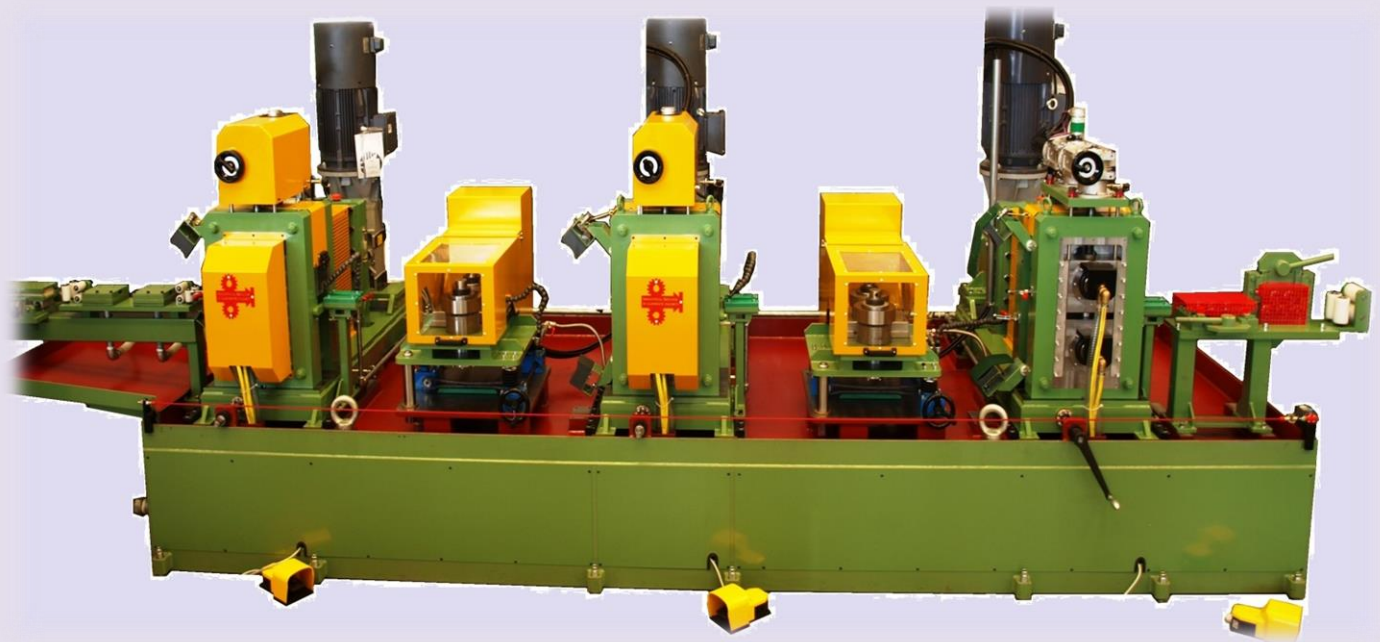


# ROLLING MILL LINE

For Copper & Aluminium flat wire



**Registered office:** Cavour street,10 26010 Bagnolo Cremasco (CR) **Factory:** Industria avenue 2 35023 Bagnoli di Sopra (PD) Italy

