



Cutting and shaping equipment

Cut Line

Cutting and shaping equipment



MIEP
the history of innovation



www.mepgroup.com



Cut Line

PRODUCTIVITY GUARANTEED

The **CUT LINE** is a full automated plant designed for **cutting, distribution and automatic bending** of rebars, managing the whole production cycle at an extremely **high flexibility level and assuring high productivity**.

The entire routing and distribution of material is pre-assigned, so that each cut rebar is sent to a precise position in **full accordance with the optimization process and the following bending cycle**.

To do so, the **CUT LINE** is equipped with a special **"two levels" intermediate collecting station**. This configuration allows to receive and hold the rebars till they reach their predetermined quantity (position complete), without forcing any idle on cutting operations.

Furthermore this feature completely eliminates the manual handling of material at intermediate stages, thus improving plant efficiency and operational safety.

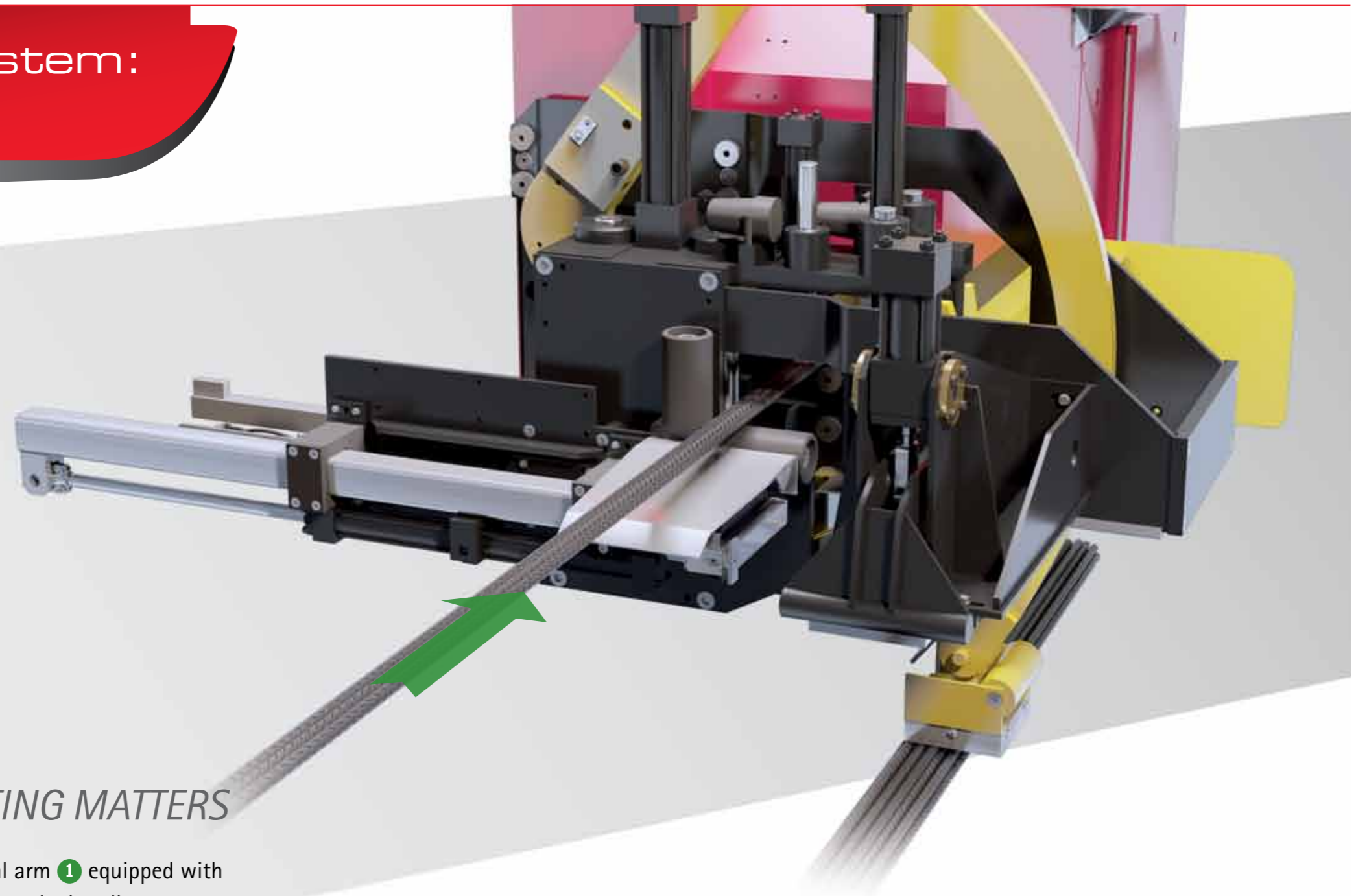


COMPACT AND MODULAR

The **CUT LINE** uses a mobile holding rack, that aligns with the extraction feeding unit. The plant **cuts the bars and unloads on both sides**, being equipped with a large number of locations in the standard collecting racks as well as in the "two levels" automatic storage pockets. The **CUT LINE** operates with a **substantial reduction of material transition phases, of the required plant footprint and also in the number of operators**. The plant lay-out is conceived as fully modular therefore suitable to be integrated with whatsoever distribution and collection solution, automatic bending stations, tying stations and so on "tailor made" according to the production requirement.

