



Stirrup bending machine

Format 20 HS

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MIEP
the history of innovation



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Format 20 HS

A NEW GENERATION

The **FORMAT 20 HS** is the ideal solution in the field of automatic coil stirrup benders for its ease of use and high performance.

Flexibility, productivity and product **quality** are always guaranteed.



FLEXIBILITY

Small or large **stirrups**, straightened or bent **bars**, as well as **circles** and **spirals** are fabricated thanks to a complete array of accessories, able to satisfy the widest range of productive requirements.



QUALITY AND PRODUCTIVITY

The **FORMAT 20 HS** is 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 creates open stirrups.

patented

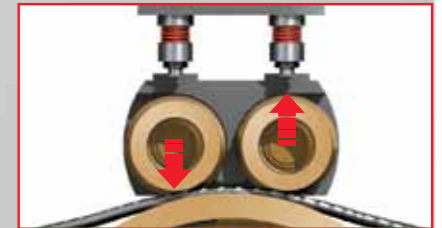
AN INNOVATIVE SOLUTION

The **AFS** 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 two wires, as well as the increased surface of contact with the large infeed wheel, eliminates any difference in length between the two wires.

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.

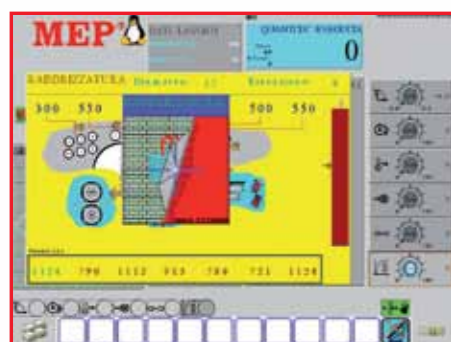


± 1 mm

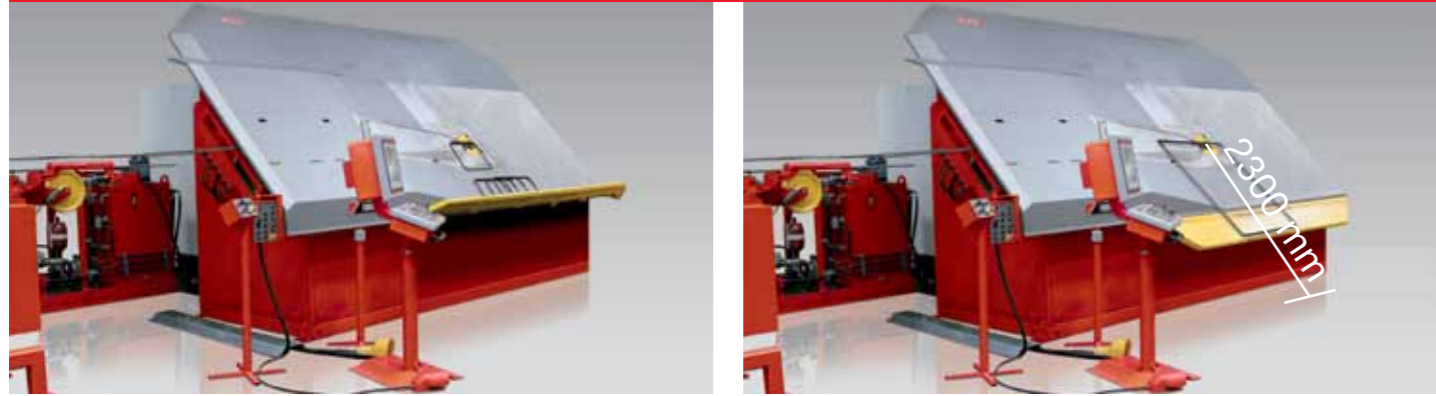


CONTROLLED STRAIGHTENING

The combined action between the **AFS** and the on-screen electronic pointer provides a real and full automated automatic control of straightening functions.