**Ph:**+39-049 9535326 **fax** +39-049 9539420 **cell.** +39-335 6898528 **E.mail:** info@industrialservice-pd.it

**Vat no.:** 01251430193 **Fiscal code:** DGH CMN54D11A570F



# INDUSTRIAL SERVICE

## DI CLEMENTE DAGHETI

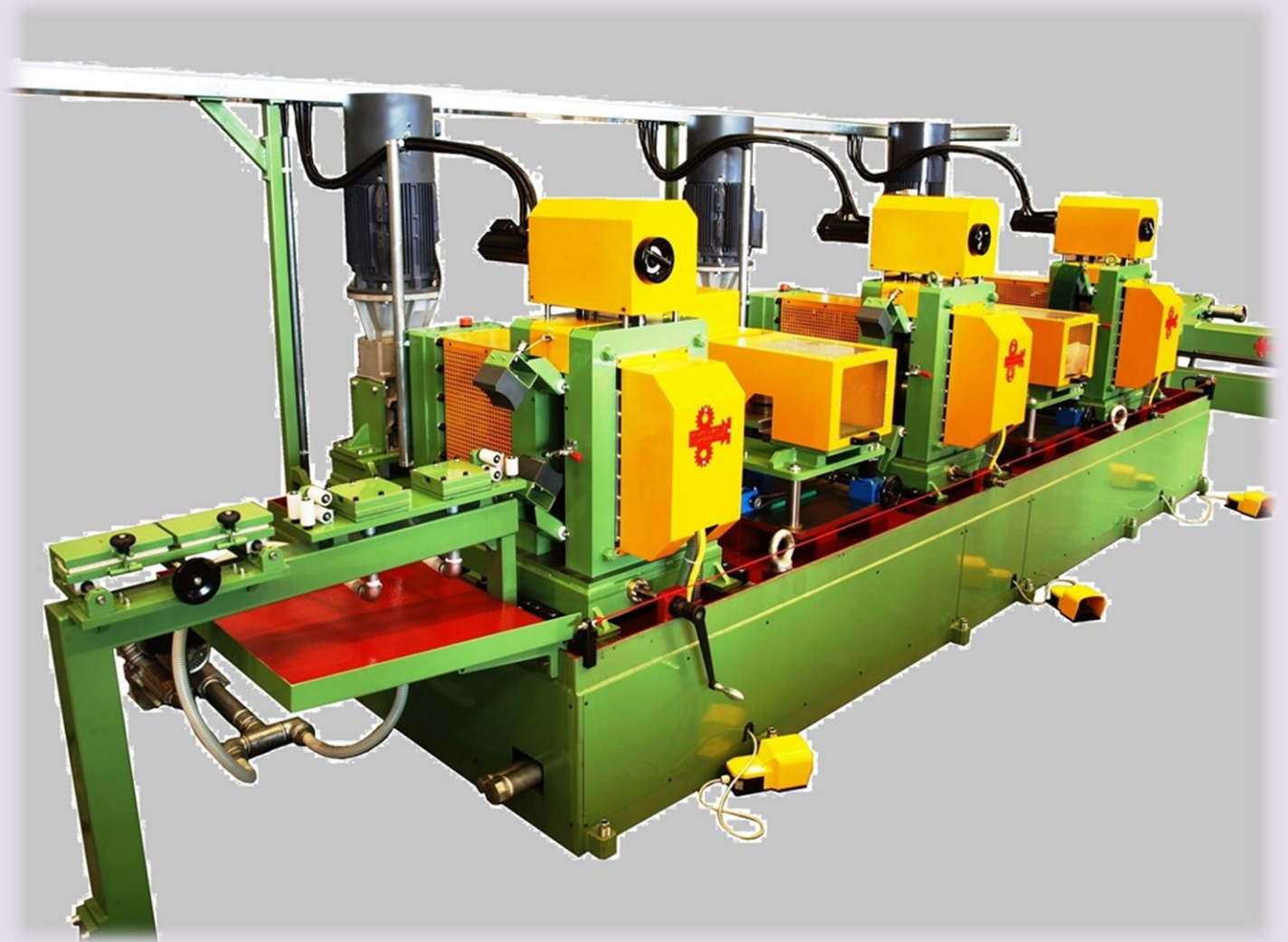


- Mechanical factory
- Mechanical constructions
- Installation of plants
- Services for industry

## ROLLING MILL LINE



For Copper & Aluminium flat wire



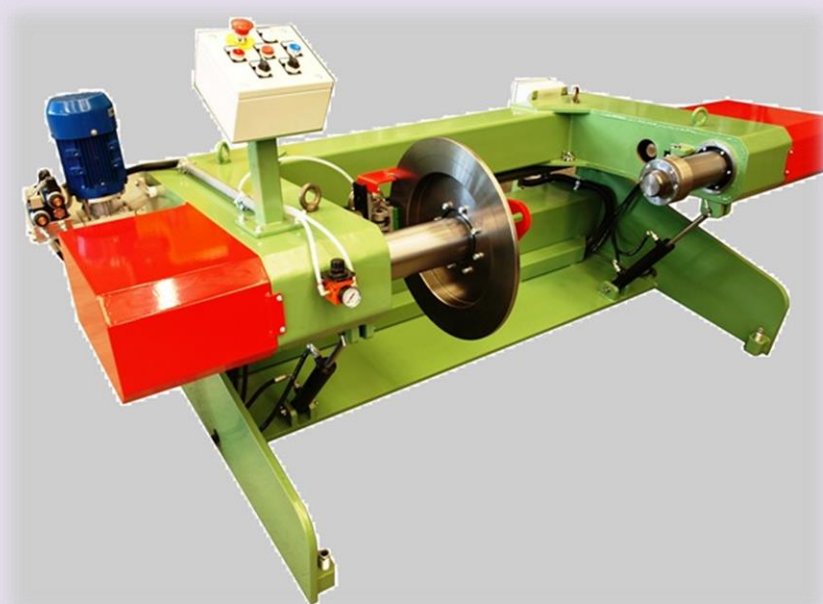
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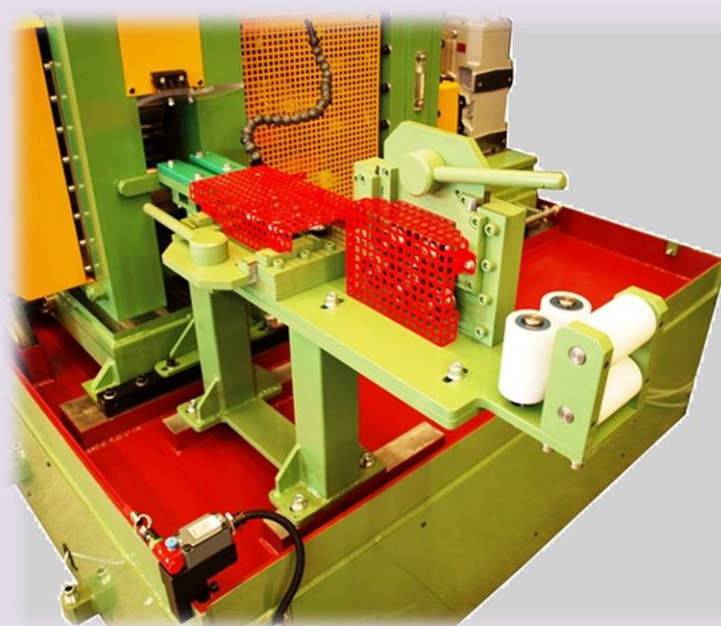
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## The system is composed as following:

