# INDUSTRIAL LABORATORY EQUIPMENT COMPANY

# Textile Testing Instruments

3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940
email: ile@ile-textiles.com

Catalog 2009 V01

# INDEX


| ITEM | Page Number |
|---|---|
| Micronaire Testers | 3 |
| Trash Analyzers | 3 |
| Hygrometers, Thermometers, & Recorders | 4-5 |
| Sliver Reels | 6 |
| Moisture - Humidity | 7-11 |
| Evenness Testers | 12-15 |
| Scales & Balances | 16-19 |
| Yarn Reels | 20-21 |
| Twist Testers | 22-23 |
| Inspection Winders | 24-25 |
| Durometers | 26 |
| Yarn: Friction Tester | 27 |
| Tension Meters | 28-29 |
| Stroboscopes | 30 |
| Tachometers, Yarn Length Indicator | 31 |
| Force Testers | 32-35 |
| Elmendorf Testers | 36 |
| Thickness Gauges | 37 |
| Mace Snag Testers | 38-39 |
| Abrasion Testers | 40-41 |
| Crock Meters | 42 |
| Gray Scales | 43 |
| Color Assessment Cabinets | 44 |
| Microscopes | 45-47 |
| Linen Testers | 48 |
| Optical Thread Counters | 48 |
| Fabric Yield, Fabric Cutters & Balances | 49-52 |
| Viscometers | 53 |
| Refractometers | 54 |
| pH Meters | 54 |
| Perspiration Testers | 54 |
| Ovens | 55-57 |
| Shrinkage Ovens | 58-59 |



**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Cotton Fineness Meter**
**(Micronaire tester)**
Complete with electronic vacuum pump, precision calibrated manometer and sample chamber.

**Calibration Cottons:**
**Call for details.**

**Shirley Analyzer**
**MK 2 – Cotton**
To determine the lint, trash and dust content within a sample of cotton fiber up to 100 grams. Also used to determine non-fiber content of synthetic fibers and to open and clean fibers for further testing. The analyzer uses the carding principle with air separation of lint and non-lint content. With wheeled trolley for portability.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Certified Hygrometer and Temperature Indicator
## Model: HTAB176

shows Relative Humidity and Temperature in both Fahrenheit and Centigrade at a glance. The Abbeon Certified Hygrometer Model HTAB-176 is certified to be accurate within ± 3% RH. The dial indicates the complete range of 0 to 100% relative humidity. Each instrument has been tested at three different positions of the dial at temperatures ranging from 32° to 230°F. The calibration and certification are done under ISO-9001 control. The bi-metallic thermometer on the model HTAB-176 is accurate to ±1% of scale with a range of -20 to 100° Centigrade and 0 to 210° Fahrenheit. Graduations are 1° for Centigrade, 2° Fahrenheit and 1% RH.

Both the humidity and temperature are directly read without any calculations whatsoever. Solid 6-inch overall brass case drilled for wall mounting. Shipping weight: 3 pounds. Color differentiated 5-inch dial with black letters and numbers and a red pointer.

## Thermometer
## Fahrenheit and Celsius
## Model: TAB77

The easy-to-read 5-inch dial indicates the temperature in a range of -20 to 120° Fahrenheit or -30 to 50° Celsius. The pointer actuated by a bi-metallic strip, reads with an accuracy of ±1% of scale. Comes with a one-year guarantee and five-year warranty.

Color differentiated 5-inch dial, 6-inch overall solidbrass case, shipping weight: 3 pounds.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Temperature & Humidity Recorders

**Multi-feature Temperature/Humidity Chart Recorder**
Model: **TH803**

With so many features it's sure to meet your monitoring needs!
- -8" chart size
- -Digital display and audio/visual alarms
- -Remote probe for hard-to-reach places

Other models available; please call or email for latest information & pricing.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Sliver Reels

**ROVING/SLIVER REEL – Model: ILE-EZ-36**
Hand operated, 36" circumference, complete with counter to 999 yards.

**ROVING/SLIVER REEL – Model: ILE-EZ-1M**
Hand operated, 1-meter circumference, complete with counter to 999 Meters.

**ACCU-REEL**
**Model: ILE-AR-18-E**
Automatic motorized reel with electronic counter and circuits for control of fast and slow speeds. Soft start and stop. 1-yard circumference. Power requirement: 115 Volts, 60 Hz. Also available in 220 Volt, 50-60 Hz.

**ACCU-REEL**
**Model: ILE-AR-18-M**
Automatic motorized reel with electronic counter and circuits for control of fast and slow speeds. Soft start and stop. 1-meter circumference. Power requirement: 115 Volts, 60 Hz. Also available in 220 Volt, 50-60 Hz.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Moisture Balances

## ILE-MB-35 MOISTURE BALANCE

Moisture determination balance. 35-gram capacity, 0.005-gram sensitivity/0.05%. Automatically determines moisture or solid content and can display both in percentage. Dual LCD display for easy programming of parameter settings.

## ILE-MB-45 MOISTURE BALANCE

Moisture determination balance. 45-gram capacity, 0.001-gram sensitivity/0.01%. Automatically determines moisture or solid content and can display both in percentage. Dual LCD display for easy programming of parameter settings.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Moisture Oven

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Portable Moisture Monitors

## Model M-200 Analog Moisture Meter

The Portable Moisture Monitor Model M-200 is a world standard for the measurement of moisture in cotton and other fibers and blends from raw stock to finished fabric. It also finds use in other hygroscopic materials such as paper, cigarette filter material and tobacco. A variety of sensing probes make the M-200 adaptable to many moisture applications in which material contact is allowed. Its features include...

- Easy-to-read analog meter with multiple scales for different materials and measurement ranges. Simple operating instructions are located on the back of the M-200 enclosure for easy use.
- All types of interchangeable sensing probes include hand rollers, needle probes, weighted surface probe, and long needle probes with spring-loaded guides, edge sensors, and special probe for insertion into tobacco bales.
- The M-200 is offered in three versions depending on application. The standard version is the Model M-200D which provides normal regain measurement ranges for most textile and related materials.
- The Model M-200B is the same as the Model M-200D but adds a special measuring circuit and range setting for higher moisture applications such as size add-on and wet pickup.
- The Model M-200C is designed for ease of use in the cotton ginning industry. It provides three very simple measurement ranges for lint and seed cotton. The Model M-200D includes all of the M-200C ranges and more.
- The Model M-200 is broadly used worldwide in the cotton marketplace.

Probes listed on page 11

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Model M-400 Digital Moisture Meter

The Portable Moisture Monitor Model M-400 takes the world standard Model M-200 to the digital era. It has all the measurement ranges of the M-200 simplified into one full-span digital range. There is only one simple calibration setting to convert from the standard cotton scaling to other fibers, blends, and materials. And it uses the same interchangeable sensing probes as the M-200. Its features include...

- Easy-to-read digital meter displays moisture to 0.1% precision. Pushbutton access to a 3-digit calibration factor allows easy setup for different fibers, blends and materials. A comprehensive list of calibration settings is provided.
- All types of interchangeable sensing probes include hand rollers, needle probes, weighted surface probe, long needle probes with spring-loaded guides, edge sensors, special probe for insertion into tobacco bales.
- The Model M-400 can be used for all applications for which the M-200 models are used. Its linearized digital display provides the potential for many more uses.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Moisture Probes:
# (Used with both the
# Analog and Digital Meters)

Hand Roll, Type HR-20, for warp and fabric,
(Available with spikes for carpet, pile side)

Yarn Probe, Type NP-20A, for packaged yarn, and loom beams

**Replacement Needles For Yarn Probe**
**-**

**model: NP-NEEDLE**
Half moon plate containing 3 needles.
(Note: 2 plates required for each probe.)
Size: Standard

**model: NP-NEEDLE-HD**
Half moon plate containing 3 needles.
(Note: 2 plates required for each probe.)
Size: Special ILE Heavy Duty Needles

Surface Probe, Type WS-20, for open stock, picker laps, card sliver, roving, wool top, skeins, hanks, and loose yarn.

