



Automatic shaping and stirrup bender from coil

Planet **25 Plus Stainless Steel** Planet **26 Plus**

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MEP
the history of innovation



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VERSATILITY AND INNOVATION

The Planet 25 Plus Stainless Steel and Planet 26 Plus are the sum of all best technology solutions developed in the field of coil processing, straightening and shaping. In this machine it is reached the maximum level of flexibility, productivity and product quality.



3,2 m/s THE EFFICIENCY THAT REDUCES THE COSTS

The high productivity is guaranteed both in case of serial production and for "classified" production, thus when processing of individual building elements such as beams and columns (variable diameters with single wire up to 26 mm). The very large production capacity of the Planet Series determines a reduction in the extent of required equipment, as well as in the number of machinery operators, therefore reducing drastically the production cost per unit of weight.





QUALITY AND PRODUCTIVITY

Planet 25 Plus Stainless Steel and **Planet 26 Plus**

are a user friendly automatic stirrup bender that provides **superior quality of finished products**.

The combined action of an exclusive series of **patented devices** minimizes the time for setup adjustments and **reduces drastically the amount of discarded products**.

A drive and control system, based on the latest generation technology, grants to reach **unparalleled levels of productivity** per hour.



The twisting of the wire during the pulling phase create open stirrups.

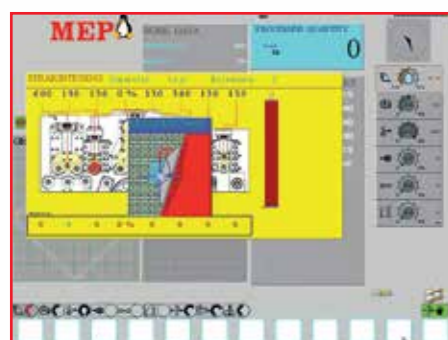
patented

AN INNOVATIVE SOLUTION

The **AFS3** is a straightening system that eliminates the effect of the wire rotation on its own axis. Therefore, **closed stirrups and straight bars** can always be produced. The **independent control** of the traction on wire, as well as the increased surface of contact with the **large infeed wheel**. Thanks to this design and to the consequent lower pressure applied on the steel material, **the coil ribs are far less deformed by the straightening process**. The lifetime of the **infeed roller themselves** is about **8 times longer** than in case of traditional straightening methods.

CONTROLLED STRAIGHTENING

Specific corrections can be applied on the straightening set up of each individual wire even though working in double strand mode and also during the working cycle, thus without stopping the production.



Secondary feeding unit: a patented system

A DOUBLE TRACTION FOR ANY SHAPE

The Secondary feeding unit lets you use a **patented method** that allow to produce shapes **bent on both sides** using one bending unit instead of two.

The **working cycle is considerably simplified and sped up**, having eliminated all the time related to transfer the wires at the second bending unit and those required for the change of two bending pins related bending angles calibrations.

NO RESTRICTIONS ON SHAPES AND DIMENSIONS

This **patented method** provides the simultaneous exit of the secondary feeding unit (1) and the bending unit (2) among the working plane, **avoiding the collision between the shape and the cutting unit (1 + 2)** during the pulling back progress.

