ART3™
Technical Data*

Basic installation
- Double Testing of Length, Strength, Colour, Trash and Single Testing of Micronaire
- BaleSMART : Software for Bale Management
- Rh and Room Temperature measurement
- Moisture Measurement
- True Maturity
- Bar Code Reader
- Double LS & CT Module

Application range
- Cotton Samples from Bales
  (140 samples/hr with one operator)

Measuring principle
- Length and Length uniformity   : Optical
- Bundle Strength and Elongation : CRE Principle
- Moisture   : Electrical
- Micronaire   : Airflow
- Colour   : Optical
- Trash   : Optical

Key technology
- Flat Sampling
- True Maturity

User Interface
- System and Module testing
- Configurable reports
- Quality Trend and Comparison

Calibration
- Length, Length Uniformity and Strength by USDA cotton
- Micronaire calibration by USDA Cotton & Metal Plug
- Colour and Trash calibration by the standard USDA Tiles

Output Parameters

Numerical Results:

Length properties
- UHML, ML and UI

Strength properties
- Bundle strength in g/tex and elongation%

Fineness properties
- Micronaire value in µg/inch
- True Maturity

Colour properties
- % Reflectance (Rd), Yellowness (+b) and Colour grade

Optical Trash properties
- Surface: Trash Count, % Trash Area & Leaf Grade

Moisture
- % Regain

Estimation
- Short Fibre Index (SFI), Maturity Ratio, RiSi & RoSi

Graphical Results:
- Fibrogram and Force Elongation graph

Ambient Condition
- Relative Humidity : 65 ± 2%
- Temperature : 21 ± 1°C
  (27 ± 1°C for Tropical Conditions)

Power consumption
- Single Phase 2.5 KVA

Compressed air consumption
- 6.8 m³/hr at 6 Bar

* Subject to change without Prior notice

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PREMIER

ART3™

Fully Automatic
High Volume Cotton Tester

iQ
intelligent QUALITY

ART3™

Truly, state-of-the-art Technology

PREMIER ART3 Fully Automatic High Volume Cotton Tester designed and developed for grading cotton by testing all the important fibre properties. It has Fully Automatic sample preparation and transport mechanism, thereby eliminating the operator influence

PREMIER ART3 Configuration:

- Length and Length Uniformity
- Bundle Strength
- Elongation
- Micronaire
- Maturity Ratio
- Colour
- Surface Trash - Optical
- Moisture Measurement
- BaleSMART
- True Maturity
- Bar Code Reader
- Double LS & CT Module

Flat Sampling Technology — Helps in preparation of a uniform and consistent fibre sample by applying uniform pressure on the cotton flocks for testing

Moisture Measurement — Automatic Moisture measurement ensures the exact moisture content of the samples at the time of testing

BaleSMART — User friendly application software for Bale Management simplifies the bale lay-down procedure to ensure consistent quality. Plays an important role in the mixing cost

True Maturity — True Maturity in *PREMIER ART3* adopts a unique method of measurement which is traceable to image analysis values

Testing Speed — Upto 140 Samples per hour with one operator about 1000 tests / 8 hour shift.

Key Technology	Function	Benefit
Patented Flat sampling	Preparation of uniform and consistent fibre sampling by applying uniform pressure on the cotton flocks for consecutive tests	Reliable representation of the population
True Maturity	A unique method determines True Maturity	Reliable representation of Maturity

System Testing

An independent test report provides comprehensive information about Length, Length Uniformity, Strength, Elongation, Micronaire and Colour. The additional information on Maturity, Short Fibre helps to evaluate a specific variety during purchase.

Suitable for Classing & Grading of Cotton

When you import cotton from other countries the correct grade of the cotton to be ensured. Cotton plant is cultivated in most of the countries of the world. The characteristics of the cotton fibre is not the same, it varies on climate, weather, cultivating & harvesting system and others. Cotton classing & grading is done based on the fibre properties such as length, strength, fineness, maturity, trash content etc.
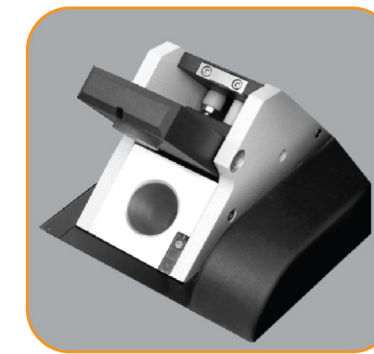
Outstanding Performance. In-built Automation.

PREMIER ART3 incorporates innovative technology to deliver a superior performance. The patented flat sampling ensures reliable representation of the population. In addition to the standard parameters ART3 is now bundled with additional noteworthy, useful parameter measurement namely True Maturity the first of its kind integrated to the High Volume Cotton testing.

Flat Sampling

"Flat sampling" technology enables uniform beard from the cotton flocks for the measurement of Length and Strength. A hand full of cotton sample in the tray is automatically transferred to the comb region where the sample is pressed on the perforated sheet with a uniform pressure. The movement of the comb carriage is supported by a lead ball screw and is driven by a servo motor to ensure a precise movement of the fibre beard into the optics zone

Micronaire and Maturity Module

The Micronaire testing can be done with a wide range of sample size viz-a-viz the same module measures both the Micronaire and Maturity enabling to test the samples at optimum speeds. The engineering calibration by metal plug ensures the reliability of results
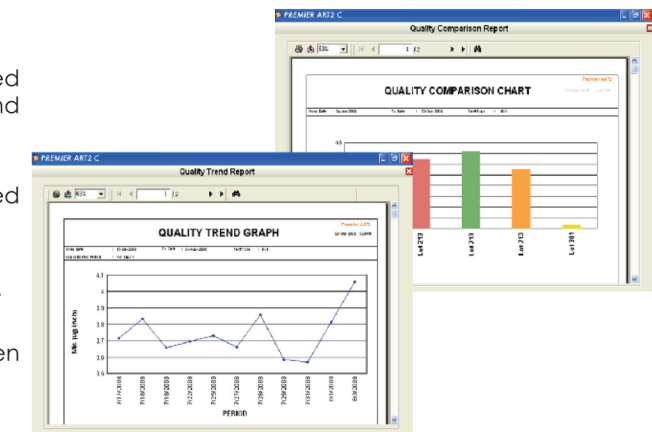
Quality Analysis

PREMIER ART3 comes with exclusively designed user friendly screens for comparison and trend analysis.

Enable to analyse trends across days for selected parameters.

Provides information at a glance for mixing control.

Enable to compare the performances between mixes.

Global Quality Standards

Uses USDA calibration cotton and tiles for instrument calibration to assure international standards for precision and accuracy

Our global presence ensures reliability of results with the equipment across the world by regular participation in international round trials conducted by ICA Bremen and CSITC