

# DRAW FORCE TESTER - HT

LH-160 DFT-HT



## HIGH TEMPERATURE & HIGH SPEED DFT

### INSTRUMENT FEATURES

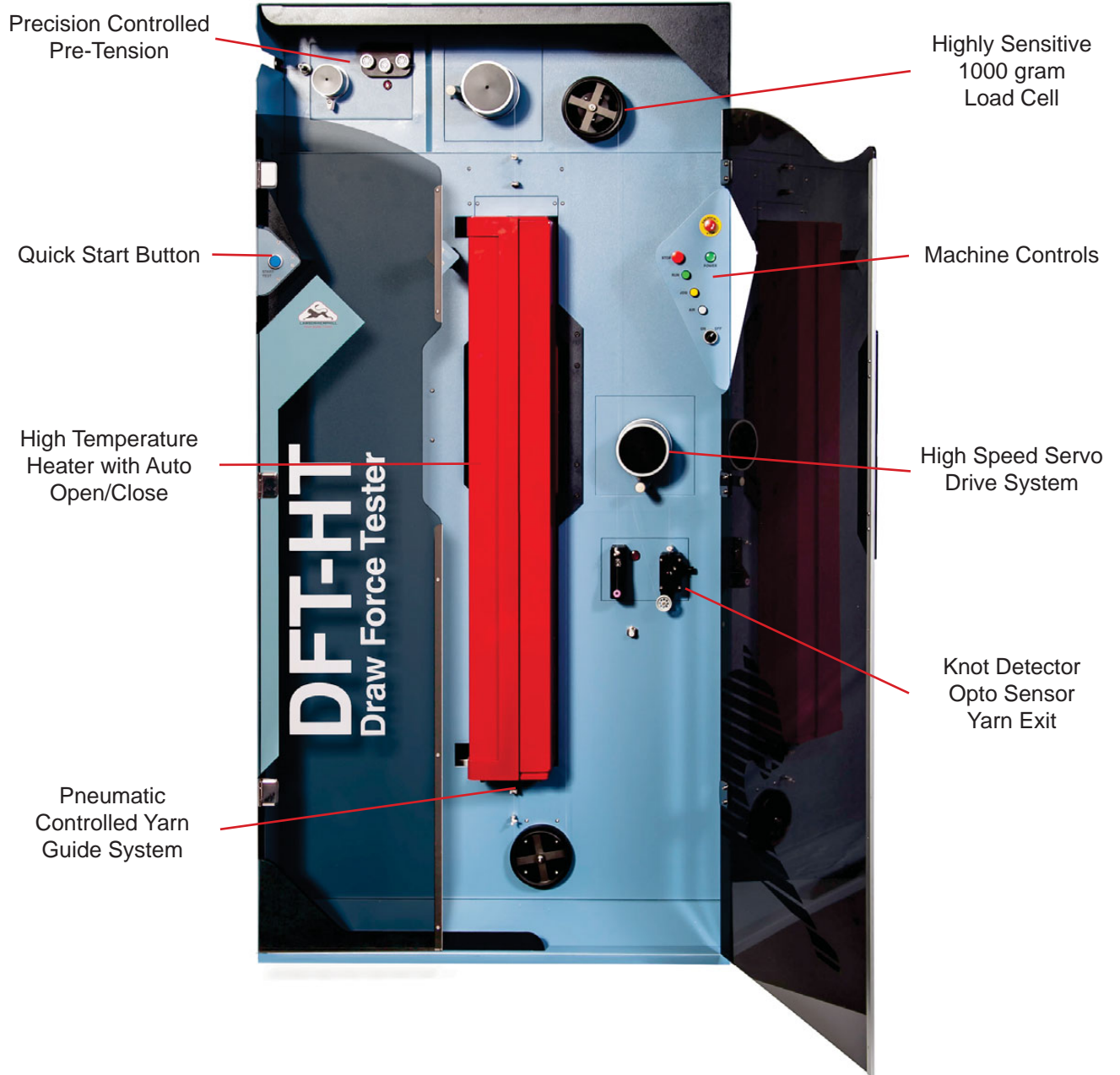
- High Speed and High Temperature precision Draw Force Tester with Electronic Drive System
- Testing Speeds between 20-1000 meters/minute with electronic servo motors
- Heater Temperature between 25-500°C
- Real-time Draw Force Measurement for partially oriented yarn under constant extension
- Software controlled, Electronic Pre-tension applied for the entire duration of the yarn testing
- Automatic Yarn Guides to move the yarn in and out of the heater after test
- Continuous operation with Automatic or Manual Splice Yarn Package Changers for maximum test efficiency
- Ability to start the test from both sides of the machine
- Closed door application for maximum safety
- Effectively used to test POY, MOY and LOY
- DFT-HT complies with ASTM D5344