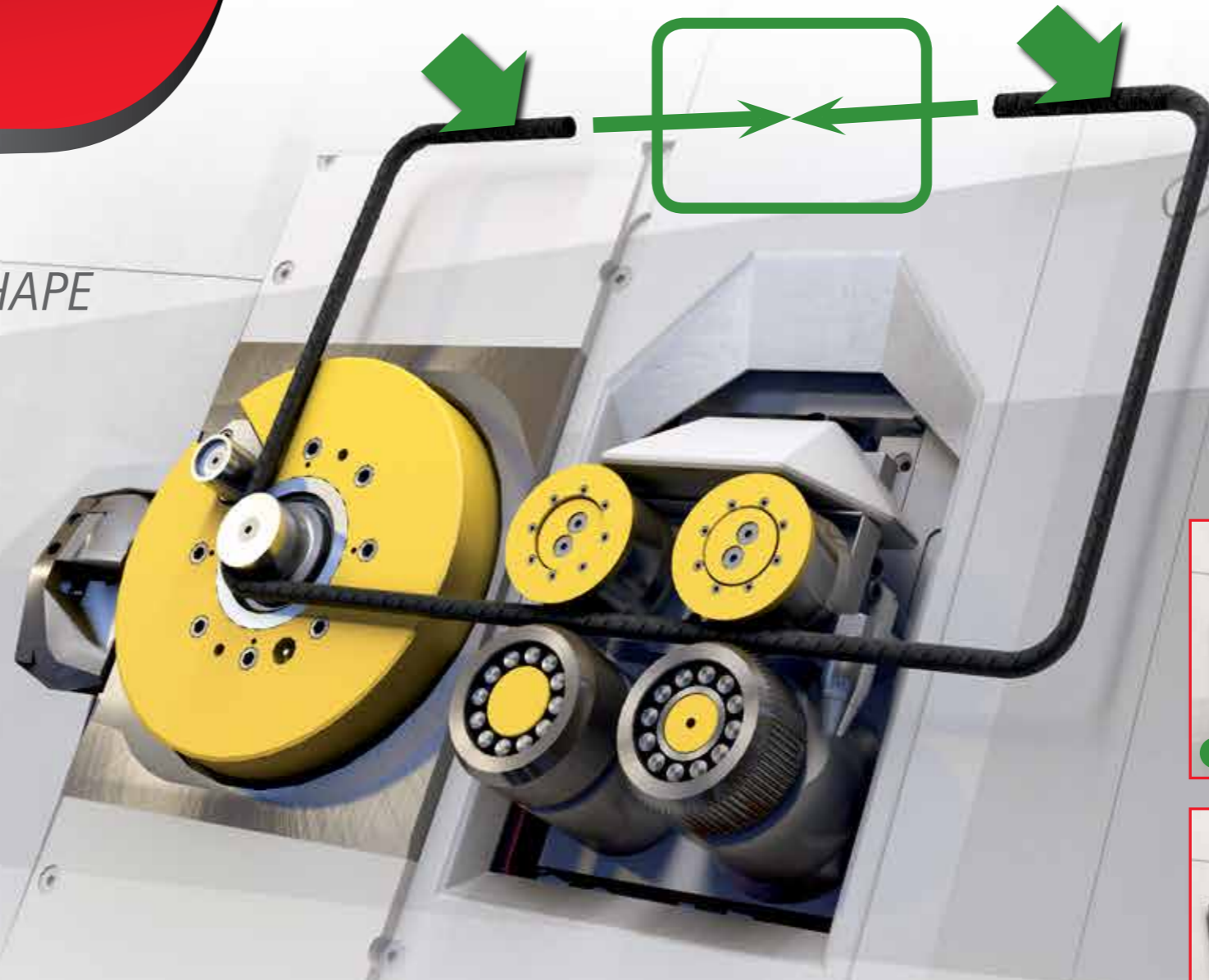
This solution enables the production of **shaped products of all forms and sizes** using **the entire working surface**.

GRAVITY FOR QUALITY

Exploiting the effect of **gravity** during the bending phase **we obtain shapes always coplanar**.

The rollers of the secondary feeding unit **open (1) and close (3) before each bend**, allowing the shape "to rely" on the work surface (2) and (4) as a result of gravity.

The subsequent bends will always aligned with those already executed, **canceling out** any residual phenomenon of rotation.



Exclusive automatism for unparalleled productivity

The **productivity** reached from **Planet 25 Plus Stainless Steel** and **Planet 26 Plus** are the result of an unprecedented concept of **full automation at maximum speed** of all processes that normally require the intervention of the machine operator.

All **manual handlings** as well as control operations **which can slow down the production** and be potentially detrimental for the unit efficiency are completely assigned to the control of the machinery. In this way the Planet operates in a full automated non-stop working cycle.

NEVER BEEN SO EASY TO FEED IN THE WIRE



Pre-straightening and feeding unit equipped with **winch and pre-straight with motorised roller**, it **eases and speeds up** the alignment and the insertion of the wires, particularly **suitable for the large diameters**.

