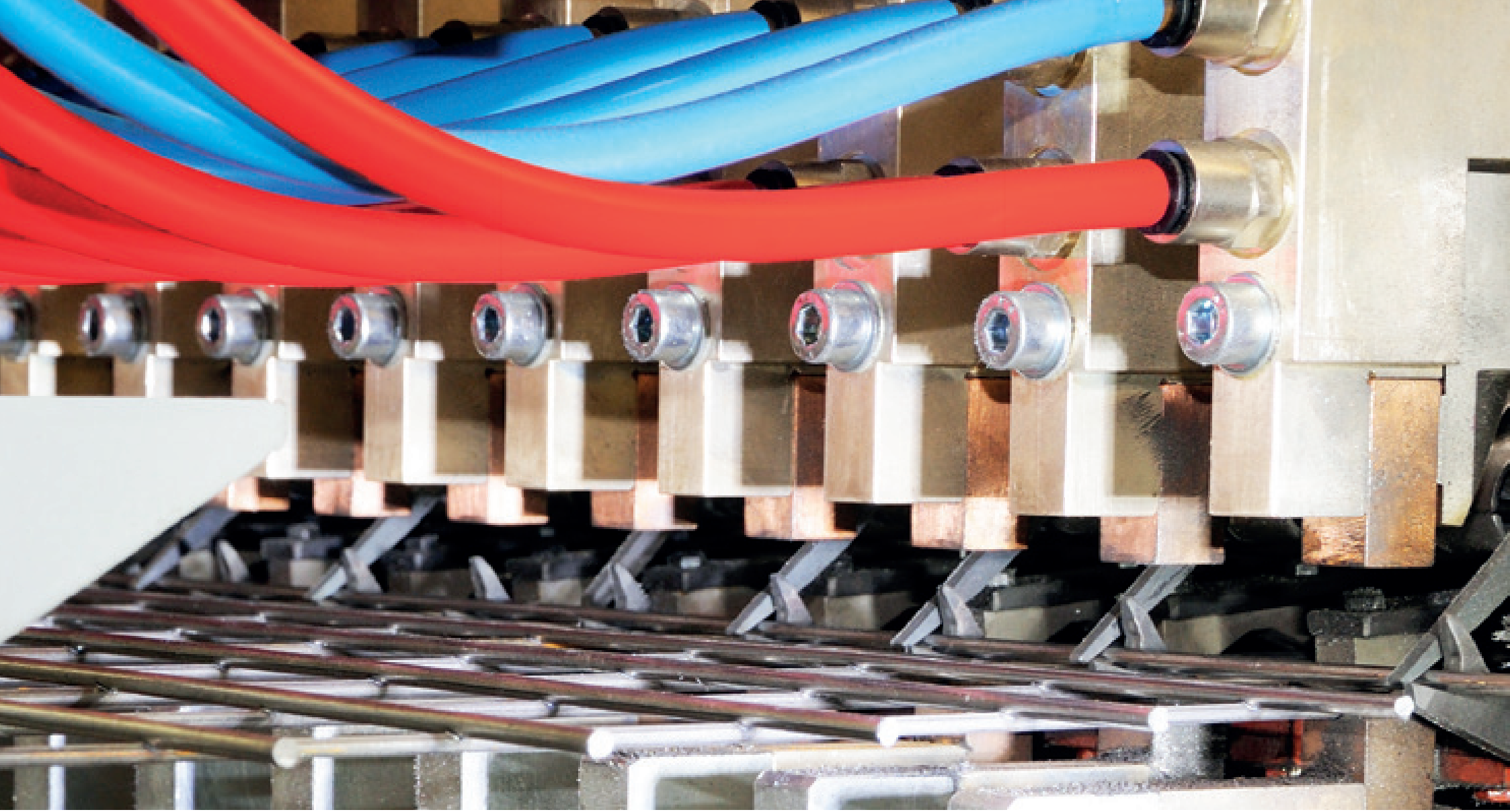


LGR

Wire mesh welding lines for the production of industrial mesh

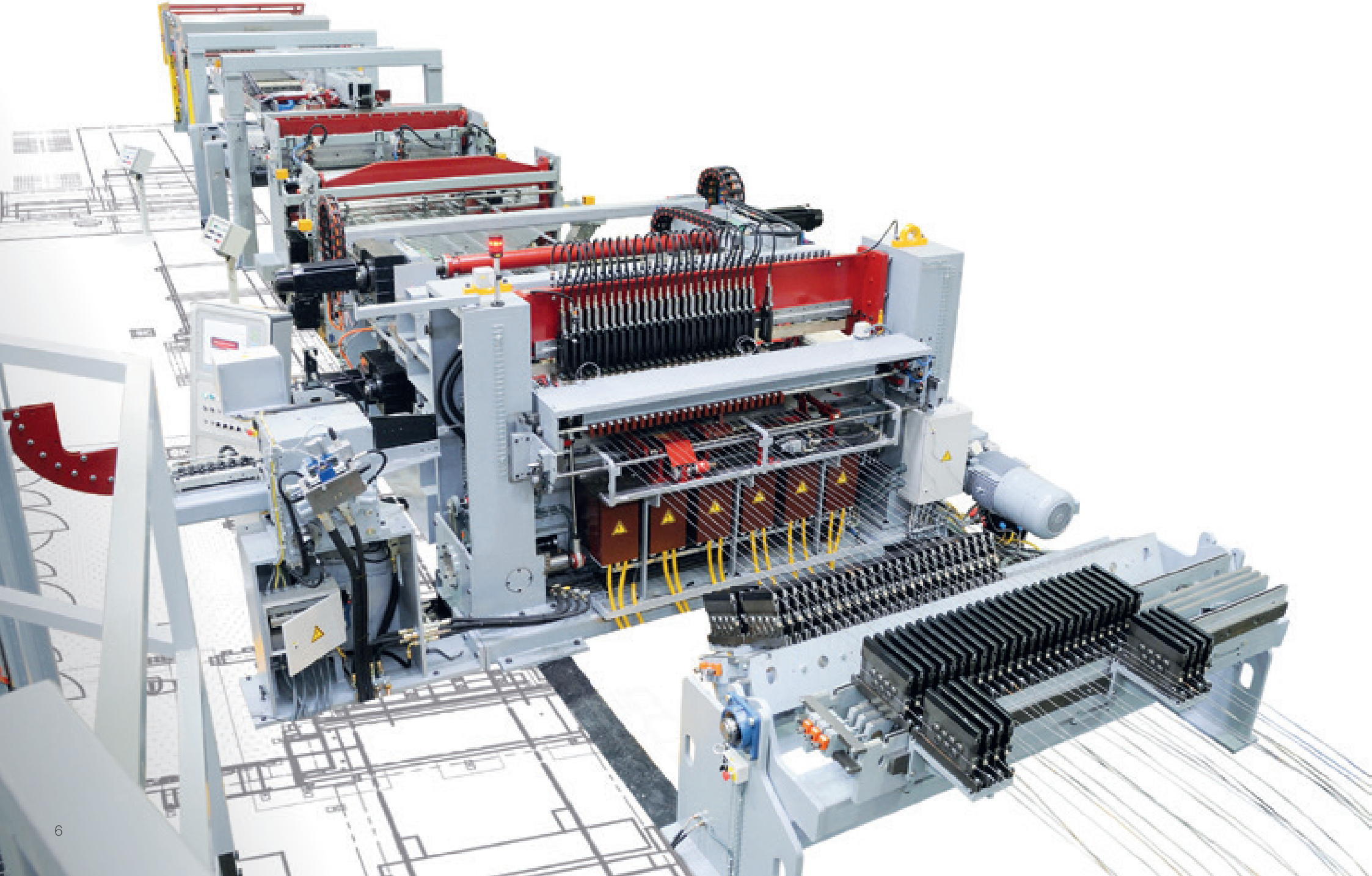
EVG

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

Photo page 3: EVG assembly bays and headquarters, Austria

Wire Mesh Welding Lines of LGR Series

Table of Contents



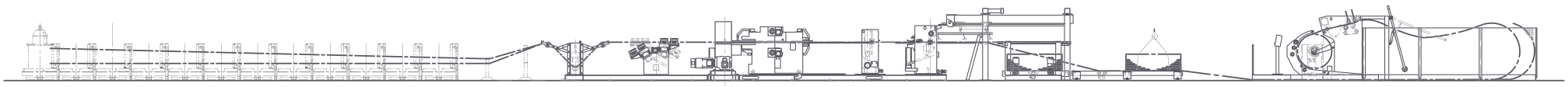
Technical Data

