



GE

Reinforcing Mesh Welding Lines



Entwicklungs- und Verwertungs-Gesellschaft m.b.H., Raaba-Austria

Photo Page 3: EVG assembly bays and headquarters, Austria



Wire Mesh Welding Lines of GE Series

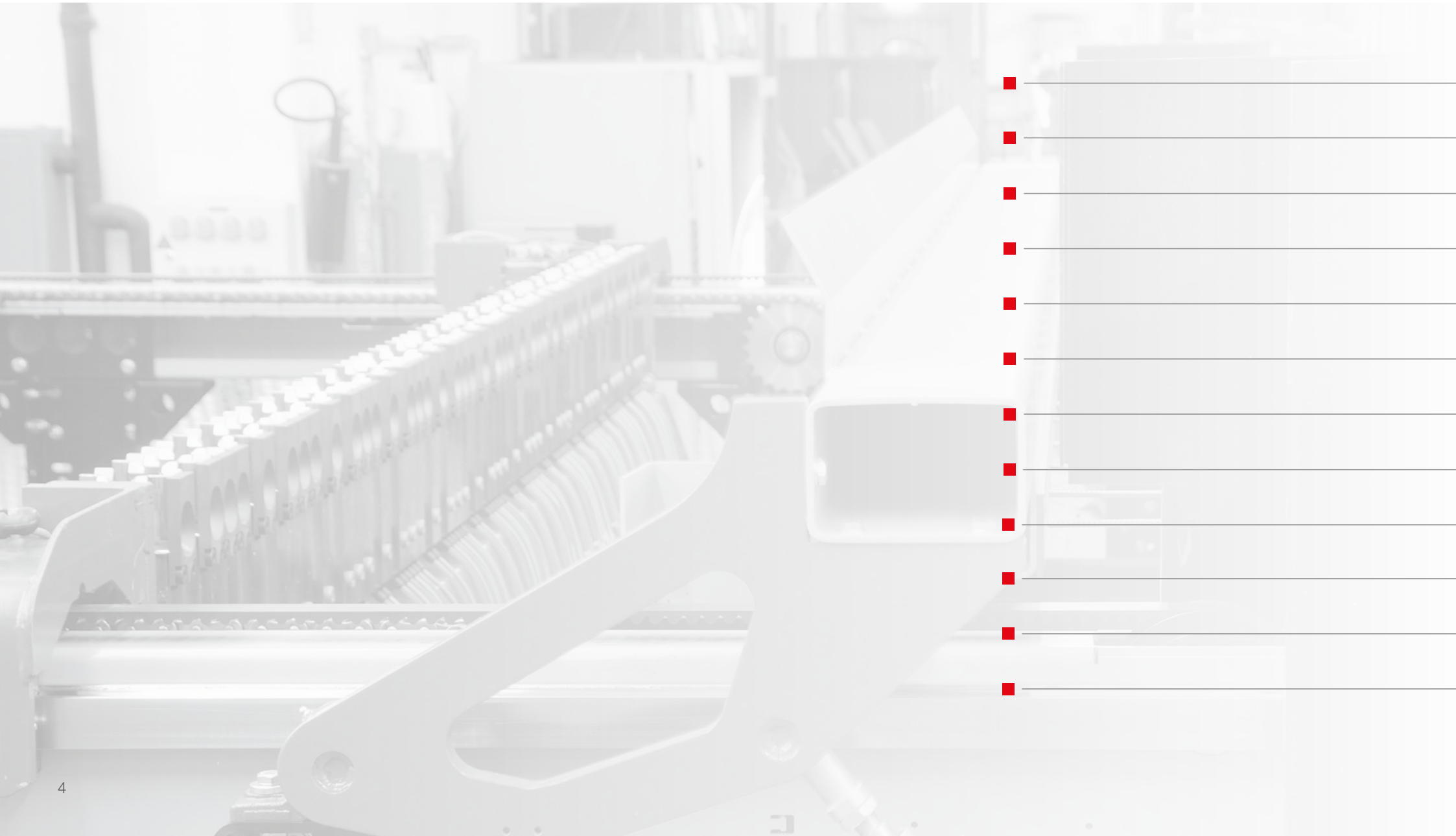
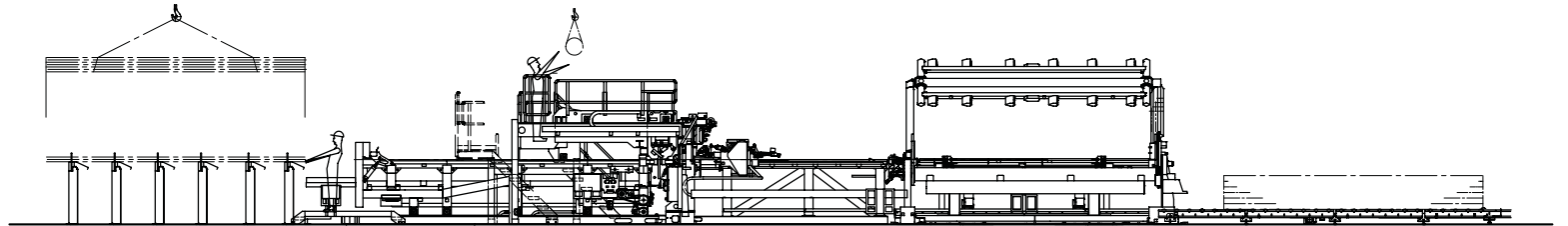


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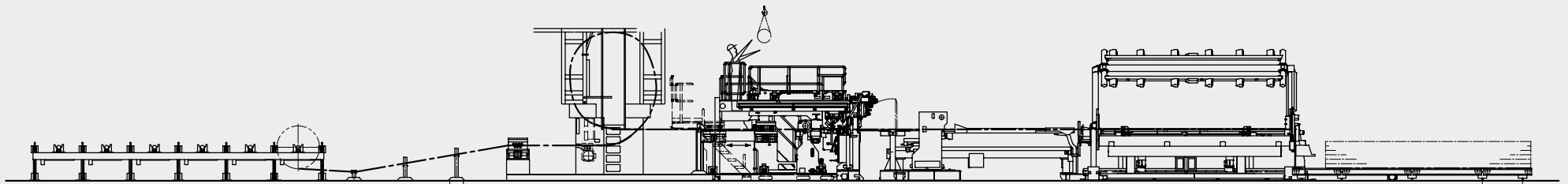


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■ Feeding of Line Wire Bars



■ Feeding of Line Wires off Coil



Technical Data



- Welding lines of different degrees of automation for the production of reinforcing steel sheets in small and medium lot sizes and for the production of special sheets and engineered fabric.

The line wires can be fed either from coils or as prestraughtened and cut-to-length bars. Cross wires are fed as prestraughtened and cut-to-length bars.

The technical data indicated refer to standard lines which, however, can be adapted to our customers' specific requirements.

