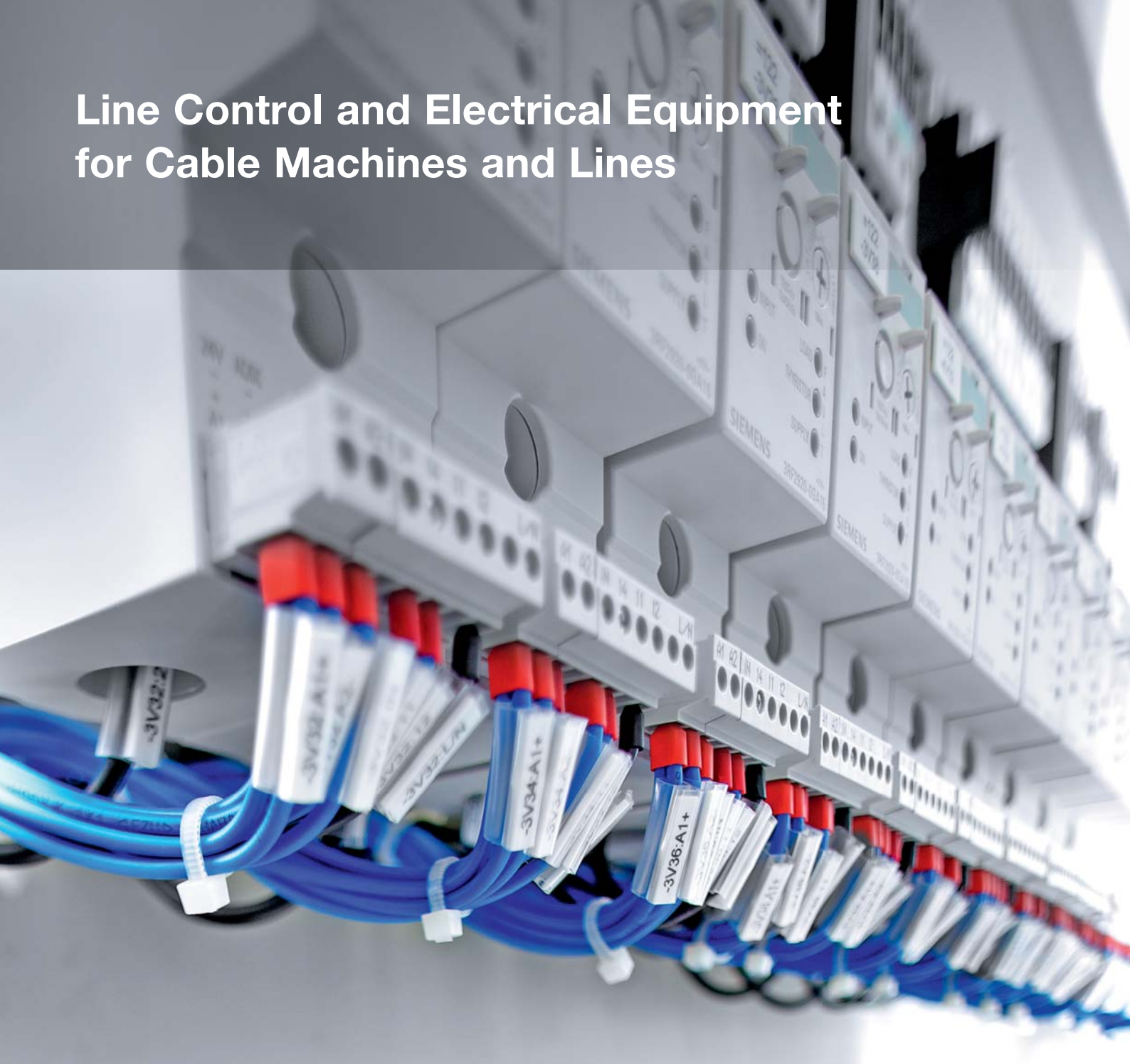


# Line Control and Electrical Equipment for Cable Machines and Lines



**TROESTER**

EXCELLENCE IN EXTRUSION.