Welding lines for the production of fence mesh, mine mesh or light reinforcing mesh made of cold-rolled material with bright, galvanized or copper-plated surface paid off from spools and/or coils.

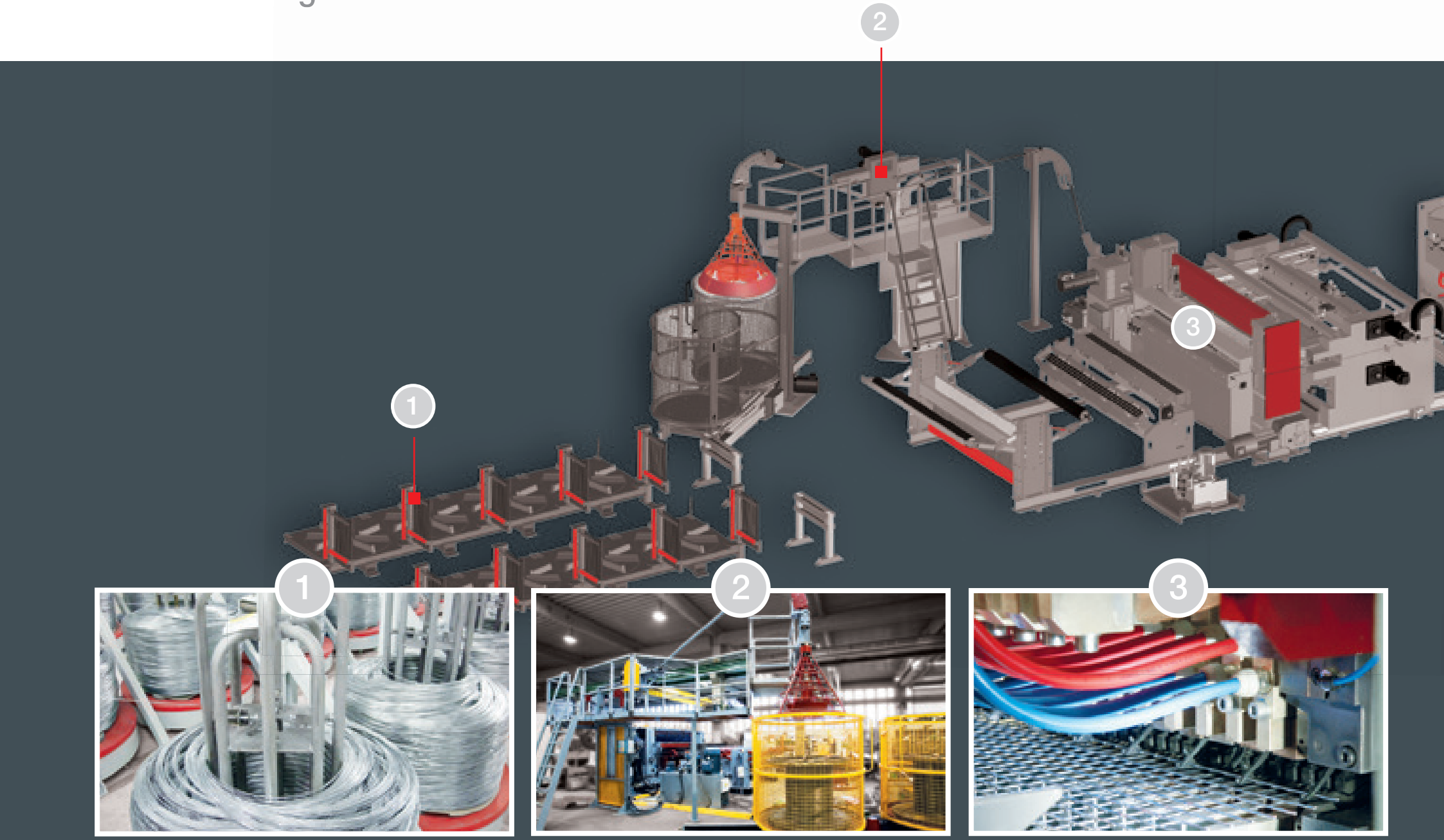
The line and cross wires are fed and welded fully automatically and in a flexible manner according to the sheet geometry defined by the line's control unit.

