:

230/115 VAC ± 10 %
50/60 Hz, 1000 W

Evaluation and control unit:

PC with Windows®-based software

Lenzing Instruments software:

- Data storage for long-time analysis
- Product table
- Network capabilities
- Bar code sample identification

Evaluation and control unit:

90 psi instrument air, 40 scfm
(6 bar, 1.2 Nm³/min)

Optionally available:

- Bar code reader
- DVA module
- ASC 12 Automatic Sample Collector
- SESS Sequential End Sampling System
- OPC UA interface
- Ethernet IP

DVA Denier Variation Accessory

Reproducibility:

± 0.1 %

Titer range:

8 - 667 dtex (7 - 600 den)

Results:

With each test, results of fineness, evenness, U % and CV % are obtained. Special process key figures for easy troubleshooting include BGT: broken gear tooth, DFV: denier frequency variation DS: denier spread

Testing speed:

Up to 900 m/min

Length: 570 mm
Width: 950 mm
Height: 1340 mm
Weight: 233 kg

Data output:

Ethernet

Technical data and pictures are subject to change.