

## Automated MD/CD Tensile

*The Technidyne PROFILE/Plus Tensile automatically measures MD and CD tensile.*

- ✦ All operations performed automatically:
  - Cutting
  - Clamping
  - Testing
  - Reporting
- ✦ No more sample preparation
- ✦ No more operator induced errors
- ✦ No more lack of relevant data
- ✦ No more costly retests
- ✦ Improved operator ergonomics
- ✦ PROFILE/Plus Automated Testing System Ready



## Eliminate Cutters and Sample Prep



The PROFILE/Plus Tensile is the first fully automated *stand-alone* tensile tester and is set to revolutionize the way tensile test are performed.

- ✦ Gone are the days when operators need to spend long hours cutting and preparing samples for tensile testing.
- ✦ Gone are the days when operators must perform countless repetitive tests just to ensure statistical relevance of the results.
- ✦ Automation provides improved ergonomics by eliminating repetitive testing movements.
- ✦ Save money with reduced manpower requirements and consistent tensile testing.

## Features

**Precisely Engineered Punch and Die Assembly**.....ensures constant sample size, increased precision, repeatability, and reproducibility.

**High Precision Sample Clamping**.....eliminates sample slippage to provide accurate and reliable data.

**Completely Automatic**.....means that measurements of MD and CD tensile strength, elongation, and TEA are all performed by the instrument itself.

**Automatic Tensile Strength Profile** eliminates operator errors in sample preparation and testing thereby allowing more tests to be performed in less time.

**User Defined Measurement Parameters**.....means that grade specific reporting units can be selected.





### **Economic Benefits – Lowering Costs and Saving Money**

A **complete tensile strength profile** provides key information about the operation of the paper machine, thus allowing better, more stable production. *A 20 foot (7 meter) papermachine CD sample tested for MD/CD tensile every 15 inches generates 16 MD and 16 CD data points in less than 6 minutes, while taking less than 1 minute of the operator's time.*

**Accurate and reliable measurement results** mean being able to tighten tensile strength specifications in order to optimize the production and save money.

PROFILE/Plus Tensile allows the machine operators to more reliably monitor the sheet strength, thus reducing costly retests.

PROFILE/Plus customers have reported that savings can be realized in the areas of furnish, chemical addition, customer complaints, and reduced paper machine breaks. Manpower efficiency can also be improved by increasing the testing frequency and accuracy, which lowers the overall cost of testing.

### **PROFILE/Plus Automated Test System**

PROFILE/Plus is a unique building block approach to automated testing. Each PROFILE/Plus instrument is a standalone instrument that can be easily placed in line with other PROFILE/Plus instruments to operate as an automated test system. This one of a kind versatility allows you the flexibility to build an automated test system that can be established over time or all at once. In addition as your testing needs change, the versatility of the PROFILE/Plus provides the flexibility to modify the testing sequence or move other test in to or out of the system. PROFILE/Plus puts you in charge of your automated testing program. In today's

ever changing markets, having a testing program that can adapt, is key to long



term viability.

## Specifications and Technical Data

- + CD or MD profile strips
- + Single sheet samples (automatically)
  - o A3, A4, and 8½" x 11"
- + Test span length – 100 mm for both MD & CD
- + Test span width – 15 mm for both MD & CD
- + Test speed – 3.5 mm/sec
- + Elongation rate – variable
- + \*Thickness Range - 25 to 650 µm
- + \*Grammage Range - 30 to 450 g/m<sup>2</sup>
- + \*Tensile strength - Max 50 kN/m
- + Resolution - 0.1 kN/m
- + \*Maximum elongation – 15%
- + Weight -
  - o 130 lb
  - o 59 kg
- + Dimensions –
  - o Height = 31" (79 cm)
  - o Depth = 19" (48 cm)
  - o Width = 10 ½" (26.7cm)
- + Air -
  - o 30 - 40 psi
  - o 205 - 275 Kpa

\*Grade dependent



### Results:

**Test completed in seconds!**

**Machine and Cross Machine results**

**Tensile Strength**

**Elongation (Stretch)**

**Tensile Energy Absorption (TEA)**

**Tensile Strength index**

**Multiple measurement, averaging, statistics and trending capabilities**

**Average, Maximum Test Value, Minimum Test Value and Standard Deviation**

**Tabular and Graphical display of results**