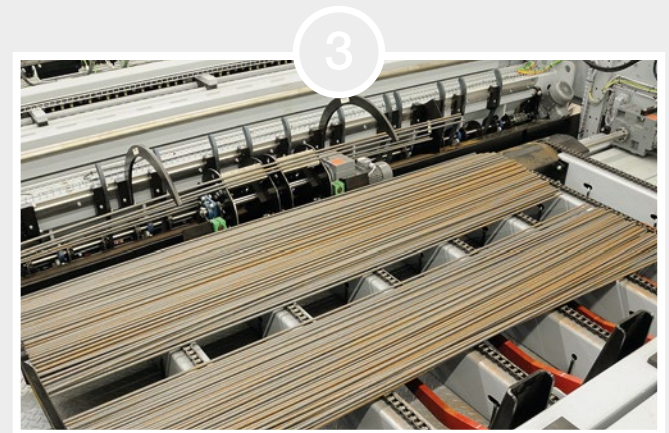
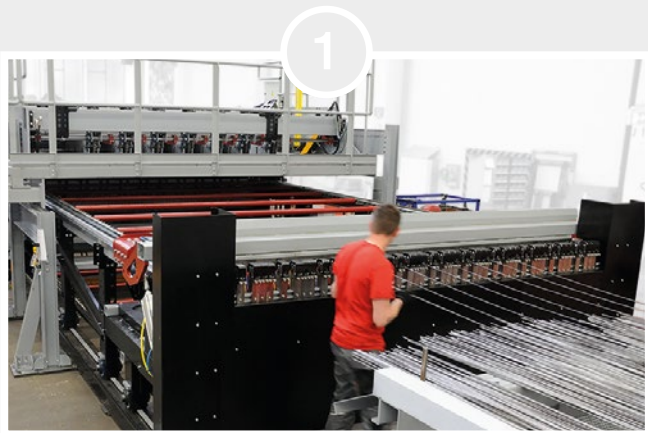
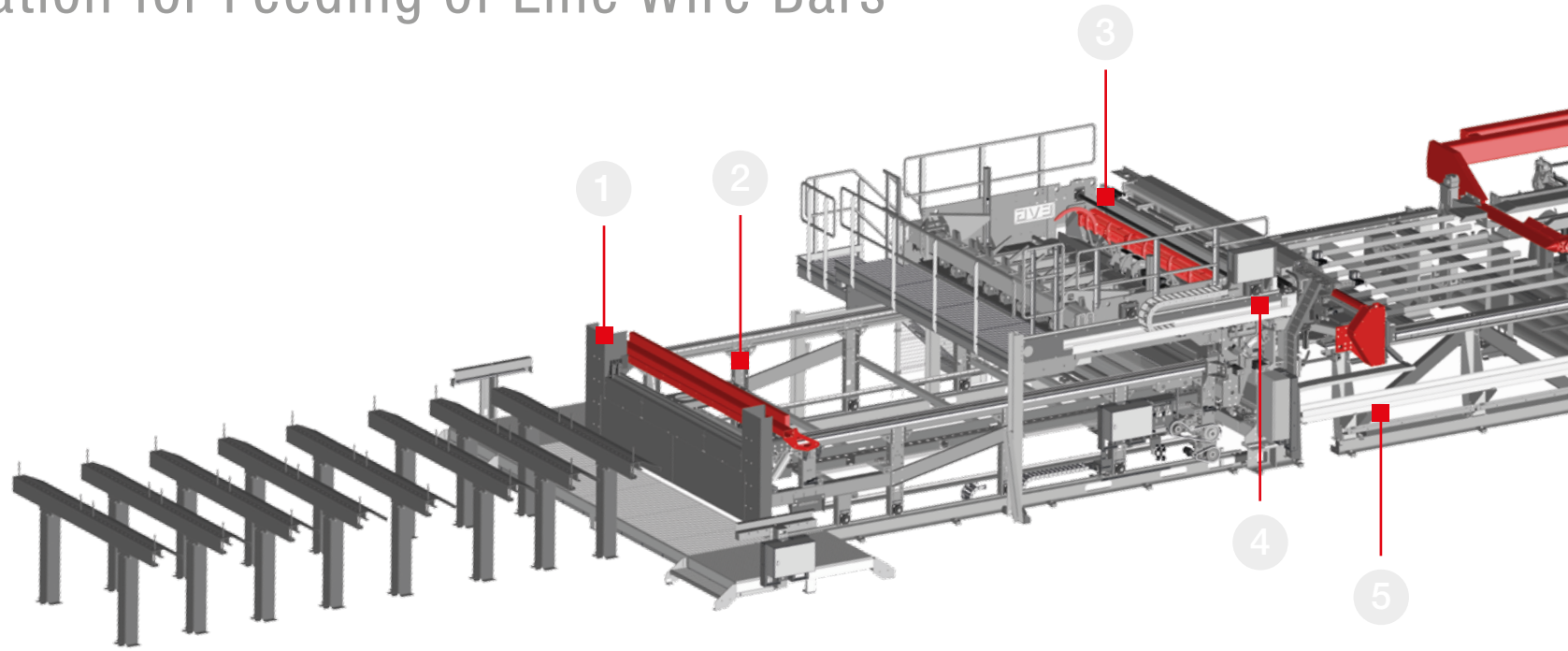
		GE 12-LTPV*	GE 16-LTPV*	GE 12-RV**
Welding Width	mm	2400, 2600, 3200	2400, 2600, 3200	2400, 2600, 3200
		3.600	3.600	
Line Wire				
Diameter Range	mm	4-12	4-16	4-12
Spacings ***	mm	(50), 100, 150, 200	(50), 100, 150, 200	(50), 100, 150, 200
Cross Wire				
Diameter Range	mm	4-12	4-16	4-12
Spacings	mm	50-400	50-400	50-400
Max. Overall Wire Size	mm	24	32	24
Max. Working Speed	CW/min.	120	120	130

