



Automatic Straightening Machine from coil

# RD 12

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**MEP**  
the history of innovation



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## HIGH PRODUCTIVITY

The **RD 12** series straightening machines are designed to **straighten and cut wires** up to a maximum length of 12 meters. **High speed, ease of use** and **sturdiness** make them a versatile tool capable of adapting to a wide range of production requirements.



## FLEXIBILITY

Different configurations allow to set the **production** according to specific needs giving priority **to high volume productions** (same lengths) or **flexibility** (for different lengths).

# Straightening system



## RELIABILITY AND PRODUCTIVITY

The straightening process is achieved through a rotating group consisting of **tungsten-carbide bushings**, chosen because of their **extreme hardness and strength**.

It is possible to adjust their position according to the diameter and the quality of the wire, **guaranteeing a perfectly straightened product**. The **high rotor speed**, necessary to meet the **highest productivity**, is equipped with a **cooling system** that allows to preserve the **reliability** of the equipment.

## STEADY QUALITY CONTROL



## FLYING SHEAR

The flying shear cuts while the wire is in motion. This solution allows to work at **high speed** within the required **measurement tolerances**.



**Two infeed units** drive properly the wire, guaranteeing **constant speed and straightening quality**, making it particularly **suited for small diameters**. Based on the different lengths and diameters can be possible to work with setting of **different speeds**.

## WORLD SYSTEM: TOTAL CONTROL



- The MEP Industrial PLC operator control panel is constituted by:
  - LCD screen for data visualization in a "user friendly" graphic form.
  - Low power consumption embedded microcontroller.
  - Input/output and axes control electronic circuit boards equipped with short-circuit prevention system.
- MEP's developed software allows:
  - Inputting bars production data and memorizing several batches to be produced in sequence.
  - Visualizing production status.
  - Adjusting production speed through trimpots.
  - Controlling every machine parameter based on the diameter used.
  - Utilizing an "active diagnostic" system to verify constantly the efficiency of all the plant's devices.
  - Presetting the memorization of the data related to the daily work cycles (diameters processed and daily weights processed subdivided by diameter).
  - Presetting the history of alarms with related memorization of machine stop time and production time.
  - Presetting for remote loading through external computer or optical reader through serial port RS 232 (e.g. bar coder reader).

## ALWAYS A CLEAN ENVIRONMENT



- The machine frame is designed to easily collect the dust generated during the straightening process and also it is sound proofed to achieve maximum noise reduction during operation.

## OUTFEED CHANNEL WITH ALIGNEMENT DEVICE



- The guiding support available in several versions, allowing the collection and distribution of straightened bars according to the specific production needs. The version that includes the automatic alignment device (optional) is particularly suitable for the production of bundles intended for welded mesh equipments.



## ACCESSORIES



- GBO1 decoilers equipped with a braking system controlled by the control panel, based on the production cycle.

## COOLING SYSTEM










- The machine electrical motors and other devices, such as the control panel, are cooled through a forced liquid cooling system. For this purpose a refrigerating unit is used to keep the liquid at the set temperature.

## WIRE BUTT WELDER



- Allows to weld the ends of two coils in order to reduce the handling time. (OPTIONAL)

## TECHNICAL AND PRODUCTION CHARACTERISTICS

|   |  |  |  |
|---|--|---|---|
|  | <b>WIRE DIAMETER</b>   |   |   |
|   | Smooth wire or rebar   | from Ø 4 to Ø 12 mm   | from # 2 to # 4   |
|   | $f_y = 600 \text{ N/mm}^2$ - $f_t = 700 \text{ N/mm}^2$ (other loads on request) |   |   |
|  | <b>LENGTH OF STRAIGHTENED AND CUT-TO-LENGTH BAR</b>                              |   |   |
|   | minimum  | 1200 mm   | 47'-1/4"  |
|   | maximum (other sizes on request)   | 7000 mm   | 22' 12"   |
|   | Length tolerance with encoder (other tolerance on request)                       | ± 5 mm (up to 5 m)  | ± 3/16" (up to 15'-0")  |
|  | <b>FEED RATE</b>   |   |   |
|   | Forward movement speed   | 1,5 ÷ 2,5 m/s   | from 4.92 fps to 8.2 fps  |
|  | <b>OPERATING TEMPERATURE</b>   |   |   |
|   | standard   | +4° C / +40° C  | 39.2° F / 104° F  |
|  | <b>INSTALLED POWER</b>   |   |   |
|   | maximum (other sizes on request)   | 75 kW   | 95.23 hp  |

THE PLANT REQUIRES THE USE OF AN AIR COMPRESSOR.

$f_y$ : Max. unit yield point -  $f_t$ : Max. Tensile strength

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

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