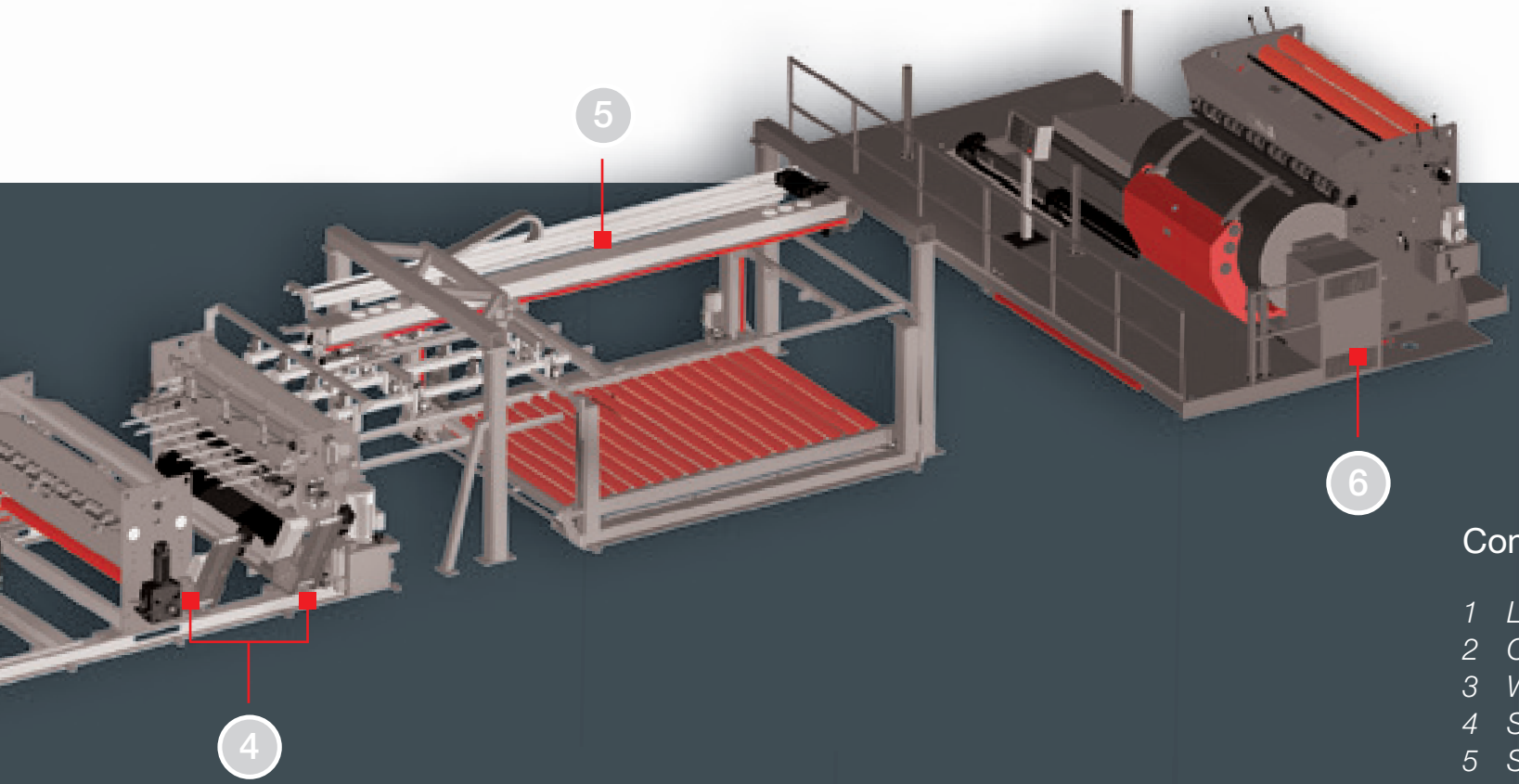
The technical data indicated refer to standard lines which, however, can be adapted to our customers' specific requirements.

		LGR 72	LGR 85	LGR 102
Max. Width of mesh	mm	1930	2260	2700
Max. Welding width	mm	1830	2160	2600
Line wire				
Diameter range	mm	1.8 - 6.0	1.8 - 6.0	1.8 - 6.0
Spacings	mm	min. 25 larger pitches steplessly adjustable	min. 25 larger pitches steplessly adjustable	min. 25 larger pitches steplessly adjustable
Cross wire				
Diameter range	mm	1.8 - 6.0	1.8 - 6.0	1.8 - 6.0
Spacings	mm	min. 12.5 larger pitches steplessly adjustable	min. 12.5 larger pitches steplessly adjustable	min. 12.5 larger pitches steplessly adjustable
Max. Overall wire size	mm	12	12	12
Max. Working speed	CW/min	180	180	180



Basic Configuration





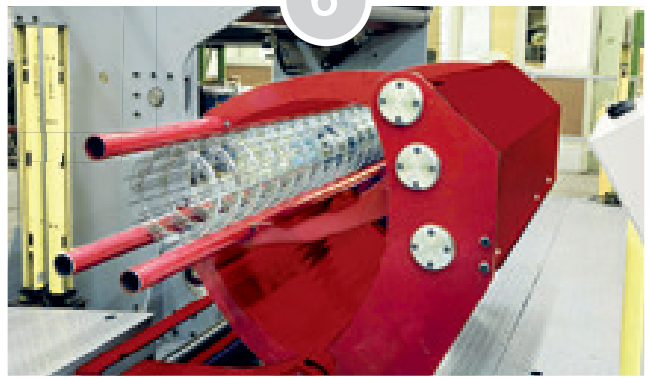
Components of the Line

1 *Line Wire Pay-off*
2 *Cross Wire Pay-off*
3 *Welder*
4 *Sheet Shears and Side-cut Shears*
5 *Sheet Stacker with Lifting Table*
6 *Roll Take-up Machine*