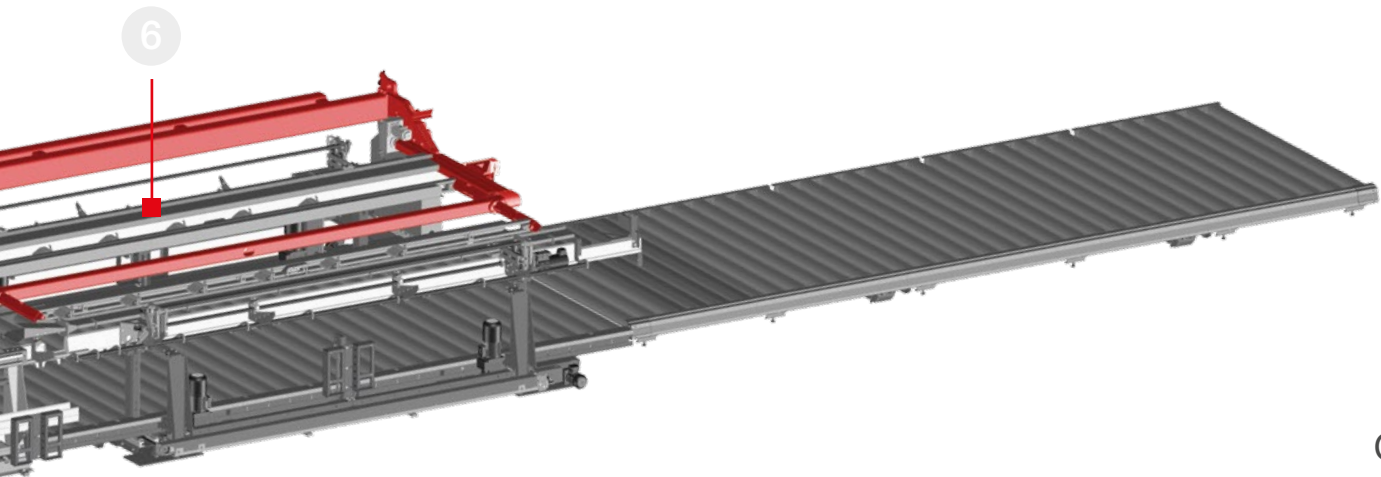
*LTPV = for line wire bars

**RV = for line wires off coil

*** Optional special design with variable line wire spacing starting from 50mm, larger spacings infinitely adjustable.

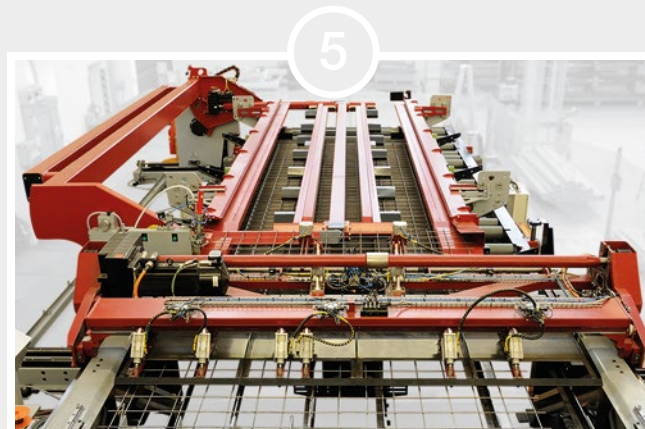
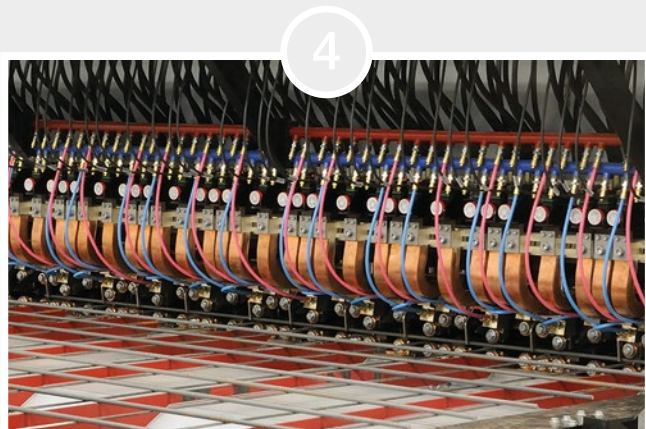
Basic Configuration for Feeding of Line Wire Bars



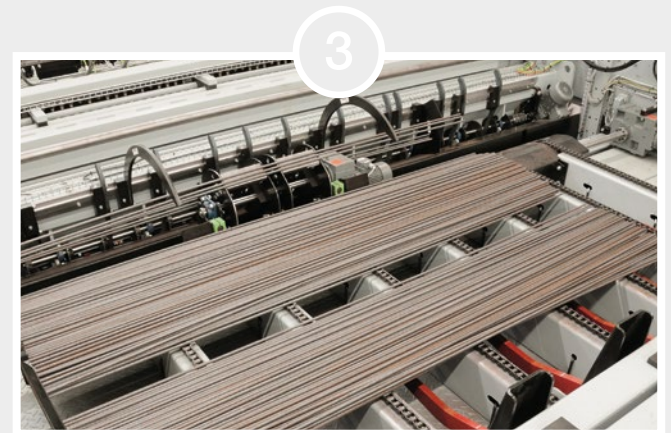
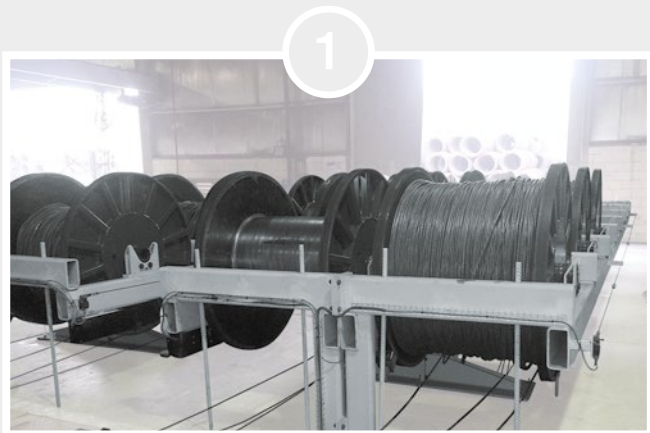
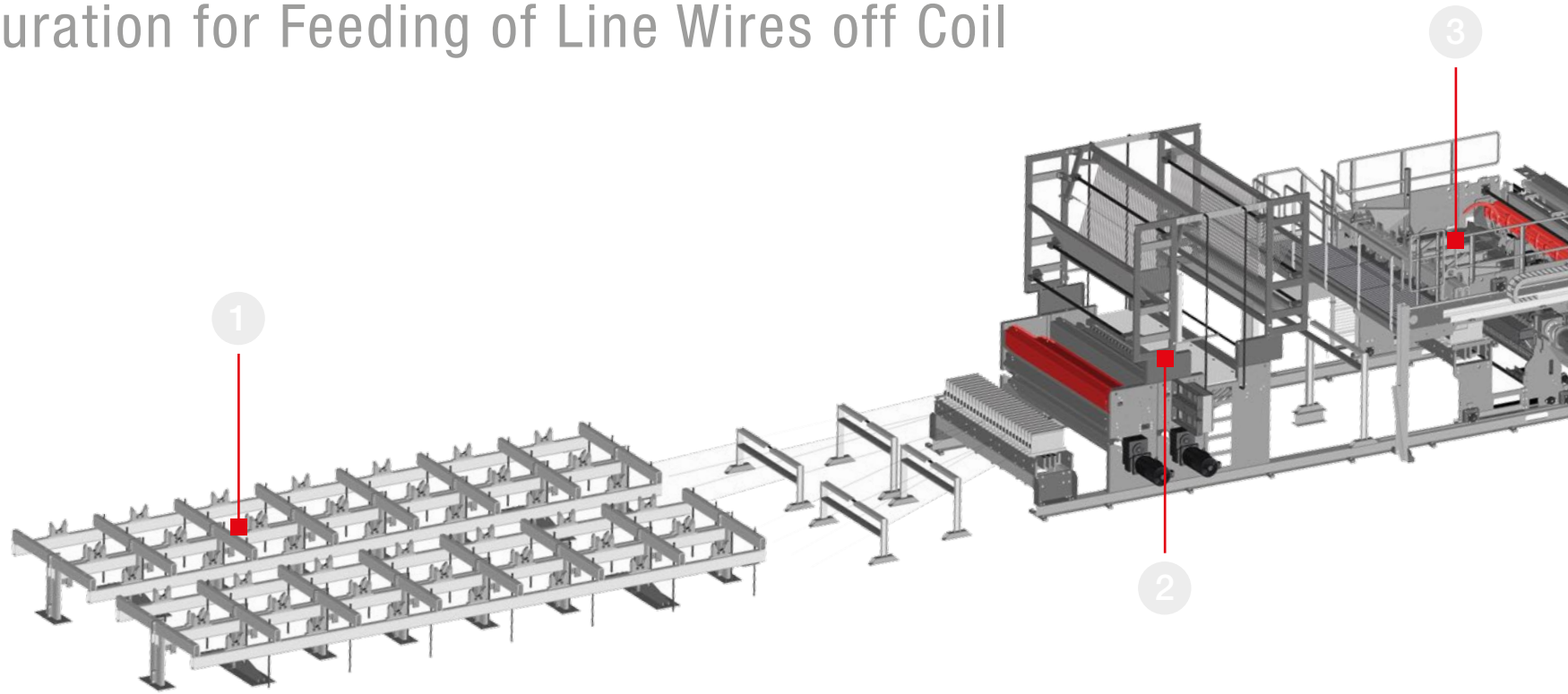


