

Software HCC - A

Honigmann Computer Control - Precision Abrasion Tester

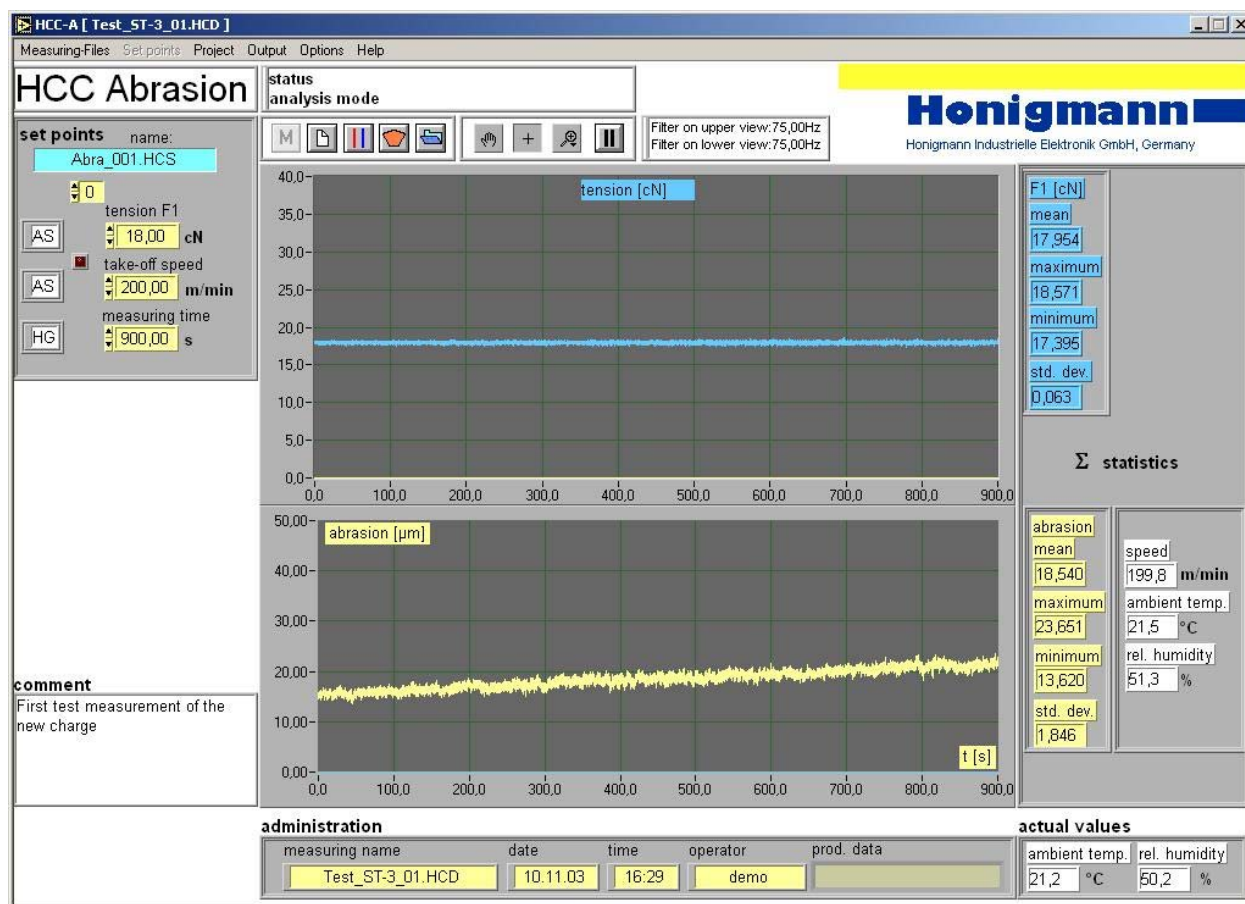
The HCC-A software, used in combination with the Honigmann abrasion tester, provides precision measurement of the abrasion characteristics of fibers and yarns.

Running on the Windows operating system platform HCC-A offers complete, high-level functionality for

