



RA-XE

Flexible Rebar Straightening, Cutting and Bending Plant



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



Flexible Rebar Straightening, Cutting and Bending Plant RA-XE



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RA-XE

EVG

RA-XE

EVG

Technical Data



■ Flexible processing center for fully automatic straightening, cutting and bending of cold-rolled or hot-rolled rebars paid off from reels or spools.

Highest production output even when processing small lots through automated production sequences and minimum change-over times when running new rebar diameters.

Designed not only for the use in precast concrete factories with the demand of highest flexibility but as well for the application in cut and bend shops and at producers of reinforcing elements on an industrial scale focusing on high output.

Servo-electrically activated shears system for cutting the continuously advanced wire in flying mode to ensure top cutting performance and moreover avoid stop-and-go operation.

Perfect straightness owing to the use of individual rotors with hyperbolic straightening rolls adapted to the respective wire diameter.

RA-XE	STRAIGHTENING AND CUTTING LINES		STRAIGHTENING, CUTTING AND BENDING LINES		
		16/8-2	20/10-2	16/5 with DBE	20/6 with DBE
Wire diameter*	mm	6 - 16	8 - 20	6 - 16	8 - 20
Max. advance speed	m/min.	2 x 140	2 x 140	140	140
Bending tool change	s	-	-	< 1	< 1
Wire diameter change	s	approx. 2-5	approx. 2-5	approx. 2-5	approx. 2-5
Number of rotors – standard execution**		8	10	5	6
Number of shears		2	2	1	1
Max. bending capacity	mm	-	-	2 x 16	2 x 16 / 1 x 20
Accuracy of length	mm/m	+/-1	+/-1	+/-1	+/-1
Bending angle	°	-	-	+/-180	+/-180
Accuracy of bending	°	-	-	+/-1	+/-1
Drive technology		E-servo motor	E-servo motor	E-servo motor	E-servo motor

*..... Optional processing of wire diameters from 5 mm possible using die-type rotors and auxiliary advance system.

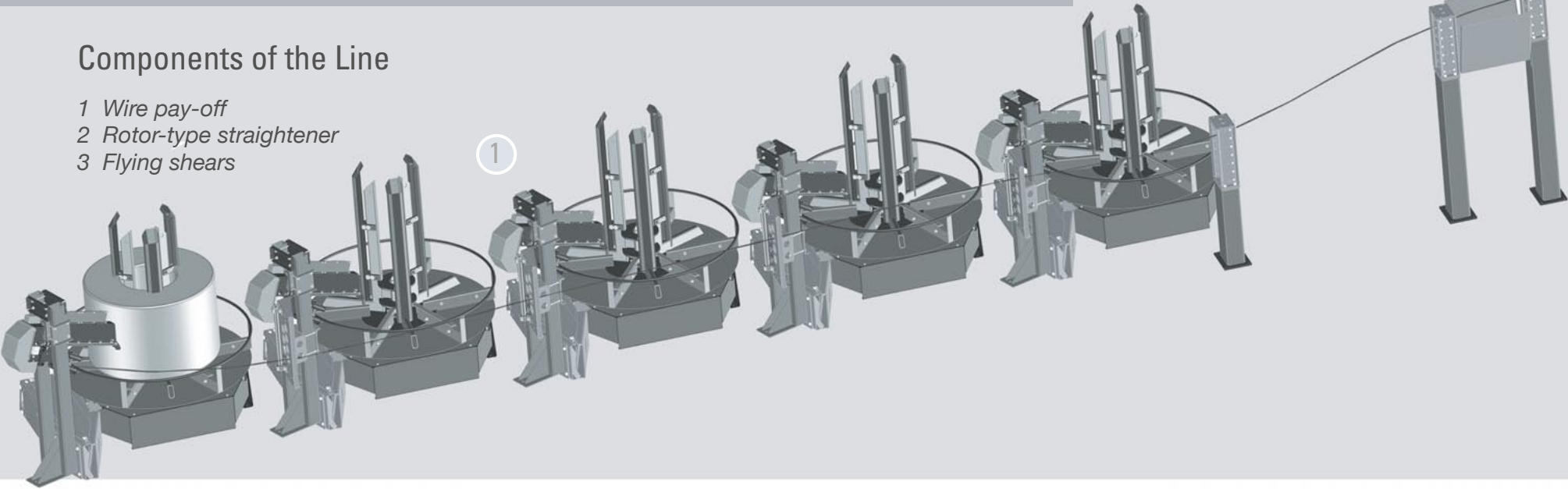
**..... The indicated types of lines are as well available with number of rotors adapted to customer' specific requirements.

