Cutting and shaping equipment

Flexiplus

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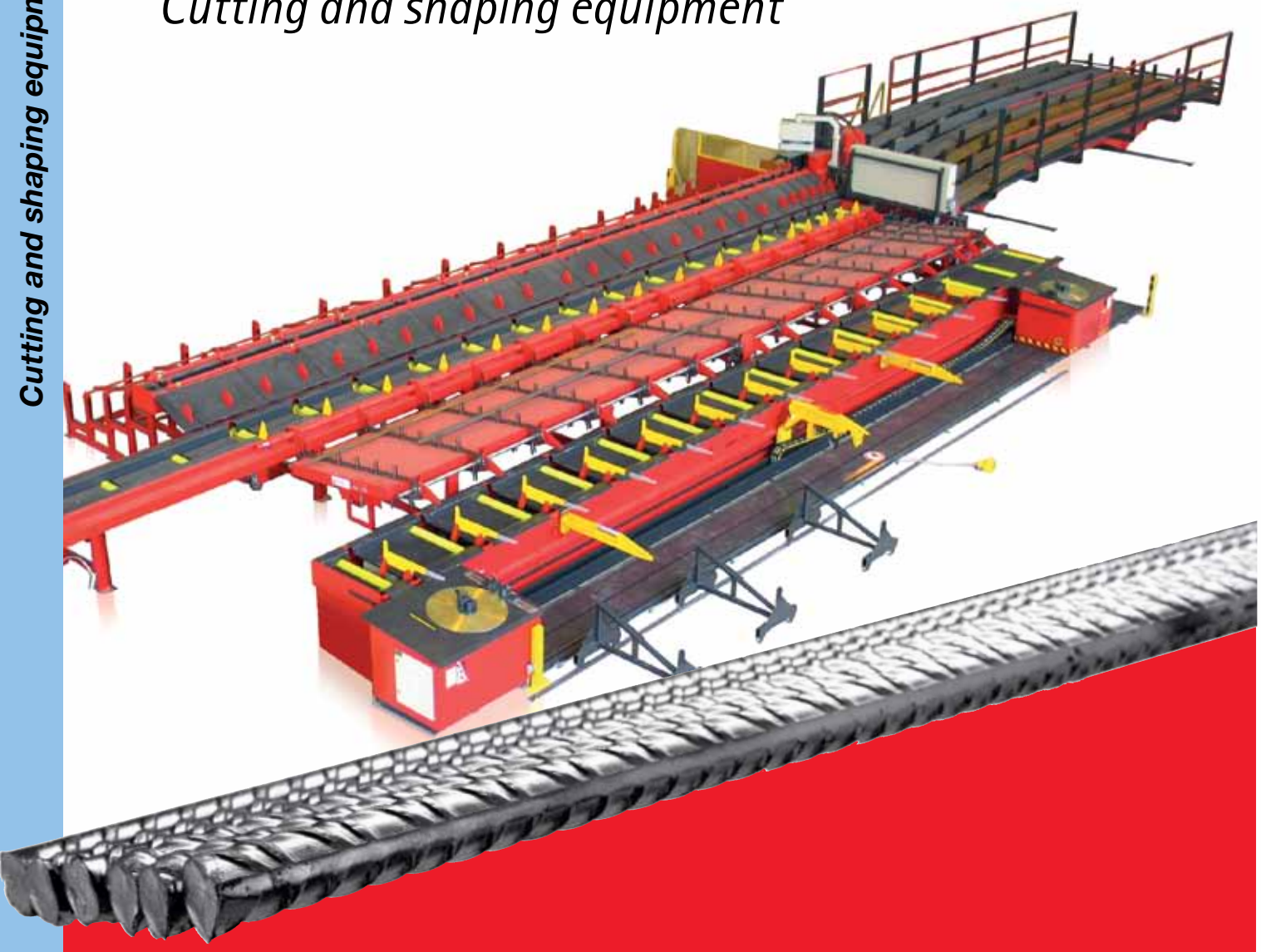