**No. 1** Pay off type cantilever for coils DIN 1000/1250 of maximum 2.500 kg.  
Loading & closing system of the coil through hydraulic cylinders.



**No. 1** Wire Straightener machine composed of 5+5 hardened and grinded steel rollers.

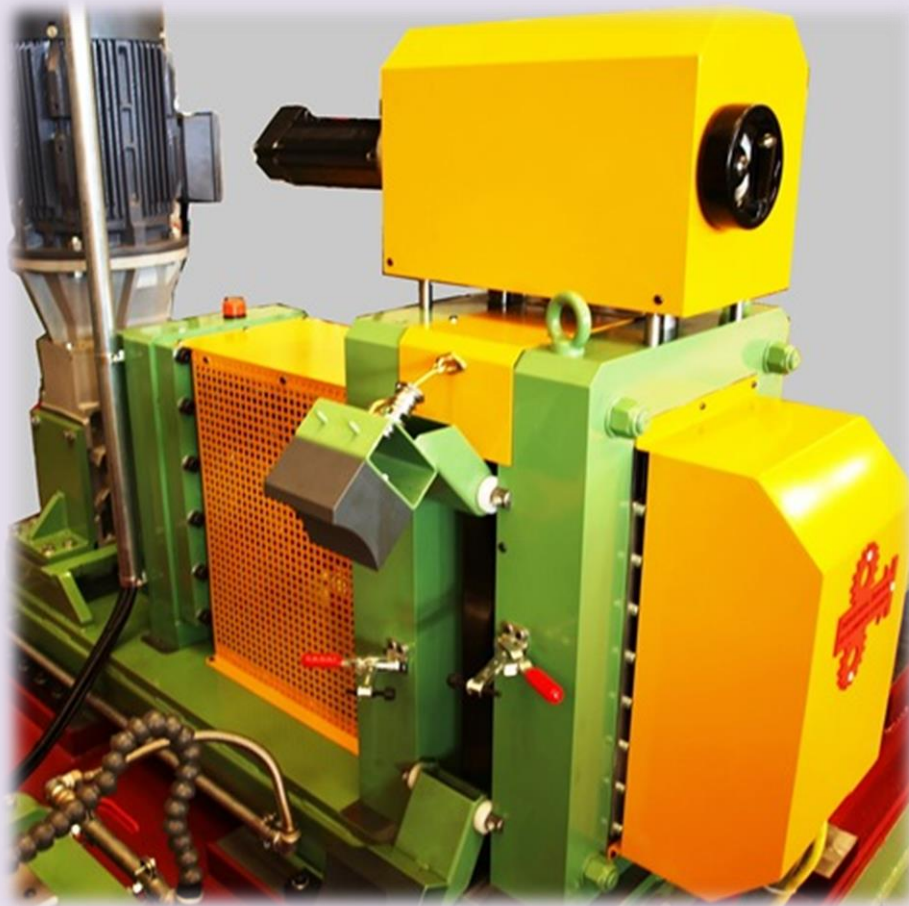




**No. 1** - Rolling mill machine at 3 rolling cages with cylinders of diameter 240-180-180 mm and working band of 100mm.

The cylinders are made of treated steel "completely hardened"; the minimum hardness surface is of 64Hrc, internal 50Hrc.

Inside the cylinders are maintained at a working temperature through rotating joints with industrial water recirculation (charged to the customer) and outside through a cooling emulsion water system.



The positioning of the cylinders will be effected by electric system and it is controlled by main electrical board.