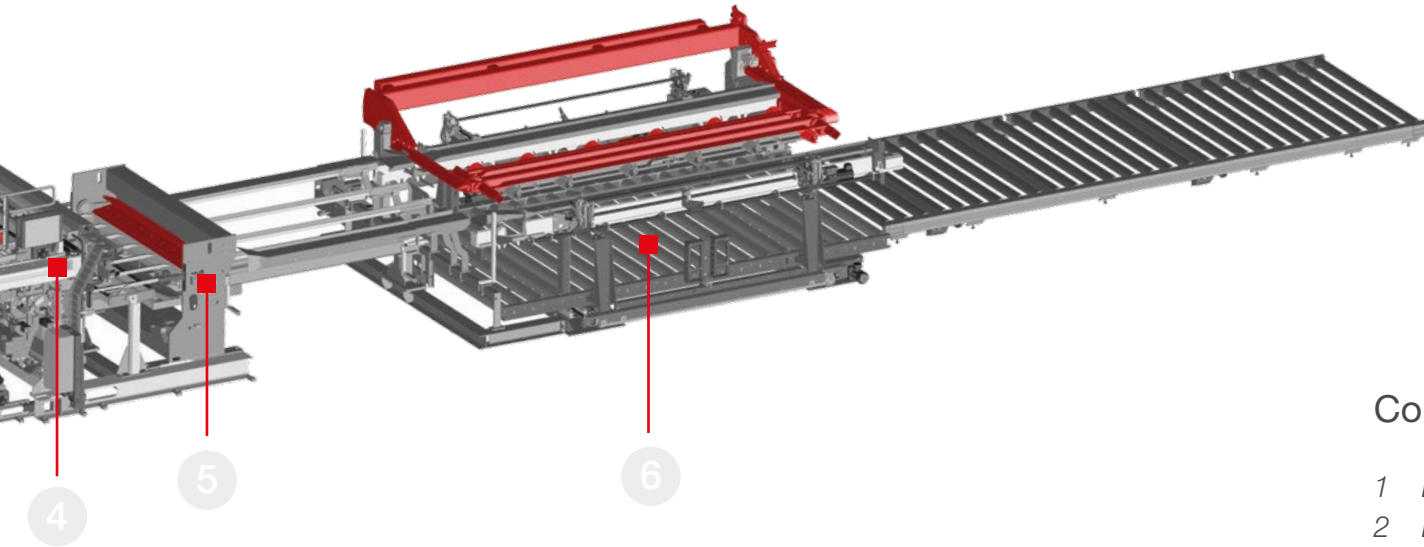
Components of the Line

- 1 *Line Wire Feeding System - Clamping Beam*
- 2 *Line Wire Feeder*
- 3 *Cross Wire Magazine*
- 4 *Welder*
- 5 *Precision Advance*
- 6 *Sheet Stacker and Turner*



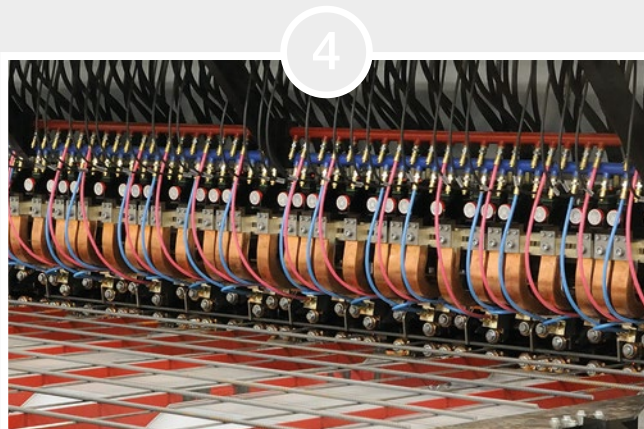
Basic Configuration for Feeding of Line Wires off Coil





Components of the Line

- 1 *Line Wire Pay-off*
- 2 *Line Wire Pull-off Machine and Straightening Unit*
- 3 *Cross Wire Magazine*
- 4 *Welder*
- 5 *Sheet Shears*
- 6 *Sheet Stacker and Turner*





■ Manual Loading of Line Wires

The prestraightened line wires are deposited on the line wire supporting table from where the machine operator feeds them into the pre-threading beam of the line wire feeder.

Semi-automatic Feeding of Line Wire Bars



- When producing with prestraightened and cut-to-length bars the wires are fed either manually or using an automatic line wire gripper system, depending on line configuration.



■ Line Wire Feeder

After inserting the line wires they will be aligned automatically and fed into the welder according to the preprogrammed overhangs.

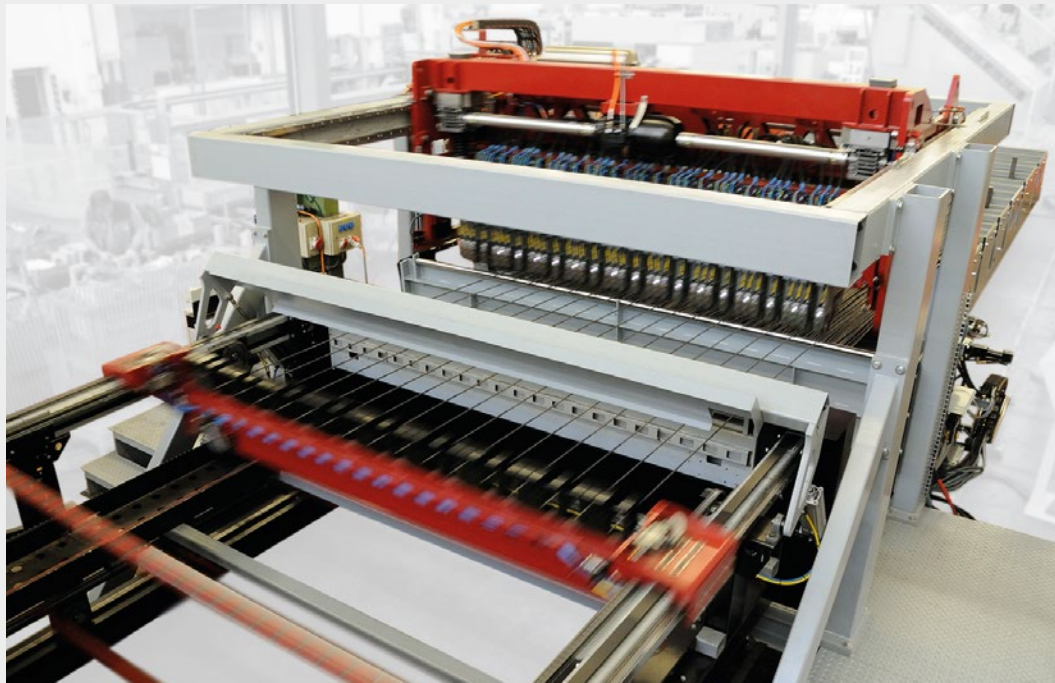
By using the stationary pre-threading beam the loading and feeding cycles are reduced significantly. This feature allows charging the line wires of the subsequent sheet during production of the machine. In addition, the traveling path of the feeding chariot can be optimized to comply with the sheet lengths specified by the customer.