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Flexiplus

VERSATILE AND PRODUCTIVE

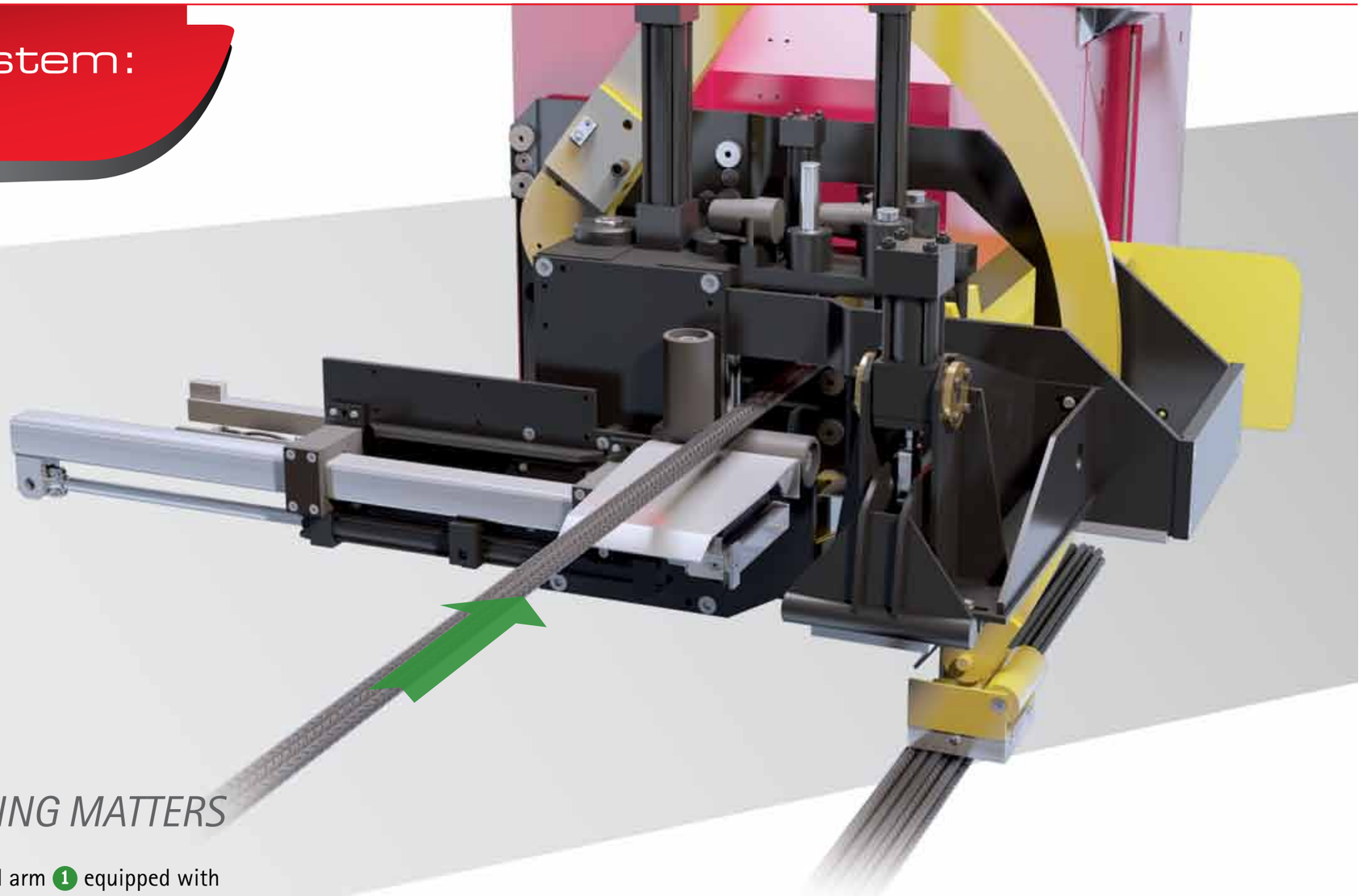
FLEXIPLUS is a plant for the cut to size of stock rebars, very flexible to meet different production needs. When operated exclusively for rebar cutting, can be equipped with multiple automatic collecting racks, widening the optimization possibilities and increasing the productivity.
When operated as complete cut and bend station, it is capable to automatically separate and collect the bars already cut to measure, from those to be shaped, eliminating any intermediate handling operation.