DFT-HT is the newest addition to Lawson Hemphill line of Draw Force Testers. The instrument features 1000 meters/minute test speed and 500°C hot air temperature on the running yarn. It complies with ASTM D 5344.

The system is Software Controlled to set the required Draw Ratio and Pre-Tension while maintaining constant air test temperature throughout the test. It is equipped with yarn guides that move the yarn in-out of the heater when testing is completed. For maximum safety, DFT-HT doors remain closed during the test.

The operator can start the test from either side of machine by pressing Quick Start Blue button or a single keyboard click. When equipped with Automatic or Manual Splice Package Changers, the DFT-HT operates continuously.

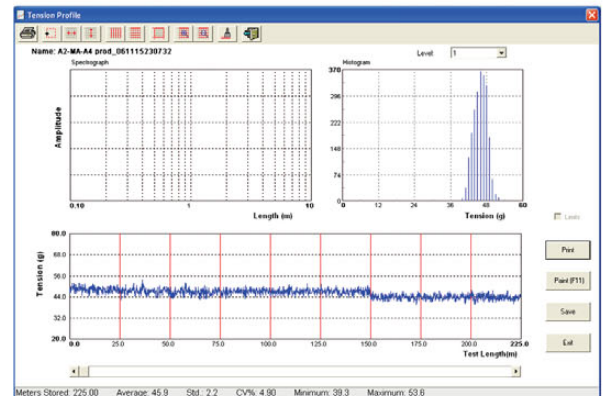
**ULTIMATE DRAW FORCE TESTER**  
for your high speed testing needs



## SOFTWARE FEATURES

- Continuous monitoring and detection of changes in yarn draw tension with real time tension graph display
- Automatic application of the Draw Ratio and Pre-tension
- Draw Force statistics for Average, Minimum and Maximum Tension readings, Standard Deviation and CV%
- Production or Continuous modes of operation for group or single package analysis
- Accept/Reject limits to sort out the yarn packages
- Knot Detector input to begin data collection
- Simple File Structure and automatic saving of test settings, results and yarn tension graphs
- Export all test data automatically or operator initiated
- Data archiving of multiple or single package test data
- Auto Export function for sharing tension data with factory main database

### View Tension Data for each Package



Tension Graph, Histogram and Spectrograph for each package

The main screen displays various test parameters on the left, including Test Speed (120 m/min), Pretension (18 g), and Test Mode (Production). The central 'Test Data' table lists individual test results for 9 packages, with some values highlighted in yellow. Below this is a 'Summary Data' table. At the bottom, there are two graphs: 'Test Graph (g)' and 'Histogram', both showing tension limits.

#	Sample	#	Avg. (g)	SD	CV%	Min	Max	Speed	Temp(C)
Test 9		9	43.6	0.74	1.69	42.1	44.8	120	150
25	44.4	8	43.6	0.59	1.36	42.3	44.5	120	150
24	43.1	A4	43.6	0.64	1.47	42.3	44.7	120	150
23	43.5	6	46.8	0.71	1.53	45.4	48.0	120	150
22	42.5	5	46.8	0.55	1.17	46.0	48.0	120	150
21	42.5	MA	46.8	0.49	1.04	45.7	47.8	120	150
20	43.1	3	46.4	0.84	1.81	45.0	48.4	120	150
19	43.9	2	47.1	0.86	1.83	45.9	50.0	120	150
18	44.2	A2 vpr	48.0	0.64	1.33	47.0	49.4	120	150
17	43.1								

Total	#	Avg. (g)	SD	CV%	Min	Max
GOOD	9	45.9	1.75	3.81	43.6	48.0
ALL	9	45.9	1.75	3.81	43.6	48.0