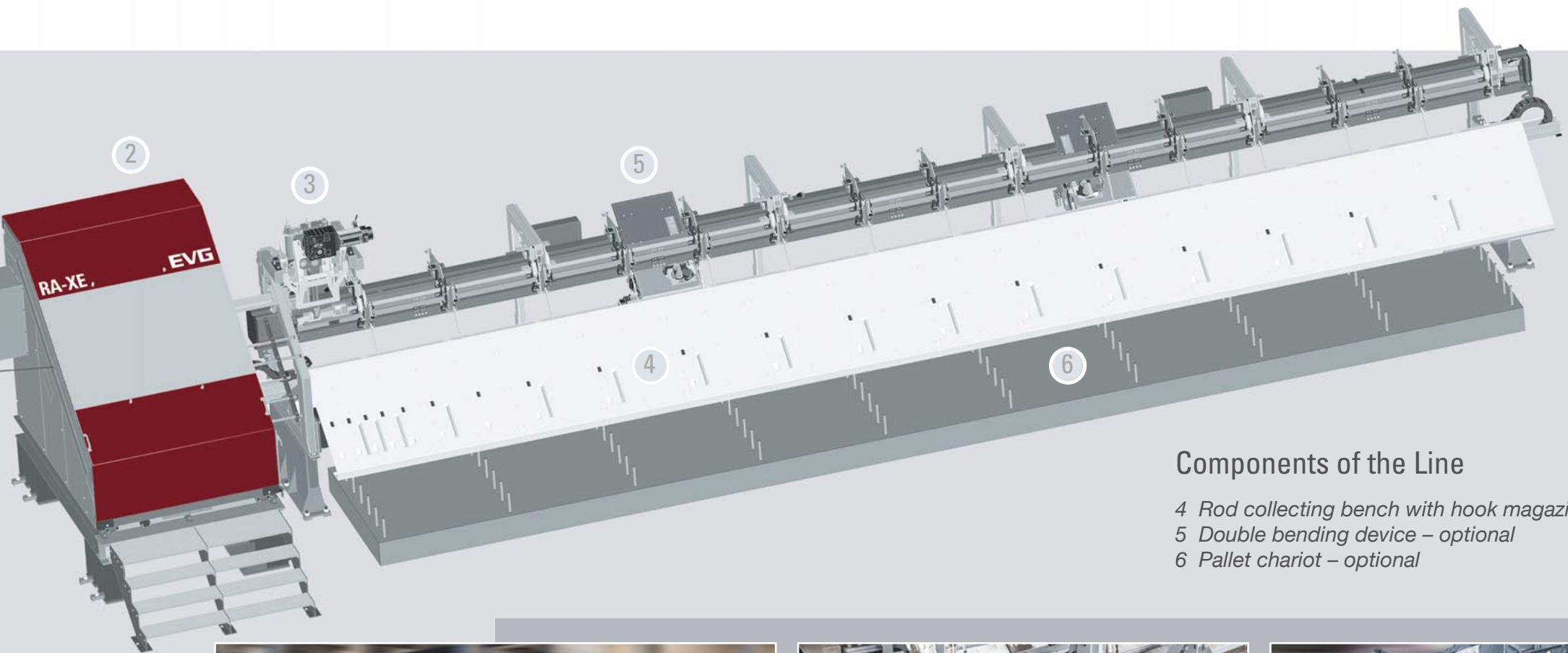
Basic Configuration



Components of the Line

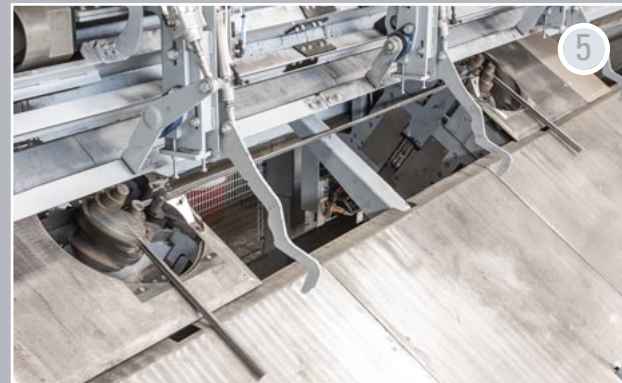
- 1 Wire pay-off
- 2 Rotor-type straightener
- 3 Flying shears





Components of the Line

- 4 Rod collecting bench with hook magazine
- 5 Double bending device – optional
- 6 Pallet chariot – optional



Wire Pay-off



- Electrically driven and braked turntables and a wire accumulator ensure that the wires are pulled off from coils in a controlled manner.