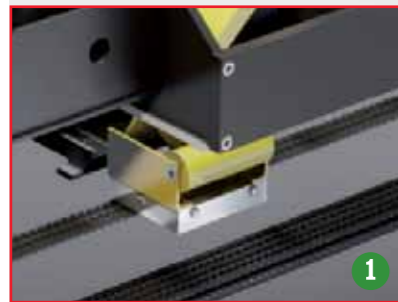
Automatic loading system: a reliable device

The optional **automatic loading system** (patented) selects the diameter of the bars, **aligns** and **loads** one or two bars depending on the programmed list, thus creating a **continuous optimized working cycle**.



PRECISE COUNTING MATTERS

The device uses a mechanical arm **1** equipped with magnets that lift the bars from the bundle. A magnet **2** draws and **counts every single bar with extreme precision**, avoiding counting errors (**loading one bar instead of two**) which would distort the quantities to be produced, as well as compromising the optimization already programmed. To avoid jams during the extraction and feeding phase it has been developed a **device 3** that **prevents the overlapping of the bars** that may occasionally happen. The **reliability of the working cycle** is thus **guaranteed**.



WE ALIGN EVERY SINGLE BAR

The **bar alignment device** is essential when working **double bar** because it **guarantees correct measurement tolerances**. The device aligns the bars before they are counted and loaded into the machine, without compromising the productivity of the equipment.



The Heart of the system

EXTRACTION GUARANTEED

The extractor roller allows the **delivery of the last bar or scrap** by measuring its length. Thus **avoiding manual intervention**.