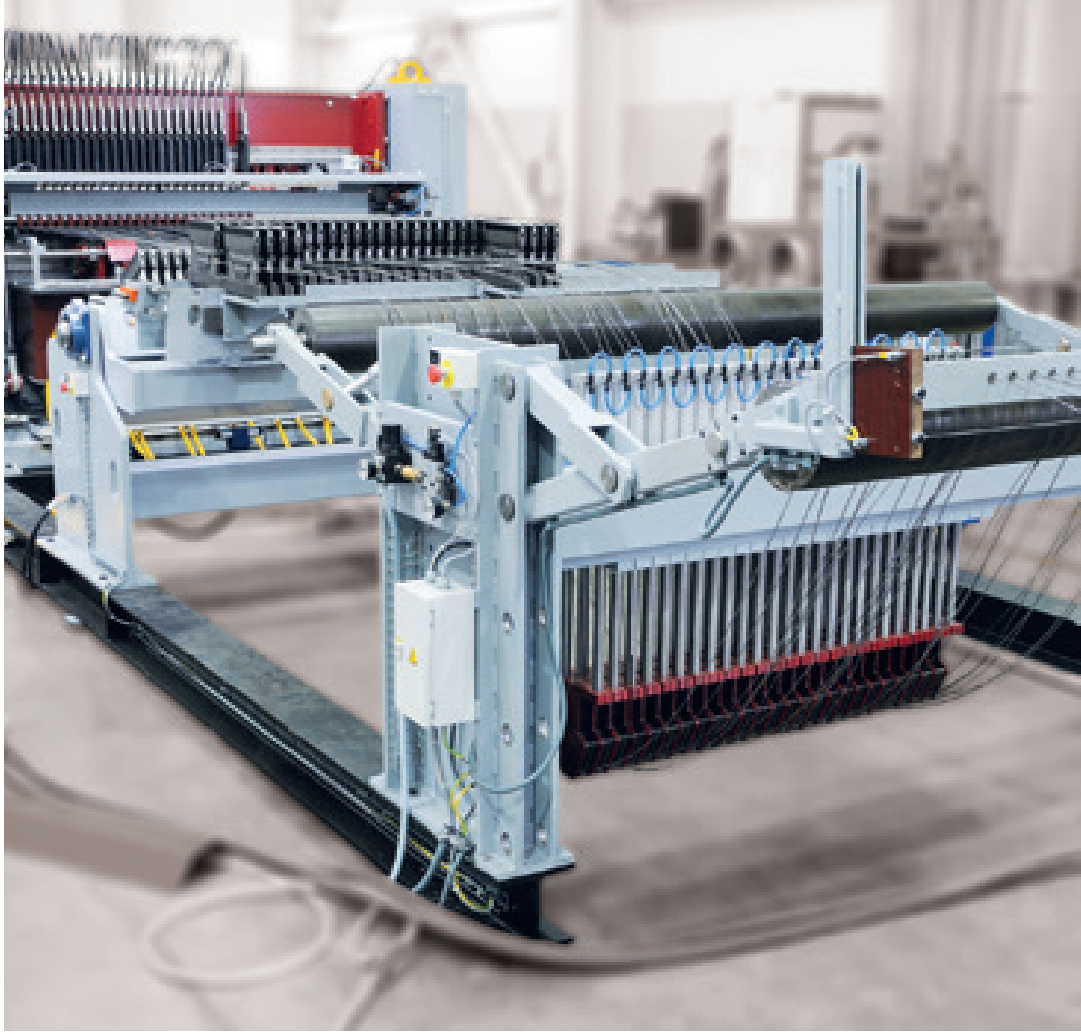
4

5

6



Line Wire Feeding



Line Wire Pay-off

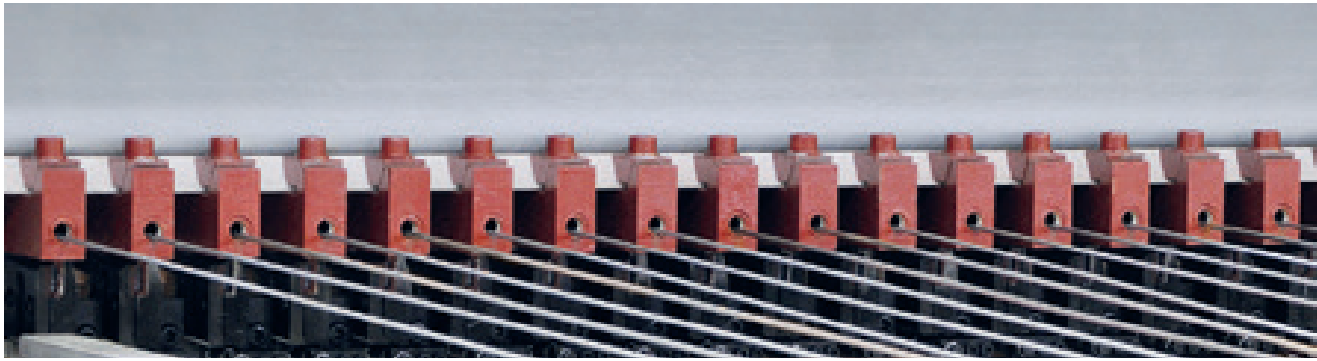
For the production of welded mesh in sheets or rolls the line wires are pulled off directly from spools or coils by the welder's heavy-duty sheet pull-out system.

Line Wire Interlock Device and Line Wire Straightening Unit

The tension of the line wires pulled off from coils or spools is monitored by an interlock device.
Centrally and individually adjustable straightening units that can be adapted to the specified wire diameter range assures the best sheet quality.

Line Wire Guides

Steplessly adjustable line wire guides are position prior to the welding units ensuring high precision of the line wire spacing.



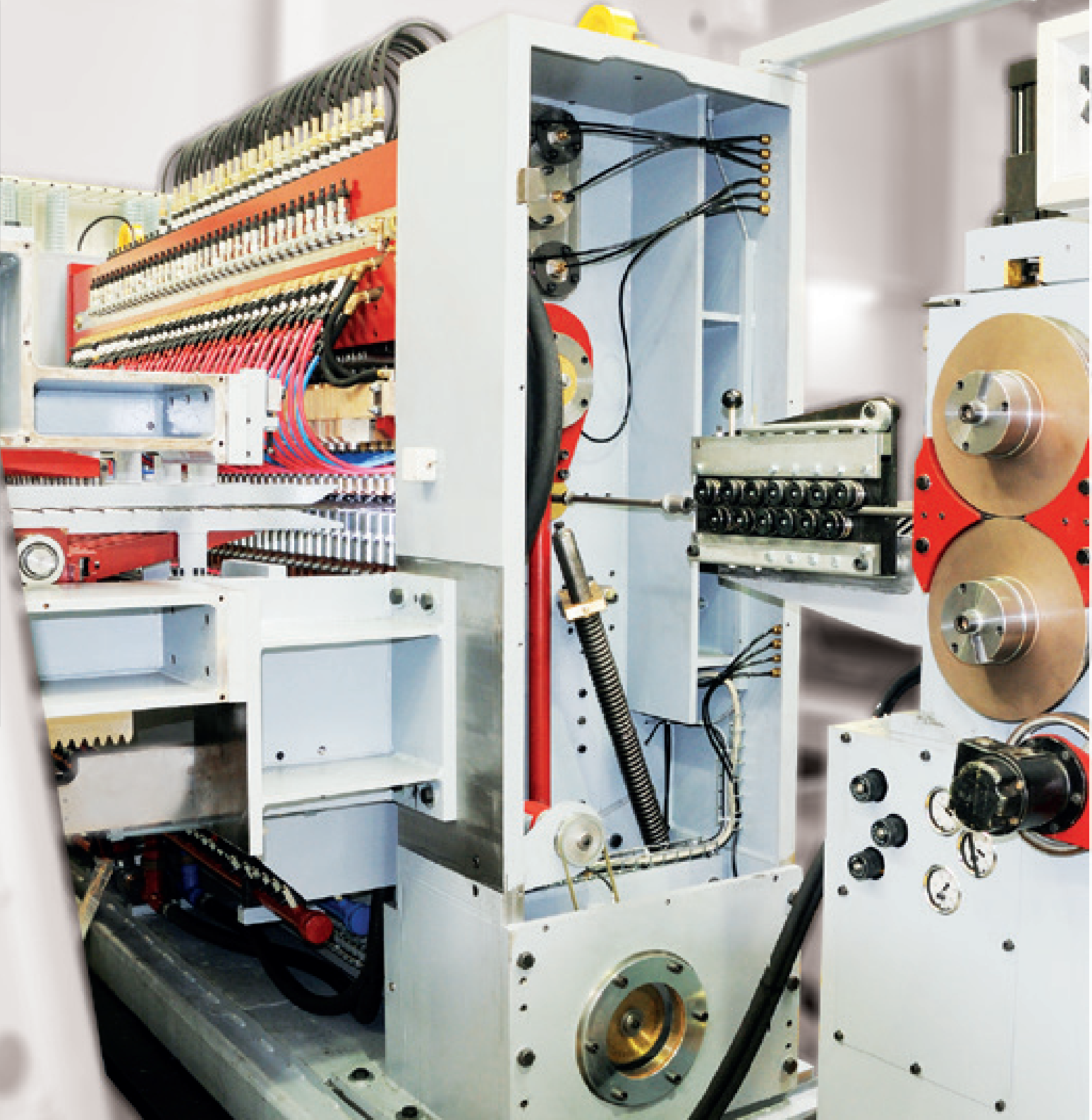
Cross Wire Feeding

Cross Wire Pull-off Machine

For continuous pull-off; straightening and feeding of the cross wire into a loop accumulator serving as a buffer to compensate for the intermittent shoot-in of the cross wire to the welder.
The pull-off speed is synchronized with the weld rate of the line through program control.

