Our customers receive all the mechanical and electrical components for their tailored coating and laminating machines from one source. A Center of Competence for all the needs of a coating and laminating operation. Environmentally friendly, ultra-efficient and quick to react, electric and electronic solutions replace and complement pneumatic and hydraulic system controls.

Incorporating Siemens hardware for drives and programmable logic controllers (PLC), we develop, design and build all the drive systems. Our own engineers put the system into operation on site and are also the point of contact for maintenance queries, updates and speedy service via Teleline.

A repeatable modular design for the drive and control concepts guarantees safety, rapid fault diagnosis and assistance. The time necessary for maintenance is also considerably reduced.
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**Technical data**

- **Control**: Safety-oriented programmable logic controllers (PLC) with decentralized peripheral Type Siemens SIMATIC S7-300F/400F/1500F
- **Bus system**: Profinet, Profinet, Industrial Ethernet
- **Protocols**: Profinet Safe, TCP/IP, OPC-UA
- **Visualization**: Proline or Siemens WinCC
- **Drive technology**: Siemens SINAMICS
Intelligent Bus Systems

Modern, secure bus systems, using industrial ethernet, link the SPC with the visualization system, drives and other intelligent bus components.

Those who have practical experience in the often long and difficult search for electrical faults know the advantages of the bus systems over classic direct wiring.

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Industrial Ethernet connection to factory network

- Main Monitor with Proline Visu and Teleline interface

Profinet bus with Profinet communication

- Safety PLC with Teleline interface
- Remote I/O for switches, sensors, valves etc.
- E-Stop connected to fail-safe digital input
- Light barrier connected to fail-safe digital input
- TP Different Machine Panels

AC Motors

AC Motors

AC AC Motors
**Technical data**

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Visualization Proline or Siemens WinCC

Drive technology Siemens SINAMICS

**OPC Communication**

Communication with the outside world is enabled by uninterrupted and open interfaces. The technical implementation on the basis of OPC UA ensures an automated exchange of data between the most diverse controls, common ERP and database systems.

This state-of-the-art coupling in the industrial age 4.0 is a powerful and forward-looking solution to the high demands placed on today’s machines for a smooth production process. This then permits the triggering of data transfers for data modification or for alarms in a time- and event-controlled manner.

In the basic form this includes:

- **SPS plug-in**
  - Drivers for Allen-Bradley and Siemens control systems
  - Drivers for other makes of control systems are optional

- **Database plug-in**
  - To connect SQL databases (MS SQL Server, Oracle, MySQL)
  - MS SQL Server Express database is included in initial delivery
  - Other database licences can be added separately if required

- **Excel plug-in**
  - Excel sheets can be created or update for reports or roll reports

Optional:

- **Connection to SAP**
  - To download production orders and reports
  - At SAP the link is made using the standard interfaces (Doc, BAPI or direct RFC call)
  - The module applied is certified as an SAP Certified integration with SAP Netweaver
  - Other ERP systems can be integrated if required

**Interfaces**

- Interface is the Ethernet switch installed in our control cabinet
- Cable and the installation thereof with components not included in our scope of delivery
- The common interface test for components not included in our scope of delivery is billed as assembly

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Bus system
Profinet, Profinet, Industrial Ethernet

Protocols
Profinet, TCP/IP, OPC-UA

Visualization
Proline on Siemens WinCC

Drive technology
Siemens SINAMICS

Liner Facer Matching (LFM) for synchronised Splicing

The optional Liner Facer Matching (LFM) function automates the splicing of one or more unwinders together with the winders.

This functionality improves efficiency throughout the whole production process by simplifying the downstream processing of the wound rolls as well as minimizing the material discharge of the unwound rolls.

The intelligent LFM function ensures that the liner and/or facer unwinders are always located on the last positions of the spliced rewinder reel. In addition, the target length of the roll to be wound can be specified.

The function is activated at the main visualization and can implement different splice modes by means of appropriate preselection parameters.

Proline System

The Proline visualization system, based on Microsoft Visual Basic.NET, is included as a standard installation. Proline is a visualization system tailored for coating and laminating systems, however, due to its flexible design it is also suitable for customer-specific requirements. Proline has many advantages:

- Simple and clear user guidance
- Full graphic surface
- Dynamic display of trends
- Display and output of process variables and system states
- Systems for automatic machine adjustment
- Record system for outputting role logs or error message lists

Telesline System

Proline also provides access to the Telesline service via the Internet. As a rule, this alternative form diagnoses and facilitates quick problem solving within a few hours and without time consuming journeys. The result is high availability and high productivity in the coating and laminating systems.

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Applications