Rotor-type Straightener



■ The straightening technology of the roller-type rotor with hyperbolic straightening rolls has been brought to perfection by EVG and enables unparalleled straightening results and, at the same time, easy handling for the operator of the machine.

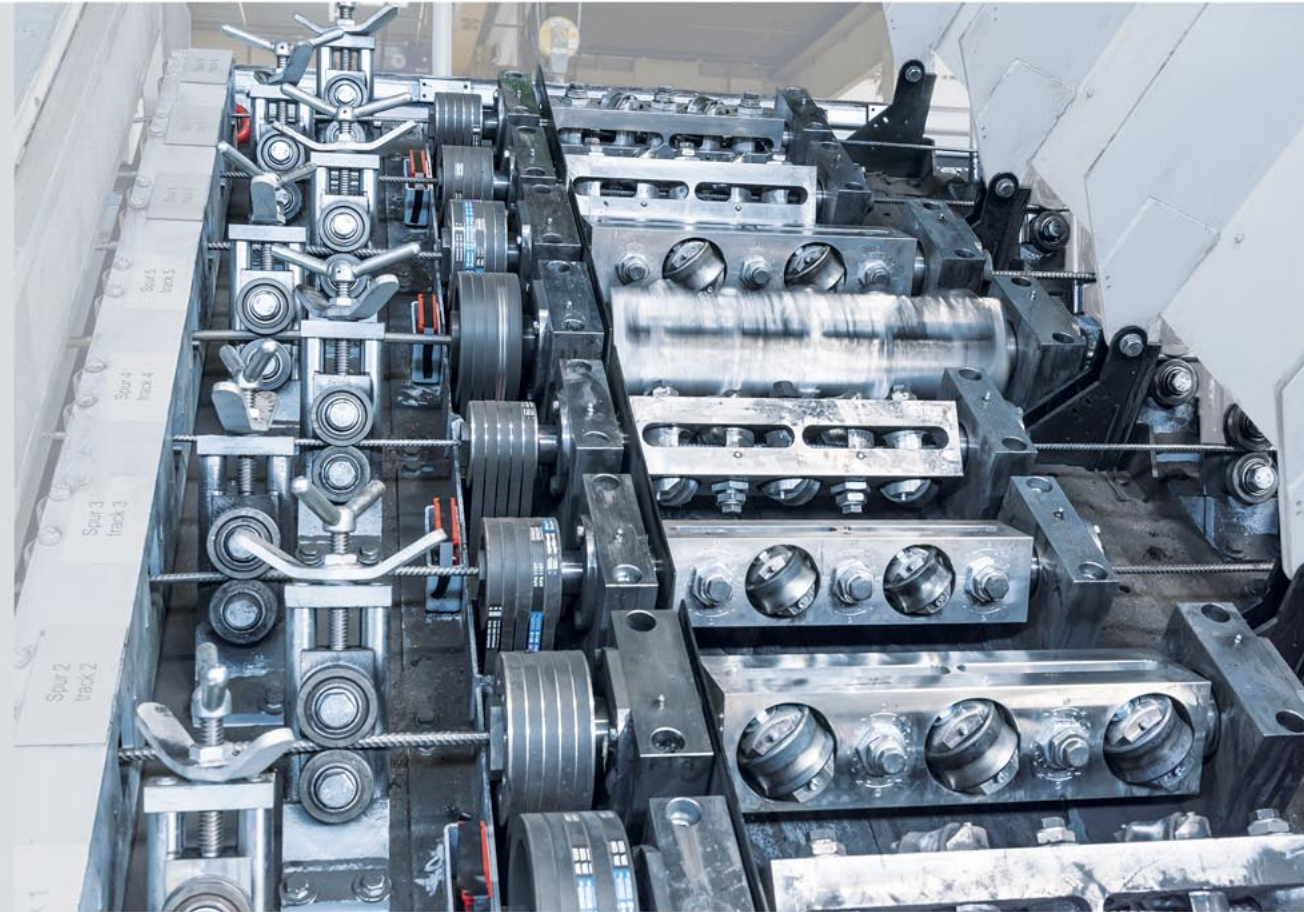
The particularly moderate straightening technology is ensured by the special shape of the straightening rolls that allow large-surface wire contact and thus minimum rib deformation.