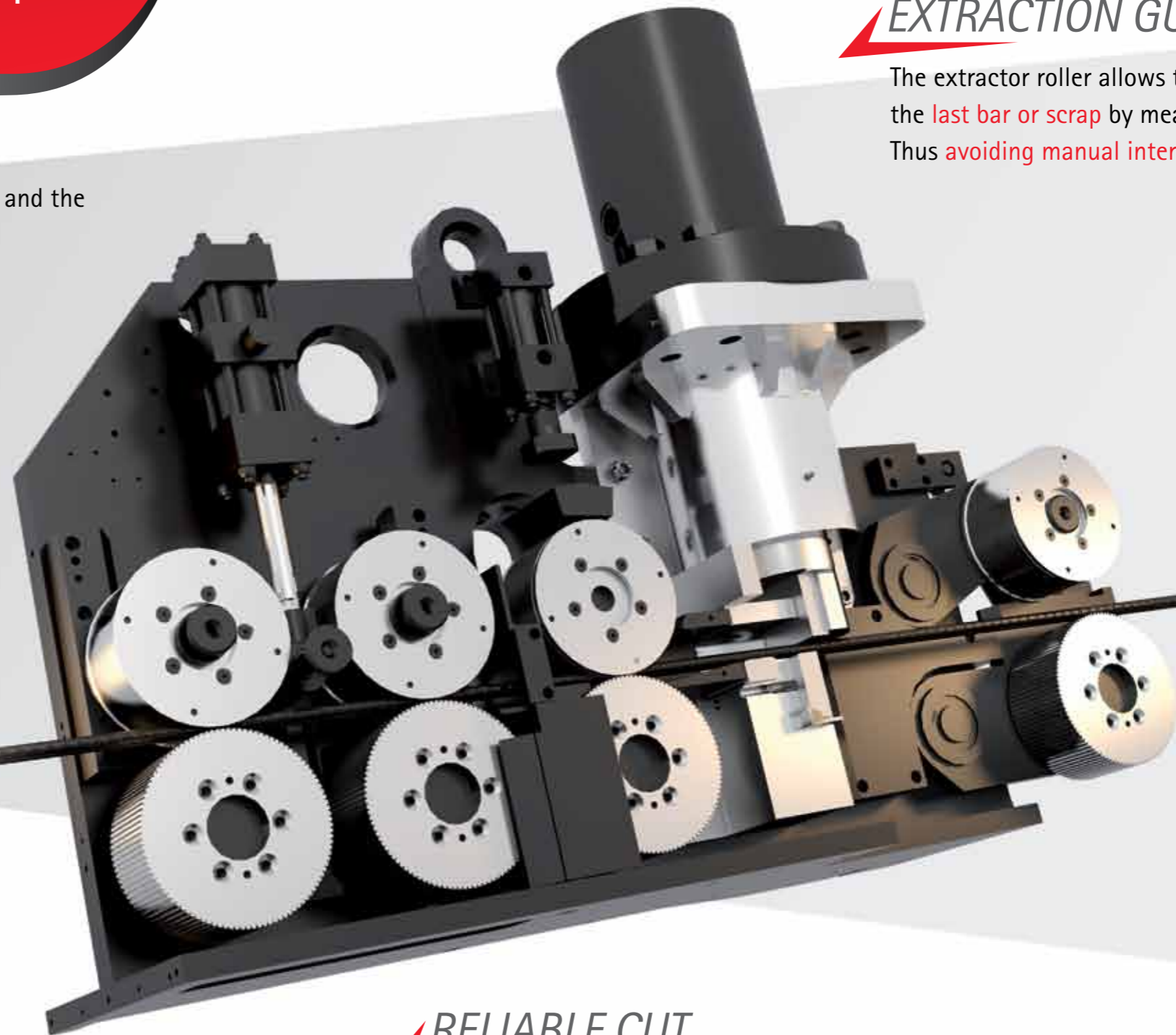
The extraction of the bar from the bundle, its cutting to size and the subsequent delivery is entrusted to a single group.

TRACTION UNDER CONTROL

The extraction and dragging of the rebar is guaranteed by a **rollers system**, able to **adapt to the differences in diameter and profile** of the bars thus avoiding slippage.

Traction control so obtained, **warrants** compliance with the **lengths tolerances** even in the most critical cases with **bundles of poor quality** or with **simultaneous processing of more bars**.

