



## **MEP MINI SYNTAX**

### **Automatic rebar production center**

Bi-directional automatic rebar production center, equipped with electronic programming for the production of small and large sized stirrups, straight and customized straightened bars and straightened bars, with bends at one or both ends.

It has a second dragging group, guaranteeing the correct displacement and dragging of the bars, achieving a perfect bending at both ends. Automatic straightening process, controlled by PLC computer, according to the diameters to be produced.

Trawling speed: 1,8 m/s

Working capacity with 1 wire: Ø 8 - Ø 16 MM

Working capacity with 2 wires: Ø 8 - Ø 12 MM

Speed (Stirrups / Hour): 2.800

## Technical data

- P.C.I. electronic programmer with screen for displaying data and graphics with window system.
- Graphic display of the stirrups with video simulation of the stirrup execution.
- Possibility of checking the functionality of all the machine's operating devices.
- Possibility of storing production times.
- Predisposition for connection to external PC with RS232 standard for remote data input.
- Semi-automatic pre-feeder for all round diameters from 6 mm to 16 mm.
- Additional feeding device and support table for mouldings.
- MEP SYSTEM straightening unit with video display of straightening parameters.
- Variable bi-directional folding and creasing speeds, selectable directly from the control panel and controlled by servo-piloted proportional valves.
- Possibility of compensation during the working phase by means of potentiometers.
- Hydraulic system with Bosch 1 Rexroth components and separate cooling circuit with air/oil heat exchangers..
- Supply voltage: 380 V- 50 Hz.
- Installed power: 37,7 Kw.
- Hydraulic power unit capacity: 300 lt of hydraulic oil (type H-LP 46 - according to DIN 515224-PART 2- June 1979).
- Advance speed: 0+ 1,5 m/s.
- Bending speed: 1000 °/s.
- Cutting times: 4/10 s.

### Dimensions.

- Moulding equipment (excluding payoffs): 9400x4500 mm.
- Payoffs (individually): 2220x2350x2500 mm.
- Dashboard: 600x600x1860 mm.

### Weights

- Machine: 4090 kg.
- Counters: 908 kg
- Payoffs: 1194 kg.
- Dashboard: 224 Kg.

## Operation.

The MiniSyntax automatic moulding machine produces large moulded stirrups and straight bars, using hot-rolled or drawn reinforcing steel round and straight bars, using hot-rolled or drawn reinforcing steel reinforcing bars, marketed in coils.

The material is uncoiled by the action of the haul-off units, straightened by the straightening units and formed by the straightening units and shaped by the bending unit. At the end of the feeding and bending phases pre-set in the program, the shearing unit intervenes to separate the produced stirrup from the original round.

The moulding feed allows the production of large stirrups and bars with bends at both ends.

The machine devices are driven hydraulically: the main pump driven by the electric motor supplies the circuit with pressurized oil. The proportional valves and solenoid valves controlled by the programmer send and modulate the quantity of pressurized oil to the actuators (motors and hydraulic cylinders). (motors and hydraulic cylinders). The dimensional control of the movements of the devices is carried out by the encoders connected to the programmer.

## Production Data

### Technical data

Mechanical characteristics of the materials to be worked.

Hot-rolled or cold-rolled ribbed round bars made in coils of 3.2 t max., with the following mechanical characteristics:

- Proportional unit load (maximum admissible limit): 600 N/mm<sup>2</sup>.
- Unit breaking load (max. admissible limit): 700 N/mm<sup>2</sup>

Diameters of the round to be worked.

- Operation with one round: f 6-16 mm..
- Operation with two rounds: f 6-12 mm.

The operation with two rounds at the same time is linked to the homogeneity of the mechanical and geometrical characteristics as well as to the state of consumption of the rollers.

In any case, it is advisable to use two rounds with stirrups and mouldings with sides greater than two metres.

### Hoe bolts for stirrups.

- Round f 6+8 mm: centre bolt f 20 mm.
- Round f 8+10 mm: centre bolt f 30 mm.
- Round f 10+12 mm: centre bolt f 50 mm .

Lobe legs for mouldings:

- Round f 6+8 mm: centre bolt f 60 mm.
  - Round f 8+10 mm: centre bolt f 80 mm.
  - Round f 10+12 mm: centre bolt f 100 mm.
  - Round f 14+16 mm: centre bolt f 120 mm.
- Special four-lobe bolt:
- round f 6+10 mm: centre bolt f 50 mm.

Functions for Stirrups (progressive).

- Number of sides available: 28.
- Number of proposed angles: 27.
- Number of stirrups per memory code: 9999.

Dimensions of stirrups and mouldings.

- Max. side (with clockwise folding direction): 1300 mm.
- Max. side (counterclockwise folding direction): 2500 mm.
- Min. side: 50 mm.
- Min. first hook: 35 mm (with round f 6 mm) .
- Min. last hook: 10 mm (with round f 6 mm).

Max. moulded length: depending on the dimensions of the collection table.

- Max. angle in clockwise folding: 180°.
- Max. anti-clockwise folding angle: 180°.