# Line Control and Electrical Equipment for Cable Machines and Lines

**The extrusion line control systems as well as the design of electrical components are significant elements of TROESTER's equipment portfolio. The extrusion unit works with the downstream equipment as a functional unit enabling constant product dimensions in the various production stages. The control is developed, designed and programmed in-house by using the latest available electrical components. Customer specifications and preferred sub-suppliers are considered according to the individual needs of the cable manufacturer.**

## Configuration of the line control

Typically the line control consists of a PLC-PC architecture. In the field area all electrical units like drives, sensors, measuring equipment, identification and marking systems are controlled by the PLC. For many years the most well-known field bus systems (Profibus, Profinet, DeviceNet), with distributed I/O stations are used. The advantage is e.g. reduced cabling on the production site and more efficient testing of machine groups before delivery.

Wherever possible all controls (Temperature, Pressure, Position) are realized with PLC software, so proprietary discrete controllers with their disadvantages like parameter sets and lack of spare parts are avoided.

## Line PC

The Line PC is used for visualization and process trending, recipe handling and the long-term production and quality protocolling. For each production run the production parameters as well as the quality results are stored. Such production results are summed up in statistically measured parameters. Besides having long-term information about the production history, the data can also be used for labeling / identifying the manufactured goods.

There is a tendency towards connecting the Line-PC to the plant network to receive the pre-selected daily production schedule of the line from a host and to provide the production data automatically from the line via network to a plant server. State of the art is a configuration with the PC as a redundant system to ensure that quality documentation and production reports can be provided without any lag.

## TRISAG – TROESTER Sag Control for CCV lines

The TROESTER digital sag measuring system TRISAG is an own developed system to control the cable position in catenary CV lines. Its design allows the integration not only in new lines but also as an upgrade into existing equipment. The improved mechanical design assures easy maintenance in case of tube cleaning.

Compared to existing units, the electrical design is raised to a complete digital basis, which allows the end-user to fully monitor and diagnose the system with standard PCs, no special interface or knowledge is required.. The system is completely sealed and works in hot, dusty and contaminated areas. With all connections plugged the installation efforts are reduced to a minimum.

## Remote Support of Cable Lines

The Ethernet concept to connect all PLCs and SCADA-PCs in a cable production line supports teleservice up to each connected unit. This way TROESTER engineers can support the operators on site in real-time from the Headquarter in Hannover, Germany. Ethernet supports the tendency of merging the company network together with the entire line control.

## Scope of functions

- > Full access to the line PC
- > Full access to all PLCs in the whole line
- > Fault diagnostics and correction
- > Information to the maintenance staff through built-in chat option
- > Download and installation of updates on site
- > Upload/verification of customer generated recipes/reports

## Main Advantages of TROESTER Computer Controlled Cable Lines

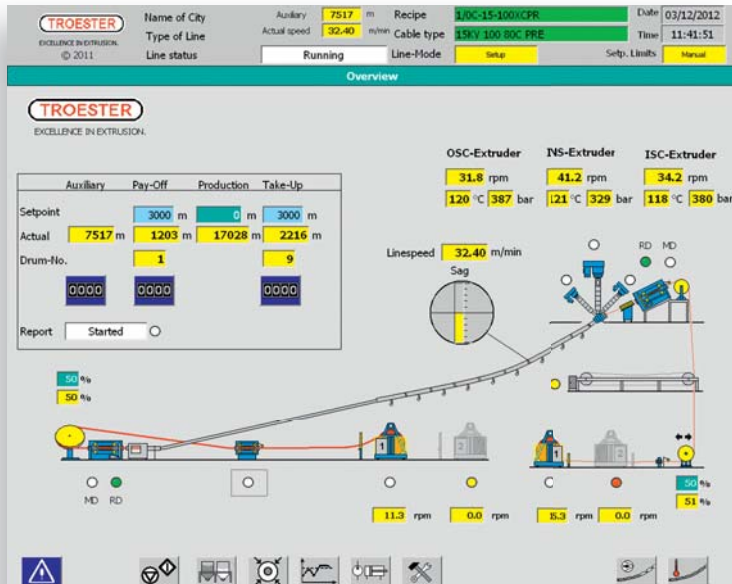
- > Modern, user-friendly operator interface
- > Optimal automatic start-up technology
- > Recipe management
- > Trend analysis
- > Data storage
- > Alarm management
- > Reporting with quality-relevant evaluation (SPC)
- > User management