Single-End Probe, Type ES-20, for warp selvage, single ends, sliver, and roving

Bale Probe, Type LP-20, for baled stock

Bale Probe, Type SP-20, for baled stock

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

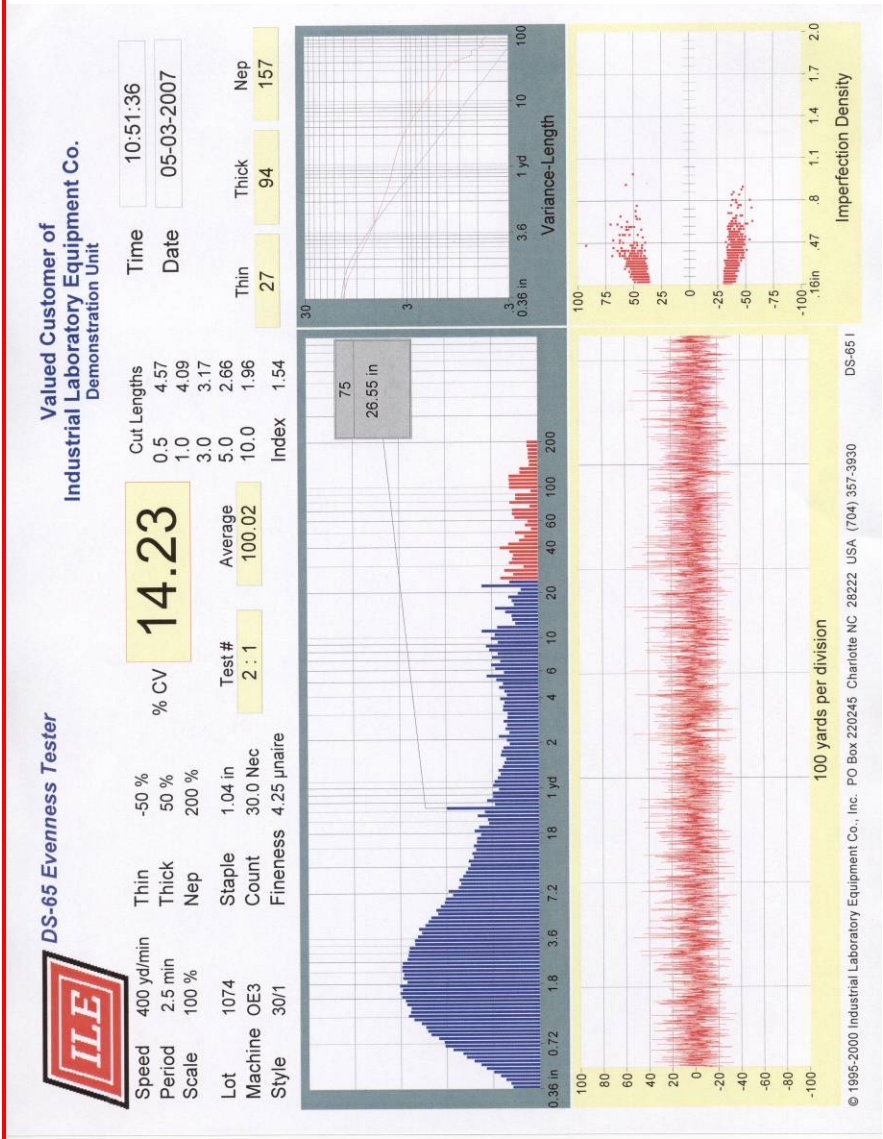
# ILE DS-65
# Evenness Tester

## ILE DS-65 Digital Evenness Tester System

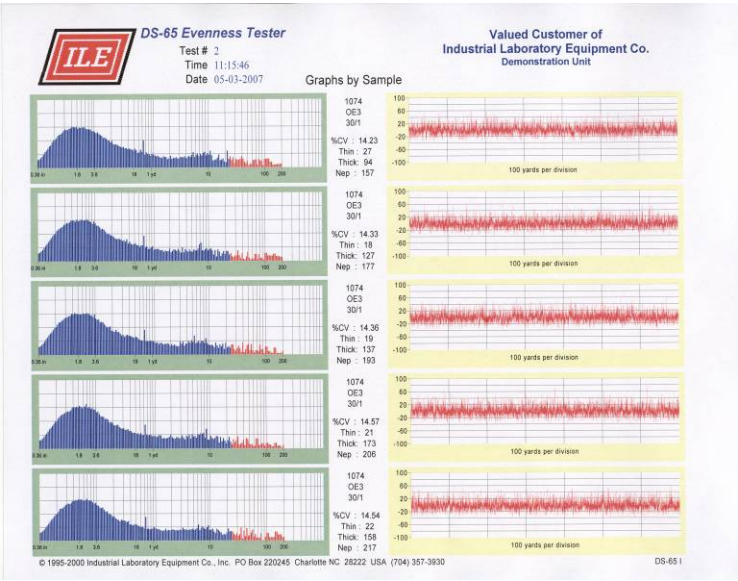
Digital Evenness Tester Series 4 software with 172 channels of *Ultra Scan* high-resolution Spectrogram and Diagram *fault* detection, Imperfection counter, Imperfection Density Screen, Variance Length Chart, Statistical data page, and memory storage of all tests. Price includes setup and training. System includes:

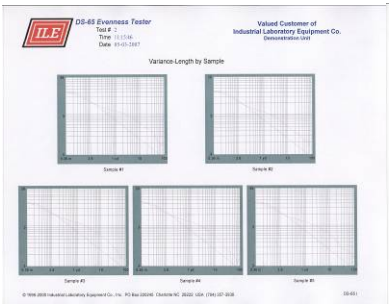
- ILE A2G2 Interface Box
- UT I-MO-B Monitor or UT II –MO-B
- Dell Computer w/ ILE Software
- Color Printer
- Flat Screen LCD Video Monitor

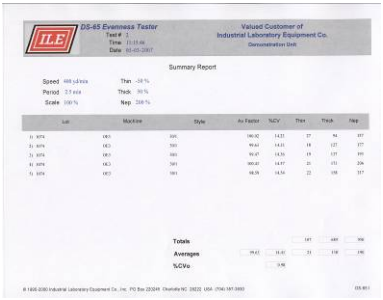
**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

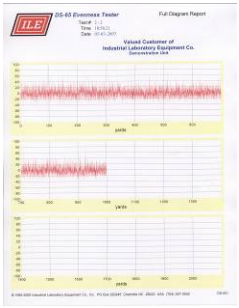



**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com



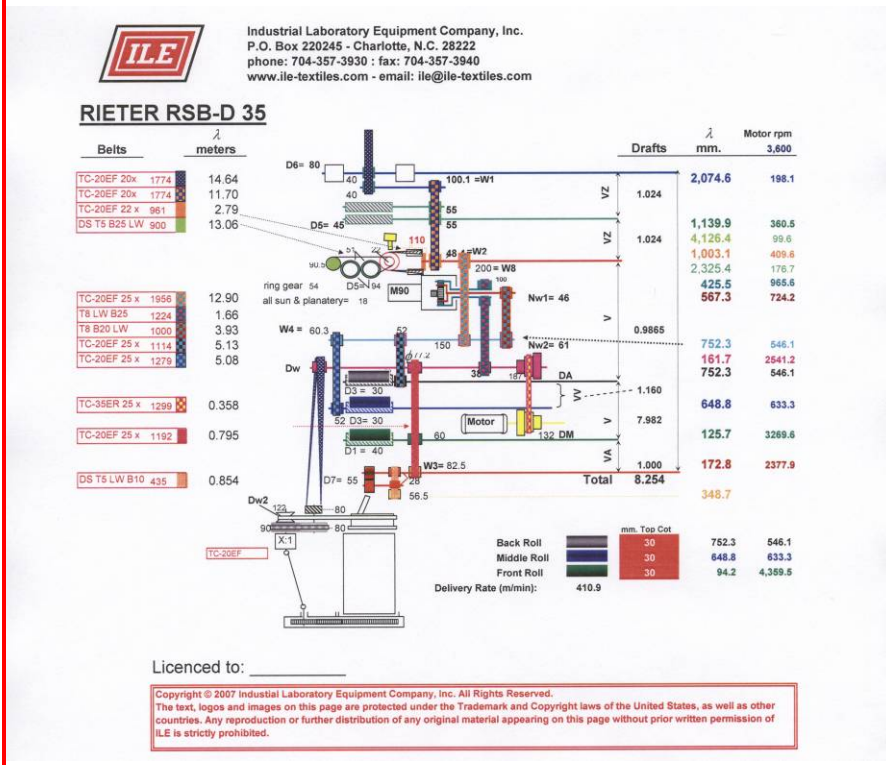



**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

| Date | Time | Test Number | Package number | Spectrograph period | Average Factor | Standard Deviation | CV% | Deviation | U% | Index | Cut length 1 | Cut Length 2 | Cut Length 3 | Cut Length 4 | Cut Length 5 | Thick count | Thin Count | Nep Count | Sig Spg Channel | Rel Spg Channel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/21/2005 | 17:34:21 | 2 | 1 | 0 | 100.014 | 33.7 | 33.696 | 25.138 | 25.135 | 4.637 | 7.021 | 4.759 | 2.613 | 2.029 | 1.368 | 2152 | 1290 | 3154 | 121 | 1 |
| 3/21/2005 | 17:35:55 | 2 | 2 | 0 | 99.769 | 33.685 | 33.763 | 25.06 | 25.118 | 4.646 | 6.989 | 4.988 | 2.683 | 2.149 | 1.389 | 2153 | 1292 | 3148 | 121 | 1 |
| 3/28/2005 | 16:56:52 | 1 | 1 | 0 | 100.183 | 33.781 | 33.719 | 25.165 | 25.119 | 4.64 | 6.801 | 4.763 | 2.703 | 1.908 | 1.188 | 2167 | 1287 | 3154 | 121 | 1 |
| 3/28/2005 | 17:00:19 | 1 | 2 | 0 | 100.843 | 33.998 | 33.713 | 25.277 | 25.066 | 4.639 | 7.029 | 4.798 | 2.684 | 1.998 | 1.162 | 2180 | 1282 | 3144 | 121 | 1 |
| 3/28/2005 | 17:02:35 | 2 | 0 | 0 | 100.975 | 34.064 | 33.735 | 25.335 | 25.09 | 4.642 | 6.944 | 4.848 | 2.678 | 2.035 | 1.169 | 2173 | 1280 | 3141 | 121 | 1 |
| 3/28/2005 | 17:04:27 | 3 | 0 | 0 | 100.425 | 33.858 | 33.715 | 25.201 | 25.095 | 4.64 | 7.081 | 4.833 | 2.651 | 1.886 | 1.314 | 2174 | 1286 | 3136 | 121 | 1 |
| 3/29/2005 | 15:49:05 | 1 | 1 | 0 | 99.971 | 0.266 | 0.266 | 0.155 | 0.155 | 0.037 | 0.211 | 0.206 | 0.185 | 0.173 | 0.079 | 0 | 0 | 0 | 121 | 1 |
| 3/29/2005 | 15:51:49 | 2 | 1 | 0 | 100.064 | 33.686 | 33.664 | 25.107 | 25.091 | 4.633 | 7.048 | 4.842 | 2.646 | 1.901 | 1.336 | 2147 | 1289 | 3135 | 121 | 1 |
| 3/29/2005 | 15:53:31 | 2 | 2 | 0 | 84.612 | 20.531 | 24.265 | 15.237 | 18.008 | 3.339 | 13.31 | 12.933 | 12.585 | 12.467 | 12.299 | 574 | 344 | 837 | 121 | 1 |
| 3/29/2005 | 16:18:58 | 3 | 1 | 0 | 99.846 | 32.588 | 32.638 | 24.022 | 24.059 | 4.491 | 6.916 | 4.829 | 2.722 | 2.15 | 1.248 | 2138 | 1288 | 3114 | 121 | 1 |
| 3/29/2005 | 16:22:18 | 4 | 1 | 0 | 100.489 | 31.745 | 31.591 | 23.107 | 22.995 | 4.347 | 6.908 | 4.757 | 2.59 | 1.944 | 1.28 | 2144 | 1276 | 3118 | 121 | 1 |
| 3/29/2005 | 16:24:56 | 4 | 2 | 0 | 100.508 | 31.717 | 31.557 | 23.13 | 23.013 | 4.343 | 6.641 | 4.692 | 2.652 | 1.962 | 1.296 | 2139 | 1287 | 3123 | 121 | 1 |
| 3/29/2005 | 16:39:46 | 4 | 3 | 0 | 100.593 | 31.825 | 31.637 | 23.184 | 23.047 | 4.354 | 6.873 | 4.804 | 2.677 | 2.003 | 1.395 | 2144 | 1282 | 3109 | 121 | 1 |
| 3/29/2005 | 16:41:09 | 5 | 1 | 0 | 99.736 | 31.869 | 31.953 | 23.311 | 23.373 | 4.397 | 7.057 | 4.873 | 2.748 | 1.955 | 1.114 | 2140 | 1289 | 3111 | 121 | 1 |
| 3/29/2005 | 16:43:05 | 5 | 2 | 0 | 99.695 | 31.845 | 31.943 | 23.258 | 23.329 | 4.396 | 6.929 | 4.792 | 2.608 | 2.01 | 1.216 | 2157 | 1273 | 3109 | 121 | 1 |
| 3/29/2005 | 16:44:57 | 6 | 1 | 0 | 100.73 | 32.207 | 31.973 | 23.503 | 23.333 | 4.4 | 7.011 | 4.801 | 2.649 | 1.965 | 1.224 | 2145 | 1277 | 3111 | 121 | 1 |
| 3/29/2005 | 16:47:06 | 7 | 1 | 0 | 100.422 | 32.127 | 31.992 | 23.453 | 23.355 | 4.403 | 5.571 | 3.857 | 2.156 | 1.471 | 0.919 | 2146 | 1280 | 3114 | 121 | 1 |
| 3/29/2005 | 16:49:38 | 7 | 2 | 0 | 100.338 | 32.053 | 31.946 | 23.435 | 23.356 | 4.396 | 5.509 | 3.892 | 2.124 | 1.418 | 0.923 | 2148 | 1282 | 3116 | 121 | 1 |
| 3/29/2005 | 16:54:22 | 8 | 1 | 0 | 99.536 | 30.785 | 30.928 | 22.251 | 22.354 | 4.256 | 5.644 | 3.845 | 2.145 | 1.612 | 1.009 | 2138 | 1284 | 3112 | 121 | 1 |