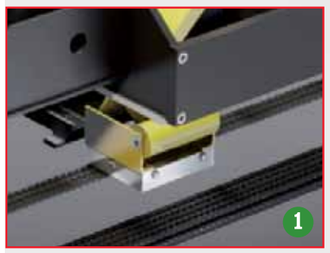
COMPACT AND MODULAR

The **FLEXIPLUS** is designed with a mobile holding rack, aligning with the extraction feeding unit. It cuts the bars and unloads on both sides, being equipped with a great number of locations in the collecting racks, all suitable to be loaded automatically. This solution reduces the number material transitions, containing the overall dimensions of the plant and the number of operators.
The modular plant layout allows "tailor made" solutions.

Automatic loading system: a reliable device

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



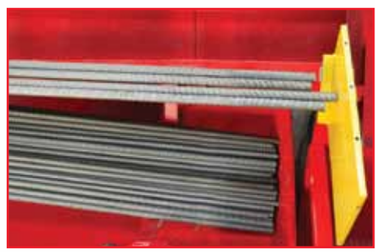


PRECISE COUNTING MATTERS

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 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.

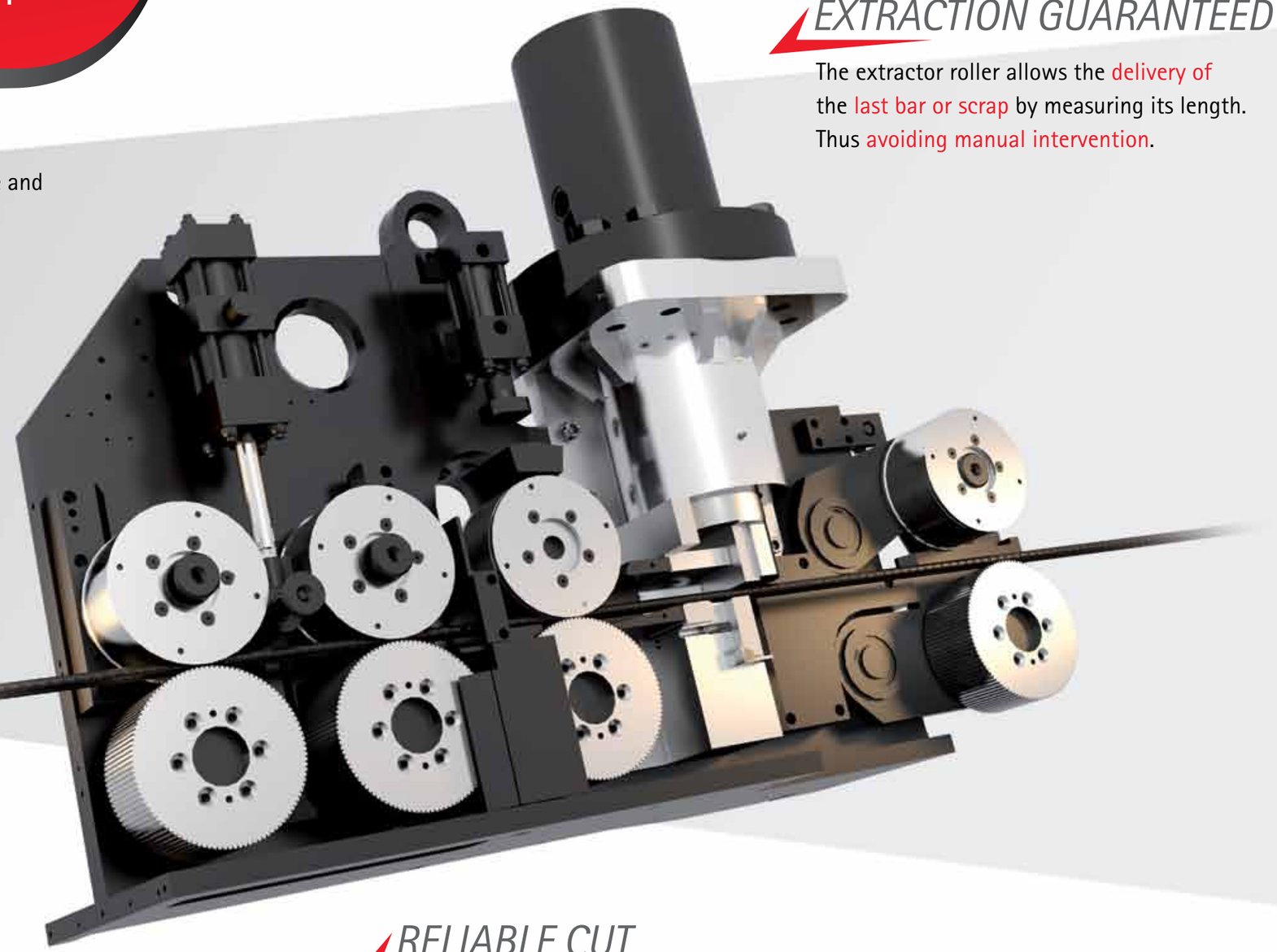


The heart of the system

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

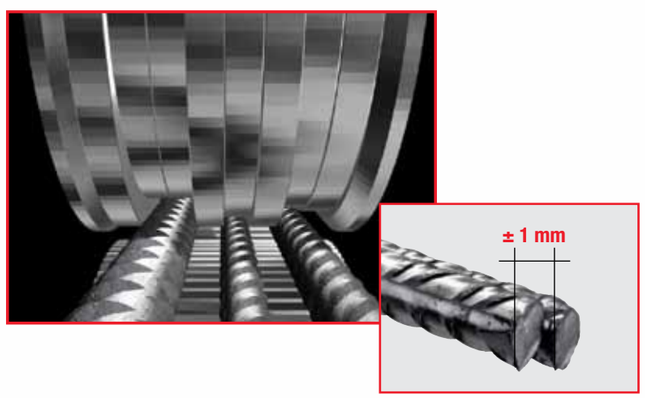