Roller-type rotors activated by frequency-controlled three-phase drives straighten and advance the wire. Straightening effect and also linear wire advance are obtained by the rotary movement enabled by the use of this technology - without the necessity of an advance unit.

Highest flexibility due to individual rotors adapted to the respective wire diameter processed. These are mounted on a movable rotor table and enable a quick change-over of wire diameters.

Depending on output requirements this line is available as single- or double-strand model.

Electronic length measuring system for lowest length tolerances.



Flying Shears



- The highly dynamic shears system with servo-electric release of cut guarantees best accuracy of length of bars produced. Cutting of the continuously advanced wire on flying mode to ensure top cutting performance and moreover avoid stop-and-go operation.

The shears are equipped with cutter blades made of hardened steel for low wear. Multi-use of cutter blades with several cutting edges ensures cost-optimized service life.

Optionally available with two shears for double-strand production.



Rod Collecting Bench



- Rod collecting bench to guide the wires during the straightening process and to discharge and transfer the cut bars in a controlled manner for further processing.

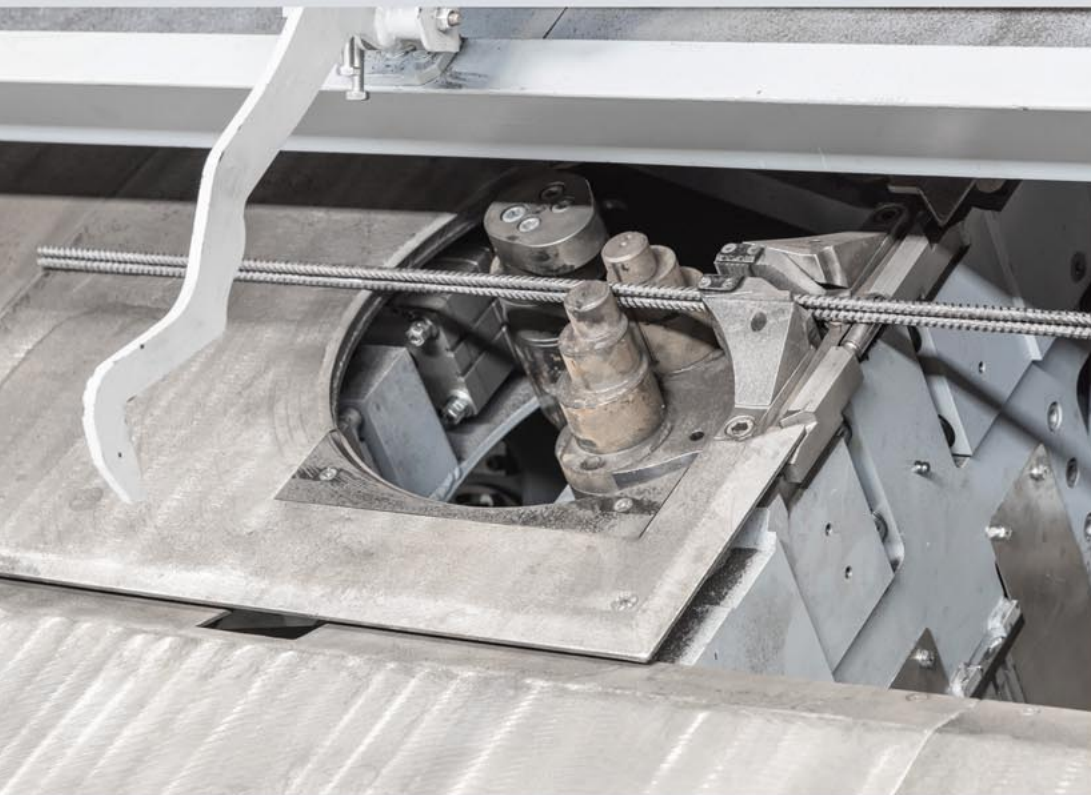
Sturdy steel structure of cantilevered design consisting of a run-out channel with pneumatically actuated flap system to stop and discharge the cut bars. The produced bars are made up in bundles and collected in two hook rows. Discharge of the bar bundles directly from the lower hook row or, alternatively, by making use of a downstream material logistics system such as pallet chariot for customized bar packages.

Standard execution for maximum bar lengths of 12 m or 14 m – special models possible on request.