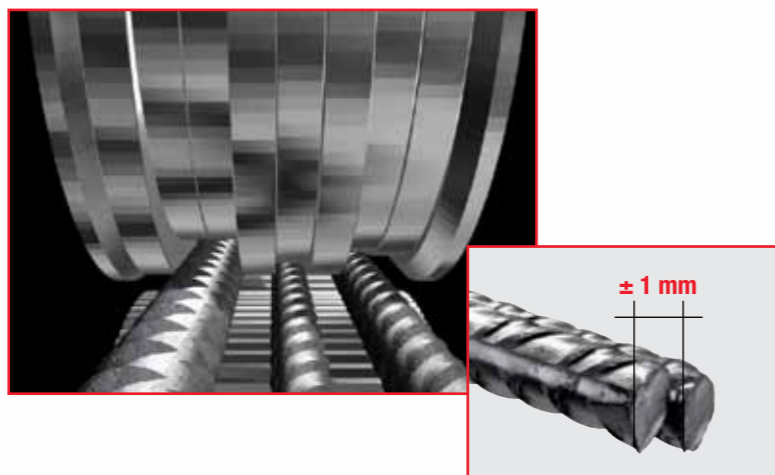
The feeding rollers are made of special **steel rings** as independent units, ensuring a **limited level of wear**.



RELIABLE CUT

The **hydraulic cutting system**, normally used in the drop-down shear lines, has been chosen for its **high reliability and cutting power**.

The shear is positioned between the feeding and delivery rollers, for a better management of the scrap that if it is smaller than 800 mm, is collected automatically in an outer container, if it is longer, delivered on the roller conveyor.



Optimizing: never been so easy

The **CUT LINE** uses a special intermediate collecting station on "two levels" which can collect and hold the bars according to their chronological sequence of optimization.

TWO LEVELS FOR THE MAXIMUM PRODUCTIVITY

The bars that must be collected and contained till they reach their predetermined quantity (location/tag completed) are conveyed through this special mid-station on two levels (patented).

The bars may be loaded in one of this 5 intermediate positions, without sequential constraints, creating a continuous work cycle. This is accomplished by using a double opening system: the loading is made from the top of the pocket, operating as a "gateway" or "bypass chute" for the subsequent bars, the discharge is made from a complete independent opening gate placed on the bottom and the bars are unloaded on a slide.

This unique design allows an input and an output of the bars very quick.

The ability to act on two independent levels, does not affect the cutting sequences ensuring a continuous and extremely productive cycle.



TWO WAYS TO BE THE FASTEST

The bars once cut to size are handled by two roller conveyors, moved longitudinally to the preassigned location and unloaded from there on either side.

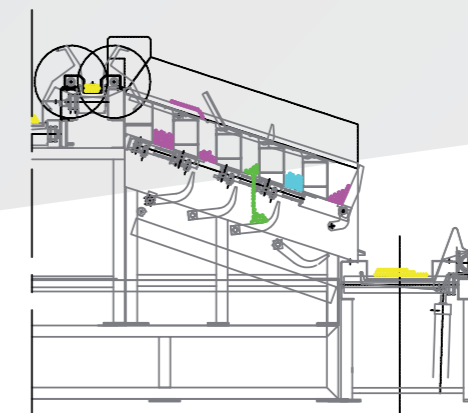
The combined action reduces the time ensuring high productivity.



DYNAMIC UNLOADING BAY

The bars, once reached their predetermined quantity (position/tag completed) are discharged quickly into the lower unloading bay and kept here. This will make available a new location in the collecting two levels mid-station, not hindering the cutting cycle.

The **CUT LINE** is able to independently manage each single position, releasing the bar to the further collecting racks or shaping centers keeping the optimal work sequence.