## ILE DS-65 Gear Diagram




**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE Textile Multi-Scales

## Statistical Textile Multi-Scale System

Multi-Scale processor with electronic balance and printer with readout in Yarn Count, roving, grains, grains per yard, grams, pounds, denier, tex, worsted, wool run, ounces per sq./yd, grams per sq./meter, ounces, length in yards of package, high, low, range, average, standard deviation, and %CV. Instantly updates and displays data with each input. Histogram available for each run or batch. Selectable test length or sample size.

| | |
|---|---|
| **Model: ILE-90-LS-600** | **Capacity 600 x .01 gram** |
| **Model: ILE-90-LS-3000** | **Capacity 3000 x .01 gram** |
| **Model: ILE-90-ASZ-80** | **Capacity 80 x .0001 gram** |

**Other Capacities available upon request.**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Textile Multi-Scales

- **Yarn Count**
- **Worsted**
- **Decitex**
- **Denier**
- **Metric Count**

**Textile Balances –** Stand alone with out Statistics
Electronic balance with read out in standard units: grams (g), ounces (oz), pounds (lb), grains (GN); plus textile units: Yarn Count, Worsted, Tex, Decitex, Denier, and Metric Count. (Does not perform statistical function)

**For short length samples, 1 yard (Ne) / 90 centimeter (Denier).**

| | |
|---|---|
| **Model ILE-MS-A-OE-62** | **Capacity 62 x .0001 gram** |
| **Model ILE-MS-A-OE-110** | **Capacity 110 x .0001 gram** |
| **Model ILE-MS-A-OE-210** | **Capacity 210 x .0001 gram** |

**For Full samples, 120 Yard (Ne) / 90 meter (Denier).**

| | |
|---|---|
| **Model ILE-MS-AT-65** | **Capacity 65 x .0001 gram** |
| **Model ILE-MS-AT-110** | **Capacity 110 x .0001 gram** |
| **Model ILE-MS-AT-260** | **Capacity 260 x .0001 gram** |
| **Model ILE-MS-PT-51** | **Capacity 51 x .001 gram** |
| **Model ILE-MS-PT-210** | **Capacity 210 x .001 gram** |
| **Model ILE-MS-LT-210** | **Capacity 210 x .01 gram** |
| **Model ILE-MS-LT-2100** | **Capacity 2100 x .01 gram** |
| **Model ILE-MS-LT-3100** | **Capacity 3100 x .01 gram** |

**Available accessories:**
**Internal Calibration**
**Thermal Printer**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# General Purpose Balances

High resolution dot matrix display can display 2 units at one time. Electronic balance with read out in 14 units including: grams (g), ounces (oz), pounds (lb), grains (GN), and 1 Custom Unit (Cst). Powered by AC adapter included. Internal Calibration available.

Analytical models (4 decimal places). Include Square Glass Draft shield with flip top and two sliding side doors.

**Model ILE-A-OEP-(capacity)**

Capacity 62 x .0001 gram
Capacity 110 x .0001 gram
Capacity 210 x .0001 gram
Capacity 0-100 x .0001, 100-210 x .001 gram

Precision models (3 decimal places). Include Square Glass Draft shield with flip top and two sliding side doors.

**Model ILE-P-OEP-(capacity)**

Capacity 210 x .001 gram
Capacity 410 x .001 gram
Capacity 610 x .001 gram
Capacity 100 x .001 & 410 x .01 gram

2 decimal place models.

**Model ILE-L-OEP-(capacity)**

Capacity 610 x .01 gram
Capacity 2100 x .01 gram
Capacity 4100 x .01 gram
Capacity 6100 x .01 gram
Capacity 1000 x .01 & 4100 x .1 gram

1 decimal place models.

**Model ILE-G-OEP-(capacity)**

**Capacity 4100 x .1 gram**
**Capacity 6100 x .1 gram**
**Capacity 8100 x .1 gram**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

Electronic balance with read out in 17 units including: grams (g), ounces (oz), pounds (lb), grains (GN), and 1 Custom Unit (Cst). Powered by AC adapter included. Internal Calibration available.

Analytical models (4 decimal places). Include Square Glass Draft shield with flip top and two sliding side doors.

**Model ILE-A-OAP-(capacity)**

Capacity 65 x .0001 gram
Capacity 110 x .0001 gram
Capacity 260 x .0001 gram

Precision models (3 decimal places). Includes Round glass windscreen with removable top.

**Model ILE-P-OAP-51**

Precision models (3 decimal places). Includes Square Glass Draft shield with flip top and two sliding side doors.

**Model ILE-P-OAP-(capacity)**

Capacity 210 x .001 gram
Capacity 310 x .001 gram.

2 decimal place models.

**Model ILE-L-OAP-(capacity)**

Capacity 210 x .01 gram
Capacity 410 x .01 gram
Capacity 810 x .01 gram
Capacity 2100 x .01 gram
Capacity 3100 x .01 gram

1 decimal place models.

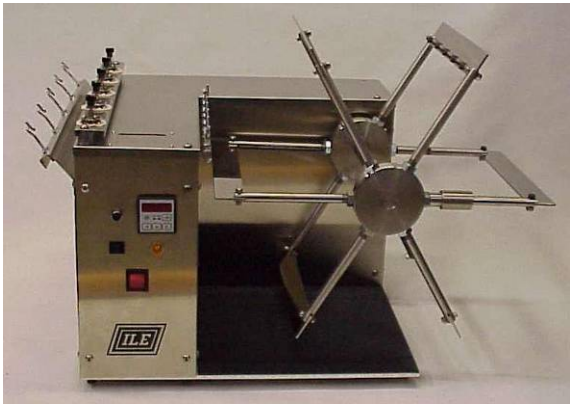
**Model ILE-G-OAP-(capacity)**

Capacity 2100 x .1 gram
Capacity 4100 x .1 gram
Capacity 8100 x .1 gram

**Many other models available; contact ILE with required capacity & readability.**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE Yarn Reels



ILE Skein Reels incorporate advanced design and economy into a rugged and versatile stainless steel laboratory instrument. All models provide heavy duty wrap arms with collapsible tension release for easy removal of skeins, cams to provide a constant rate of traverse to insure the yarn lies even across the fly, and digital counters to provide precision stopping.

**Table Top Yarn Skein Reel**

- Specify Motorized or Hand Operated Model (picture not shown).
- Available In 5 Or 6 Skeins
- Includes Individual Tension Discs
- 18 inch square base
- Also available in 8 Skein model with an18 inch x 24 inch base.

**Fly Circumferences Available:**
54 inch = 1 ½ Yard, 36 inch = 1 yard, 1.125M = 1- 1/8 Meter, 1M = 1 Meter

**Models Available:**

| **Hand operated, 5 position** | **Hand operated, 6 position** |
|---|---|
| ILE-5-SKRH-36 | ILE-6-SKRH-36 |
| ILE-5-SKRH-54 | ILE-6-SKRH-54 |
| ILE-5-SKRH-1M | ILE-6-SKRH-1M |
| ILE-5-SKRH-1.125M | ILE-6-SKRH-1.125M |

| **Motorized, 5 position** | **Motorized, 6 position** | **Motorized, 8 position** |
|---|---|---|
| ILE-5-SKRM-36 | ILE-6-SKRM-36 | ILE-8-SKRM-36 |
| ILE-5-SKRM-54 | ILE-6-SKRM-54 | ILE-6-SKRM-54 |
| ILE-5-SKRM-1M | ILE-6-SKRM-1M | ILE-6-SKRM-1M |
| ILE-5-SKRM-1.125M | ILE-6-SKRM-1.125M | ILE-6-SKRM-1.125M |

**Specify Voltage for Motorized Units.**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Free Standing Single Fly Yarn Skein Reel**

- Available In 10 Or 12 Skeins
- Includes Individual Tension Discs
- 31 inch x 24 inch base
- Specify Voltage for Motorized Units.

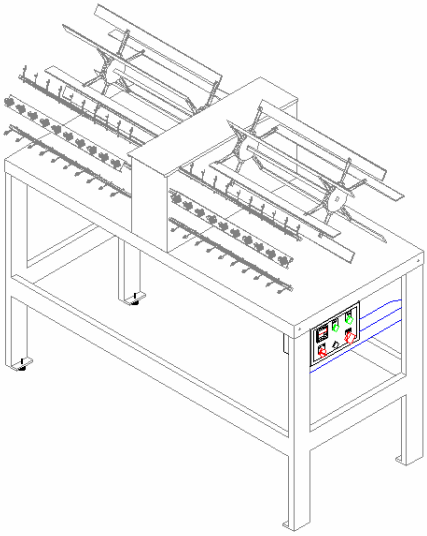
**Fly Circumferences Available:**
54 inch = 1 ½ Yard,
36 inch = 1 yard,
1.125M = 1- 1/8 Meter,
1M = 1 Meter

**Models Available:**
**Motorized, 10 position**
ILE-10-SKRM-36
ILE-10-SKRM-54
ILE-10-SKRM-1M
ILE-10-SKRM-1.125M

**Motorized, 12 position**
ILE-12-SKRM-36
ILE-12-SKRM-54
ILE-12-SKRM-1M
ILE-12-SKRM-1.125M

**Free Standing Dual Fly Yarn Skein Reel**

- Available In 20 Skeins
- Includes Individual Tension Discs
- 55 inch x 24 inch base



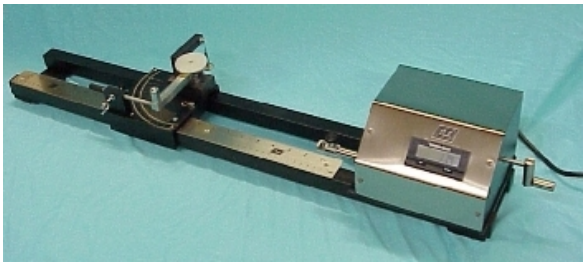
**Models Available:**
**Motorized, 20 position**
ILE-20-SKRM-36
ILE-20-SKRM-54
ILE-10-SKRM-1M
ILE-10-SKRM-1.125M

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE Twist Testers

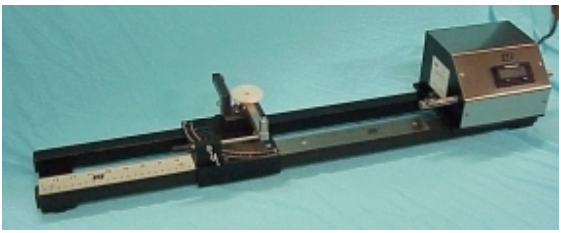
## Twist Tester – Model: ILE-ITC-5-H

Hand operated twist tester, for plied and singles yarn, 0-20 inches and 0-50 centimeters. For both S and Z Twist. Battery activated lamp indicates proper tension and completed test for singles yarns. Counter power supply: specify 120-220 Vac, or battery pack.