SAFETY AND ERGONOMICS



The **AFS** creates **stirrups** which are **always closed**, thus **eliminating** the typical and dangerous **manual operation** during the bending process by operator. The **exclusive tilted work surface** provided with a lower swinging device **prevents the stirrups from falling on the ground and also allows the production of large-sized stirrups** (a distance of 2300 mm between the central bending pin and the floor). These solutions ensure that the operator can work in **optimal safety conditions**, in an extremely **ergonomic environment**.

WORLD SYSTEM: TOTAL CONTROL



- **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".
 - The programming allows to store all the speed and compensation parameters based upon the dimensions of the stirrup and the wire diameter.
 - Control of all speed parameters in execution via a potentiometer.
 - 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).

QUALITY DECOILING



- **Motorized decoilers** equipped with an automatic braking system monitored by the control panel according to the work cycle.



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

ACCESSORIES

	<ul style="list-style-type: none"> • Motorized pre-feeding roller, for the insertion of the wires. 		<ul style="list-style-type: none"> • Multi-wire pre-feeding unit. Fully automatic, 5 positions for the wire changeover managed electronically by the control panel. (OPTIONAL)
	<ul style="list-style-type: none"> • Pre-straightening and feeding unit equipped with winch and pre-straightener with motorised roller. It eases and speeds up the alignment and the insertion of the wires. Particularly suitable for the big diameters. 		<ul style="list-style-type: none"> • Centre forming with self-blocking fastening (patented) – easy to be replaced when changing diameter, realized complying with the international regulations.
	<ul style="list-style-type: none"> • Infeed Extractor Unit. This device allows a drastic reduction of waste and removes downtime for removing ends, straightening and extracting automatically the end of the coil. 		
	<ul style="list-style-type: none"> • Supporting and collecting unit for the production of straight bars and bars bent at one end. (OPTIONAL) 		<ul style="list-style-type: none"> • 12 m motorized collection cart with compartments allowing a selective distribution of the products and the separation of the single beam elements according to the optimized working sequence. (OPTIONAL)

TECHNICAL AND PRODUCTION CHARACTERISTICS

	SINGLE STRAND PROCESSING WIRE DIAMETER		
	cold drawn, hot rolled, smooth or ribbed wire fy = 600 N/mm ² - ft = 700 N/mm ² (other loads upon request)	from Ø 10 to Ø 20 mm	from 3# to #6
	DOUBLE STRAND PROCESSING WIRE DIAMETER		
	cold drawn, hot rolled, smooth or ribbed wire fy = 600 N/mm ² - ft = 700 N/mm ² (other loads upon request)	from Ø 10 to Ø 16 mm	from 3# to #5
	SQUARE STIRRUP DIMENSIONS		
	minimum with Ø 10 mm wire (optional bending pin)	80 mm x 80 mm	3" x 3"
	maximum if clockwise	1600 mm x 1600 mm	5-3" x 5-3"
	maximum if counterclockwise (with eventual optional cover extension)	2200 mm x 2200 mm	7-3" x 7-3"
	LENGTH OF STRAIGHTENED AND CUT-TO-LENGTH BAR		
	minimum maximum (if equipped with optional supporting guide; other sizes upon request)	5 mm 12000 mm	3/16" 39-4"
	CENTRE FORMING TOOLS DIAMETER		
	minimum maximum (other sizes upon request)	30 mm 160 mm	1 1/4" 6"
	MAXIMUM DISTANCE BETWEEN CENTRAL BENDING PIN AND THE GROUND		
	standard optional upon request	2300 mm > 2300 mm	7- 6" > 7- 6"
	OPERATING TEMPERATURE		
	standard optional upon request	-5° C / +40° C -15° C / +55° C	23° F / 104° F 5° F / 131° F
	INSTALLED POWER		
	maximum (other sizes upon request)	49 kW	66 hp

THE PLANT DOES NOT REQUIRE COMPRESSED AIR.

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

Note: #3 = 3/8" ; #5 = 5/8" ; #6 = 3/4"

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