TRACTION UNDER CONTROL

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.



EXTRACTION GUARANTEED

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



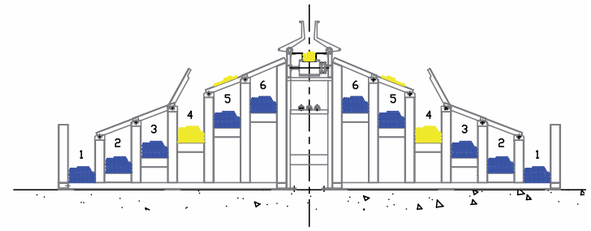
RELIABLE CUT

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

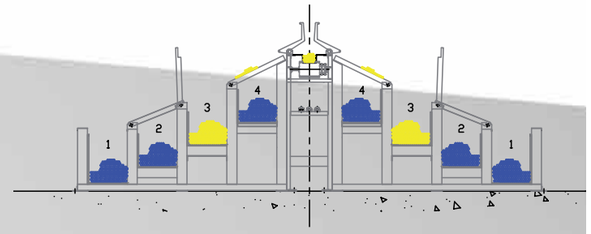
Optimized rebar distribution

ADDICTED TO CUT

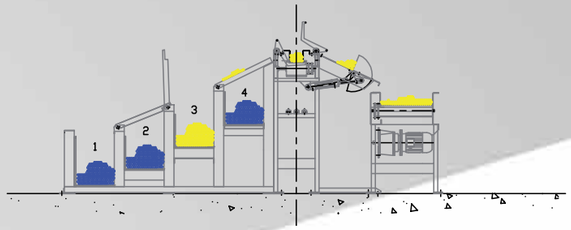
Configurations of plant oriented to a prevalent amount of cutting to length can take benefit of a large number of collecting racks/pockets. By increasing the storage positions, it maximize the optimization process too.
The double side discharge tipping of material, allows to create two segregated working areas where the operator can access safely for the bundling-up and subsequent handling during the working cycle.
These solutions, while reducing dead times, increase the shear use, thus increasing productivity.