Test Results for Individual Packages with Statistics

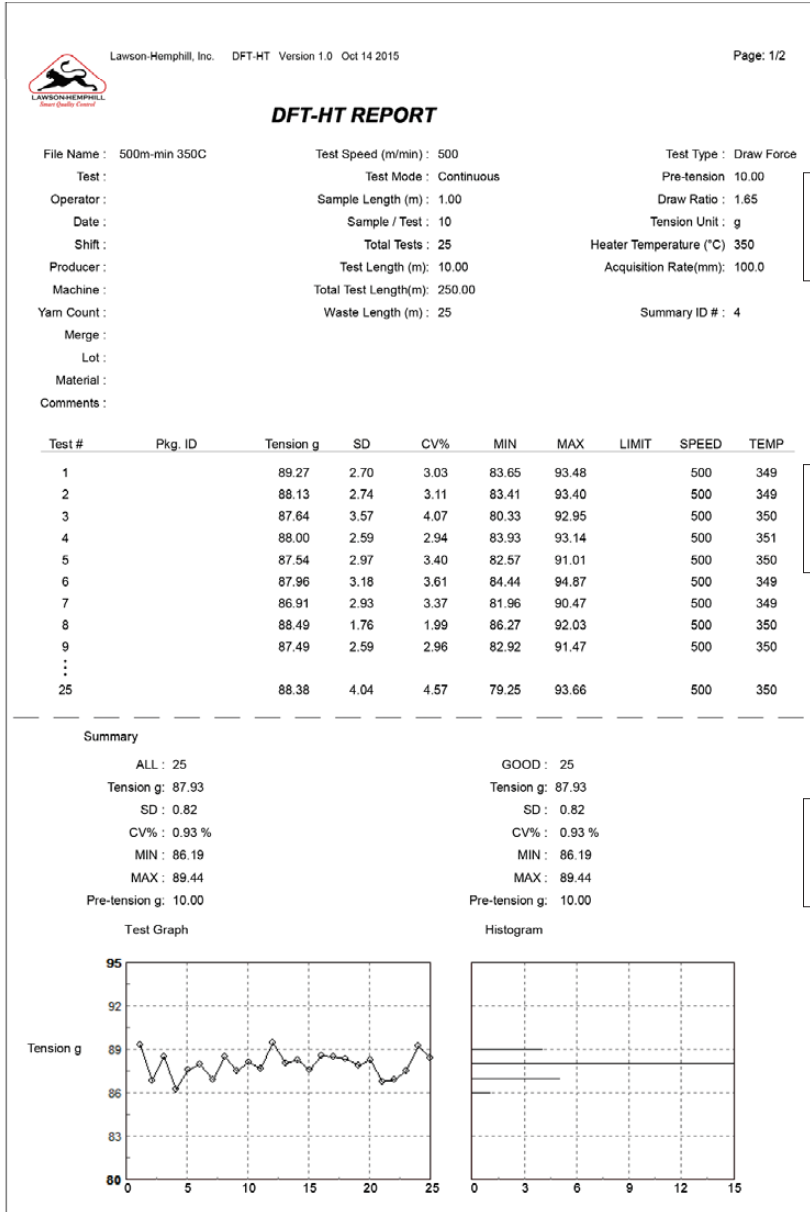
Out of Limit results are highlighted and flagged

Summary of all packages with Statistical Analysis

Tension Graph and Histogram with Limits

DFT Software Main Screen

# DRAW FORCE TESTER HIGH TEMPERATURE & HIGH SPEED



Test Header,  
including test  
parameter value

Test Result,  
for individual packages  
including statistical report

Summary of GOOD and  
ALL packages with group  
statistics

## DFT-HT PRODUCTION TEST REPORT

### TECHNICAL SPECIFICATIONS

Machine Speed	10-1000m/min
Heater Temperature	25-500°C
Heater Length	1000mm
Load Cell	1000 grams
Pretension Range	5-50 grams
Yarn Types	POY, MOY or LOY yarns

*\*All specifications are subject to change.*

### MODEL

LH-160	
Draw Force Tester High Temperature and High Speed	
Electrical	110-220 Vac 50-60 Hz, 3.3Kw
Air	60 psi, clean air required
Dimensions	940 x 673 x 1905mm (37 x 26.5 x 75 inches)
Weight	295kg (650 lbs)

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

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