



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.

ACW 600/DVA

AUTOMATIC CUT & WEIGH DENIER VARIATION ACCESSORY

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:

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

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

ACW 600

Automatic Cut & Weigh

Denier range:

up to 8500 den (9444 dtex)

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 sample removal

Pretension:

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

Calibration:

Fully automatically in-between test runs

Power supply:

230 / 115 VAC ± 10 %,
50 / 60 Hz, 1000 W

Computer system:

Evaluation and control system consisting of: PC with Windows® operating system, keyboard, mouse and instruments cable

Lenzing Instruments software:

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

Air supply:

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

Options:

- DVA module
- Network communication
- SESS automatic bobbin changer
- OPC UA interface
- Ethernet IP

Dimensions:

H x W x D: 1340 x 950 x 570 mm
Weight: approx. 233 kg

DVA

Denier Variation Accessory
optional module

Reproducibility:

± 0.1 %

Denier range:

7 - 600 den (higher ranges on request)

Results:

Within one test run fineness, evenness and CV% are obtained. Additional special process key figures (BGT - broken gear teeth, DFV - denier frequency variation) for the continuously monitoring expert system are given.

Testing speed:

Up to 900 m/min

Technical data and pictures are subject to change!

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quality improvement

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