6+6 COLLECTING RACKS/POCKETS



4+4 COLLECTING RACKS/POCKETS



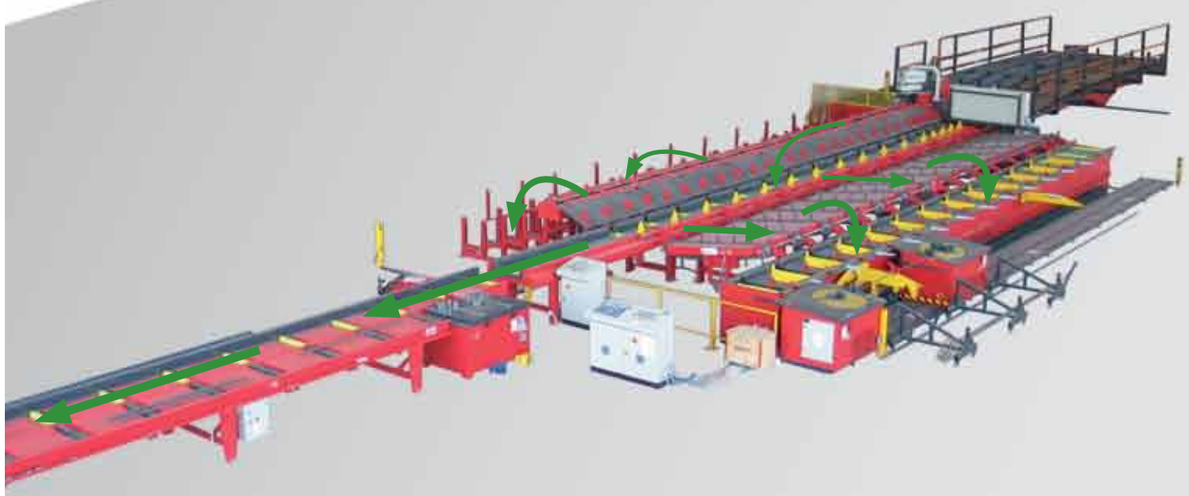
4 COLLECTING RACKS/POCKETS + 1 ROLLER CONVEYOR

AUTOMATIC LOADING SYSTEM

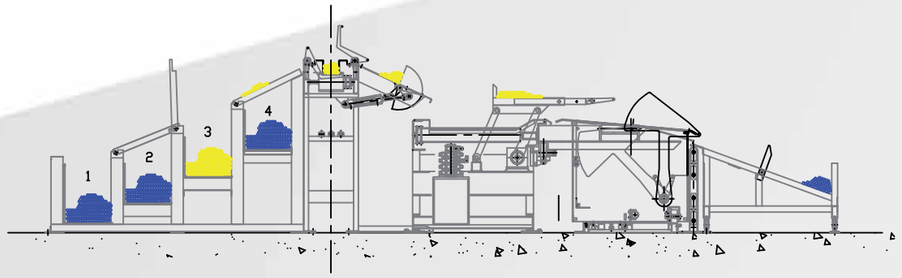
Particularly suitable in cases where you want to achieve maximum productivity. (OPTIONAL)

Cut&Bend dedicated

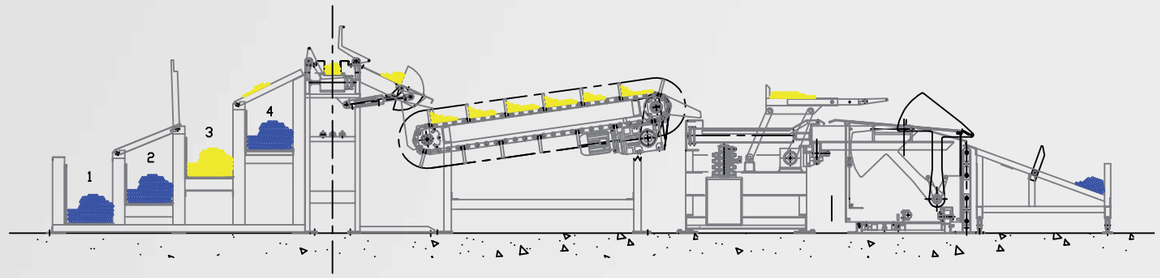
The **FLEXIPLUS** configured for processing of higher percentage of material to be bent, can automatically and effciently separate material for bending from cut to length bundles.
All the various stages of intermediate handling, involving storage into racks or the transfer to areas dedicated to shaping, are managed and optimized automatically.
In this way additional lifting operations are not longer required.
These solutions, reduce downtime and the use of additional operators, therefore increasing the efficiency of the plant and reducing operational costs.