## Motorized Twist Tester – Model: ILE-ITC-5-M

Motor operated twist tester, for plied and singles yarn, 0-20 inches and 0-50 centimeters. For both S and Z Twist. Battery activated lamp indicates proper tension and completed test for singles yarns.

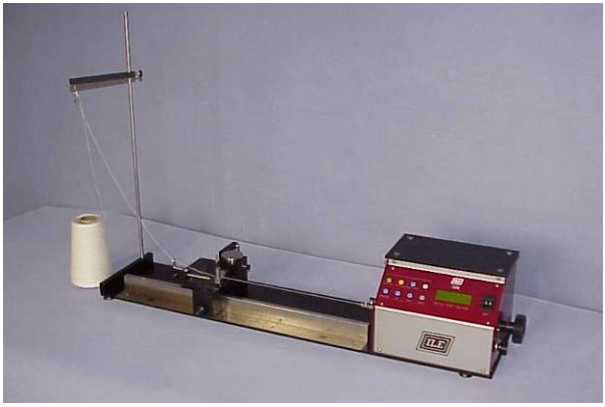


**Both Models also available in 100 inch.**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Electronic Digital Twist Tester – Model: ILE-DE-5

Semi-Automatic testing of single or plied yarns. Digital displays of twist for sample length tested, as well as twist per unit selected (twist per inch, twist per centimeter). Automatically stops at end of test. Allows multiple test of same sample. Variable speed. Specify 110 or 220 volts, 50/60 Hz.

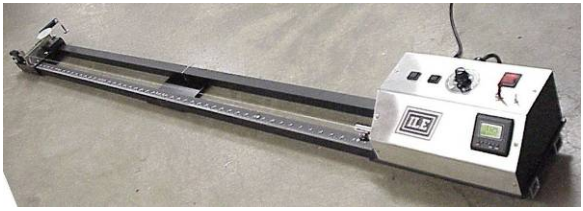


## Digital Microprocessor Twist Tester – Model: ILE-DTC-2000

Semi-Automatic testing of single or plied yarns. Digital displays of twist for sample length tested, as well as twist per unit selected (twist per inch, twist per centimeter). Automatically stops at end of test. Allows multiple test of same sample. Variable speed. Sample memory of groups or batch tests. Statistical data of multiple samples provided in addition to high, low, range, and average. Printer included. Specify 110 or 220 volts, 50/60 Hz.

## Twist Insertion – Model: ILE-ITD-28

Twist Insertion Instrument. For inserting various twists in yarns. 0-20 inches and 0-50 cm. Specify S or Z twist when ordering.



## Twist Insertion – Model: ILE-ITD-32S

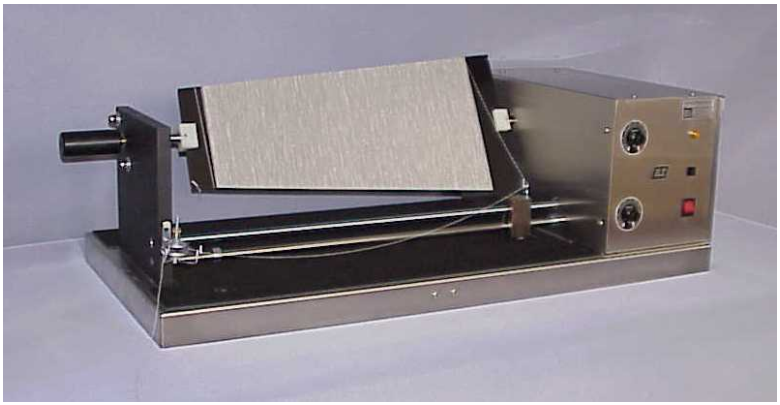
Designed to allow the inserting of various twists in yarns for research and development. Unit comes ready for 0-20 inch and 0-50 cm testing with bi-directional electronic counting in S or Z rotation. Pre-Set allows for exact duplication of samples. Complete with extension for 0-50 inch or 0-160 cm samples. Standard tension weights included. 110V, 60 hz

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE Inspection Winders

## BOARD WINDER, Model: ILE-TPR-5

Taper-ray Trapezoidal Board Winder, motor driven with electronic speed controls for even wraps on all size yarns. With 3 black boards. Specify 115v 60 Hz. or 220v, 50Hz.



**ADDITIONAL FEATURES:**

**Option B: Multiple Traverse Head**
Multiple traverse head for comparison of up to 5 different yarns on the same board.

**Option C: Adjustable Clamping Jaws**
Adjustable clamping jaws on the motor side to allow for winding standard ASTM cardboards or longer black anodized trapezoidal or rectangular boards.

**ADDITIONAL BOARDS** (ILE Trapezoidal or rectangular, black metal):

## ASTM Photographic Yarn Appearance Standards

Grades A, B, C, D (mounted). Boards sold individually. Select 1 range per board.
Specify No.: 1-12, 12-24, 24-36, 36-50, 50-75 or 75-135 (English cotton count).

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Inspection Card Winder - Model: ILE-CB-2-SD

Dual motor driven inspection card winder. Single layer sample one direction only. Specially designed for winding sample cardboards of color and natural yarns. Speed of card and traverse are adjusted separately. Automatic stop and preset location. Sample spacing set manually. Specify power requirement: 110V, 60Hz. or 220V, 50Hz.

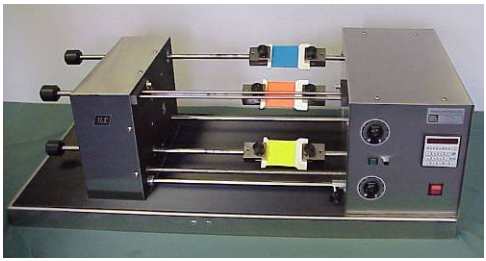
## Inspection Card Winder - Model: ILE-CB-2-BD

Dual motor driven inspection card winder. Specially designed for winding sample cardboards to check appearance characteristics of dyed yarns on colorimeters. Programmable counter allows selection for width of sample and the number of layers. Digital controllers allow for exact speed of card wrap motor and traversing motor. The instrument will then exactly reproduce future cards, starting in the same position on each card, and then providing the exact number of wraps per length. This is extremely critical when using spectrophotometers and colorimeters. The instrument always begins sampling in the same direction and provides bi-directional traverse. These features allow exact duplication of samples in optimum results from colorimeters. The ILE-CB-2BD is the only instrument with the above features. Universal clamping jaw accommodates various sizes of cardboard. Specify power requirement: 110V, 60Hz. or 220V, 50Hz.

**ADDITIONAL FEATURE: -Multiple Traverse Head**
Allows for comparison of up to 5 different yarns on the same board.

## Inspection Card Winder Model: ILE-CB-2-BD-3

Same as above with 3 positions.



**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Durometers

## Durometer, Ergo Style

The Ergo Style Durometers are built to meet or exceed current ASTM D2240, ISO 7619 and ISO 868 specifications. Complete with memory pointer, test block and carrying case. Height 4” (10.2cm); Width 2.25” (5.7cm); Depth 1.75” (4.4cm); Weight 6 oz. (170g). NIST Traceable. The Ergo Style Durometers are available in Type A, B, C, D, DO, E, O and OO.

| Type | Material Selection Guide | Spring gf | Indenter Shape |
|---|---|---|---|
| A | Rubber (Soft) | 821 gf | 35º Truncated Cone |
| B | Rubber (Moderately Hard) | 821 gf | 30º Cone |
| C | Rubber (Medium Hard); Plastics (Medium Hard) | 4.53 kgf | 35º Truncated Cone |
| D | Rubber (Hard); Plastics (Hard) | 4.53 kgf | 30º Cone |
| DO | **High Density Textile Windings (Slasher beams, etc.)** | 4.53 kgf | 3/32" Spherical Dia. |
| E | **Medium Density Textile Windings;** Soft Foams & Cushions | 821 gf | .200" Spherical Dia. |
| O | **Medium Density Textile Windings;** Soft Rubber (printer rolls) | 821 gf | 3/32" Spherical Dia. |
| OO | **Low Density Textile Windings;** Foam and Sponge Rubber | 113 gf | 3/32" Spherical Dia. |

## Durometer, Yarn Package

The Yarn Package Style Durometers come complete with carrying case and offer an optional memory pointer and optional test block. Height 4.44” (11.0cm); Width 1.97” (5.0cm); Depth 1.97” (5.0cm); Weight 1.10 lb (500g). *This iteim is not NIST Traceable.*

| Type | Material Selection Guide | Bottom Surface | Indenter Shape |
|---|---|---|---|
| 2.5 | Closely wound bobbins of synthetic fibers | Concave Radius | 2.5mm Ball |
| 5 | Loosely wound bobbins of synthetic fibers and closely wound natural fibers, yarns and threads | Concave Radius | 5mm Ball |
| 10 | Very loosely wound bobbins of thick yarns, such as carpet yarns | Concave Radius | 10mm Ball |
| 2.5F | same as 2.5 with Flat working face for measuring warp beams or for bobbin diameters over 400mm | Flat | 2.5mm Ball |
| 5F | same as 5 with Flat working face for measuring warp beams or for bobbin diameters over 400mm | Flat | 5mm Ball |
| 10F | same as 10 with Flat working face for measuring warp beams or for bobbin diameters over 400mm | Flat | 10mm Ball |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

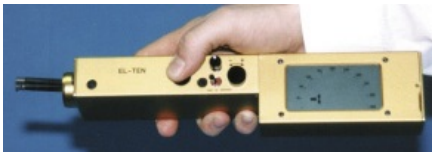
# Friction Meter

**Yarn Friction Meter**
**– Model: ILE-YFM**
Hand-held instrument to directly read the coefficient of friction of running yarn. Made in U.S.A.

**Friction Meter Stand**
**– Model: ILE-FMS**
Optional friction meter instrument stand with motor for laboratory testing. 110 volt. (Friction Meter shown, but not included) Made in U.S.A.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Tension Meters




## Electronic Tension Meter
## Model: ILE-EL-TEN-(range)

Zivy electronic tension meter. 1-gram sensitivity. Filament speeds up to 2000 m/min. Available models: 200M (0-200g) 400M (0-400g).
Software also available. Please advise if required.

## Digital Tension Meter,
## Model: ETMB-(specify range)

Three long, closely-spaced slender shafts with precision guide rollers, perfect for limited access tension measuring applications. Speeds up to 2000 m/min. Stores average, minimum, maximum, and peak tension.

Available Ranges:
100: (0.5 – 100); 200: (1 – 200);
500: (1 – 500) grams.