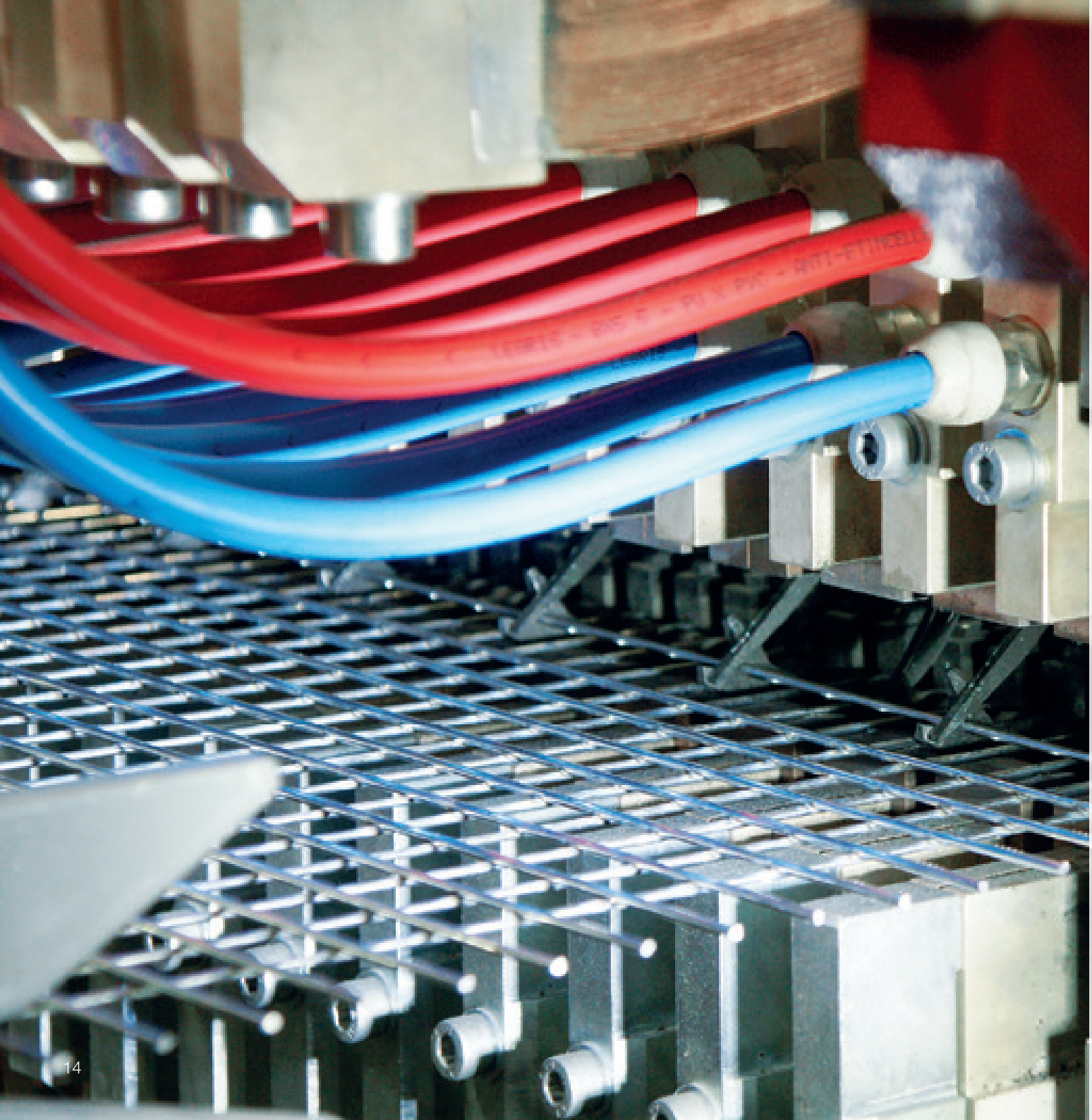
Cross Wire Pay-off Station

The cross wires mounted on driven turntables are pulled off overhead from coil or spool in a continuous operation and are fed through a loop accumulator before being advanced into the cross wire shoot in system.
The two turntables shift between pay-off position and charging position. By using the turntables alternately change-over times are reduced to a minimum.



Cross Wire Shoot-in

The highly dynamic electric servo drive on the cross wire shoot-in enables working speeds of up to 180 CW/min. The welder positions cross wires reliably due to the compact arrangement of the cross wire shoot-in channel, cross wire feeder and electrode unit. As a result, the LGR requires only minimum cycle times for welding of cross wires.



Welding Units

The upper welding beam is driven by an eccentric drive and equipped with electrode units that are activated individually.
Depending on configuration, the centrally controlled passive welding pressure application is accomplished by hydraulically preloaded individual electrodes or by mechanically actuated spring-loaded electrode plungers ensuring top welding quality.

When changing the line wire spacing individual welding units can be activated or deactivated. Handling is easy if shifting of the electrode units is required for a specific line wire spacing. The upper electrode units can shift steplessly and connect to a continuous bus bar. This configuration allows for a quick changeover with no need to convert or change current bridges.

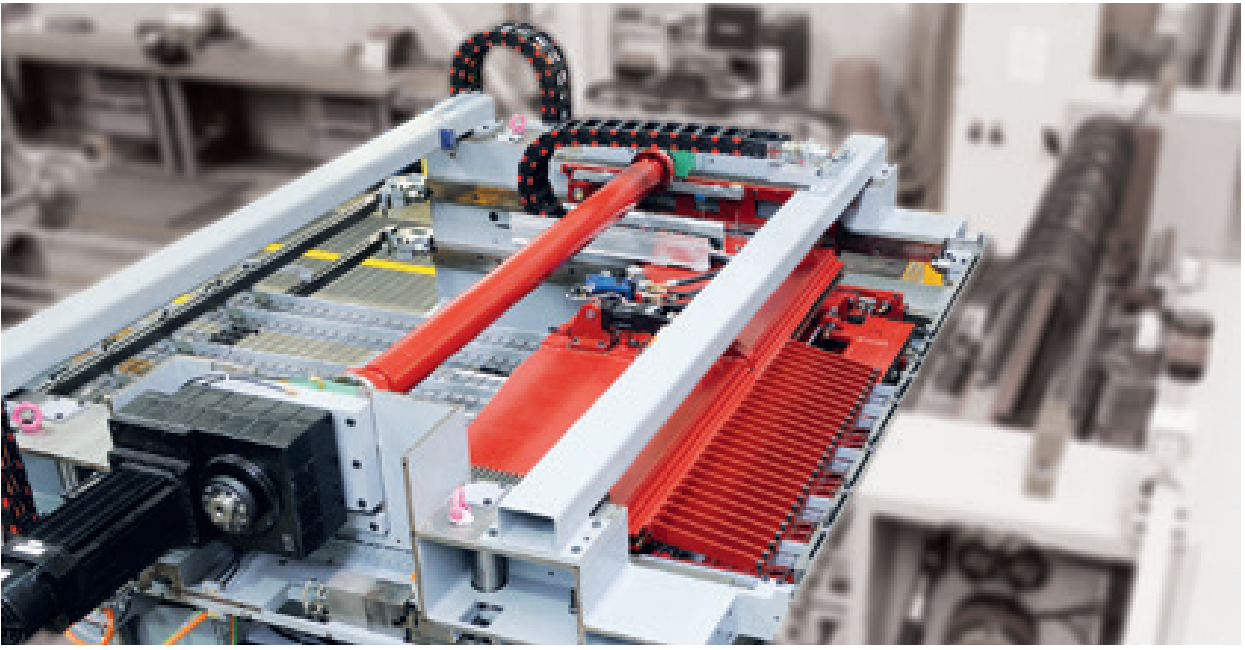
As welding current is supplied to the electrodes via a transformer block and bus bar system, this design provides for quick change of electric polarity to individual welding units by simply adjusting shifting contacts.