VERSATILITY AT YOUR SERVICE: FLEXIPLUS



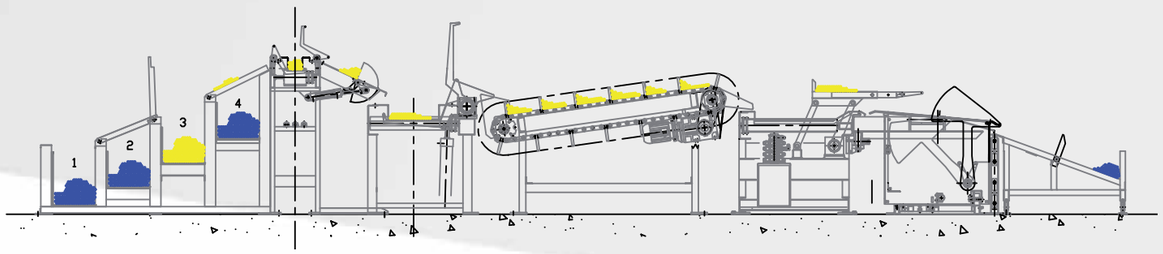
4 COLLECTING RACKS/POCKETS + AUTOMATIC SHAPING CENTERS CS 440



4 COLLECTING RACKS/POCKETS + CHAIN FEEDER + AUTOMATIC SHAPING CENTERS CS 440

AUTOMATIC LOADING SYSTEM

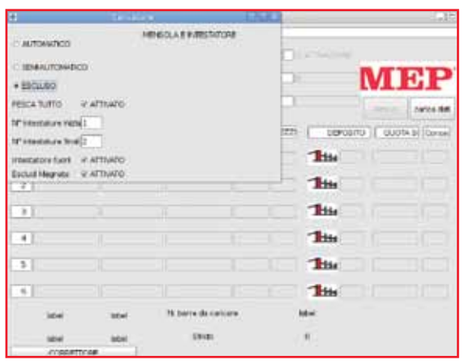
Particularly suitable when you want to achieve maximum productivity. (OPTIONAL)

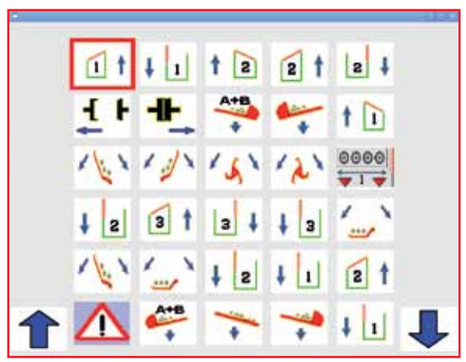


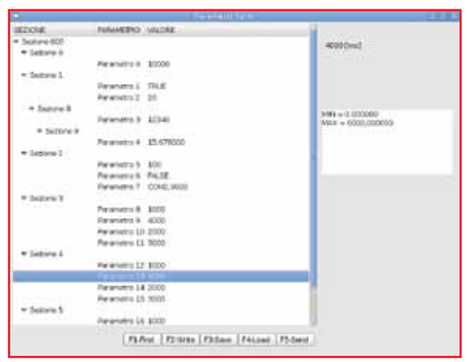
4 COLLECTING RACKS/POCKETS + 1 ROLLER CONVEYOR + CHAIN FEEDER + AUTOMATIC SHAPING CENTERS CS 440

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. (OPTIONAL)

STORAGE RACKS

- The storage rack is a unit that collects the bars cut to size automatically creating an efficient warehouse storage. (OPTIONAL)

AUTOMATIC TYING UNIT

- The automatic tying unit aligns and ties the cut to length bars. Integrated within the **FLEXIPLUS** 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 CS440

- 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 **FLEXIPLUS**. (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/mm² - ft = 650 N/mm² (other sizes on request)		
	**CUTTING CAPACITY**		
	Minimum cutting lenght (other sizes upon request)		800 mm / 31.5"
	Maximum lenght (other sizes upon request)		12000 mm / 39-4"
	Measurement tolerance		±1 mm/m
	Max. speed bar pulling		2 m/s / 6,6 fps
	Measurement rollerway evacuation speed		2,2 m/s / 6,6 fps
	**INSTALLED POWER**		
	maximum (other sizes upon request)		27,6 kW / 36,9 hp

THE PLANT REQUIRES THE USE OF AN AIR COMPRESSOR.

fy: maximum yield conventional limit – ft: maximum breaking point conventional limit

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

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