## Digital Tension Meter,
## Model: DTMB-(specify range)

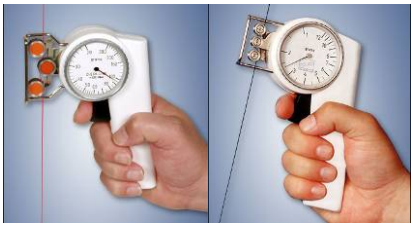
Accurately measure the running line tensions with thickness compensator. Tensions are sampled 62 times per second and averaged over a user selected interval of 0.5, 1, 2 or 4 seconds. Speeds up to 2000 m/min. The maximum, minimum and peak values are stored for recall to the display.

| Model | Range | Spacing | Application |
|---|---|---|---|
| **DTMB-200** | 0.1-200.0 g | 38 mm | 1000 Denier |
| **DTMB-500** | 0.1-500.0 g | 38 mm | 0.05-0.25mm |
| **DTMB-1K** | 50 - 1000 g | 38 mm | 0.10 - 0.40 mm |
| **DTMB-2K** | 200 - 2000 g | 38 mm | 0.30 - 0.70 mm |
| **DTMB-2.5KB** | 250 - 2500 g | 100 mm | 0.30 - 0.70 mm |
| **DTMB-5KB** | 500 - 5000 g | 100 mm | 0.50 - 1.20 mm |
| **DTMB-10KB** | 1.00 - 10.00 kg | 100 mm | 0.70 - 1.40 mm |
| **DTMBL-20KB*** | 2.00 - 20.00 kg | 200 mm | 1.00 - 2.00 mm |
| **DTMBL-50KB*** | 5.00 - 50.00 kg | 200 mm | 1.50 - 3.00 mm |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Warp Tension Meter

To determine correct tension for particular fabric qualities in weaving and preparation. Accurate and robust mechanical operation, dial readout 0-100 centesimal scale.



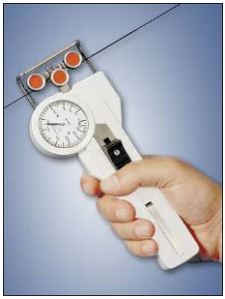
**Mechanical Tension Meter (Pistol grip)**
Mechanical tension meter with plastic housing.
**Model: ILE-ZD2-(range)**
Available ranges: 30 (3-30g), 50 (5-50g), 100 (10-100g),150 (20-150g), 200 (20-200g), 300 (20-300g)
**Model: ILE-ZF2-(range)**
Uses miniaturized rollers ideal for delicate fibers, low tensions or when access space is limited.Available ranges: 5 (1-5.0g), 10 (1-10g), 12 (1-12g) 20 (2-20g), 30 (3-30g), 50 (5-50g), 100 (10-100g)

## Mechanical Tension Meter – Model: ILE-TEN-(range)

Zivy Mechanical tension meter.
Available ranges. 0.5-3g, 1-5g, 2-10g, 2-12g, 5-20g 5-30g, 10-40g, 10-50g, 10-60g, 10-70g, 20-120g, 50-170g.

## Mechanical Tension Meter – Model: ILE-TR-(range)

The Trigger Tension Meter measures tensions on wires, yarns, fiber optics, films, tapes, narrow fabrics and flat materials. The contact elements are recessed into the trigger shield, which stops material from snagging and/or breaking behind the rollers. Internal magnetic dampening assures an accurate tension reading no matter which position the meter is held in. Available ranges. 25g, 125g, 250g, 1000g, 2000g, 4000g, 5000g.



## Mechanical Tension Meter – Model: ILE-DX2-(range)

A precise jeweled movement, rugged cast aluminum housing makes the DX2 ideal for the toughest production floor application. Built-in mounting holes permit fixed installation for continuous in-line use. Built-in material thickness compensator maximizes accuracy when using filaments of different diameters. (Standard on model DX2-SP and higher ranges)

| Model | Range | Roller Spacing c:c | Model | Range | Roller Spacing c:c |
|---|---|---|---|---|---|
| DX2-3 | 3-30 g | 38 mm | DX2-EX | 100-1000 g | 38 mm |
| DX2-5 | 5-50 g | 38 mm | DX2-200 | 200-2000 g | 100 mm |
| DX2-12 | 20-120 g | 38 mm | DX2-500 | 400-5000 g | 100 mm |
| DX2-20 | 20-200 g | 38 mm | DX2-1K | 2-10 Kg | 100 mm |
| DX2-40 | 20-400 g | 38 mm | DX2L-2K | 5-20 Kg | 150 mm |
| DX2-SP | 20-1000 g | 38 mm | DX2L-3K | 5-30 Kg | 250 mm |
| | | | DX2L-5K | 5-50 Kg | 250 mm |

**OTHER MODELS AND RANGES AVAILABLE.**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Stroboscopes & Tachometers

## ILE-DT-311

Digital stroboscope 40-35,000 flashes per minute.
Specify power requirement:
115 Volt AC or 220 Volt AC.

## ILE-DT-315A

Portable digital stroboscope with internal rechargeable battery for up to 2- hour continuous use. 40-35,000 flashes per minute.

Specify power requirement for charger:
115 Volt AC or 220 Volt AC.

## ILE-DT-315AEB

Portable digital stroboscope with external rechargeable battery for up to 3-hour continuous use. 40-35,000 flashes per minute.

Specify power requirement for charger:
115 Volt AC or 220 Volt AC.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

DT-205L (LCD)

DT-207L (LED)

**Digital Tachometer –**
**Model: ILE-DT-205L**
Non-contact (or contact with included adapter) digital tachometer with memory for last, maximum, minimum, and four intermediate readings. 6 to 99,999 RPM. LCD display.
****ILE-DT-207L** with LED display also available.

DT-105A (LCD)

DT-107A (LED)

**Digital Tachometer –**
**Model: ILE-DT-105A**
Contact digital tachometer with memory for last, maximum, minimum, and four intermediate readings. Multi-mode speed selection. 0.1 to 25,000 RPM. LCD display.
****ILE-DT-107A** with LED display also available.

**Yarn Length Indicator –**
**Model: ILE-YSL-2000**
Accurately measures the speed and length of yarns, wires, and other filaments using the unique roller that guides the filament onto a "u-grooved" wheel that insures maximum contact and eliminates slippage and breakage of filaments. It also can be used as either a contact or non-contact Tachometer.
Made in Germany.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Force Testing

The Yarn splice tester is able to capture the highest force peaks. With variable display update rate and superior accuracy, these gauges feature unique 180 degree flip displays, permitting the user to read the display right-side up. Additional enhancements are; dual direction keypad, variable baud rate for SPC applications, selectable force direction indication, and selectable power on/off settings.
Designed to ergonomically fit in the palm of your hand; the rugged all metal construction permits accurate measurement and display of compression and tension forces up to 100 pounds.

| Features | Benefits |
|---|---|
| 1000 Hz update rate | Ability to capture the highest compression/tension force |
| Highly accurate (+/- 0.2% f.s.) | Ideal of for strict tolerances |
| Peak measurement | Captured with a single push button |
| Reversible keypad | Easy to read upside down or right side up when stand mounted |
| Variable display rate | Slow display update rate for operator ease |
| Overload capacity: 200% F.S. | High overload protection leads to fewer repairs |
| Heavy duty load sensor | Designed for over 1 million operations |
| Variable units of measure (Oz., lbs., Kg, N) | One button selection |
| Rugged die-cast aluminum construction | Exceptional durability, production floor capable |
| Measures and records compression and tension tests | True "push-pull" tests are permitted |
| Dual power capable | Rechargeable battery or AC line voltage |
| Selectable, automatic on/off ability | Prolongs battery life , provides 24/7 testing with no off time when powered by AC |
| Low battery indicator | Provides warning to complete tests when on battery power |
| One year warranty | Provides peace of mind, (Optional: NIST certs with data) |

**Available Ranges:**

| .5X | 1X | 2X | 5X | 10X | 20X | 50X | 100X |
|---|---|---|---|---|---|---|---|
| 0.5x.001 lb | 1x.001 lb | 2x.001 lb | 5x.001 lb | 10x.01 lb | 20x.01 lb | 50x.01 lb | 100x.1 lb |
| 200 x.1 g | 500 x.1 g | 1000 x1 g | 2 x.001Kg | 5 x.001Kg | 10 x.01Kg | 20 x.01Kg | 50 x.01Kg |
| 2 x.001 N | 5 x.001 N | 10 x.01 N | 20 x .01 N | 50 x .01 N | 100 x .1 N | 200 x .1 N | 500 x .1 N |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE-ET-1.5 Series Tensile Tester

ILE testers are designed for testing that requires high accuracy on a tight budget. The ILE-ET1.5 provides general purpose testing to ASTM, ISO, BS and other world standards. The system includes a Test stand, S-Block load cell. Sample Holders are sold separately.

The variable speed stand has up/down/stop motor control, crosshead jog, emergency stop, speed dial, and high speed return. Test Stand capacities available to 500 pounds with Speed range to 20 inches per minute. All stands offer up to 31 inches of travel.

Displays force, elongation, test stand direction and speed, limit switch warnings, and error messages. Force and elongation can be displayed at either peak or break value. Force can be set to readout in pounds, kilograms, Newtons, grams, or ounces. Elongation can be set to read out in inches, centimeters, or millimeters. Limits can be set to stop the test at a specific force or certain distance.

Additional features:

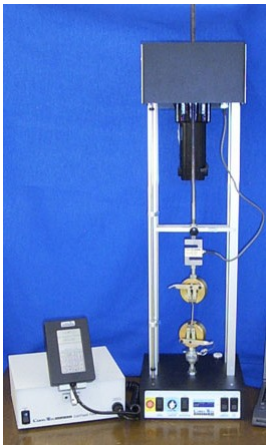
- Real-time display of force, elongation, and speed during test
- Pretension the sample to a force before the test starts
- Test data output through a RS-232 serial port or analog connection
- Adjust the point at which the test terminates in relation to % of peak
- Variable start force to avoid getting a false peak at test beginning
- Automatic return can be set on, off, or on with time delay
- Ability to reset all setup settings to a default to prevent tampering
- Calibrated to a system accuracy of 0.1% full scale
- Calibration is in accordance with ASTM E74 and traceable to NIST

Power requirement: specify 120 Volt 60 Hz. or 230 Volt 50 Hz.

*ILE reserves the right to modify and change specifications and other improvements.*

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE-ET-3 Series Tensile Tester



ILE testers are designed for testing that requires high accuracy on a tight budget. The ILE-ET3 provides general purpose testing to ASTM, ISO, BS and other world standards. The system includes a Test stand, Menu driven handheld touchpad, and S-Block load cell. Sample Holders are sold separately.

The variable speed stand has up/down/stop motor control, crosshead jog, emergency stop, speed dial, and high speed return. Test Stand capacities available to 5000 pounds with Speed range to 30 inches per minute. All stands offer an 8 inch working width with an unlimited working depth and up to 40 inches of travel.

The Menu driven handheld touchpad displays force, elongation, test stand direction and speed, limit switch warnings, and error messages. Force and elongation can be displayed at either peak or break value. Force can be set to readout in pounds, kilograms, Newtons, grams, or ounces. Elongation can be set to read out in inches, centimeters, or millimeters. Limits can be set to stop the test at a specific force or certain distance.