Fully Automatic Feeding of Line Wire Bars



- The optional equipment for the singling-out and support of line wires enables fully automatic feeding of prestraightened and cut-to-length bars.



■ Fully Automatic Singling-out and Support of Line Wires

The line wires are picked up from the supporting table by lowerable and individually controlled grippers. After automatic line wire control and alignment, the line wires are transported to the line wire feeder which takes them over and feeds them into the welding unit.

The design of the supporting table including charging magazine and crosswise distributing system allows preparing another complete set of wires or the line wires for the subsequent production job.



■ Line Wire Pull-off Machine and Straightening Unit

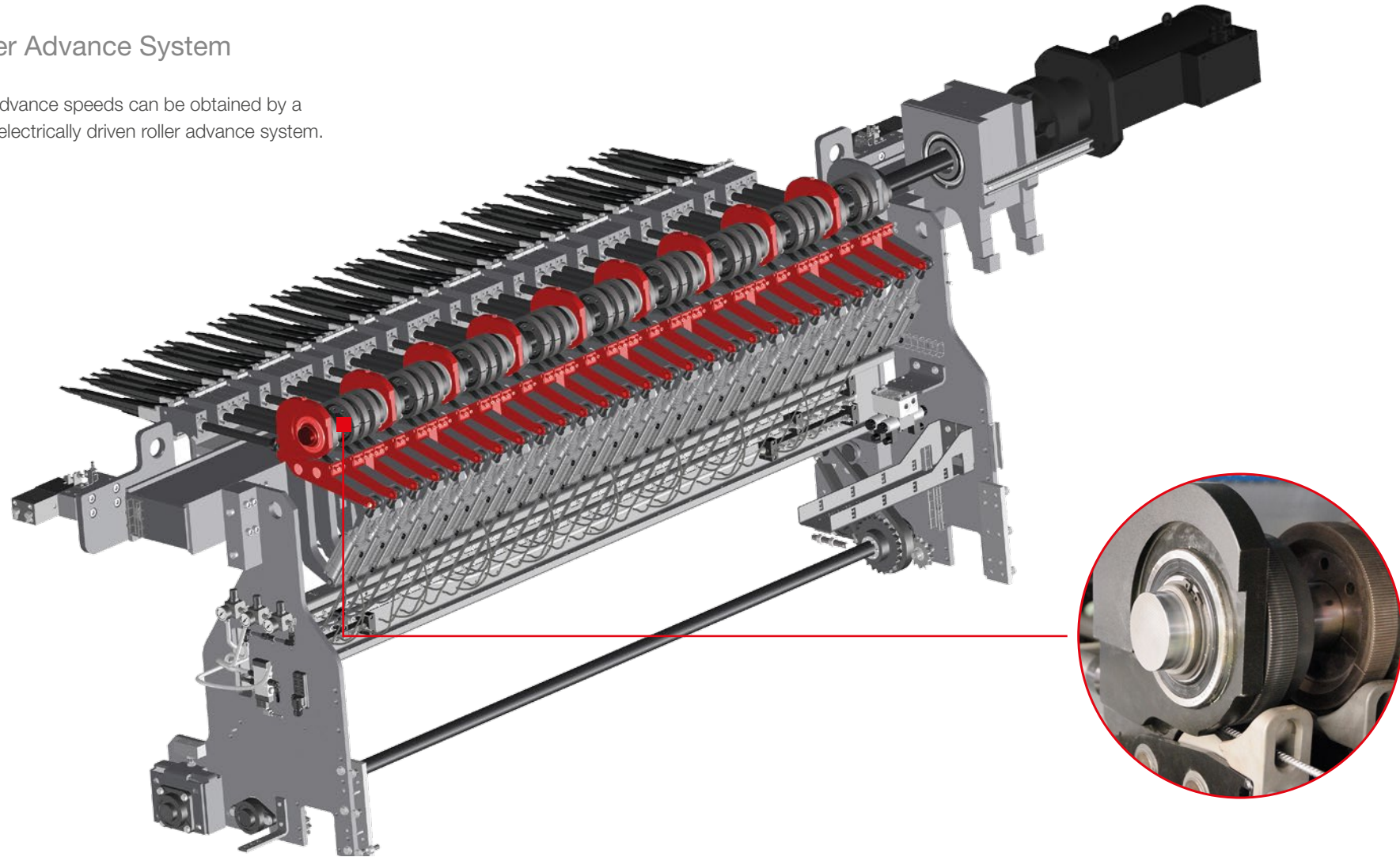
The line wires are pulled off automatically from spools or coils. A loop accumulator ensures continuous and retraction-free wire feeding despite intermittent operation of the welder. Centrally and individually adjustable straightening units enable optimum sheet quality also when producing sheets with major line wire overhangs.