Double bending device



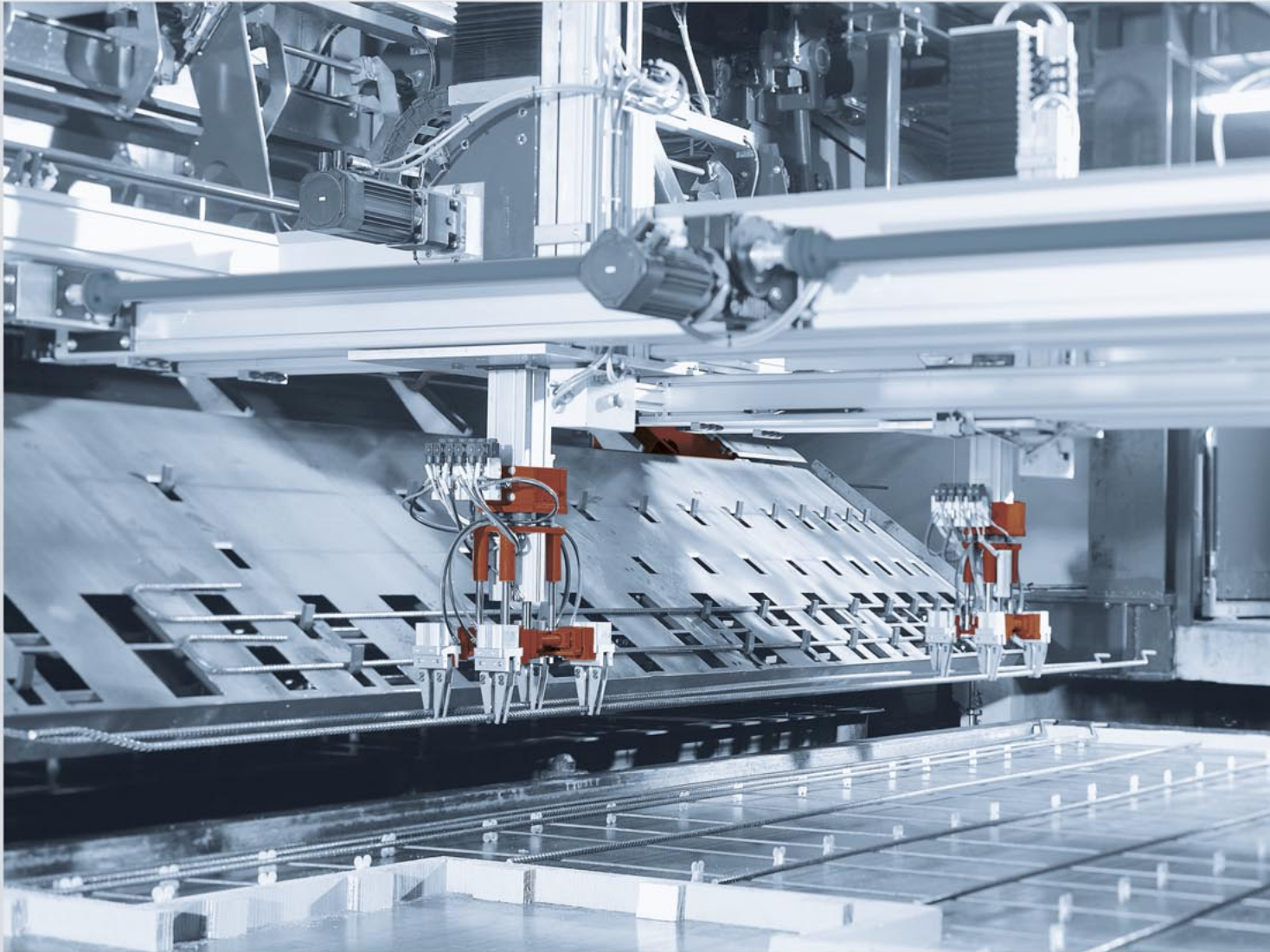


- The optional servo-electrically driven double bending device serves to bend the straightened and cut-to-length bars. Two bending heads are integrated in the rod collecting bench and can be positioned independently of each other. They allow producing not only long stirrup shapes with both sided bent ends but also closed stirrups. The bending shapes are programmable owing to the visualization feature of the control unit.