THE FASTEST WIRE CHANGE

The exclusive pre-feeding unit **changes automatically the wire in a very short time**. At the same time **the straightening system AFS3** **reconfigures itself** based on the diameter or the material to be worked and recalling, if stored, straightening parameters previously applied. Thanks to this solution the equipment is ready to **restart the production in few seconds** without any manual operation.

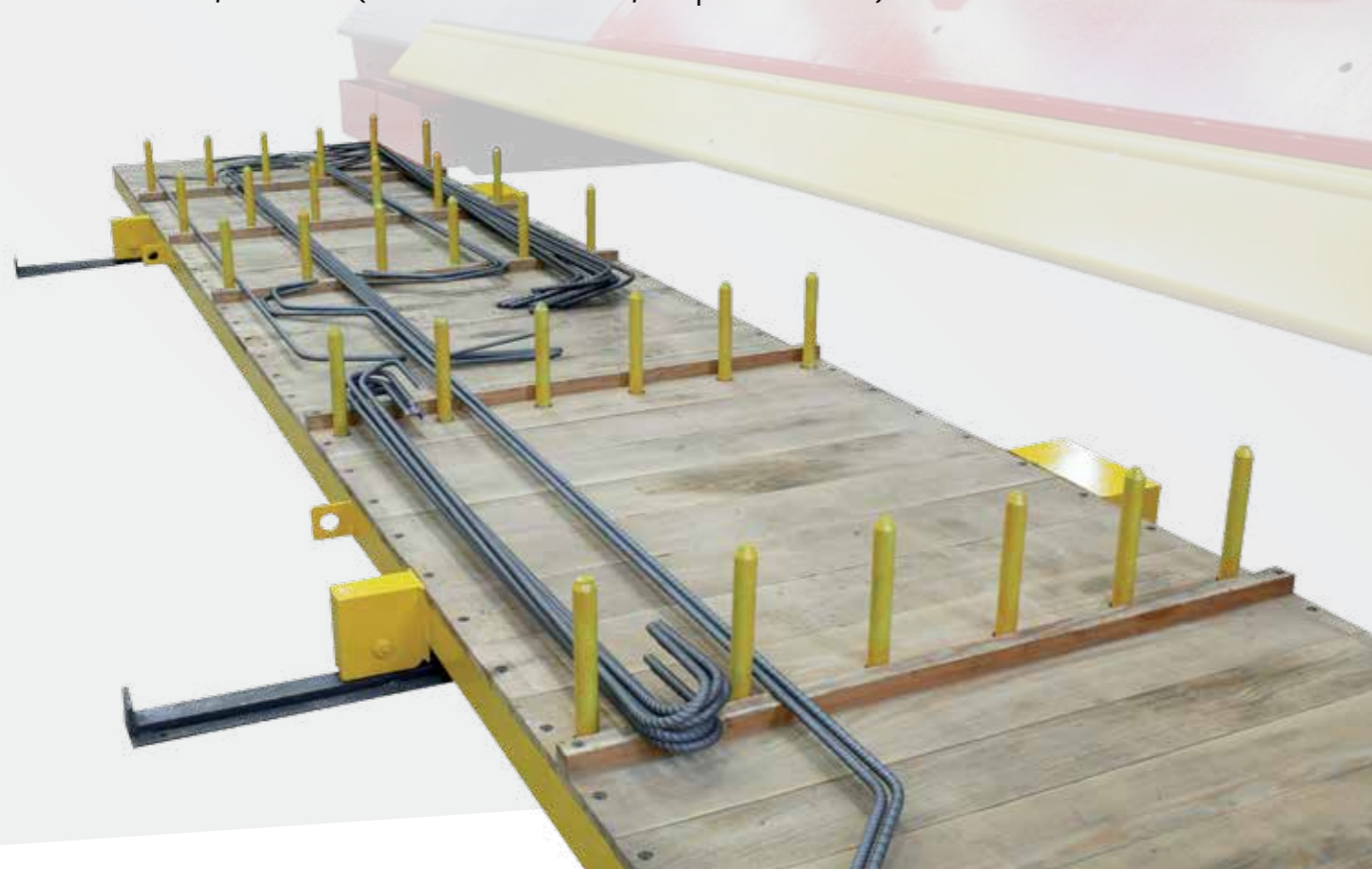


COLLECTING AUTOMATICALLY

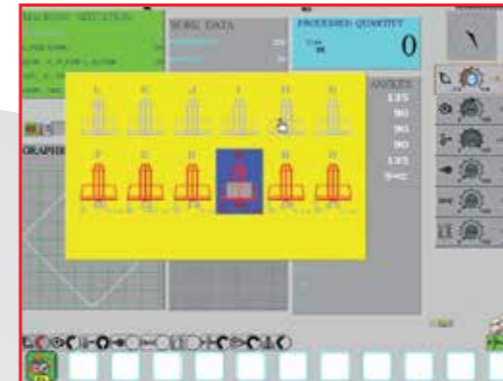


The **automatic collection** devices are used to maintain **high levels of productivity**, reducing downtime normally required for the evacuation of the products finished. Each unit can be equipped with single or multiple collection cart configuration.

It is possible **split automatically the different products** based on the production cycle (repeated forms) or for single structural elements such as beams, columns (different diameters, shapes and sizes).