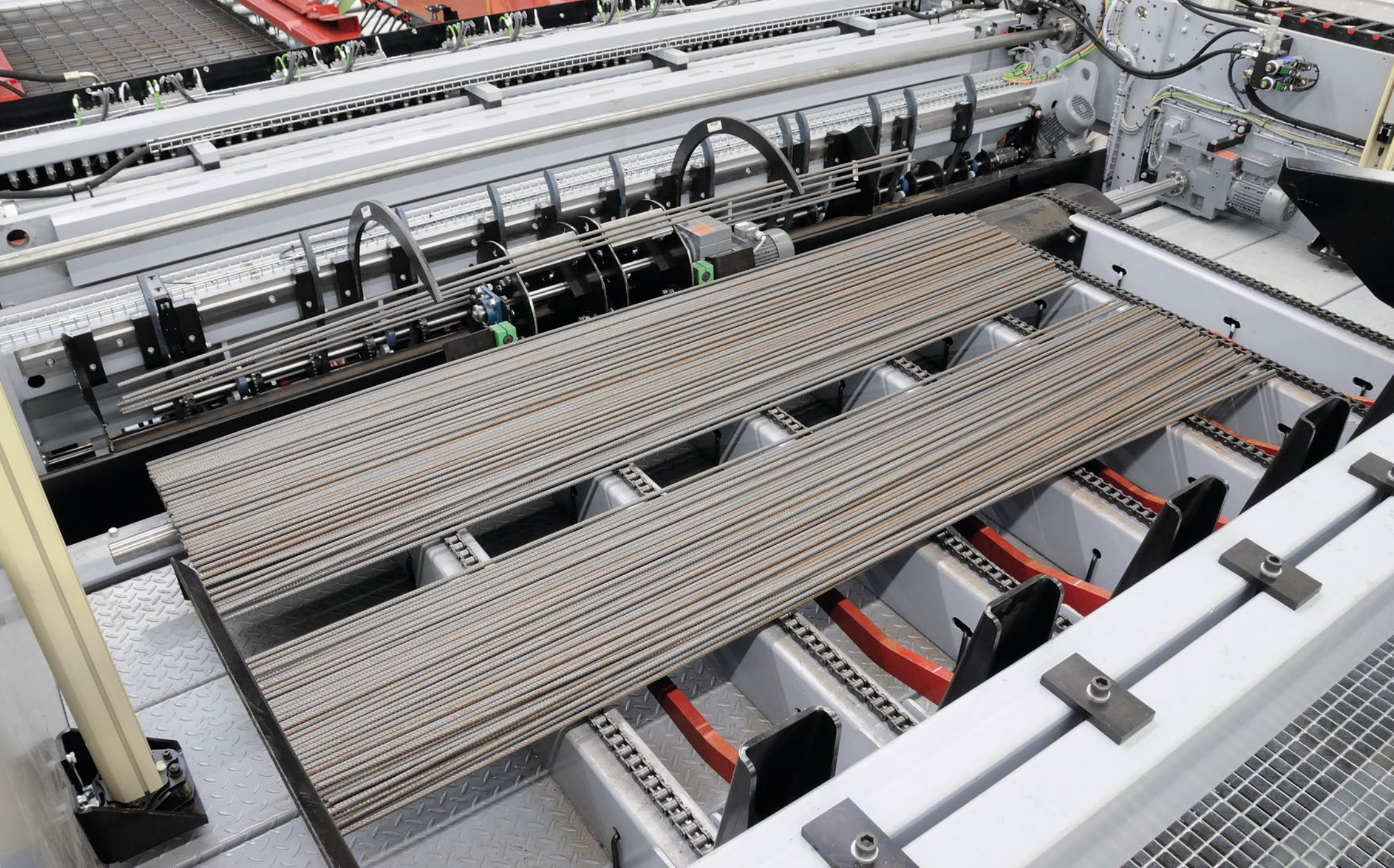
Feeding of Line Wires off Coil



■ Roller Advance System

High advance speeds can be obtained by a servo-electrically driven roller advance system.





Cross Wire Feeding System



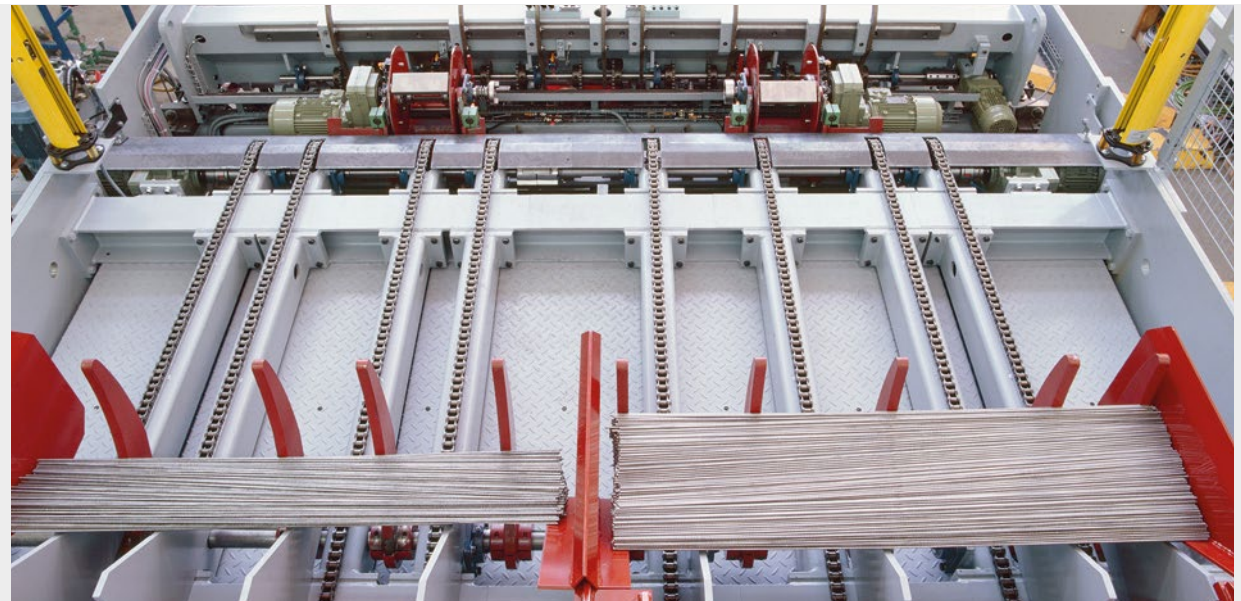
■ Cross Wire Magazine

The singling-out of bars from the wire bundle using a magnetic wheel and mechanical stripper as well as continuous feeding of individual cross wires into the welding unit are fully automatic processes. Positioning devices ensure the exact position of the cross wires in the welding unit and, therefore, in the mesh system.

The electronic monitoring of the bundle size enables continuous operation. A separate support area allows preparing another complete set of wires or the cross wires for the subsequent production job.

■ Optional Execution

Optional execution of the cross wire magazine for two-strip production.



Welder

■ Welding Units

The rigidly mounted electrode beam is equipped with hydraulically actuated welding units. This execution allows optimum process control of welding and, therefore, minimum welding times.

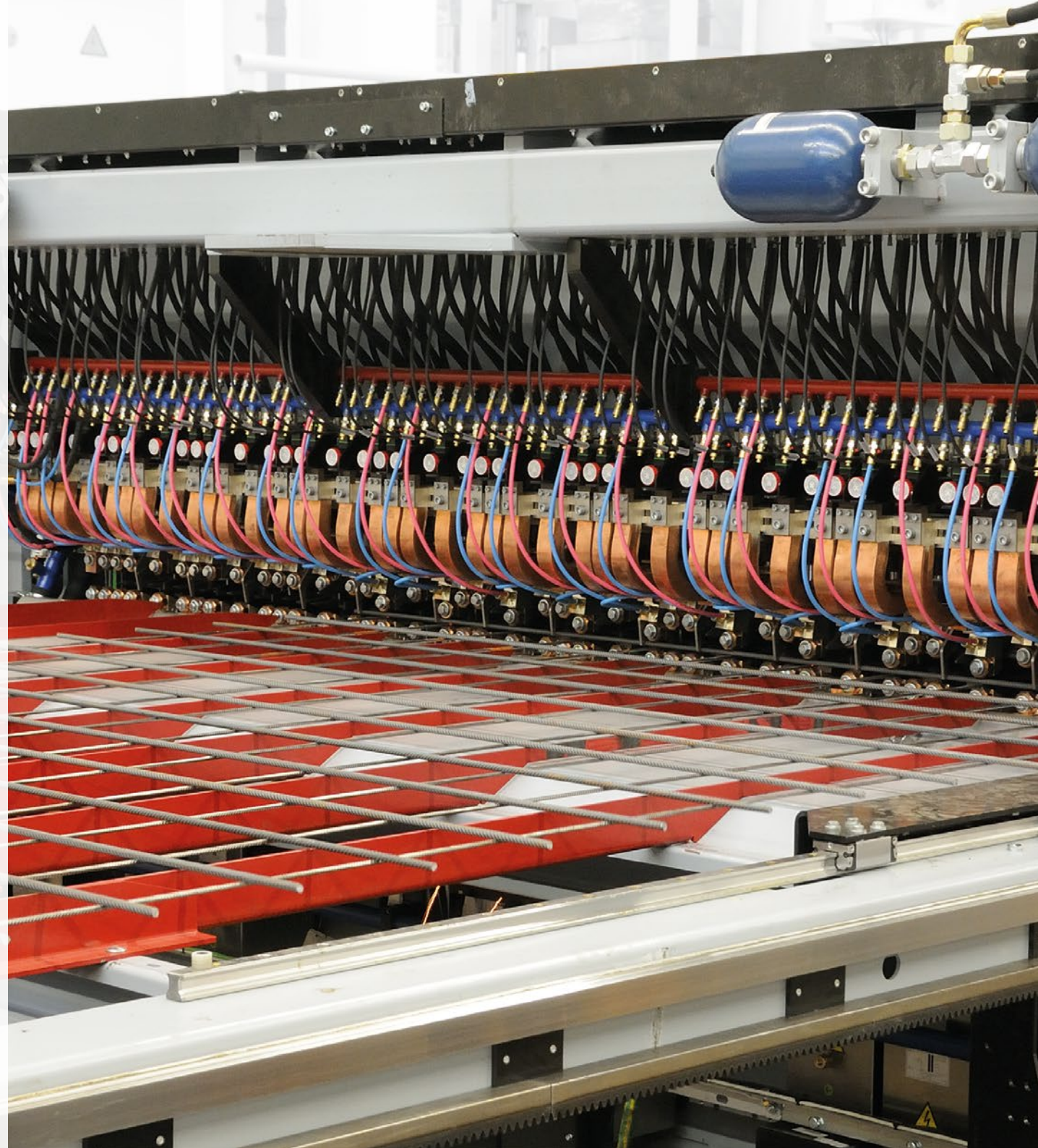
When changing the line wire spacing, the welding units are activated/deactivated individually via the input computer of the line's control unit.