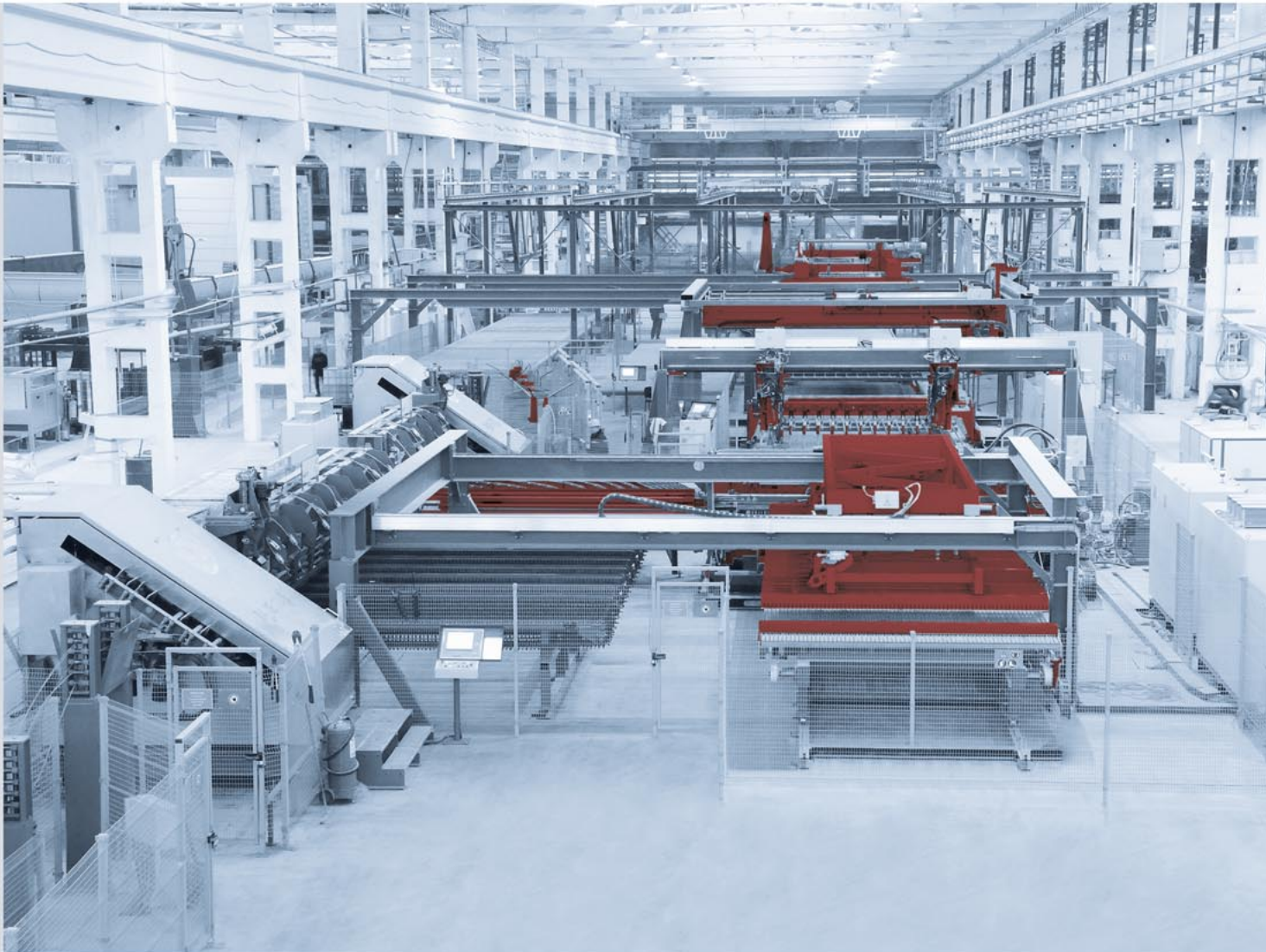
Bending mandrel change executed fully automatically due to staggered design of the bending head.



Application in Precast Factories



- Straightening/cutting/bending line of model RA-XE in combination with robot system MFA for the fully automatic bar-shaped reinforcement of concrete elements in pallet circulation plants.



- Straightening/cutting/bending line of model RA-XE integrated in a **flexible wire mesh welding line of the FBE/HFBE series** for the fully automatic two-dimensional reinforcement of concrete elements in pallet circulation plants.

Control Unit/Visualization

- The line is controlled via a state-of-the-art industrial PC running with Windows operating system, and a control panel with a 19" TFT display. Easy operation through graphically supported input of data via a sturdy industrial-type touchscreen.

The control unit is ready for connection to existing data processing systems including extended communication. The integrated network connection allows telemaintenance of the equipment.



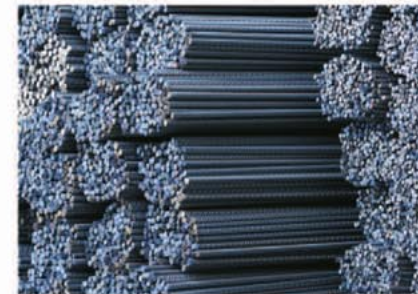
■ Group of Companies

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 as suppliers of complete production lines
- AVI and BSTG as producers of reinforcing steel sheets, cold-rolled reinforcing steel, truss girders, spacer strips and reinforcing cages
- 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.



EVG

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

EVG, inc.

220 East, 42nd Street
Suite 3100
New York, NY 10017
USA
phone: +1 212 6970770
e-mail: general@evg-usa.com
www.evg.com

Представительство EVG в России

ул. Дубининская, 90
115093, г. Москва
РОССИЯ
Тел.: +7 495 789 9666
e-mail: russia@evg.com
www.evg.com

Subject to modification.

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