



Stirrup bending machine

# Format 14 HS

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# MEP

the history of innovation



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## A NEW GENERATION

The **FORMAT 14 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 14 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.

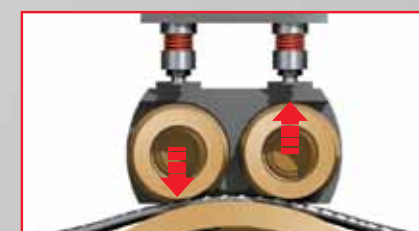
patented

## 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.

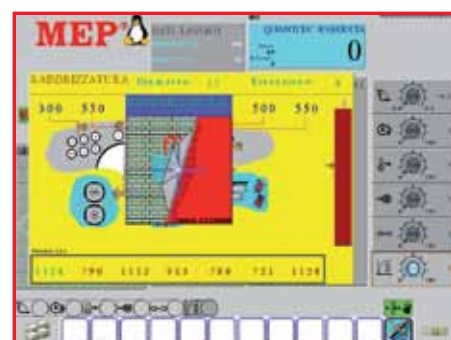


$\pm 1 \text{ mm}$



## 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.





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 2000 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



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



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

ACCESSORIES



- **Multi-wire pre-feeding unit.** Fully automatic, 5 positions for the wire changeover managed electronically by the control panel. (OPTIONAL)



- **Motorized pre-feeding roller, for the insertion of the wires.**



- **Winch** equipped with clamping device for the wire end to be pulled. (OPTIONAL)



- **Supporting and collecting unit** for the production of straight bars and bars bent at one end. (OPTIONAL)



- **Bender supplied with central bending pins that conform to international standards.** Exclusive MEP design, designed to facilitate the overlapping and the guiding of the external wire with respect to the internal one during the bending phase. This means that complex or even very small stirrup can be realized with two wires simultaneously.

TECHNICAL AND PRODUCTION CHARACTERISTICS

|  | <b>SINGLE STRAND PROCESSING WIRE DIAMETER</b>                                      |                     |                |
|--|--|---------------------|----------------|
|  | cold drawn, hot rolled, smooth or ribbed wire                                      | from Ø 6 to Ø 14 mm | from #2 to #4  |
|  | $f_y = 600 \text{ N/mm}^2$ - $f_t = 700 \text{ N/mm}^2$ (other loads upon request) |                     |                |
|  | <b>DOUBLE STRAND PROCESSING WIRE DIAMETER</b>                                      |                     |                |
|  | cold drawn, hot rolled, smooth or ribbed wire                                      | from Ø 6 to Ø 12 mm | from #2 to #4  |
|  | $f_y = 600 \text{ N/mm}^2$ - $f_t = 700 \text{ N/mm}^2$ (other loads upon request) |                     |                |
|  | <b>SQUARE STIRRUP DIMENSIONS</b>   |                     |                |
|  | minimum with Ø 6 mm wire (optional bending pin)                                    | 50 mm x 50 mm       | 2" x 2"        |
|  | maximum if clockwise   | 1500 mm x 1500 mm   | 4-11" x 4-11"  |
|  | maximum if counterclockwise (with eventual optional cover extension)               | 2000 mm x 2000 mm   | 6-7" x 6-7"    |
|  | <b>LENGTH OF STRAIGHTENED AND CUT-TO-LENGTH BAR</b>                                |                     |                |
|  | minimum  | 5 mm                | 3/16"          |
|  | maximum (if equipped with optional supporting guide; other sizes upon request)     | 12000 mm            | 39-4"          |
|  | <b>CENTRE FORMING TOOLS DIAMETER</b>   |                     |                |
|  | minimum  | 12 mm               | 1/2"           |
|  | maximum (other sizes upon request)   | 70 mm               | 3"             |
|  | <b>MAXIMUM DISTANCE BETWEEN CENTRAL BENDING PIN AND THE GROUND</b>                 |                     |                |
|  | standard   | 2000 mm             | 6-7"           |
|  | optional upon request  | > 2000 mm           | > 6-7"         |
|  | <b>OPERATING TEMPERATURE</b>   |                     |                |
|  | standard   | -5° C / +40° C      | 23° F / 104° F |
|  | optional upon request  | -15° C / +55° C     | 5° F / 131° F  |
|  | <b>INSTALLED POWER</b>   |                     |                |
|  | maximum (other sizes upon request)   | 25 kW               | 35 hp          |

THE PLANT DOES NOT REQUIRE COMPRESSED AIR.

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

Note: #2 = 1/4" ; #4 = 1/2"

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