The welding current path is constructed of massive copper, a feature which ensures minimum electric resistance and maximum energy efficiency.
Refined utilization of energy and reduction of connected load are guaranteed by applying double point welding technology with uniform mains load.

Welding Machine with Sheet Pull-out System

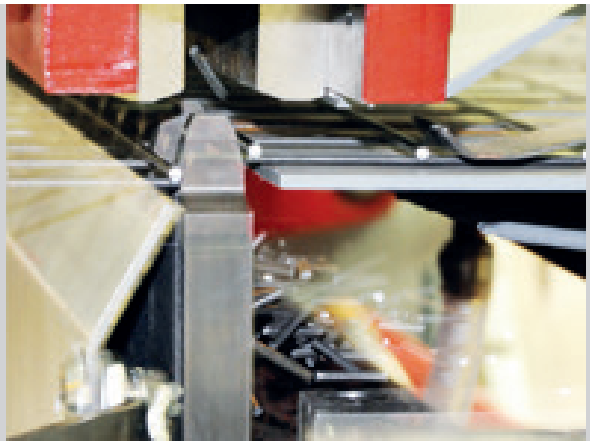
Double Precision Advance

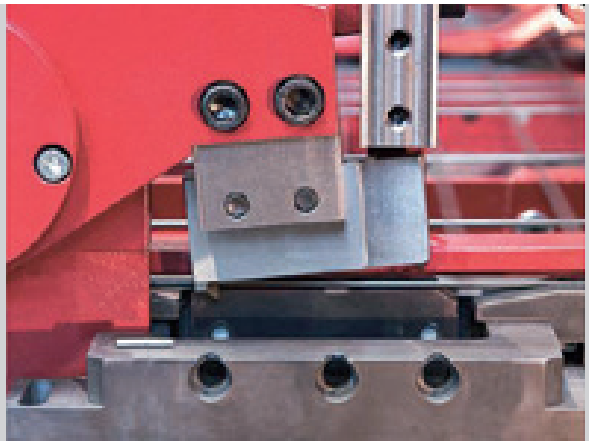
The welded mesh fabric is advanced by one or (optionally) two precision advance systems running with a servo-electric drive. While the first standard mesh pull-out system is moving back to the start position, the second (optionally) mesh pull-out takes over to advance the mesh and vice versa.



Cross Wire Tensioning Device

To compensate for thermal effects of welding, the cross wire are pretensioned automatically.





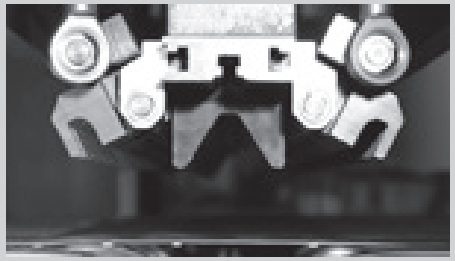
Sheet Shears / Side-cut Shears

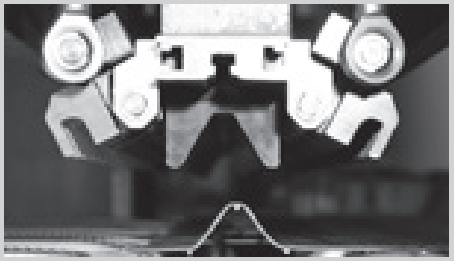
The optional slitting and/or side-cut shears enable the production of several mesh strips or the production of sheets trimmed on all sides.

Sheet Stacker

After slitting and/or side-trimming the mesh sheets they are sheared to length in the sheet shears. The mesh sheets are then transported by grippers and positioned automatically on a lifting table. Depending on mesh configuration, the different mesh strips can be stacked not only lengthwise, but also crosswise.
Various Sheet Stacker models offer integrated sheet rotating and turning (flipping) systems to meet your needs.

Ancillaries



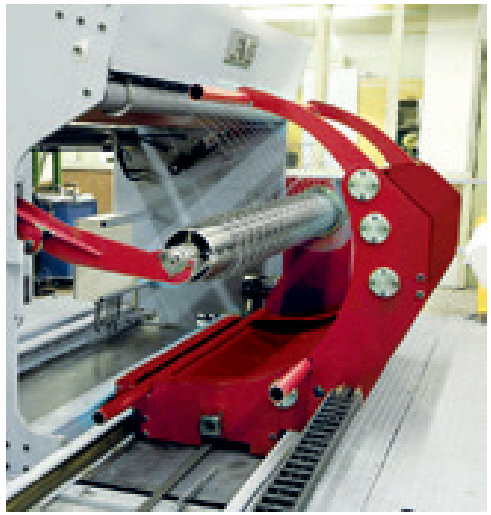


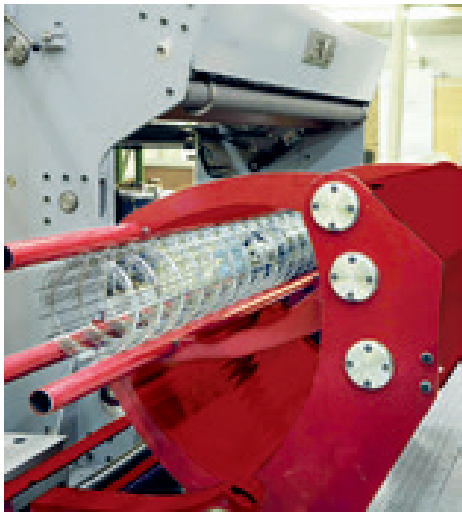
Sheet Bending Station

The most important fence mesh styles can be produced in a very efficient mode with the use of a fully automatic sheet bending station including the required sheet transfer, positioning and stacking systems.

Roll Take-up Machine

For the production of mesh rolls, EVG offers roll mesh take-up machines with different levels of automation for your consideration.