- BARS MOVING
- BARS PENDING (OPEN POSITION)
- BARS WAITING (CLOSED POSITION)
- BARS UNLOADING

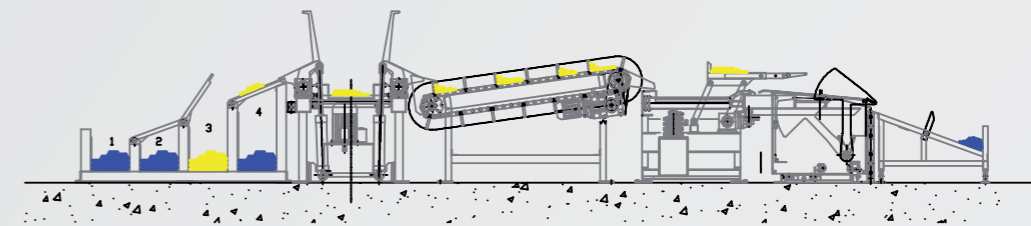
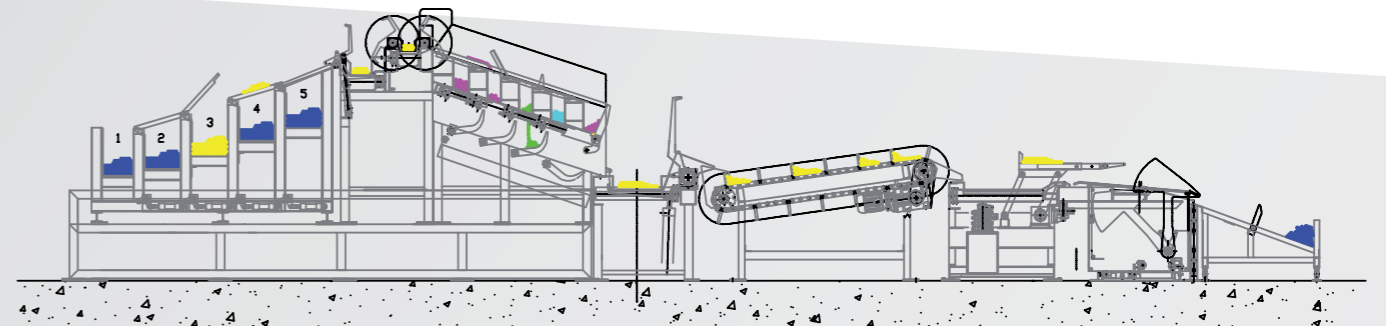
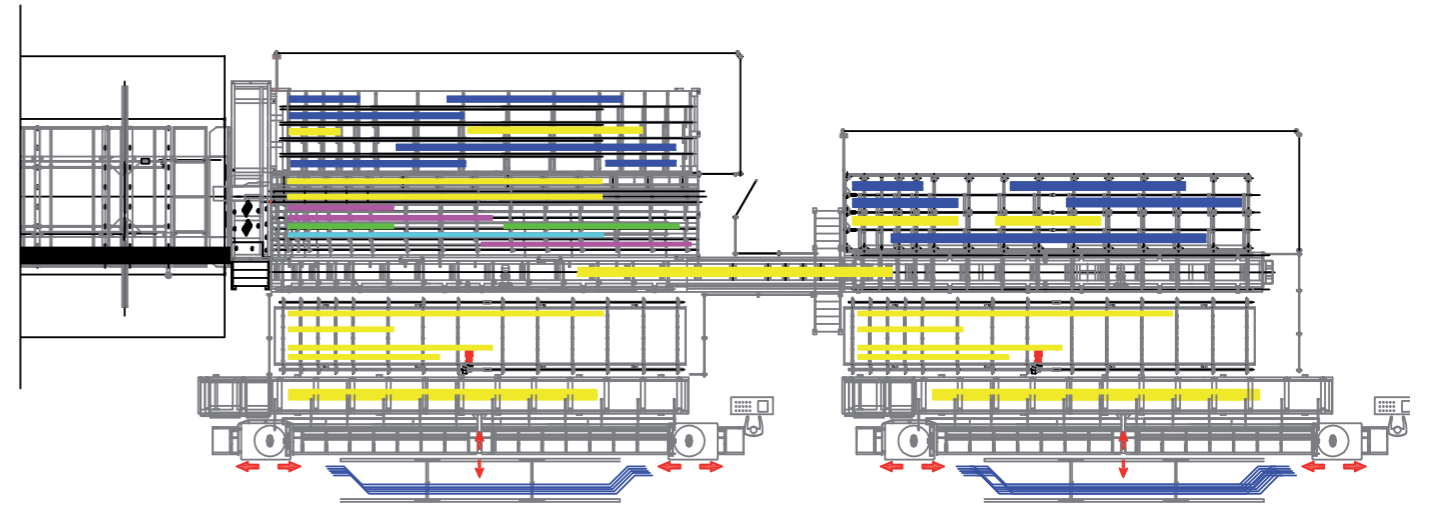
Automatic working center






The **CUT LINE** allows multiple configurations to meet the different production needs. It manages the working cycle in a dynamic way and optimizes the production flow according to the production loaded on the various units of the system, either for the collection of the product or for its shaping.

