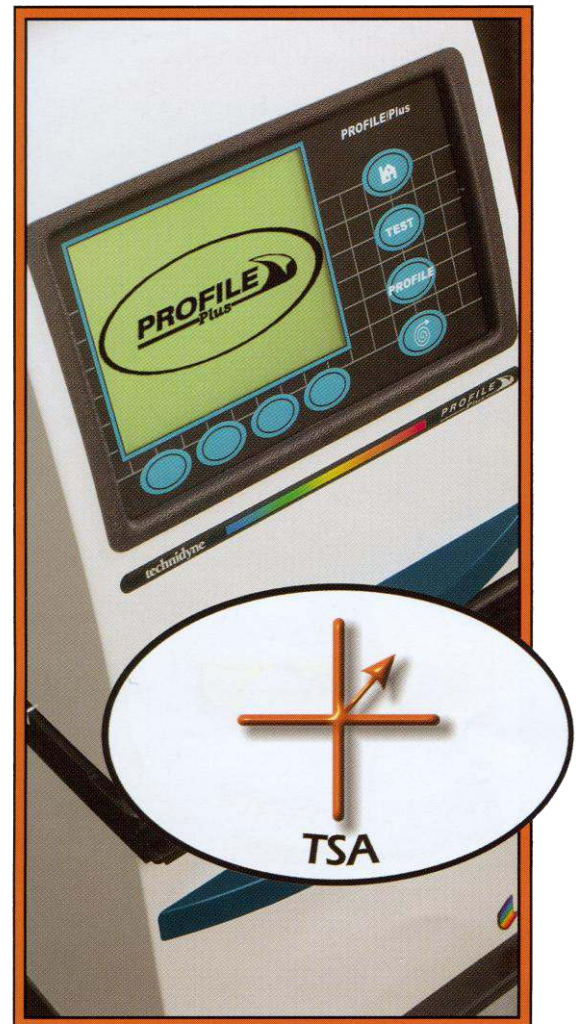


Automated Tensile Stiffness Alignment

The Technidyne PROFILE/Plus TSA automatically measures the Tensile Stiffness Alignment using ULTRASONIC technology.

- + Dedicated MD/CD transmitters
- + Specially engineered receivers
- + Robust, high precision measuring head
- + Well proven technology
- + Self aligning backing
- + Compact, all inclusive design
- + Process optimization tool
- + PROFILE/Plus Automated Testing System Ready



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Features

Compact, all inclusive design

The PROFILE/Plus TSA has been ergonomically designed so that the computer is included inside the unit itself to help simplify the operation and to make performing measurements fast and easy.

Dedicated MD/CD transmitters

Within the measuring head of the PROFILE/Plus TSA, where there is one each CD and MD transmitters. As opposed to shared function transmitter/receiver sensors, the TSA's dedicated MD/CD transmitters provide enhanced stability. These dedicated transmitters are finely tuned to optimize the ultrasonic transmission, providing improved accuracy and precision.

Specially engineered receivers

The TSA measurement is accomplished by utilizing a series of specially engineered sensors. The ultrasonic waves are transmitted across the in-plane direction of the sample. The pulses are detected by a series of receivers, propagation times are determined and calculations performed to provide the measurement data.

Self aligning backing

Self-aligning backing pad eliminates uneven and improper clamping pressure on the sample, providing improved accuracy and precision.

Robust, high precision measuring head

The newly designed High Resolution measuring head has receivers located every 11.25° in the measurement area, providing improved accuracy and precision. The entire testing process takes less than 5 seconds.

Well proven technology for process optimization

As mills require greater uptime on the paper machine, it is essential to make quick and accurate decisions. Often times the opportunity to review a bank of data is not available. The PROFILE/Plus TSA can be used for making process decisions. It uses ultrasonic technology that has been proven to reveal properties of the paper or board allowing paper makers a further insight into areas of the paper machine such as:

- Jet / Wire Ratio
- Rush / Drag Ratio
- Slice Opening (Slice Screws)
- Formation Table
- Head Box Recirculation
- Side Bleeds

What TSA Indicates

- Hygroexpansion Problems
- Stack Lean Problems
(Computer Forms)
- Twist and Curl
(Copy Paper and Paperboard)



Economic Benefits – Lowering Costs and Saving Money

Compact, all inclusive design means reduced investment costs, lower maintenance and support costs and the smaller footprint results in less space requirements.

The specially engineered sensors and high precision measuring head results in reduced maintenance costs and improved manpower efficiency along with the ability to introduce tighter process control limits to lower machine breaks, reduce customer complaints, and improve quality.

Self aligning backing ensures reliable results to improve efficiency, reduce retests, and lower costs.

Well proven technology ensures an indispensable tool for process improvement and cost reduction.

Stack lean, Curl and Twist are problems that cause serious runnability difficulties to the end users of paper, board or corrugated fiberboard. Although these problems are well known by papermakers, to quantify and control them is a different scenario.

The **PROFILE/Plus TSA** is an indispensable tool to the papermaker. Papermakers view the **PROFILE/Plus TSA** as a process optimization tool enabling them to produce a better quality product by qualifying and quantifying the overall profile of their paper machines.

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

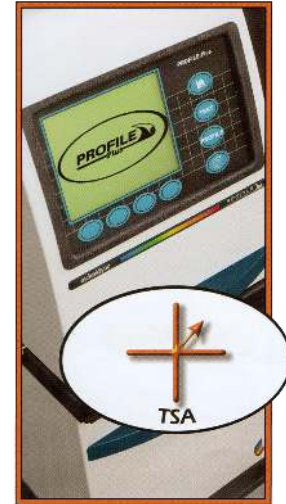
- + CD or MD profile strips
- + Single sheet samples (automatically)
 - o A3, A4, and 8½" x 11"
- + Thickness Range – 25 to 1000 µm
- + Grammage Range - 15 to 600 g/m²

- + Weight –
 - o 62 lb
 - o 28 kg

- + Dimensions –
 - o Height - 26" (66 cm)
 - o Depth - 18" (46 cm)
 - o Width - 10 ½" (26.7 cm)

- + Voltage/Frequency -
 - o 100-130 VAC/49-61 Hz
 - o 210-250 VAC/49-61 Hz

- + Air -
 - o 30 - 40 psi
 - o 205 - 275 Kpa



Results:

TSA
TSI MD
TSI CD
TSI MAX
TSI MIN
TSI MD/TSI CD Ratio
TSI MAX/TSI MIN Ratio

Measurement completed in seconds!

Multiple measurement, averaging, statistics and trending capabilities

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

Tabular and Graphical display of results