Additional features:

- Real-time display of force, elongation, and speed during test
- Pretension the sample to a force before the test starts
- Various levels of security to prevent users from changing setup
- Hook up a parallel printer to print a report directly, without a PC
- Test data output through a RS-232 serial port or analog connection
- Adjust the point at which the test terminates in relation to % of peak
- Variable start force to avoid getting a false peak at test beginning
- Automatic return can be set on, off, or on with time delay
- User can set the time/date/day setting
- Ability to reset all setup settings to a default to prevent tampering
- Calibrated to a system accuracy of 0.1% full scale
- Calibration is in accordance with ASTM E74 and traceable to NIST

Power requirement: specify 120 Volt 60 Hz. or 230 Volt 50 Hz.
Made in U.S.A.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE-ET-4 Series Tensile Tester

ILE testers are designed for testing that requires high accuracy on a tight budget. The ILE-ET4 provides general purpose testing to ASTM, ISO, BS and other world standards. The system includes a Test stand, Menu driven handheld touchpad, and S-Block load cell. Sample Holders are sold separately.

These variable speed testers can perform compression tests and tensile tests without the need of special adapters or cages and include adjustable travel limit switches. Sturdy twin ball screw drives allow for smoother operation and precise crosshead positioning. Test Stand capacities available to 20,000 pounds with Speed range to 30 inches per minute. All stands offer an 18 inch working width with an unlimited working depth and up to 48 inches of travel.

The Menu driven handheld touchpad displays force, elongation, test stand direction and speed, limit switch warnings, and error messages. Force and elongation can be displayed at either peak or break value. Force can be set to readout in pounds, kilograms, Newtons, grams, or ounces. Elongation can be set to read out in inches, centimeters, or millimeters. Limits can be set to stop the test at a specific force or certain distance.

Additional features:

- Real-time display of force, elongation, and speed during test
- Pretension the sample to a force before the test starts
- Various levels of security to prevent users from changing setup
- Hook up a parallel printer to print a report directly, without a PC
- Test data output through a RS-232 serial port or analog connection
- Adjust the point at which the test terminates in relation to % of peak
- Variable start force to avoid getting a false peak at test beginning
- Automatic return can be set on, off, or on with time delay
- User can set the time/date/day setting
- Ability to reset all setup settings to a default to prevent tampering
- Calibrated to a system accuracy of 0.1% full scale
- Calibration is in accordance with ASTM E74 and traceable to NIST

Power requirement: specify 120 Volt 60 Hz. or 230 Volt 50 Hz.
Made in U.S.A.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Elmendorf Tester

**Digital Elmendorf Tearing Tester –**
A microprocessor controlled falling-pendulum instrument with digital display for determination of the average force required to propagate a single-rip tear starting from a cut in paper, cardboard, plastics, nonwovens, knitted and woven fabrics. Supplied with a template, knife, and cutting board for cutting test specimens. **Pendulum and calibration weights for 800, 1600, 3200 and 6400 grams are included.**

**Elmendorf Tearing Tester (Manual) –**
To determine the ballistic tearing strength of textiles, paper or board. Range from 8000 to 64000 Millinewtons with suitable pendulum.
**Pendulums not included.**

**Pendulum Type A –**
For use with Elmendorf Tearing Tester - 8000 Millinewtons max.
**Calibration Weight** – For pendulum type A.

**Pendulum Type B –**
For use with Elmendorf Tearing Tester - 16000 Millinewtons max.
**Calibration Weight** – For pendulum type B.

**Pendulum Type C –**
For use with Elmendorf Tearing Tester - 32000 Millinewtons max.
**Calibration Weight** – For pendulum type C.

**Pendulum Type D –**
For use with Elmendorf Tearing Tester - 64000 Millinewtons max.
**Calibration Weight** – For pendulum type D.
**Spare Cutting Blade –**
For Elmendorf Tearing Tester.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Thickness Gauges

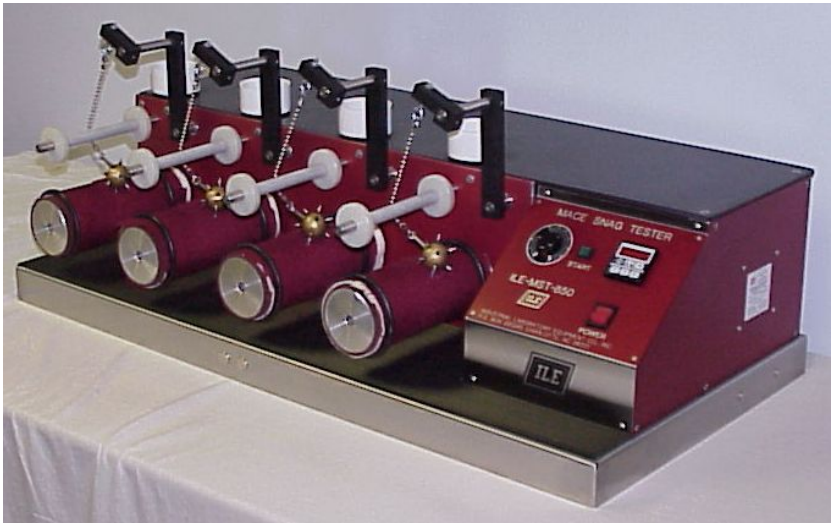
**THICKNESS GAUGE**
**Model: ILE-TG-2-D**
Digital Thickness Gauge incorporates an easy to read digital display with an accuracy of .001". Complete with 1.129" diameter presser foot and loading weight to provide a load of 0.6psi. Compliant with ASTM D1777-option 1.

Other Configurations available.

MANY STLYES AND RANGES AVAILABLE
CALL FOR DETAILS

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Mace Snag




**Mace Snag Tester (ICI), Model: ILE-MST-850**
Rapidly determines the tendency of fabrics to snag in normal wear. Provided with 4 rotating cylinders fitted with sleeves of test fabric, mace balls and controlled by a predetermined electronic counter. Meets ASTM D-3939 Standard

OTHER CONFIGURATIONS AVAILABLE UPON REQUEST

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Mace Snag Tester Viewing Cabinet**
**Model: ILE-MST-VC-120**
Includes photographic standards and viewing cabinet with light source.
Meets ASTM D-3939 Standards

OTHER CONFIGURATIONS AVAILABLE UPON REQUEST

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Abrasion Testers

**ILE MARTINDALE ABRASION TESTER**
**Model: ILE-MAT 250**

To determine the abrasion resistance of all kinds of textile structures. Samples are rubbed against known abradants at low pressures in continuously changing directions and the amount of abrasion is compared against standard parameters. The unique design allows removal of individual sample holders for examination without lifting the top motion plate or stopping the test. The equipment is supplied complete with electronic predetermined batch and totalizing counters as well as all sample holders, 9kpa & 12kpa weights and loading devices to carry out standard tests. Tester with 4 sample positions. Also available in 6 position. Specify Power Supply: 120 Volt 60 HZ., 220 Volt 50 Hz.
**Standards:** ASTM D4966 Abrasion Test & ASTM D4970 Pilling Test.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Wyzenbeek Tester

The Wyzenbeek Tester is a four station abrasion device. It abrades the surface of textiles or leather to determine the amount of marring and wear of the surface finish. Operation of the machine is simple. Each sample is held under measured tension and measured pressure. Securely fastened the samples are subjected to the abrasive material clamped on the oscillating drum operating underneath the samples. Cycle speed is adjusted with the variable speed control on the front panel. The number of test cycles desired is entered on the pre-set cycle counter on the front panel indicating when the test will be completed. A vacuum unit is built into the machine. Two slotted vacuum pipes are suspended over the abrasive drum. The large volume of air being sucked over the abrasive surface keeps it free from lint and dust during operation.

**Standards:** ASTM D3597; ASTM D4157; FED-STD-191/5304; SAE J 948; SAE J 1530; GM 2756M; Toyota TSL 5101G 3.9.4

## Random Tumble Pilling Tester

Used to determine the pilling and fuzzing characteristics of textile fabrics. Stainless steel impellers rotate within individually lit aluminum chambers constantly tumbling test fabrics against cork liners for a pre-determined time controlled by a timer and audible alarm. Compressed air is also injected into the chamber to assist in the tumbling action. Tester is available with 2 or 4 test chambers. Laboratory standard compressed air supply required.

**Standards:** ASTM D3512; DIN 53867; JIS L 1076

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# CROCKMETERS

## Crockmeter Hand Operated – Model: ILE-HCM-400

Manual operated with counter, 1000 pieces of 2 in x 2 in. white crocking cloth, 2 pieces of abrasive paper, sample holder and one spring clip. Conforms to AATCC standards.

## Crockmeter Motorized - Model: ILE-MCM-500

Electric motorized operated with automatic stop counter up to 99,999 provided with standard 15.875mm dia. crocking finger (or 18mm) with downward force of 9N. Metal holder ensures fixed place of fabric during testing. Can accommodate for extra weights for non-standard tests (please specify). Also includes 1000 pieces of 2 in. x 2 in. white crocking cloth, 2 pieces of abrasive paper, and one spring clip. Conforms to AATCC standards. Specify power requirement: 110 V 60 Hz or 220 V 50 Hz.

## ROTARY CROCKMETER Model: ILE-RCM-400

To determine the color fastness of textiles to dry or wet rubbing particularly for printed fabrics. Applies 1134 grams of pressure on a 16mm finger and rotates 1.125 turns clockwise then counter-clockwise. The operating handle is, however, turned in one direction only. Conforms to AATCC standards.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Gray Scale for Color Change – Model: ILE-GS-CC

For assessment of change in color to meet AATCC Standards. Gray Scale for Color Change is used to visually evaluate change in color due to colorfastness tests as described in Evaluation Procedure 1 which is included in the purchase of a Gray Scale for Color Change.

## Gray Scale for Staining – Model: ILE-GS-ST

For assessment of staining to meet AATCC Standards. Gray Scale for Staining is used to visually evaluate staining on multifiber samples due to colorfastness tests as described in Evaluation Procedure 2 which is included in the purchase of Gray Scale for Staining.

## Chromatic Transference Scale – Model: ILE-CTS-CM AATCC

9 Step scale for various colorfastness tests to meet AATCC Standards.
This scale is used to visually evaluate color transfer or staining. The five hues, red, yellow, green, blue and purple, were selected from the Munsell Book of color. The neutral gray chips were selected to correspond to the gray chips on the Gray Scale for Staining. The Chromatic Transference Scale may facilitate evaluations of staining, especially when used by a less experienced technician.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Light Cabinet

## Verivide cabinet with 4 light sources:

D65 – Artificial Daylight.
TL84 – Philips fluorescent.
F – Filament.
UV – Ultra Violet.
(other options available).

**Model: ILE-CC-210B**

| Dimensions: | Width | Height | Depth |
|---|---|---|---|
| Overall: | 1290mm | 755mm | 620mm |
| Viewing Cavity: | 1260mm | 545mm | 590mm |

**Model: ILE-CC-210C**

| Dimensions: | Width | Height | Depth |
|---|---|---|---|
| Overall: | 1560mm | 755mm | 620mm |
| Viewing Cavity: | 1530mm | 545mm | 590mm |

**Call for other Color Assessment Equipment & Accessories**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE Series MACROSCOPES

These unusual low cost portable macroscopes offer many advantages over traditional units making them useful not only in typical laboratory applications but also in a variety of non traditional fields.