In fact the **CUT LINE** actively controls every single position (tag open or closed) and determines from time to time the operational priorities.

This allows the maximum flexibility in setting different job schedules, cases where high productivity is required (high weight per tag/label) or those that require "individual building elements" such as beams, columns (low weight per tag/label) or any combination of the two.

VERSATILITY AT YOUR SERVICE: CUT LINE

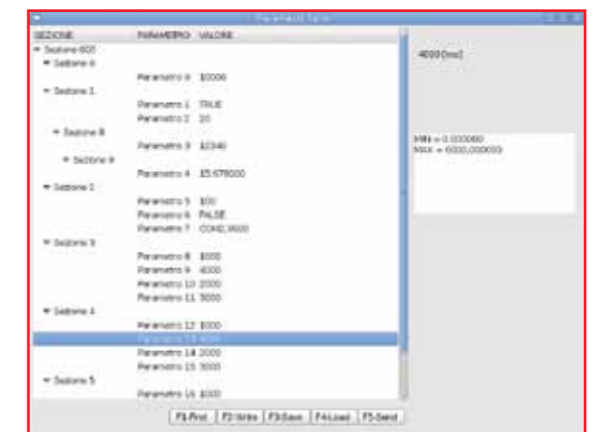
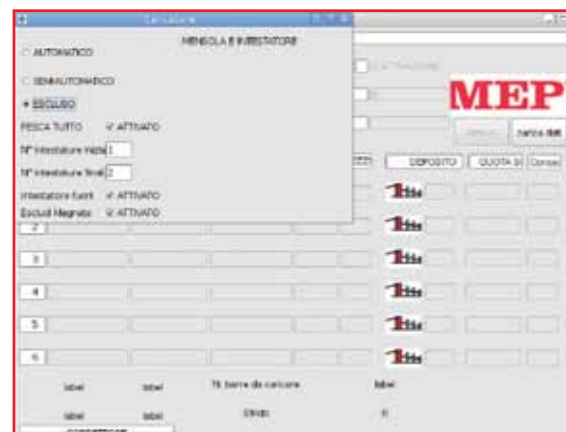


-  BARS MOVING
-  BARS PENDING (OPEN POSITION)
-  BARS WAITING (CLOSED POSITION)
-  BARS UNLOADING
-  TAG/LABEL COMPLETED

World system: total control

- **Industrial P.C. control panel** with software organized by windows structure that provides the following functions:
 - Programming the length of the bars to be cut and their quantity depending on the diameter and stock length.
 - Programming of a complete cycle of up to 6 different sizes on each bar.
 - Programming the selection of the roller conveyor for the collecting rack.
 - Coding of work cycles to allow the operator to place the tag (tagging).
 - Programming the optional aligning cut of the bars.
 - Automation of multiple stations, automatic tying unit (optional).
 - Displaying the cutting capacity of shear depending on the diameter of the bars to be cut.
 - Displaying the length of remaining scrap.

- Possibility of optimizing cutting lists by creating automatic work cycles (optional).
- Ability to upload up to 100 cycles of work in the required sequence, displaying the weight, length and cut quantity for each position.
- Storing data of work cycles (positions, diameters, times, weights, etc..).
- System of "active diagnostics" to check all devices in the machine.
- Outfitted for downloading data from external computer via RS 232 link. (optional)



CHAIN FEEDER



- The **chain feeder** is a unit that collects, transports and deposits the bars cut to size by creating an efficient intermediate storage station. Every single position is handled automatically by the **CUT LINE**. (OPTIONAL)

STORAGE RACKS



- The **storage rack** is a unit that collects the bars cut to size automatically creating a large warehouse storage. **CUT LINE**, manages automatically every single job.