As welding current is supplied to the electrodes via a transformer block and bus bars an easy and quick change of electric polarity of individual welding units is possible simply by adjusting contact pieces.

The welding current path is made up of massive copper, a feature which ensures minimum electric resistance and maximum energy efficiency.

Favorable utilization of energy and reduction of connected load are ensured by applying double point welding technology with uniform mains load.

Maximum service life of electrodes is obtained by optimized welding pressure control including pre-compression and re-compression time.



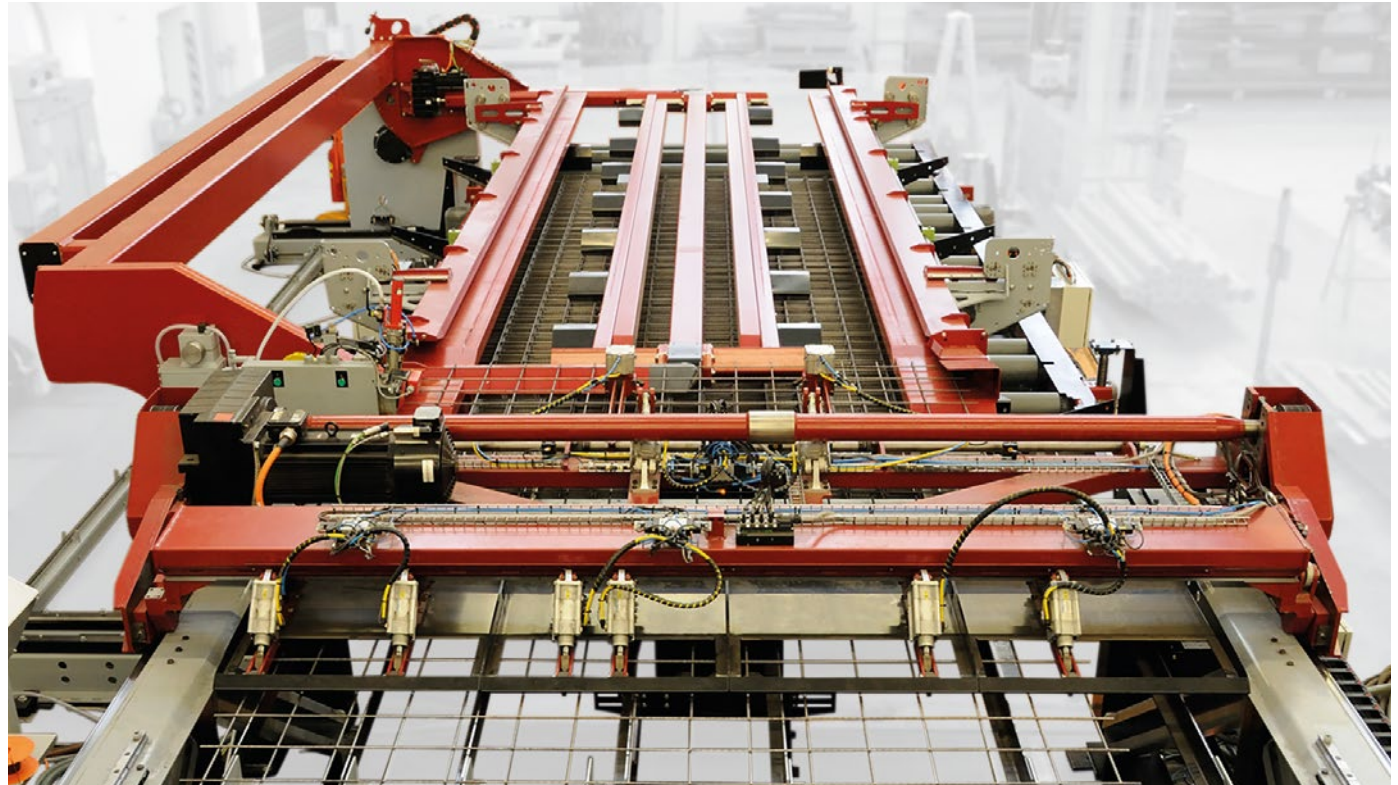
Mesh Advance



■ Precision Advance

When working with line wire bars, the mesh is advanced according to the programmed cross wire pitches using a mesh pull-out system installed downstream of the welding machine. This servo-electrically driven highly dynamic precision advance system ensures high production output and positioning accuracy.

Additional transport grippers mounted on the outlet side serve to push off mesh sheets simultaneously into the stacking/turning area.



■ Sheet Stacker and Turner

Finally, the mesh sheets are turned and stacked automatically.

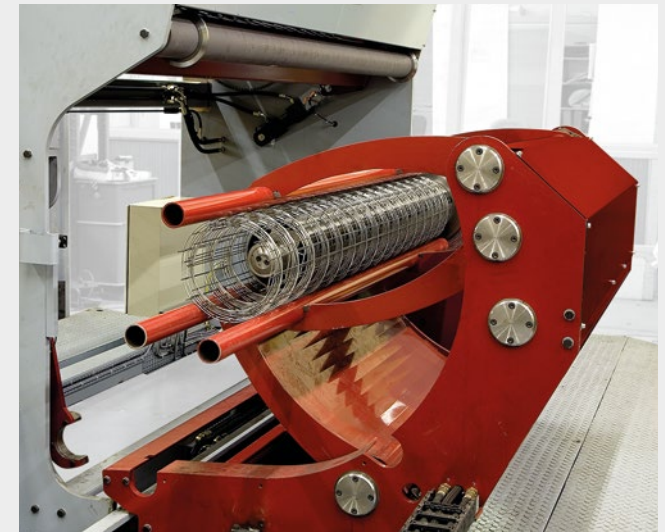
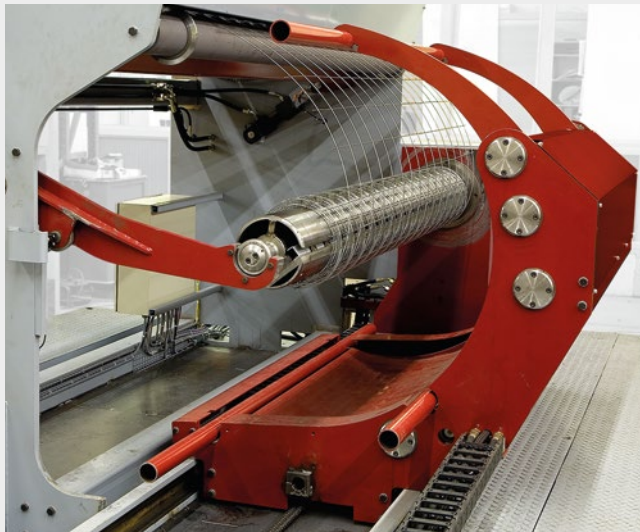
When feeding line wires off coil, a linear transporter pushes the mesh sheets into the stacking/turning area after cutting using the integrated sheet shears.