The exceptionally wide field of view coupled with the positionally correct image make MACROSCOPE units easy to use even for those untrained in microscopy.
The simple, lightweight design makes them ideal for use in the field as well as the laboratory.
These features coupled with their camera adaptability make MACROSCOPE units the instrument of choice for serious professionals in many fields.

MACROSCOPE 25 provides 25X magnifications over a wide 8 mm (5/16") field of view. The positionally correct image includes an interchangable scale. The A scale provides measurements in inches and millimeters and the B scale provides measurements in inches and mills. With the close-up lens removed the unit can be used for distance viewing.

MACROSCOPE 45 provides 45X magnification over a wide 4.8mm (3/16") field of view. It incorporates a measuring scale providing measurements in inches or millimeters. With the close-up lens removed the unit can be used for distance viewing.

MACROSCOPE 18-36 ZOOM provides variable magnification of 18X to 36X. The unit incorporates a measuring scale that provides measurements in inches or millimeters that is valid at either maximum or minimum magnification.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**COMPOUND DIGITAL MICROSCOPE SYSTEM – Model: ILE-DMS-C**

Precision Trinocular Microscope with wide field 10X eyepieces and achromatic super contrast objectives for total magnification of 40X, 100X, 400X and 1000X. Precision mechanical stage, 20W halogen illumination with intensity control, white balance switch supplied with blue, green, yellow and frosted filters, eyecups, spare bulb, calibration slide and dust cover. Built-in high resolution CCD Camera (specify NTSC or PAL system) and video capture card allows output to suitable PC via USB port (cable included). Includes powerful image analysis software capable of capturing images, on-screen measurement, storage and retrieval. Minimum computer requirements 500MHZ, 64MB Ram, 200MB hard drive space, Windows 98, SVGA color, CD Rom, USB port.

- Siedentopf trinocular phototube 30º inclined. The vertical tube has a built in 1/3" CCD camera.
- The ball bearing mounted reversed quintuple nosepiece has a ribbed grip for easy rotation and is positioned back closer to the microscope body for easy access to the specimen.
- The ASC "Achromatic Super Contrast" objectives provide brilliant sharp images with excellent contrast.
- The precise graduation of the low position coaxial control mechanical stage allows quick finding and marking of specific areas on your slide. The travel range of the stage is 76mm x 50mm (X-Y) and graduated to 1 mm with vernier reading to 0.1 mm.
- Slide-in center able Abbe Condenser N.A. 1.25 offers maximal flexibility required for any laboratory application.
- The built in field of view diaphragm ensures correct positioning of the condenser according to Kohler for perfect illumination of the specimens.
- A bright and efficient 12v/20W halogen illumination with intensity control allows viewing of difficult light absorbing specimens.
- White balance switch to help show the real background color of the slide to the CCD, regardless of the color temperature.

Designed for textiles from fiber to fabrics, identification, structure, contamination analysis and measurement

Compound precision and stereo zoom digital microscopes with built-in CCD cameras and video capture cards allow use with any suitable computer or monitor, magnification 5x-1000x.

Images for windows software and all necessary cables included. Allows image capture, measurement, storage and email with text or soundtrack addition.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Microscopes

**Stereo Zoom Microscope**
**Model: ILE-2-62-1**
Binocular Stereo Zoom Microscope.
Magnification range 7X to 45X.
Light source: Upper halogen, lower fluorescent.

**Stereo Microscope –**
**Model: ILE-2-62-11**
Binocular Stereo Microscope. 10X Eyepieces, 1X and 2X Objectives, Total Magnification, 10X and 20X; Binocular Head rotates 360°, Halogen and fluorescent lamp illumination; Stage plate with clips; rack-and-pinion focus.
**Includes:** Stand, head, eyepieces, objectices, dual illumiunation systems, dust caps, dust cover and spare lamp.

OTHER MODELS AND RANGES AVAILABLE.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# LINEN TESTERS

**ILE-LT-1 LINEN TESTER**
1" x 1" folding glass with case, 5X lens. Reads in inches and centimeters.

**ILE-LT-2 LINEN TESTER**
1/2" x 1/2" folding glass with case, 9X lens

**ILE-LT-3 LINEN TESTER**
1" x 1" with traveling pick needle, 6X lens

## Handheld Thread Counters (Optical Gratings):

To instantly determine the number of yarns per (cm or inch) in knitted and woven fabrics.
Available Ranges:
**L-1 Thread Counters (10-44 Counts/In 4-17 Counts/Cm)**
**B-1 Thread Counters (25-66 Counts/In 10-23 Counts/Cm)**
**S-2 Thread Counters (35-80 Counts/In 13-31 Counts/Cm)**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Large Manual Fabric Punch**
**– Model ILE-B-36**
Cutter Dies Sold Separately.

Specifications:

| | |
|---|---|
| Capacity | 5000 lbs |
| Max. Lineal cutting edge | 30 inch |
| Projection | 6 " |
| Piston stroke | 1 ⅛ " |
| Die opening | 11/16 " |
| Die holding diam. (Pressure plate) | 7 ½ " |
| Table width | 13 ¾ " |
| Table depth | 11 ½ " |
| Machine height | 23 " |
| Machine width | 16 " |
| Machine depth | 17 " |
| Net weight | 100 lbs |
| Shipping weight | 150 lb |

The NAEF B-36 Punch Press is mostly used in Laboratories, Quality Control and R & D Dept. The B-36 cuts soft material including textile, carpets, paper, plastic, rubber etc. The maximum sample thickness is ½ inch. The die is supported securely to the die holder (Pressure plate) and stays in place during cutting and removal of the samples. Changing dies is a matter of seconds. All NAEF dies come with an expulsion, so that the samples will be found on the table. The depth gauge restricts penetration into the table top surface.

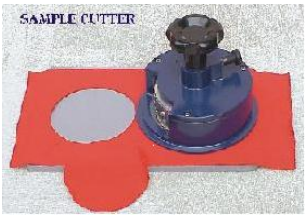
**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Fabric Yield

**Pneumatic Sample Press**
Heavy duty table top press with 125mm (5 in) bore air cylinder, 50mm (2 in) cutting depth and 125 x 125mm (5 x 5 in) cutting table. Pneumatic activation at 100 PSI (7 Bars) produces 887 kg (1950 lb) of cutting force. Ejection device removes samples from the cutting die. Completely air operated - no wiring required. Two hand control for safety and regulator filter. OSHA approved air supply shut off valve can be locked in "OFF" position. Supplied with standard Die for U.S. Fabric Yield (oz/sq. yd). Special die sizes available.
*Laboratory standard compressed air supply required.*

**Fabric Punch – Model ILE-FSC-688**
Hand punch furnished with cutter die that is designed to read directly in ounces per square yard when used with 8 samples. For North American testing Standards the fabric is folded in a way that allows the 8 samples to be cut in one operation, and more important ensures the samples are taken from uniformly spaced locations throughout the fabric.

**METRIC FABRIC PUNCH –**
**Model ILE-FSC-600M**
Hand punch furnished with cutter die that is designed to read directly in grams per square Meter when used with 4 samples. For North American testing Standards the fabric is folded in a way that allows the 4 samples to be cut in one operation, and more important ensures the samples are taken from uniformly spaced locations throughout the fabric. Produces (4) 25 sq. cm. samples.




**Metric Circular Fabric Sample Cutter**
**Model: ILE-CFC-100**
113mm diameter x 5mm cutting depth – Produces 100 sq. cm samples. Complete with cutting board and 12 spare blades.

**CALL FOR FABRIC PUNCH ACCESSORIES: (BLADES, CUTTING PADS ETC.)**

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Portable Balance – Model ILE-2-OSP-200**
Electronic balance with standard units: grams (g), ounces (oz).
Capacity 200 x .01 gram. Powered by AC adapter included or batteries.

when used with the ILE Standard Punch reads in ounces per square yard Capacity:
200 x .01 oz/yard$^2$

when used with the ILE-Metric Punch or Circular Cutter reads in grams per square meter; Capacity:
20000 x 1 g/meter$^2$

## ILE FABRIC YIELD BALANCES

**Fabric Yield Balance –** Electronic balance when used with the ILE-Punch reads in ounces per square yard, and grams per square meter plus standard units: grams (g), ounces (oz), pounds (lb), grains (GN). Powered by AC adapter included or batteries.
Capacity 210 x .01 gram

| **Programmed for use with:** | **Standard Punch** | **Metric Punch or Circular Cutter** |
|---|---|---|
| | **Model ILE-FY-LT-210**<br>Capacity:<br>210 x .01 oz/yard$^2$<br>7120 x 1 g/meter$^2$ | **Model ILE-FY-LT-210-M**<br>Capacity:<br>20000 x 1 g/meter$^2$<br>619 x .05 oz/yard$^2$ |

CONTINUED ON NEXT PAGE

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# ILE FABRIC YIELD BALANCES

Each of the following Precision Fabric Yield Balances have an additional set of units when programmed for the Standard Fabric Punch; this allows for testing using a single layer sample when material is limited.

**Fabric Yield Balance –** Electronic balance when used with the ILE-Punch reads in ounces per square yard, and grams per square meter plus standard units: grams (g), ounces (oz), pounds (lb), grains (GN). Powered by AC adapter included.

| **Programmed for use with:** | **Standard Punch** | **Metric Punch or Circular Cutter** |
|---|---|---|
| | **Model**<br>**ILE-FY-PT-51**<br>Capacity:<br>51 x .001 oz/yard²<br>1729 x .1 g/meter²<br><br>51x.001 grams | **Model**<br>**ILE-FY-PT-51-M**<br>Capacity:<br>5100 x .1 g/meter²<br>150 x .005 oz/yard²<br><br>51x.001 grams |
| | **Model**<br>**ILE-FY-PT-210**<br>Capacity:<br>210 x .001 oz/yard²<br>7120 x .1 g/meter²<br><br>210 x .001 grams | **Model**<br>**ILE-FY-PT-210-M**<br>Capacity:<br>20000 x .1 g/meter²<br>619 x .005 oz/yard²<br><br>210 x .001 grams |
| | **Model**<br>**ILE-FY-AT-65**<br>Capacity:<br>65 x .0001 oz/yard²<br>2200 x .01 g/meter²<br><br>65 x .0001 grams | **Model**<br>**ILE-FY-AT-65-M**<br>Capacity:<br>6500 x .01 g/meter²<br>190 x .0005 oz/yard²<br><br>65 x .0001 grams |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

## Cup-Type Viscometers

For quick measurement of the viscosity of liquids such as paint, lacquer, varnish, syrup, and oil. One-piece, corrosion-resistant stainless steel. Portable cups measure the viscosity of a liquid in Zahn seconds (the amount of time required for a steady stream to flow from the orifice in the bottom of the cup). Capacity, 1-1/2 oz. (44mL); length, 13-3/4 in. (35cm)

| Orifice Diameter | No. | Uses | Centistroke Range |
|---|---|---|---|
| 0.078 in. (2.0mm) | 1 | Very thin oil | 18-56 |
| 0.108 in. (2.7mm) | 2 | Thin oil or lacquer | 40-230 |
| 0.148 in. (3.8mm) | 3 | Medium oil or mixed paints | 150-790 |
| 0.168 in. (4.3mm) | 4 | Heavy Mixtures | 220-1100 |
| 0.208 in. (5.3mm) | 5 | Very Heavy Mixtures | 460-1725+ |

## Dial Viscometer:

| | VISCOSITY RANGE cP(mPa•s) | | SPEEDS | |
|---|---|---|---|---|
| **MODEL** | Min. | Max. | RPM | Number of Increments |
| **LVT** | 1† | 2M | .3-60 | 8 |
| **RVT** | 100†† | 8M | .5-100 | 10 |
| **HAT** | 200†† | 16M | .5-100 | 10 |
| **HBT** | 800†† | 64M | .5-100 | 10 |

† 1 cP achieved with UL Adapter accessory. 15 cP on LV with standard spindles.

