PRODUCT SPECIFICATIONS

Thermo Scientific IPlus! measurement and control system

The Thermo Scientific[™] IPlus! measurement and control system is our reliable and robust value based system. Its advanced sensor technology and powerful software, packaged in an intuitive, easy-to-use system, provides users with high performance and a low cost of ownership.

Features

- Automatic profile control with accurate non-linear flow mapping
- Two or three-zone calendering control
- Up to 2000 measurement profile points
- Advanced application specific controls
- Intuitive HMI operator displays
- Advanced system diagnostics and remote support capability

Benefits

- Accurate, real-time measurement of material production
- Improved product quality and uniformity, process efficiency and raw material savings
- Wonderware[™] user interface with Windows[®] operating system offers easier data management and archiving
- System software backup allows for quick and easy system restoration in case of accidental damage
- High reliability for less downtime

Sheet and film solutions

- The application package is specifically tailored to cast film extrusion, extrusion coating or sheet extrusion measurement and process control requirements. A single scanner and sensor are used for measuring total basis weight, moisture or direct thickness.
- Optional closed loop Machine Direction (MD) control greatly improves yield by automatically adjusting either the linespeed or screw-speed to maintain product target.



- Automatic Profile Control (APC) with advanced, non-linear mapping is recommended to achieve optimal production quality by minimizing cross-directional variation. When coupled with MD control, APC can help increase product uniformity, reduce scrap and increase material savings for a higher return on investment.
- For roll coating processes, a two-zone control package can be used to make adjustment via side-to-side.

Calendering solutions

The vinyl calendering application package is specifically designed for roll calendering. For total basis weight or total thickness control, it can be coupled with an advanced algorithm such as two zone control by roll gap, or three zone control by roll gap and either cross axis or roll bending. Additionally, feed forward control is also available.

Nonwovens solutions

The nonwovens application package is optimized for the spunbond, spunlace, carded, airlaid, and needle punch processes. Online measurement is highly recommended for these applications since the raw material distribution can vary drastically across the web. Closed loop MD control can also be added to enhance quality.



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Standard IPlus! measurement and control configuration schematic



General specifications

Applications	Cast film, sheet extrusion, extrusion coating, nonwovens, vinyl calendering
Scanners	L400 Scanner, L220, L220-Shadow; Measurement of sheet width up to 4000 mm
Measurements	Basis weight measurement by Thermo Scientific [™] sensors: Krypton-85, Strontium and X-Ray Master Direct thickness measurement by Thermo Scientific [™] sensors: ShadowMaster and PROSIS [™] IR Moisture weight measurement by PROSIS IR sensor
Controls	Closed loop MD control Non-linear die mapping APC control Two or three-zone calender control with feed forward
Other Features	Advanced roll report capability Powerful diagnostics

Performance specifications Scanner L400 Scanner for up to 4000-mm web width Sensor Kr-85 1250 mCi Beta Sensor Effective 10 - 1000 gsm measurement range Measurement ±0.1 gsm or ±0.025 % whichever is greater repeatability (20) Measurement ±0.2 gsm or ±0.05 % whichever is greater reproducibility (2o) Dynamic accuracy ±0.15 gsm or ±0.1 % whichever is greater during scan (20) ±0.25 gsm or ±0.2 % whichever is greater Max possible variation by sheet flutter (2o)



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