



SynchroLine INDIVIDUAL

AUTOMATION SYSTEM FOR MANUFACTURING OF ASSEMBLIES FOR SOLAR TECHNOLOGY

Flexible System with Transfer System

The high-performance system is designed for the fully automatic manufacturing of electrical assemblies for solar technology or photovoltaics.

The innovative transfer system with shuttle carts forms the technical basis for highly efficient production and is complemented by special modules for the separation and feeding needed parts.



MANUFACTURING OF ASSEMBLIES FOR SOLAR TECHNOLOGY

Preparations for Cable Production

The nearly tension-free feeding of the two-core cable is carried out via a specially developed dereeler. Depending on demand, the speed of unwinding is regulated, and a corresponding cable length is stored in a buffer.

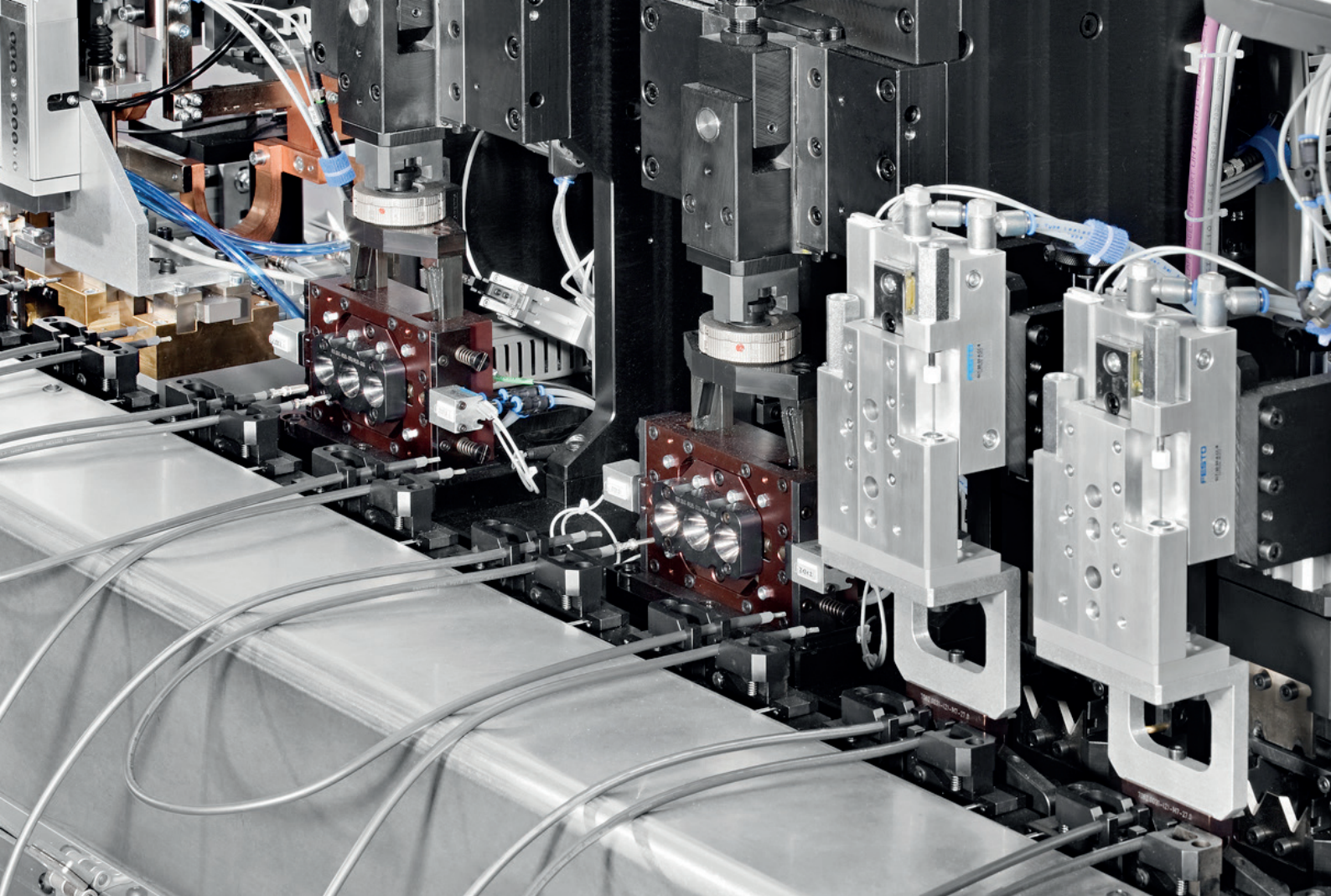
In the first processing step, the insulation at the cable end is roughened in an inline process. At another station, the product-specific lengths are cut, and the cables are stripped.

Production of Assemblies

The transfer system transports the cables in pairs from station to station using a shuttle cart. The separation and feeding of terminals and parts for the assembly production occur parallel to the preparatory process.

On one side of the cable, connections are made with high precision using 4-point crimps. The other side is compacted and connected to an electrical assembly through resistance welding.





Intuitive User Interface

The control system with a touchscreen features an intuitive user interface for easy and safe operation of the system in various languages.

The selection of different user roles and operating modes, as well as functions for machine networking, enable flexible and modern process flows.

High Safety for the Operator

The safety of the operator during operation is ensured by a monitored protective device. Opening protective doors interrupts the electrical safety circuit, stopping all motors.

The system fully complies with European directives regarding mechanical and electrical safety as well as electromagnetic compatibility.

Overview of the Entire Process

The individual processing steps for cable manufacturing are:

- Roughening in the inline process
- Cutting to length and stripping
- Separating and feeding terminals
- Feeding electrical components
- Crimping with terminals and components
- Compacting and resistance welding
- Testing for quality assurance



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