

# ELECTRONIC INSPECTION BOARD with ACCU-COUNT ENTANGLEMENT

LH-482 EIB-E



The entanglements in the yarn are responsible for holding the filaments together during the fabric formation so we can work with the yarn. Consistent entanglement-count and entanglement-uniformity are the most important characteristics of an entangled yarn.

The Electronic Inspection Board, EIB-E offers entanglement analysis based on the dynamic yarn diameter measurements. A CCD camera is used to measure the diameter values with 3.5micron precision when the yarn is moving at test speeds up to 300m/min.

As the yarn passes in front of the camera, the Accu-Count Entanglement Software, ACE counts the entanglements and searches for the missing ones in the yarn. The ACE report includes the number of entanglements per meter, standard variation, coefficient of variation, the maximum skip (no show length) and the skip count. The software can mark the good and the bad packages based on the Accept/Reject limits.

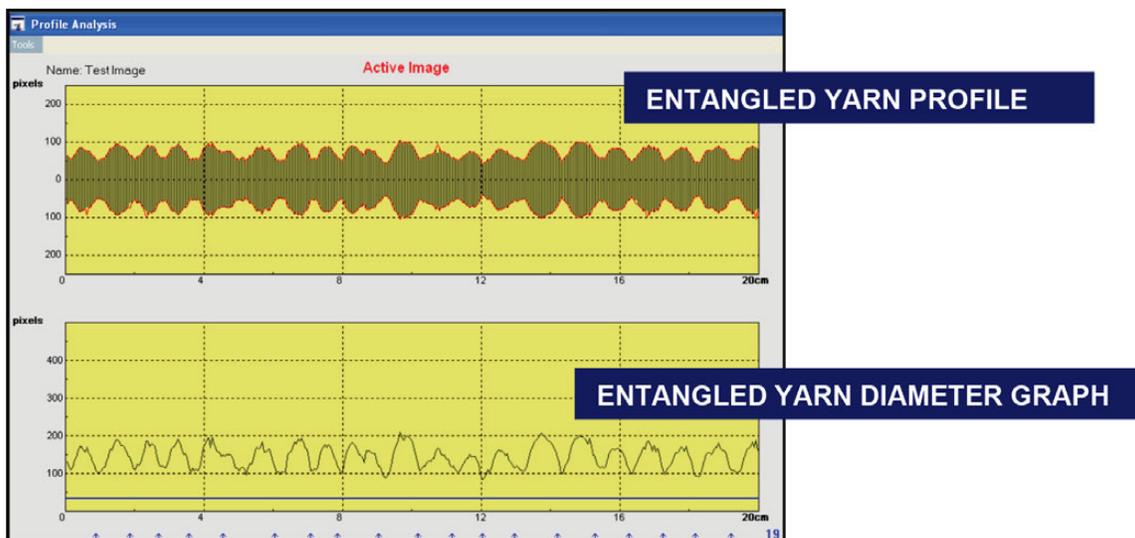
The test results and the diameter graphs are saved in common file formats. The profile of any individual package or the entire test can be viewed at any time. This unique feature provides the ability to look at the entanglements and verify how the entanglements are counted, which is not possible with any other entanglement counting systems in the market.

## FEATURES

- Dynamic test instrument for Entanglement Analysis based on yarn diameter measurement
- Ability to measure every 0.5mm of the yarn with 3.5micron precision
- Variable yarn speed from 20-300m/min
- Maintains constant Input Tension up to 30g on the running yarn
- Windows based, easy to use Accu-Count Entanglement (ACE) software to analyze the entanglements
- Can be equipped with a Package changer for continuous operation

## ADVANTAGES

- Constant monitoring and detection of yarn sections that are entangled and missing entanglements
- Automatic test parameter setup
- Entanglement statistics for average, min and max entanglement/meter, standard deviation, CV% and maximum skip (no show) length
- Accept/reject limits to identify good and bad packages
- Ability to view the diameter profile and test data of multiple or single packages
- Automatic saving of the test settings, results and diameter graphs
- Easy to share test reports in common file formats



## ACCU-COUNT ENTANGLEMENT SOFTWARE (ACE)

This software is Windows based and it is very easy to use. At the end of the test, it displays the statistics for individual test packages and the summary for the entire test.