†† Minimum viscosity is achieved with optional RV/HA/HB-1 spindle.

M = 1 million cP = Centipoise mPa•s = Millipascal/seconds

## Digital Viscometer:

| | VISCOSITY RANGE cP(mPa•s) | | SPEEDS | |
|---|---|---|---|---|
| **MODEL** | Min. | Max. | RPM | Number of Increments |
| **LVDV-E** | 1† | 2M | .3-100 | 18 |
| **RVDV-E** | 100†† | 13M | .3-100 | 18 |
| **HADV-E** | 200†† | 26M | .3-100 | 18 |
| **HBDV-E** | 800†† | 104M | ..3-100 | 18 |

† 1 cP achieved with UL Adapter accessory. 15 cP on LV with standard spindles.

†† Minimum viscosity is achieved with optional RV/HA/HB-1 spindle.

M = 1 million cP = Centipoise mPa•s = Millipascal/seconds

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Automatic Temperature Compensated Hand Refractometers**
Measure Brix, Industrial Fluids, Starch and Adhesives and Concentration of other solutions. These automatic temperature compensated refractometers eliminate the bother of making manual temperature corrections to your measured results when solution's temperature deviates from 20° C. The high contrast blue filter systems and adjustable eyepiece give easy-to-read scale readings. Unit has a rubber sleeve that protects sample from body heat, and a rubber eye shield that prevents excess light from entering field of vision. Price includes carrying case and manual.

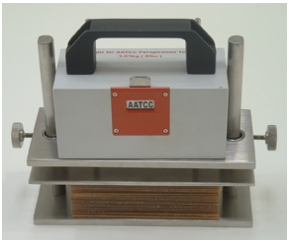
SPECIFY RANGE:
Model ATC-10 (0 - 10% x 0.1%)
Model ATC-18 (0 - 15% x 0.1%)
Model ATC-32 (0 - 32% x 0.2%)
Model ATC-58 (58-90% x 0.5%)
Model ATC-62 (28-62% x 0.2%)

## pH/mV/Temperature Meter, model: HI8314

Small casing pH meter and with DIN connector. Manual 2 point calibration. Automatic temperature compensation.
Range: 0.00 to 14.00pH; +/-1999mV; 0.0 to 100.0°C
Resolution: 0.01pH; 1mV; .1°C
Accuracy: +/-0.01pH; +/-1mV; +/-0.4°C
Includes: 1) Probe, model: HI 1217D Combination pH electrode, gel filled, double junction, internal temperature sensor, DIN connector and 1 m (3.3') cable.

## Plating Bath pH Meter – Model: HI 99131

Waterproof, portable pH/temperature meter supplied complete with HI 62911 pH electrode with internal temperature sensor, pH 4 and pH 7 buffer sachets, HI 700661 electrode cleaning solution (2 x 20 mL), batteries, rugged carrying case and instructions.
Calibration: Automatic; 1 or 2 point Manual
Automatic temperature compensation.
Range: -2.00 to 16.00pH; -5.0 to 105.0°C
Resolution: 0.01pH; .1°C. Accuracy: +/-0.02pH; +/-0.5°C
Probe, model: HI62911, amplified, with titanium cage, internal temperature sensor and Matching-Pin (included).



**AATCC Perspiration Tester**
Includes:

- Stainless Steel Frame (20 sample capacity)
- Loading Weight (10 Lb – AATCC, 5 Kg – ISO)
- Acrylic Plates (set of 21)

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# OVENS

## Premium Lab Ovens; Model: ILE-FSI-OVEN

Full-feature ovens available in three sizes as gravity-flow or forced-air models. Power supply 120 Volt-60 Hz.

Operating Features

- Intuitive microprocessor controls with touch keypad, LED digital display and on-screen prompts
- Variable temperature control from 50° to 275°C in 1°C increments
- Automatic over temperature protection at 5°C above set point with visual alarm
- Last settings retained in memory
- Built-in safety backup and circuit breaker to protect oven from power surges

Cabinet Features

- Easy-to-clean stainless-steel chambers
- Enamel-painted steel exterior with coated aluminum trim
- Low-watt-density, long life heating elements
- Thick 21/2 in. (6.4cm) all-around fiberglass insulation keeps exterior cool
- Gasketed door has stay-cool latch; opens 180° for easy access
- Adjustable chrome-plated steel wire shelves (163/4 x 173/8 in. [44 x 42.5cm])
- Nonskid rubber feet elevate cabinet for ventilation

Three Sizes

- Small: 2.5 cu. ft. chamber volume; supplied with one shelf (hold up to 5)
- Medium: 3.75 cu. ft.; with one shelf (hold up to 8)
- Large: 5.0 cu. ft.; with two shelves (hold up to 11)

Forced-Air Ovens

- Deliver more uniform heating for better temperature control and faster drying
- Blower circulates air throughout chamber; fresh air is mixed in and re-circulated
- Used air vented through top of oven

Gravity-Flow Ovens

- Vertical airflow for uniform sample heating
- Used air expelled through top-mounted vent

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**All-Purpose Laboratory Oven, Model: ILE-TSP-OVEN**

Operating Features

- Temperature control to 250°C (482°F), sensitivity: ±0.3°C or better
- Built-in timer (12 hours, electronic models; 99 hours, microprocessor-control models)
- Class II user-adjustable safety thermostat with flashing indicator light (electronic control models) or with audio/visual alarm (microprocessor-control models)

Cabinet Features

- Require only 3.5 sq. ft. of bench space
- Corrosion- and contamination-resistant stainless-steel chamber
- Steel exterior with gasketed door
- Top vent for optimal venting
- With two adjustable, non tip nickel-plated shelves

Mechanical Ovens

- Solid chamber floor that resists spills and protects heating elements
- Balanced centrifugal blower for uniform air distribution

Microprocessor-controlled Models

- Digital set points and LED display
- RS-232-C knockout for data port

Specifications & Ordering Information:
Small & Medium Models available for 115 or 230 Volt operation.
Large Model Only available in 230 Volt-50/60 Hz.

Three Sizes

- Small: 2.5 cu. ft. chamber (15-1/2”,18-1/2”,15”)
- Medium: 4.5 cu. ft. chamber (15-1/2”,18-1/2”,27”)
- Large: 5.5 cu. ft. chamber (15-1/2”,18-1/2”,33”)

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

**Mechanical Convection Oven;**
**Model: DKN-810**

Temperature range: from 5°C above ambient to 260°C
Store 10 preset temperatures and up to 10 set temperatures. Settings can be locked. PID controller compensates for temperature changes caused by fluctuating loads and setting changes to ensure accuracy. Built-in diagnostics include automatic shutoff and audible/visual alarms. Corrosion-resistant Type 304 stainless steel interior. Cold-rolled carbon steel exterior with baked melamine finish.
**Includes:** 4 Removable Type 304 stainless-steel shelves.

OTHER MODELS AND RANGES AVAILABLE.

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Thermal Shrinkage Oven – Model: MK 3

This machine was originally designed in conjunction with the Tyre Technical Division of Dunlop Rubber Co. Ltd., to determine the shrinkage of tyre cord yarns at closely controlled temperatures. It has since been modified to enable similar tests to be carried out on 1" wide strips of fabric, as well as yarns, mono-filaments etc. Samples under test are exposed to the controlled air. Temperatures between two 10" wide heated platens, and shrinkage per cent is indicated on a scale. Residual shrinkage can be ascertained by removing the sample from the heated zone and allowing it to cool. A.S.T.M. Designated No. D4974-89.

Temperature range is adjustable from ambient to 250° centigrade.

Detailed specification overleaf.

| APPROXIMATE SHIPPING WEIGHTS AND MEASUREMENTS | |
|---|---|
| Packing case | 52 x 50 x 46 cm |
| Gross weight | 55lb (25 kg) |
| Nett weight | 44lb (20 kg) |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com

# Shrinkage and Force Tester – Model: MK V

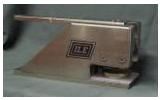
Designed and based on the original T.S. AB idea, to determine the shrinkage of tyre cord yarns at closely controlled temperatures this totally new Shrinkage and Force Tester incorporates these ultra modern features.

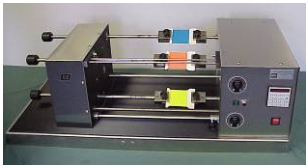
1. Heater and hardware unit remote from separate control module (for ease of service and repair).
2. Control module features a large bright 16 character alphanumerical display.
3. Three term P.I.D. controller with ± 0.25˚C deviation.
4. Standard RS 232 output to link to your computer (gives ASC II output of load or shrinkage every time a graph point is plotted).
5. 20 key touch pad to programme test requirements.
6. Temperature range of ambient (20˚C) to 250˚C.
7. -5% to +32.5% shrinkage range.
8. Either 0-25 Newton or 0-100 Newton Force Range.
9. 0-99.9 minute timer (almost 1.40 hours).
10. Built in miniature printer producing accurate graph of result.
11. Output provided 0-2V for larger recorder.
12. Average key.
13. Voltage either 110V 60Hz or 230V 50Hz.

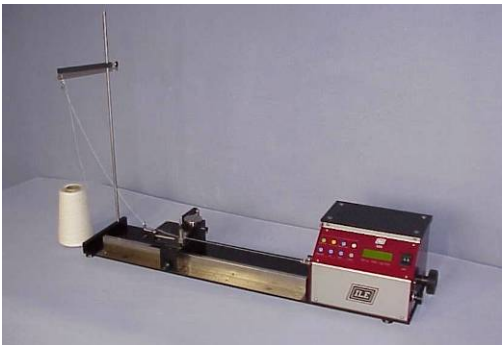
***Note:** Items 8 and 13 must be stated upon order*

| Approximate Shipping Weights and Measurements | |
|---|---|
| Packing case | 75 x 52 x 46 cm |
| Gross weight | 59lb (25 kg) |
| Nett weight | 44lb (20 kg) |

**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com







**INDUSTRIAL LABORATORY EQUIPMENT COMPANY, INC.**
3210 Piper Lane – Charlotte, NC 28208 – U.S.A.
PO Box 220245 – Charlotte, NC 28222 – U.S.A.
Phone: 704-357-3930 – Fax: 704-357-3940 – email: ile@ile-textiles.com