3,2 m/s: DECOILING UNDER CONTROL



The **maximum speed of 3,2 m/s** which operates **Planet 25 Plus Stainless Steel** and **Planet 26 Plus** requires an **automatic unrolling control** of the coil.

The management of the speed rotation of each **motorized decoiler**, depends on variables related to the weight and diameter of the coil, **avoid wire overlaps and reduces downtime**.



Spacer for the use of spooled or rewind coils. (OPTIONAL)



WORLD SYSTEM Total Control

The world system through an interface "user friendly" allows total control of all devices in the plant, thus enhancing performance.

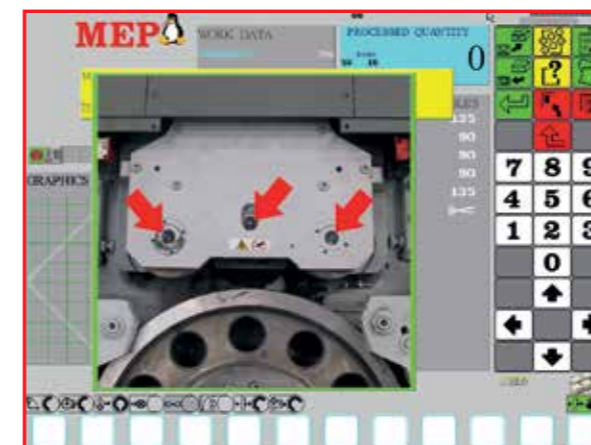
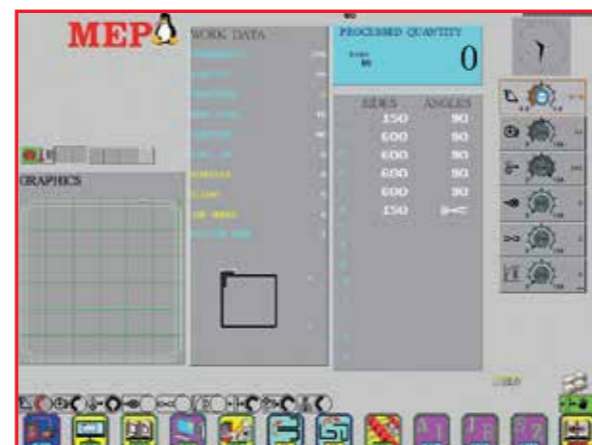
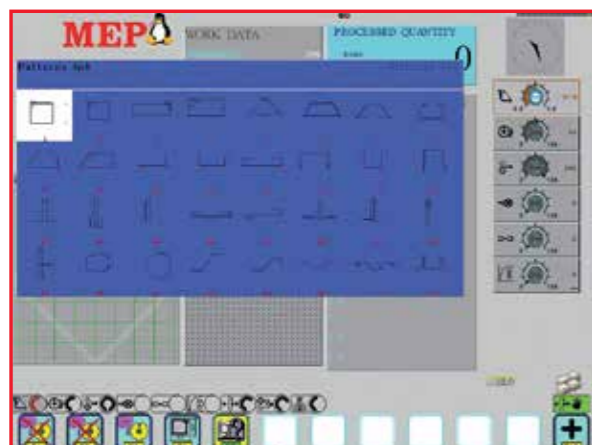
The programming of the production cycle makes it possible to use the stored parameters relating to speed, compensation etc. related to shape, size and diameter of each element.