### Options:

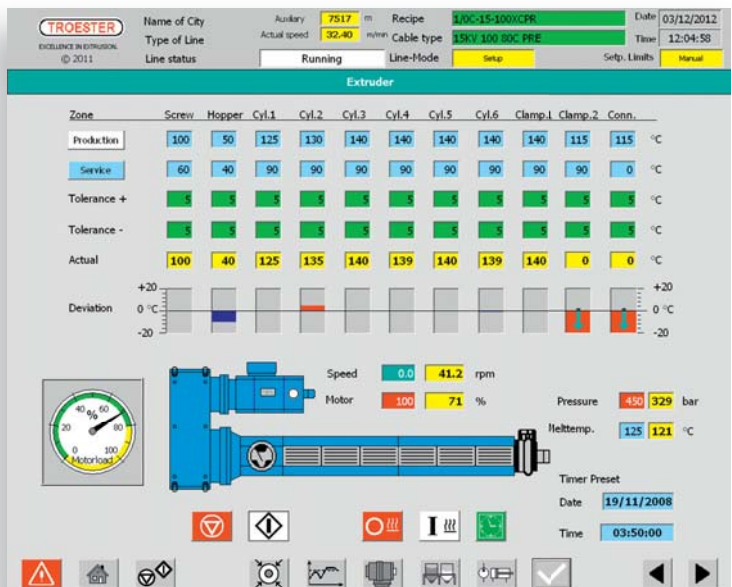
- > Remote support for service assistance via VPN/Internet
- > Language selection
- > Linking to an existing factory data processing system
- > Linking multiple systems together



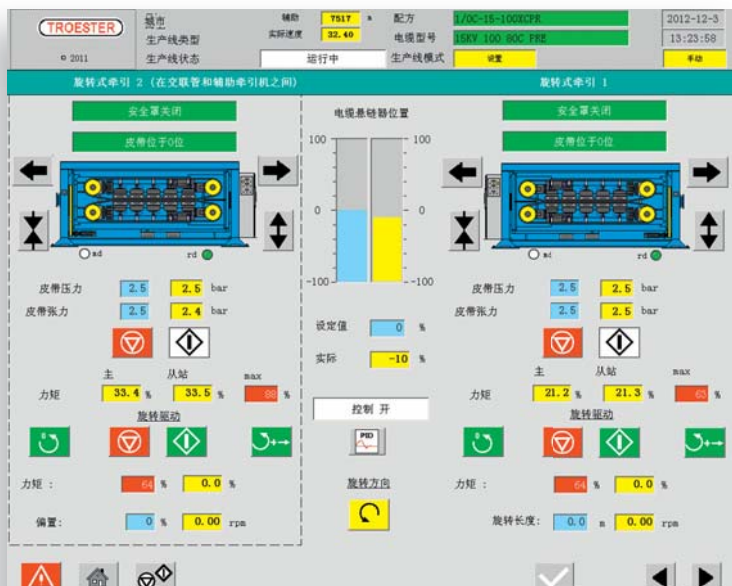




The main menu in the graphic touch screen system allows the operator to call up the desired line elements by touching the respective symbols.



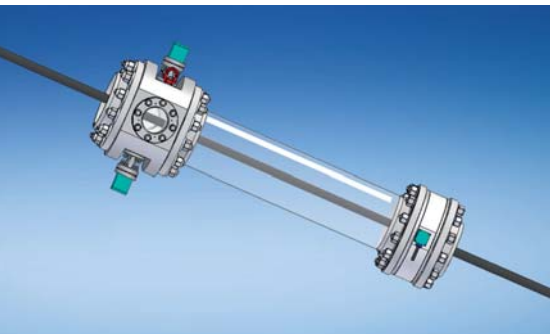
Clearly arranged and easily understandable detail pictures enable optimal operation and monitoring. Direct changing to the line control and main menu screens are possible from each detail picture.



A permanent language selection is implemented, which includes all line data and alarm messages. This selection is possible between English (always present) and each European language as well as Russian and Chinese.



Stand alone extruders and cable machines can be equipped with an individual line control for decentralized control of its functions. A small operation touch panel allows the visualisation and control of the machine as well as small recipe management, trends and report functions.



TRISAG – TROESTER Sag Control  
for CCV lines



Line Control Operation Monitor



Electrical Cabinet

# TROESTER

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