When feeding cut-to-length line wire bars, the mesh sheets are pushed into the stacking/turning area by means of the precision advance system.



■ Roll Take-up Machine

For the production of mesh rolls roll take-up machines of different automation levels are available.



■ Sheet Supporting Table

As an option, the stacker/turner can be omitted and replaced by a simple sheet supporting table allowing manual discharge and pick-up of mesh sheets.

■ Slitting Shears

Integratable optional separating shears enable slitting the mesh to obtain two strips.

■ Other Ancillary Equipment

Other ancillary equipment can be quoted for upon request.



Line Control



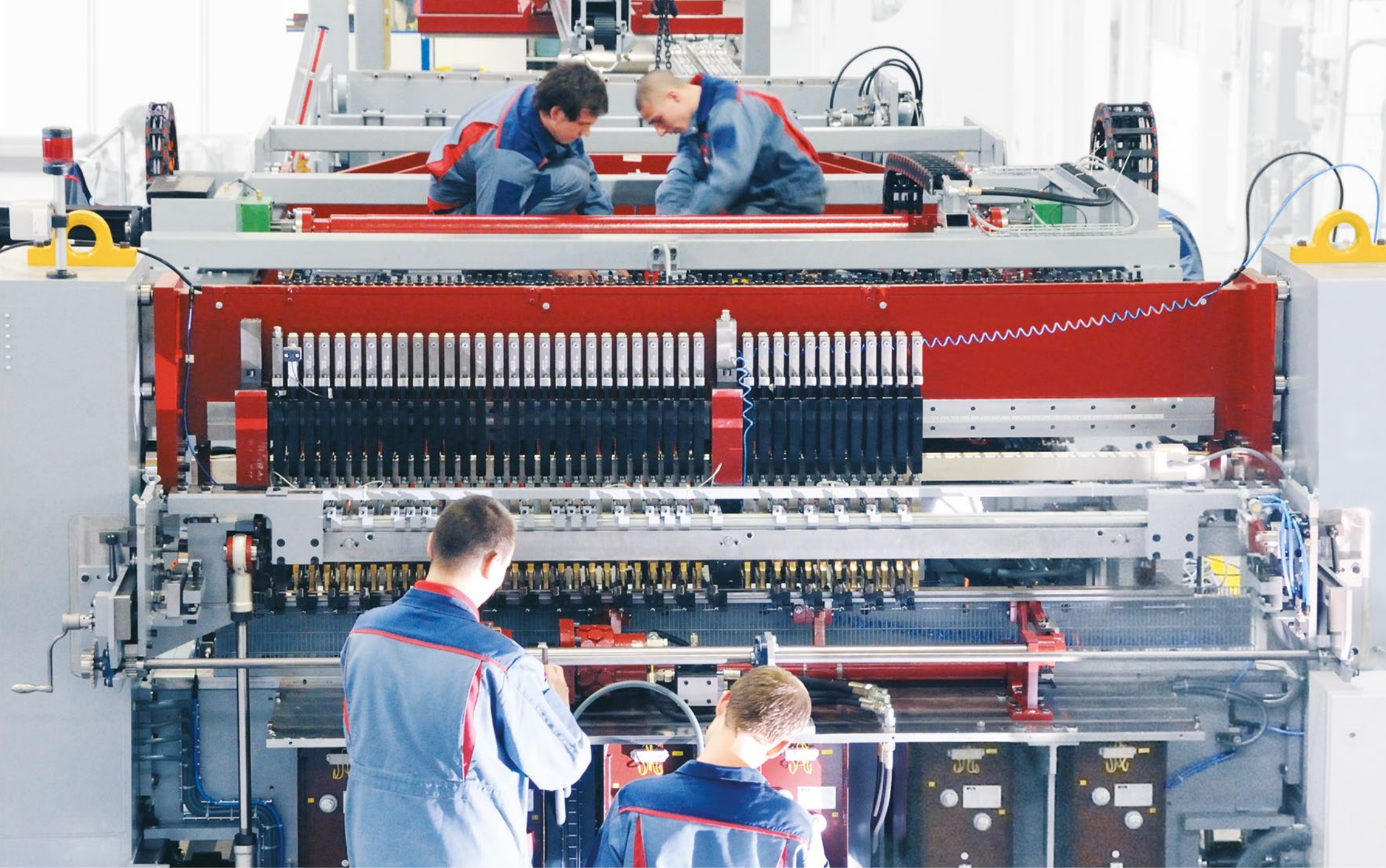
■ Control Unit

The control system of the line ensures the fully automatic operation of the entire production line. Easy handling through central data input via an input computer of state-of-the-art industrial PC design. Monitoring of the line via a diagnosis program with plain text display.

Tabular input of product data, production lists, welding parameters and line-dependent functions.

Owing to an integrated network communication feature it is possible to execute telemaintenance at the line.





Competence



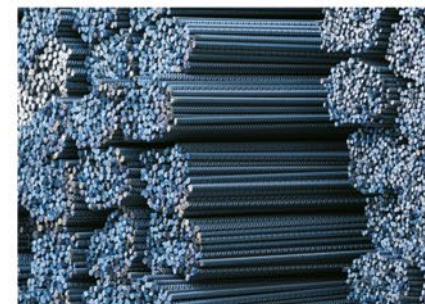
■ Group of Companies

The group of companies EVG - AVI - MARIENHÜTTE with its complete program for the production of reinforcing steel and welded mesh is your reliable and experienced partner when it comes to reinforcement of concrete, wire products, production equipment and knowhow.

- EVG and FILZMOSENER as suppliers of production lines
- AVI as producer of cold-rolled reinforcing steel, truss girders, spacer strips and reinforcing cages
- BSTG (joint venture with Gruppo Pittini) as producer of reinforcing steel sheets
- Steel and rolling mill MARIENHÜTTE as producer of reinforcing steel
- H&S Zauntechnik as supplier of industrial and fencing mesh as well as complete fencing systems

The cooperation within our network of companies allows EVG to become aware of all major challenges inherent in the production and application of mesh and reinforcing products also from a machine operator's point of view. Any knowledge gained this way is constantly introduced in our new projects.

The most important foundations of our success are close cooperation with our customers based on partnership, highly-qualified staff and ongoing innovations.



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Subject to modifications.

The figures shown are of exemplary nature and do not allow drawing any conclusions on the configuration of the line acquired by the buyer.