AUTOMATIC TYING UNIT



- The **automatic tying unit** aligns and ties the cut to length bars. Integrated within the **CUT LINE** system eliminates the need for manual binding. (OPTIONAL)

MOBILE BUNDLES HOLDING RACK










- The **mobile holding rack** allows the bundles' storage within 7 or more compartments that depending on the diameter to be processed aligns to the (optional) automatic loading system reaching a continuous and automatic production cycle. A dedicated software (available with the automatic loading system) monitors the remaining quantity of each compartment in order to plan the bundle loading for the completion of the programmed list.

SHAPING CENTER CS 440



- Automatic Shaping Centers CS** in different versions bend the bars on both ends either clockwise and counterclockwise. Perfectly integrated with the management of the work system and **CUT LINE**. (OPTIONAL)

TECHNICAL AND PRODUCTION CHARACTERISTICS

				
	PROCESSING OF SMOOTH OR REBAR WIRE			
	number of bars	n. 1 Ø	40	#11
		n. 2 Ø	32	#10
		n. 3 Ø	26	#8
		n. 4 Ø	20	#6
n. 5 Ø		16	#5	
fy = 600 N/mm ² - ft = 650 N/mm ² (other loads upon request)				
	CUTTING CAPACITY			
	minimum cutting length (other sizes upon request)	800 mm	31.5"	
	maximum length (other sizes upon request)	12000 mm	39-4"	
	measurement tolerance	±1 mm/m		
	max. speed positioning	2 m/s	6,6 fps	
measurement rollerway evacuation speed	2,2 m/s	6,6 fps		
	INTERMEDIATE COLLECTING STATION			
	Number of compartments	5 + 5		
	STORAGE RACKS			
	Number of compartments	5		
	INSTALLED POWER			
	maximum (other sizes upon request)	28,7 kW	38.5 hp	

THE PLANT DOES NOT REQUIRE COMPRESSED AIR.

fy: max. unit yield point - ft: max. tensile strength

Note: #5 = 5/8" - #6 = 3/4" - #8 = 1" - #10 = 1-1/4" - #11 = 1-3/8"

MEP

MEP Macchine Elettroniche Piegatrici
via Leonardo Da Vinci, 20
I - 33010 Reana del Roiale (UD) - ITALY
Tel. +39 0432 851455
Fax +39 0432 880140

MEP
BRASIL

MEP Brasil
Rua Bom Jesus da Cachoeira, nº 100
Parque Edu Chaves
CEP 02236-020 - Sao Paulo - BRASIL
Tel. +55 11 2240.4610 - 2240.4553
Fax +55 11 2240.4610 - 2240.4553

MEP
FRANCE

MEP France S.A.
8 bis, rue des Oziers
BP 40796 Zone d'Activités du Vert Galant
95004 St. Ouen L'Aumône FRANCE
Tel. +33 1 34300676
Fax +33 1 34300672

MEP
NORD-EUROPE

MEP Nord-Europe GmbH
Brienner Strasse 55
D-80333 München GERMANY
Tel. +49 089 41610829

MEP
POLSKA

MEP Polska Sp. z o.o.
ul. Józefowska 13/A
93-338 Łódź POLAND
Tel. +48 42 645 7225
Fax +48 42 645 7058

MEP
VOSTOK

MEP Vostok OOO
Ул.Новаторов, 36 корп.3 Офис XXIV
119421 Москва Россия
Tel./Fax: +7 495 745 04 90

MEP
ASIA

MEP Asia Co., Ltd.
1303 Ho, 301-Dong, Bucheon Techno Park
345 Sukcheon Ro, Ojung-Gu
Bucheon, Gyunggi-Do - SOUTH KOREA
Tel. +82 32 329 1956
Fax +82 32 329 1957

www.mepgroup.com

sales@mepgroup.com