- **MEP Industrial PC "World System" operator control panel is comprised of:**

- LCD "Touch Screen" for the user friendly graphical visualization of all data.
- Compact, "embedded" microprocessor with low power consumption and a compact flash disk with no moving parts (diskless).
- Linux operating system.
- Automatic backup saving system in case of accidental power interruption for safeguarding files and memory support integrity.

- **The custom software developed by MEP allows:**

- Data input with graphic visualization of programmed and pre-memorized shapes with feasibility checks via a "dynamic simulation".
- Control of all speed parameters in execution via a potentiometer.
- Access to the straightening correction function, without stopping the production process, through the electronic cross hair displayed on the control panel.
- Saving and archiving of data relative to work cycles and generation of daily production statistics (positions, diameters, times, weights, etc.).
- "Active diagnostic" system for a constant efficiency check of all machine devices.
- Automatic activation of the scheduled maintenance program.
- Interface compatible with optical bar code reader through RS 232 port.
- USB connection port.
- Possible to connect to Company Network through RJ45 Ethernet port (LAN port) or RS 232 port.
- VPN Connection-ready for remote assistance via Internet (through Company Network).



SAFETY AND ERGONOMIC



Planet 25 Plus Stainless Steel and **Planet 26 Plus** allows you to get **coplanar shapes and stirrups continuously closed**, therefore eliminating the dangerous manual operator's intervention during the bending phase. The **exclusive design of the tilted work table** provided with a lower swinging device allows you to **produce large sized stirrups and shapes** (at a distance of 2200 mm between the central bending pin and the floor) in addition becoming **an intermediate storage level for all fabricated products**.

The combined action of pre-feeding unit and the collecting unit allow the operator to always work in optimal safety conditions and in an extremely ergonomic environment.

UNIVERSAL BLADE



- The cutting unit utilities universal knives for all diameters processed with **4 cutting faces**.

COMPLIANCE BENDING PINS




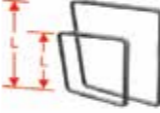






- Bending pins for **quick replacement**, made in accordance with **international standards** among the different workable diameters.

25 mm STAINLESS STEEL



TECHNICAL AND PRODUCTION CHARACTERISTICS

			
	SINGLE STRAND PROCESSING WIRE DIAMETER		
	cold drawn, hot rolled, smooth or ribbed wire	from Ø 10 to Ø 25 / 26 mm	# 3 to # 8
	$f_y = 600 \text{ N/mm}^2$ - $f_t = 700 \text{ N/mm}^2$ (other loads upon request)		
	SQUARE STIRRUP DIMENSIONS		
	minimum with Ø 12 mm wire (optional bending pin)	350 mm x 350 mm	13-3/4" x 13-3/4"
	maximum if clockwise	1500 mm x 1500 mm	4"11" x 4"11"
	maximum if counterclockwise (with eventual optional cover extension)	3200 mm x 3200 mm	10'6" x 10'6"
	LENGTH OF STRAIGHTENED AND CUT-TO-LENGTH BAR		
	minimum	5 mm	3/16"
	maximum (other sizes upon request)	12000 mm	39-4"
	CENTRE FORMING TOOLS DIAMETER		
	minimum	40 mm	1 5/8"
	maximum (other sizes upon request)	200 mm	7 7/8"
	MAXIMUM DISTANCE BETWEEN CENTRAL BENDING PIN AND THE GROUND		
	standard	2200 mm	7-6"
	optional upon request	> 2200 mm	> 7-6"
	OPERATING TEMPERATURE		
	standard	-5° C / +40° C	23° F / 104° F
	optional upon request	-15° C / +55° C	5° F / 131° F

THE PLANT DOES NOT REQUIRE COMPRESSED AIR.

f_y: max. unit yield point - f_t: max. tensile strength

Note: #3 = 3/8" ; #8 = 1"

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