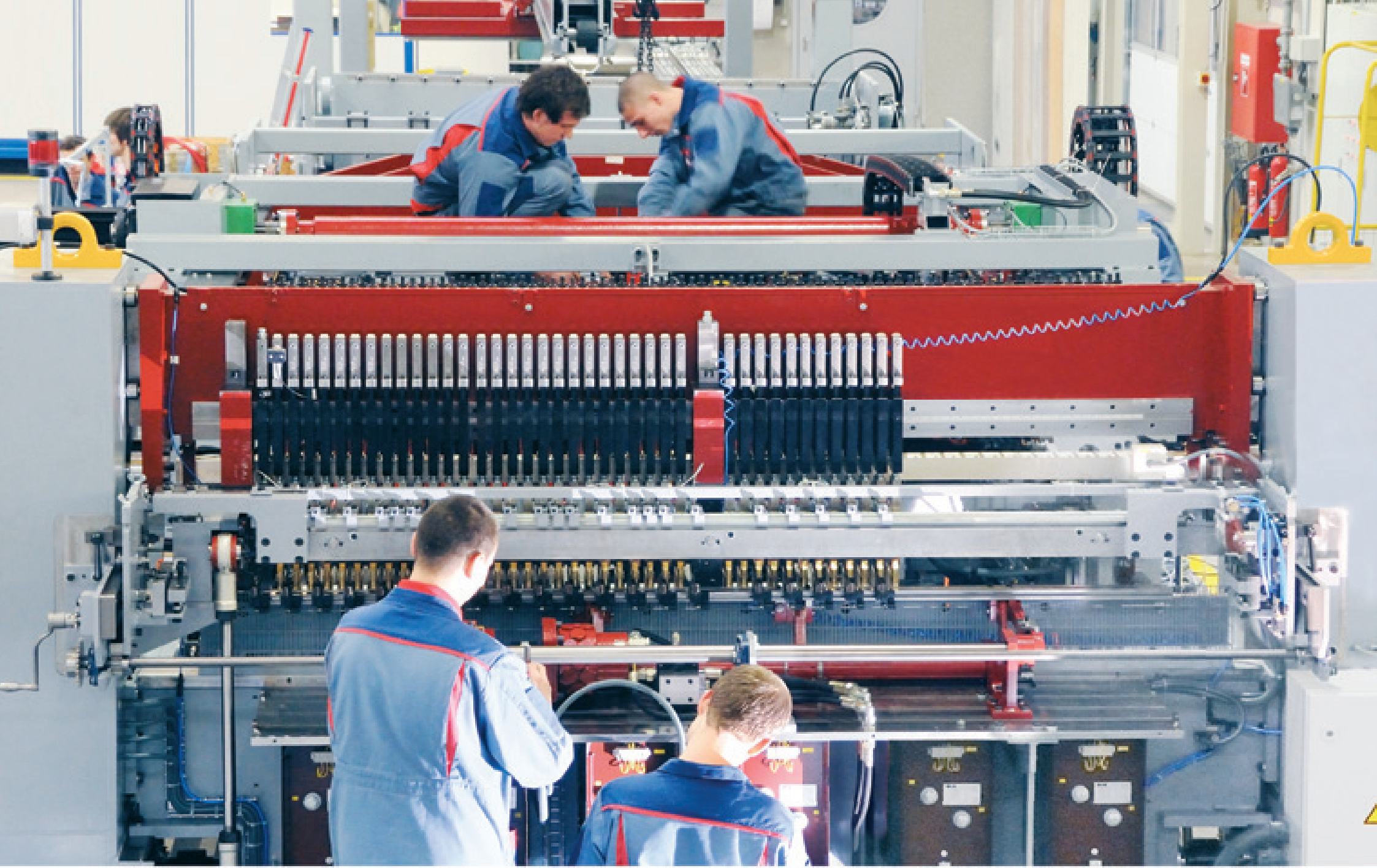

EVG
EVG
EVG
325

Control Unit

Line Control

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

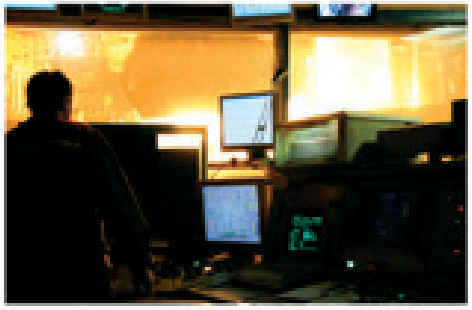
Group of Companies

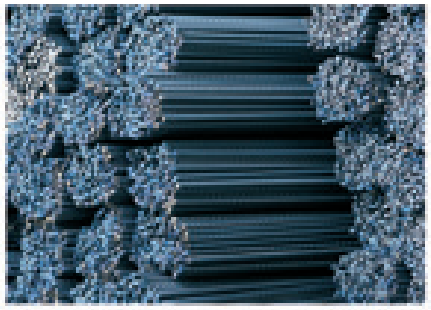
The group of companies EVG - AVI - MARIENHÜTTE with its complete program for the production of reinforcing steel and welded mesh is your reliable and experienced partner when it comes to reinforcement of concrete, wire products, production equipment and knowhow.