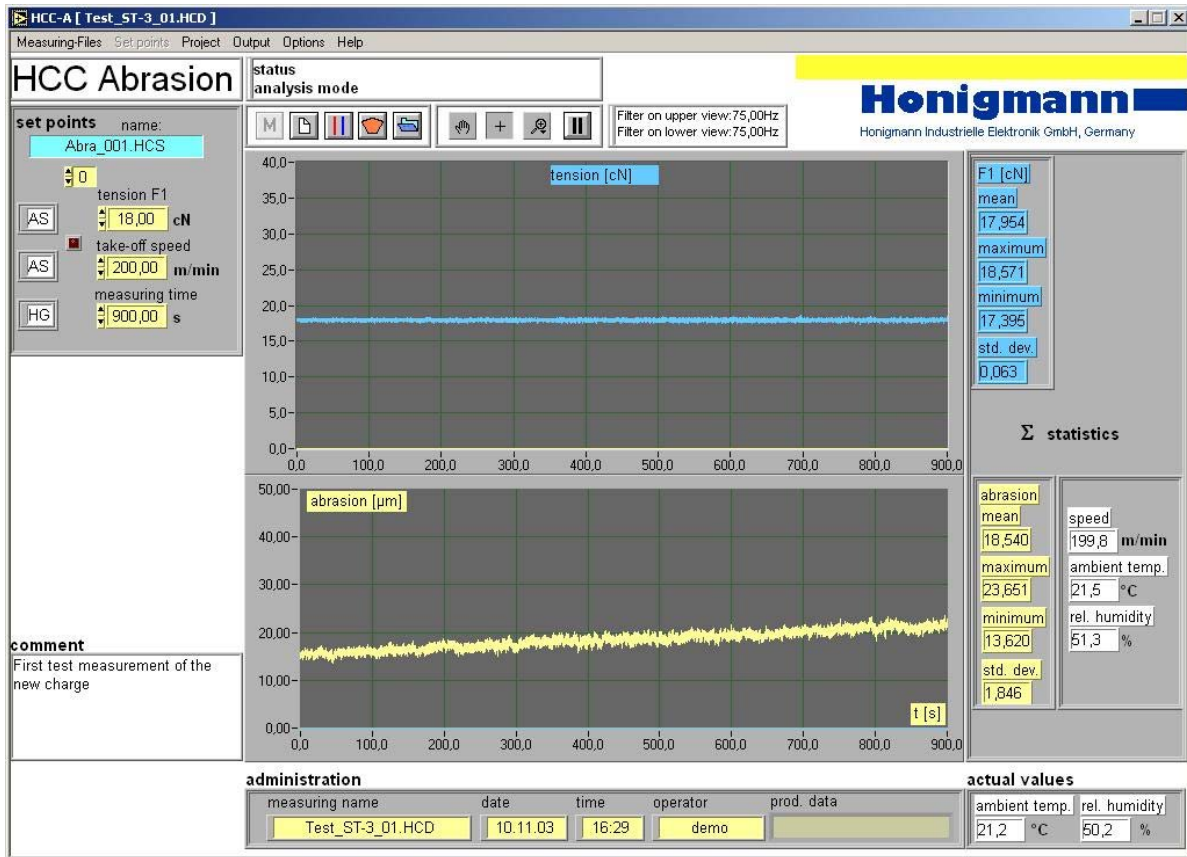
- online measurement data acquisition and evaluation,
- automatic documentation and output of the results.

HCC-A makes available to the operator all the advantages of a graphic user interface. Thanks to this the data acquisition, the evaluation of the measurement and, ultimately, the presentation of the results can be handled quickly and efficiently, with a minimum of operator effort.

The concept behind the overall system is consistently targeted on working to the specific testing standards and quality standards (e.g. DIN/ISO 900x). When recording the individual measurements not only the final results will be stored but all the peripheral parameters, as well, such as the F_1 tensile force, abrasion, take-off speed, measurement period, date, operator identification, temperature, relative humidity etc.



Measurement data acquisition and online depiction



The measured data are captured at a sampling rate of 200 measurements per second, at resolution of 16 bits.

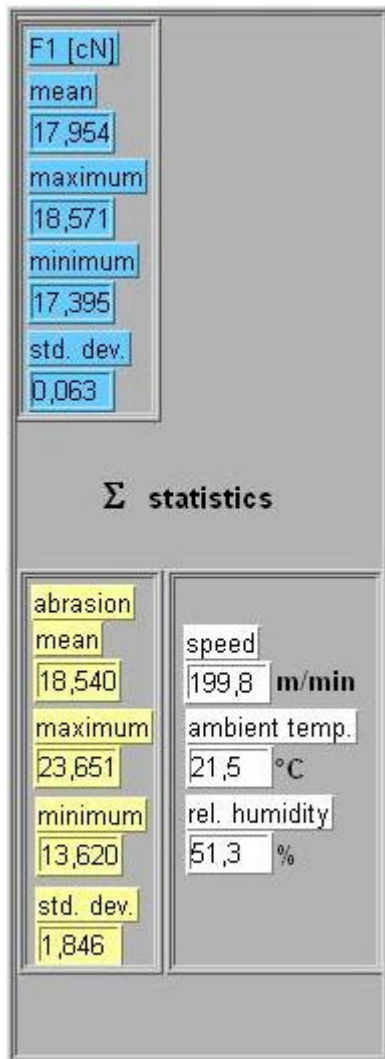
Shown in parallel, during the measurement, are the set-point values and

- the actual value for tensile force F_1
 - in analog form as a $y(t)$ chart (upper display area) and
 - digitally as a mean value over the previous 300 ms
- the abrasion value calculated online
 - in analog form as a $y(t)$ chart (lower display area) and
 - digitally as a floating mean value over 300 ms
- the actual values of the following parameters (shown digitally, in the right hand frame within the screen)
 - thread take-off speed
 - room atmosphere* (ambient temperature and relative humidity)
- information on the momentary software operation status

All the measured values are stored as the original values, without data compression, together with the associated measurement parameters, the comments and the statistical values. This makes it possible to call these data once again, whenever it may be required, and to carry out further assessments – in accordance with the state of the art valid at any given date. In addition, this makes for simple reconstruction of the measurements at any time.

