



# Elmendorf Tearing Testers

Tearing Strength

# Testing for Falling Pendulum Tear Strength

SDL Atlas Elmendorf Tearing Testers are designed to determine falling pendulum tearing strength by propagating a single-rip tear starting from a cut in a sample of paper, cardboard, plastic, or fabric, woven or nonwoven. The versatility of the SDL Atlas Elmendorf Testers allows for the testing of both light and heavy weight specimens.

## PowerTear™ High Energy Elmendorf Tearing Tester

The PowerTear High Energy Elmendorf Tearing Tester is the most versatile tearing tester of its kind. It is designed to provide fast, accurate results while also being easy to use.

With increased functionality and unmatched ease of use, the PowerTear features an innovative pendulum apparatus that is controlled by a sophisticated microprocessor. The new full color touch screen allows the user to easily set up tests and choose results in 7 different units of measurement.

Electronic braking and two button release provide safety while the rotary encoder, pendulum balance control, and release pin bearing increase accuracy and reliability. Lever clamps make sample loading fast and easy for the operator.

The use of the optional “E” Pendulum increases the capacity of the PowerTear to 128 N, twice the capacity of many other devices on the market.



Adjustable controls for pendulum zeroing provide greater control for more accurate results.



## Manual Elmendorf Tearing Tester

The Manual Elmendorf is a cost-effective alternative for determining the tearing strength of paper, cardboard, plastic or fabric.

The Manual Elmendorf has a testing range of 8 N to 64 N. Transitioning between pendulums can be quickly and easily achieved to perform tests on a variety of different sample weights. Pendulums and weights are sold separately.

# PowerTear™ Features

## Full Color Touch Screen Controller

Results are displayed on a full color touch screen controller in mN, cN, N, g, kg, oz and lb. The display shows the sample number and which pendulum is in use. Microprocessor controller can store 100 test results in the instrument.



- Pendulum and weights for 8 N, 16 N, 32 N, and 64 N are included (128 N pendulum kit optionally available).
- Adjustable pendulum balance allows the user to precisely determine the center of gravity and make changes as required.
- Electromagnetic brake halts the pendulum after the test for user safety.

Test weights and check weights come in acrylic racks for safe storage.



Large platform ensures instrument stability during testing.



Lever Clamps hold the sample securely for making the initial cut and for testing.



Connects to PC



The PowerTear connects via USB to a PC for testing and data storage allowing for searchable records. Software allows inputting of:

- Batch information
- Remarks
- Sample descriptions
- Ability to include or exclude particular test results

Customizable reports allow the user to select the desired result calculations and save in Microsoft Excel.

The screenshot shows the software's report generation interface. It includes a sidebar with icons for 'New File', 'Open File', 'Save File', 'CAL-Data', and 'Help'. The main area displays test parameters and a table of results.

Sample	Break Force	Range(%)	Pendulum	Layers	Date
Test1	AVG: 17.043 N CV: 0.0%				2022-02-16 10:09:39
1	AVG: 16.937 N CV: 0.0%	26	D	1	2022-02-16 10:09:44
Test2	AVG: 16.937 N CV: 0.0%				2022-02-16 10:10:27
Test3	AVG: 16.937 N CV: 0.0%				2022-02-16 10:10:44
Test4	AVG: 17.043 N CV: 0.0%				2022-02-16 10:10:48
Test5	AVG: 16.726 N CV: 0.0%				2022-02-16 11:11:56
Test6	AVG: 16.831 N CV: 0.0%				2022-02-16 11:12:01
Test7	AVG: 16.937 N CV: 0.0%				2022-02-16 11:15:47
Test8	AVG: 16.937 N CV: 0.0%				2022-02-16 11:50:12
Test9	AVG: 16.831 N CV: 0.0%				2022-02-22 14:06:28
Test10	AVG: 16.000 N CV: 141.4%				2022-02-22 14:07:01
Test11	AVG: 31.906 N CV: 0.0%				

# Specifications and Standards

PowerTear™ High Energy Elmendorf	Manual Elmendorf
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## Configurations

Standard Configuration	<ul style="list-style-type: none"> <li>PowerTear Elmendorf Tearing Tester</li> <li>Pendulum and Weights (A-D for 8 N, 16 N, 32 N and 64 N)</li> <li>USB Instruction Manual and Software</li> </ul>	<ul style="list-style-type: none"> <li>Manual Elmendorf Tearing Tester</li> </ul>
Optional Accessories	<ul style="list-style-type: none"> <li>Pendulum Kit E - Extends Capacity to 128 N</li> </ul>	<ul style="list-style-type: none"> <li>Pendulum A - 8 N maximum</li> <li>Pendulum B - 16 N maximum</li> <li>Pendulum C - 32 N maximum Additional Weight 16 N - Converts Pendulum B to C</li> <li>Pendulum D - 64 N maximum Additional Weight 48 N - Converts Pendulum B to D</li> </ul>

## Specifications

Operation Mode	Automatic	Manual
Measuring Range	5 Grades 8 N, 16 N, 32 N, 64 N, 128 N	4 Grades 8 N, 16 N, 32 N, 64 N
Tearing Strength Unit Display	mN, cN, N, g, Kg, oz, lb	mN
Analysis Software	Yes	No
Test Result Output	Yes (USB)	N/A
Dimensions (LxWxH)	420 mm x 612 mm x 440 mm	458 mm x 190 mm x 324 mm
Weight	62 kg (excludes weights)	15 kg (excludes weights)
Power	110-230V, 50/60Hz, Single Phase	N/A

## Standards

Comply to:	ISO 13937-1 1974, 4674-2, 6383-2 ASTM D1424, D1922 GB/T 3917.1 NEXT 17 TAPPI T414 M&S P29 DIN 53128, 53862 BS 4253, 4468 AFNOR G07-149 INDA IST 100.1 WSP 100.1.R3	ISO 13937-1, 1974, 4674-2, 6383-2, 9290 ASTM D1424 NEXT 17 TAPPI T414 M&S P29 DIN 53862 BS 4253, 4468 INDA 1ST 100.1 WSP 100.1.R3
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