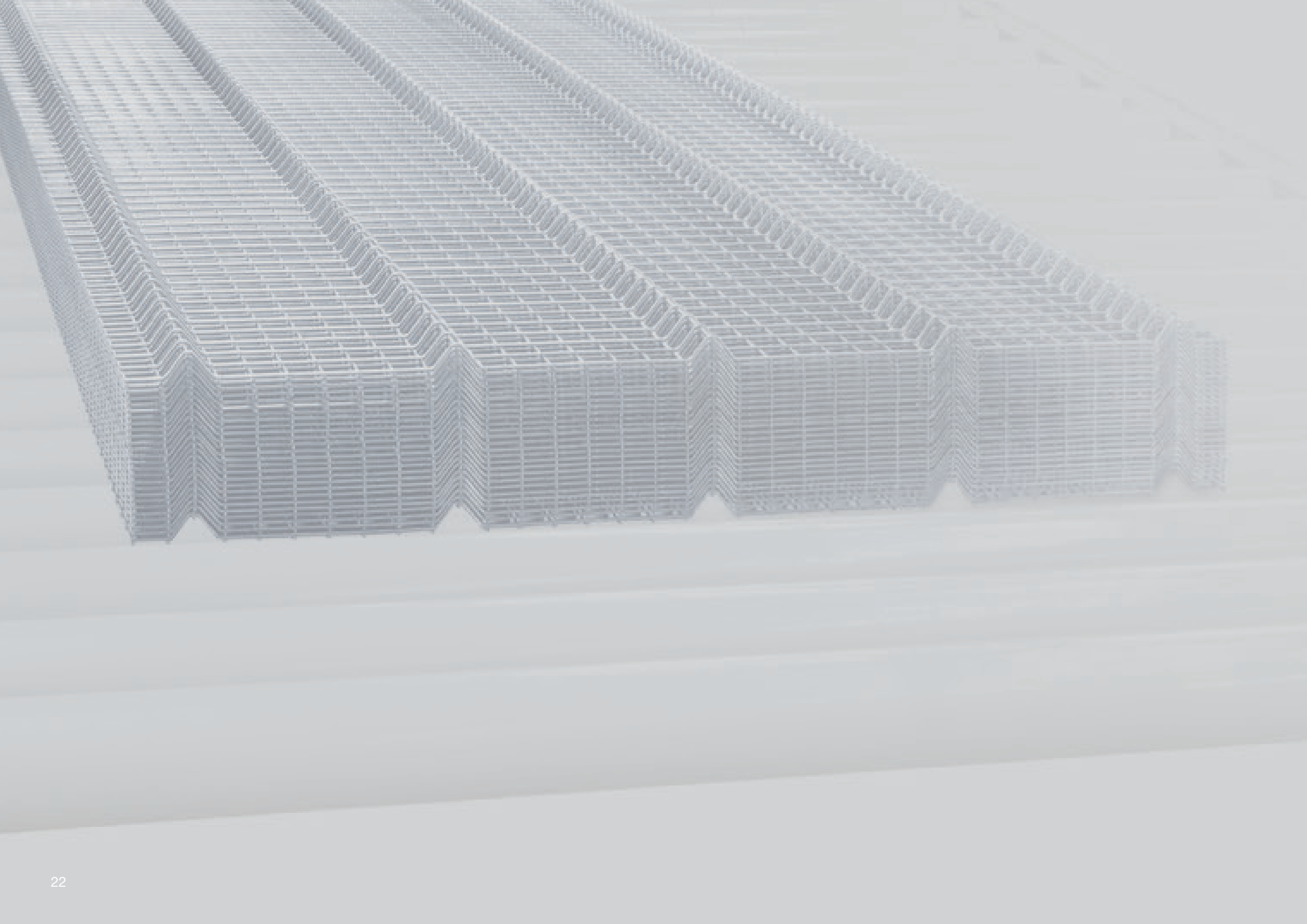
- EVG and FILZMOSER as suppliers of complete production lines
- AVI as producer of cold-rolled reinforcing steel, truss girders, spacer strips and reinforcing cages
- BSTG (joint venture with Gruppo Pittini) as producer of reinforcing steel sheets
- Steel and rolling mill MARIENHÜTTE as producer of reinforcing 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.

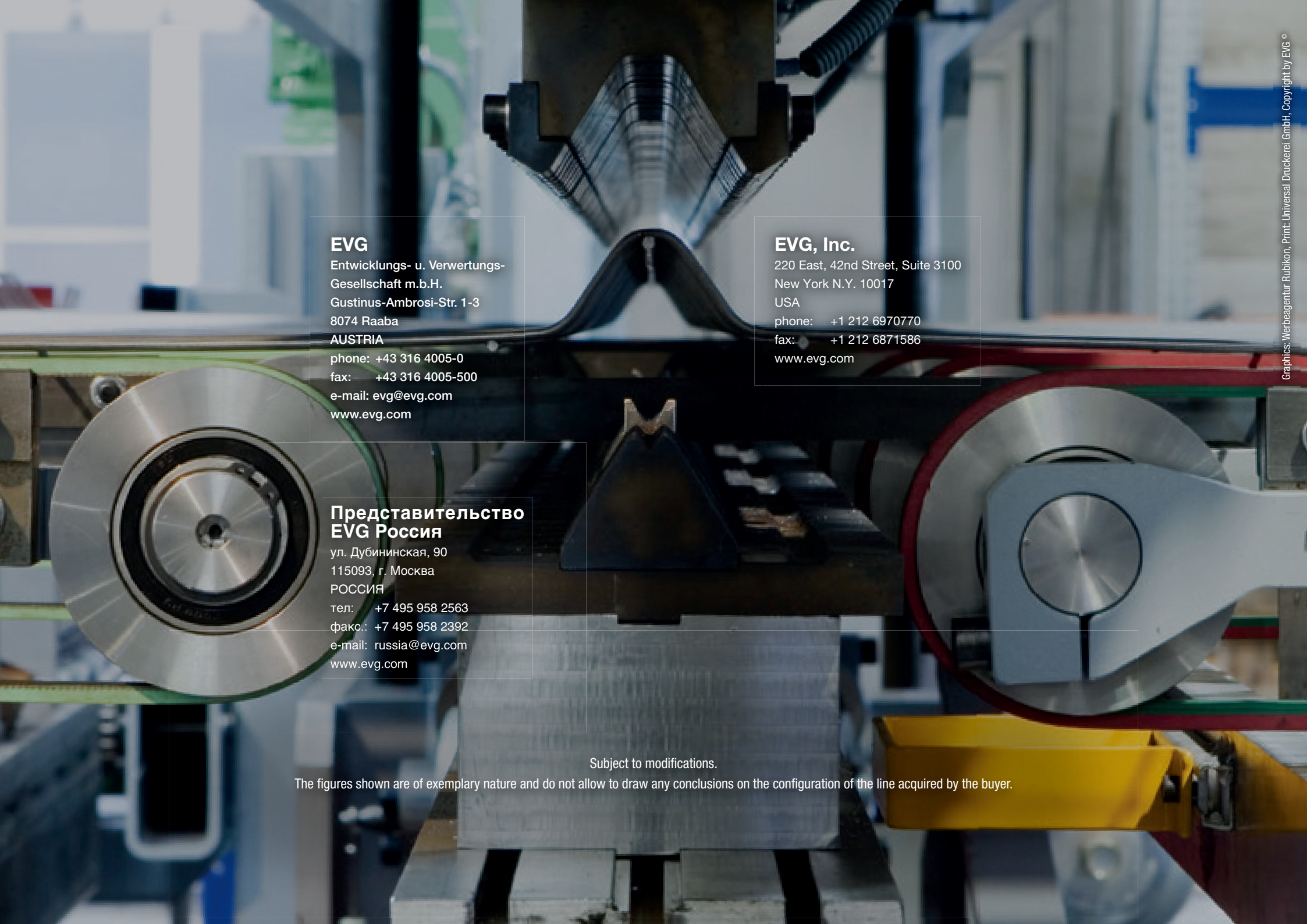
The most important foundations of our success are close cooperation with our customers based on partnership, highly-qualified staff and ongoing innovations.




www.evg.com



EVG
Entwicklungs- u. Verwertungs-
Gesellschaft m.b.H.
Gustinus-Ambrosi-Str. 1-3
8074 Raaba
AUSTRIA
phone: +43 316 4005-0
fax: +43 316 4005-500
e-mail: evg@evg.com
www.evg.com

EVG, Inc.
220 East, 42nd Street, Suite 3100
New York N.Y. 10017
USA
phone: +1 212 6970770
fax: +1 212 6871586
www.evg.com

Представительство EVG Россия
ул. Дубининская, 90
115093, г. Москва
РОССИЯ
тел: +7 495 958 2563
факс.: +7 495 958 2392
e-mail: russia@evg.com
www.evg.com

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