* Provided that the appropriate functional module is installed at the HCC abrasion tester

Analysis capabilities and statistical evaluations



Once a measurement has run to completion the data captured for tensile forces F_1 and abrasion will be evaluated statistically:

- mean value
- maximum
- minimum
- standard deviation or coefficient for standard deviation c_v

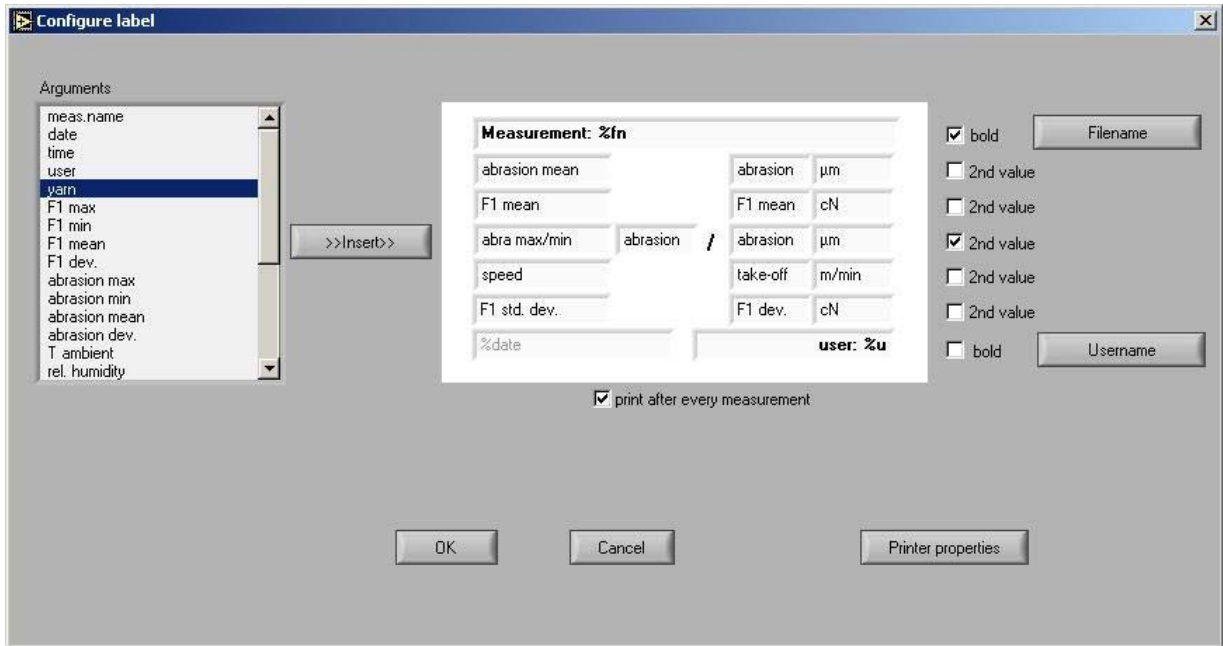
In addition to the evaluations described above, the HCC-A software offers further outstanding analysis options. Parameterization – within the limits imposed by values which make good mathematical and physical sense – can be specified as desired.

- zoom function for both display areas, in the t and y directions
- recalculation of the mean value across the zoomed sector
- recalculation of the peak values across the zoomed sector
- cursor functions with the current cursor position displayed
- complex evaluation of the abrasion signal
- FFT analysis**
- filter functions with adjustable cut-off frequencies

Each measurement can be provided with an individual comment.

** FFT: Fast Fourier Transformation – depiction of the frequency and amplitude spectrum

Output options for measurement and analysis values



The following output options are available for documentation purposes and to export the results:

- direct output of the analysis screen content (color or B/W) to an ink-jet or laser printer
- generating bitmap files (*.bmp) for post-editing using MS Paint or MS PowerPoint, for example
- label printing, at present with
 - 10 user-selectable measurement and analysis values in 5 lines
 - header / free text for each line
 - 2 free editable texts

| | |
|--|------------------|
| Measurement: Material Test 0235 | |
| abrasion mean | 0.2034 μm |
| F1 mean | 35.987 cN |
| abra max/min | 0.307 / 0.105 μm |
| speed | 80.0 m/min |
| F1 Std. dev. | 1.245 cN |
| 12.10.2002 | User: demo |

Minimum PC system requirements

- computer: Pentium III, 500 MHz, 128MB-RAM
- hard disk 4GB
- monitor and graphic card: min. 768 x 1024, 256 colours
- keyboard and mouse
- required plug-in space:
1 PCI-slot
- CD-ROM
- housing:
standard desktop or
miditower housing
(**no** slim-line housing)
- inclusive original operating system: Windows 2000, Windows XP,
German or English version
- inclusive installation programs for all accompanying drivers
(i.e. for monitor, graphic card etc.)
- other periphery: usual Windows standard