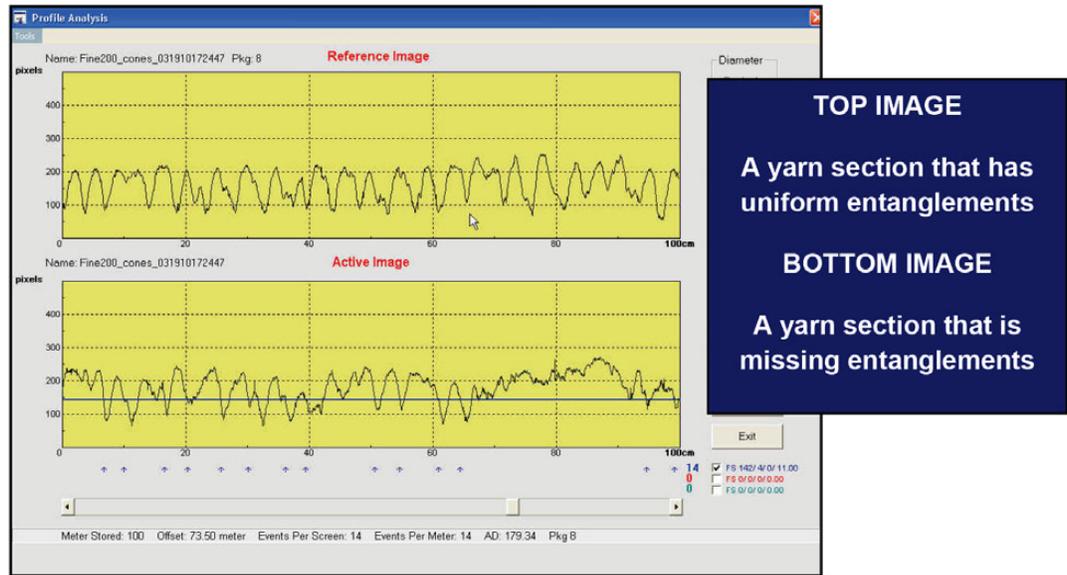
The screenshot displays the main interface of the ACCU-COUNT ENTANGLEMENT software. On the left, there are control panels for Test Speed, Input Tension, Test Mode (set to Production), Sample Length, Sample / Test, Total Tests, Test Length, and Waste Length. Below these is a Test Sequence section with a list of package numbers and buttons for Reset, Fill, Delete, Insert, and Enter. At the bottom left are START (F1) and STOP (F4) buttons. The main window shows a table of test results for individual packages, with some rows highlighted in yellow to indicate out-of-limit results. Below the table is a Summary Data section with a table showing overall statistics for GOOD and ALL tests. On the right, there are two graphs: a Test Graph showing a line plot of entanglement results and a Histogram showing the distribution of results. Callout boxes highlight these features.

Pkg. #	Avg. Ent/m	SD	CV%	Min	Max	Max Skip	SOL #
80#2	26.6	2.41	9.06	23.0	30.0	136	1
80#2	25.9	1.97	7.61	23.0	29.0	155	1
80#2	26.8	2.20	8.21	23.0	30.0	160	1
80#2	26.7	2.26	8.46	23.0	30.0	134	1
80#2	26.6	1.51	5.68	25.0	30.0	129	1
80#1	27.3	2.31	8.46	24.0	31.0	116	1
80#1	28.6	1.35	4.72	27.0	31.0	86	0
80#1	27.4	1.07	3.91	26.0	29.0	111	0
80#1	27.9	2.13	7.63	25.0	31.0	137	1
80#1	24.0	2.37	8.94	22.0	30.0	167	1

	#	Avg. Ent/m	SD	CV%	Min
GOOD	2	28.0	0.85	3.04	27.4
ALL	10	27.0	0.78	2.89	25.9

This screenshot shows the 'Include in PrintOut' and 'Sigma Control Limits' configuration windows. The 'Include in PrintOut' window has checkboxes for Heading, Good Tests, Reject Tests, Data Graphs, and Sigma Control Limits, all of which are checked. Below this is the 'Data Transfer' section with an 'Automatic' checkbox checked and a 'File Name(.csv):' field containing 'test2 limits\_0915061137'. The 'Sigma Control Limits' window shows a normal distribution curve with areas under the curve labeled A, B, and C, and their corresponding negative counterparts. Checkboxes for A, B, -B, and -C are all checked. Callout boxes highlight the 'Automatic Test Results Transfer' and 'Sigma Control Limit Setup' options.

ACE is the only software that can show you the entanglements that get counted. It will also allow you to compare different packages or the good/bad sections of the same package on the same graph.



**ACE SHOW AND COMPARE THE ENTANGLEMENTS**

## MODEL

LH-482 EIB-E Electronic Inspection Board with Accu-Count Entanglement

Electrical	115/220 VAC 50/60Hz (consult LH for other power supply)
Air	60 psi-clean air required
Dimensions	119 x 76 x 160cm (47 x 30 x 63 inches)
Weight	220kg (485 lbs)

*\*All specifications are subject to change.*

Contact us today for more information on any Lawson-Hemphill product!

## Lawson Hemphill

Room 303, Building 6, No. 398 Jinglian Road  
Minhang District, Shanghai, China 201108  
Phone: +86 21 54848783  
information@lawsonhemphill.com  
www.lawsonhemphill.com

