KEISOKKI
EVENNESS TESTER
model KET-80V/C & KET-QTV
Evenness Tester Model KET-80V/C for Windows

The Keisokki Evenness Tester Model KET-80V/C for filament, the new face operating on Windows, succeeds to the legacies of the former models. KET-80V/C, as well as the former models, reveals the characteristics of filament yarn in the terms of CV%, U%, AVE, CV(L)% etc. Plus KET-80V/C employs Windows technologies.

What are obtained from KET-80V/C?

- Numerical data from each individual test
  - CV% (coefficient of variation) and U% (mean deviation) of mass variations
  - AVE (relative yarn count or mean cross section)
  - Max% and Min% (maximum and minimum cross-sectional deviation from AVE)
  - R/2 (the half of the range, which is the sum of Max% and Min%)
  - CV(L)% with 4 reference lengths

- Graphic data from each individual test
  - Diagram of mass variations
  - Diagram of mass variations in inert or half-inert mode
  - Spectrogram with 160 channels at the maximum

- Statistics
  - Mean
  - Range (R)
  - Standard deviation (s)
  - CV%
  - 95% confidence limits (Q95)

- Others
  - CV(L)%
  - Overall spectrogram
  - Histograms of CV% and AVE

Components

Main components are as follows. A diagram recorder as a physical device is no longer used. The diagram is displayed on the screen.

- Measuring frame ME802
  - Sensor unit and Drive unit are fitted together in the measuring frame.

- Main evaluation frame MEF-V
  - A PC system for Windows and the KT-80V/C system including the spectrograph are embedded in the frame. The spectrograph is optional. Peripheral devices of a display unit, keyboard, mouse and laser printer are also optional. Windows is preinstalled.

- LABOBANK V/AD-C
  - This is the KET-80V/C program, which is preinstalled in the PC system of the main evaluation frame as well as Windows.

- Electronic tension device ETD-V
  - ETD-V gives a precise tension to the testing filament.

- Stand
  - The measuring frame is put on the stand. In addition, the materials tested are collected in the stand.

- Auto cop changer ACC (option)
  - ACC is available. Up to 24 bobbins can be automatically exchanged one after another.
### Technical data

#### Measuring specification

- **Range of material:** approx. 10 to 10,000 denier or 11 to 11,000 dTex
- **Dynamic measuring range:** ±100%, ±50%, ±25% and ±12.5%
- **Measuring mode:** either normal and half-inert modes or normal and inert modes
- **Material speed:** 25 to 800 m/min at every increment of 25 m/min
- **Evaluation time:** 10" to 19' 50" at every increment of 10"
- **Twisting speed:** 1,000 to 22,000 rpm
- **Twisting direction:** 5 or Z
- **Diagram recorder speed:** 2.5, 5, 10, 20, 25, 50 and 100 cm/min
- **Recording unit length:** equivalent to 20 cm length of recording paper
- **Significant CV% and U%:** 0.20% to 99.99%

#### Spectrograph (option)

- **Number of channels:** max. 160 channels
- **Wavelengths analyzed:**
  - 4 cm to 2,451.8 m at 800 m/min and 6 minutes
  - 2 cm to 1,225.9 m at 400 m/min and 6 minutes
  - 1 cm to 613.0 m at 200 m/min and 6 minutes
- **Amplification setting:** automatic or 0.1 to 99% by manual

#### CV(L)%

- **Number of channels:** 4 channels
- **Reference length:** 0.20 to 10.00 m

#### Electronic tension device ETD-V (option)

- **Range of tension:** 5 cN to 50 cN

#### Auto cop changer ACC (option)

- **Maximum number of bobbins:** 24
- **Type of knitter:** automatic fishermans knitter
- **Knotting cycle:** about 3 seconds
- **Trigger signal:** +12Vdc and 100 msec.

#### Power supply

- **Voltage:** either 100/110 Vac or 200/220 Vac
- **Frequency:** 50/60 Hz

#### Compressed air

- **Measuring frame:** 0.6 Mpa and about 4 m³/h
- **Auto cop changer:** 0.6 Mpa and about 4 m³/h

#### Size and Weight

- **Measuring frame:** 320 (W) x 646 (H) x 364 (D) mm and approx. 34 kg
- **Main evaluation frame:** 425 (W) x 180 (H) x 500 (D) mm and approx. 17 kg
- **Stand:** 340 (W) x 490 (H) x 450 (D) mm and approx. 14 kg
- **Electronic tension device:** 320 (W) x 240 (H) x 147 (D) and approx. 5.5 kg
- **Auto cop changer:** 535 (W) x 250 (H) x 259 (D) mm and approx. 30 kg
KET-QTV with 4 sensors

KET-QTV is an evenness tester for filament with 4 independent plug-in sensor units. Thus the user can test 4 bobbins at a time.

What does KET-QTV provide?

Numerical data from each individual test
- CV% (coefficient of variation) and U% (mean deviation) of mass variations
- Max% and Min% (maximum and minimum cross-sectional deviation from AVE)
- R/2 (the half of the range, which is the sum of Max% and Min%)
- CV (L) % with 4 reference lengths
- CV (half-inert) % and U (half-inert) %

Graphic data from each individual test
- Diagram of mass variations
- Diagram of mass variations in half-inert mode
- Spectrogram

Statistics
- Mean
- Range (R)
- Standard deviation (s)
- 95% confidence limits (Q95)

Technical data

Measuring specification
Sensor: capacitive sensor with one electrode
Sensor unit: max. 4 plug-in units with one sensor each
Range of material: on demand at the ratio "min. count / max. count = 1 / 6" out of the absolute range of 50 to 5,000 dTex,
(for example 100 to 600 dTex or 200 to 1200 dTex)
Material speed: 25, 50, 100, 200 and 400 m/min
Twisting speed: 1,000 to 11,000 rpm
Twisting direction: S or Z

Size and Weight
570 (W) x 1820 (H) x 630 (D) mm and approx. 150kg

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