There are available a manual and an automatic control devices by creating and recalling of working programs managed through a practical touch-screen.

Even during the rolling mill procedures there is a manual regulation of the end lifting position that allowing the regulation of the final work head.

The maximum speed of this plant is of 150meter/ min.

Between the 3 rolling heads, are positioned 2 idle flanging wire machines for the calibration of the width of flat wire.

These two units are electrically driven through brushless motors operated by manual adjustment or by the working program, for opening or closing of the rollers and for a calibration of the flat wire.

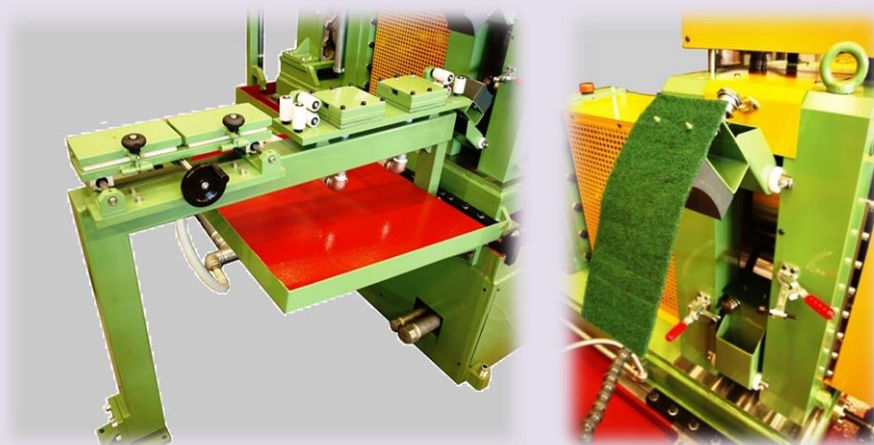
The shafts of flanging wire machines will be made in order to place the rollers of the customer or of our supply ( standard diameter: 180mm - hole: 105mm). The flanging wire machines can be moved in vertically position in order to exploit both the different throats.



Translation system rolling mills cages to use the entire surface of the rollers without losing the machine axis.



Cleaning flat wire and rolls system with blowers, turbofan and felt.

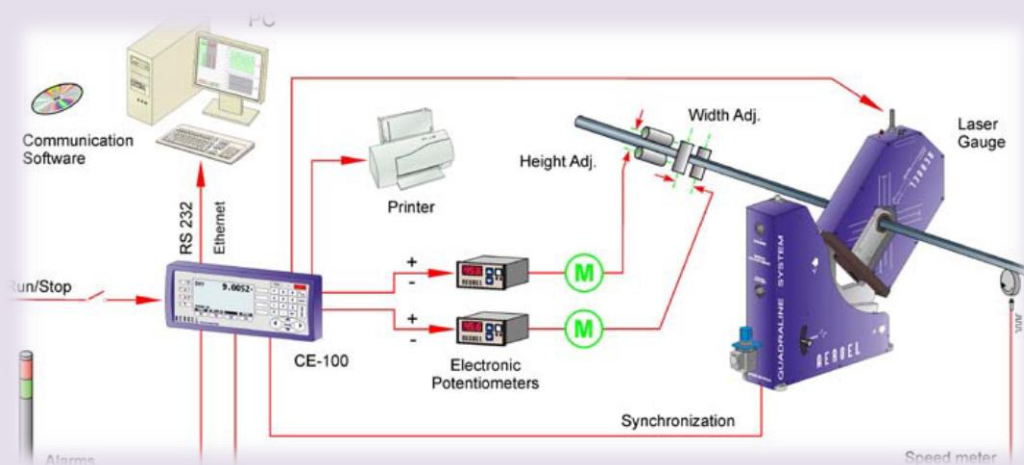
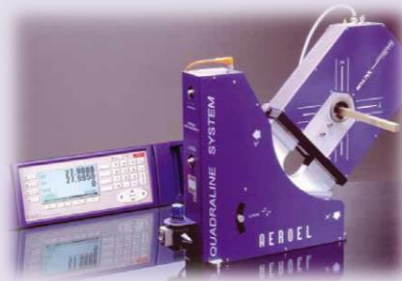




## No. 1 Laser measurement

QUADRALINE is a Laser System designed for the on-line control of the two dimensions of extruded or rolled products featuring rectangle-like cross section. Due to its special features, Quadraline guarantees reliable and accurate measurements without the need for a tight alignment and tolerates product vibration and twisting.

- It measures dimensions from 0.1 mm to 32 mm, using crossed beams, dual axis laser gauges. ;
- It checks the product tolerance and alerts the operator when the shift from nominal dimensions exceeds the pre-set limits
- It performs automatic process regulation, keeping the product within the tolerance limits throughout production
- Detailed statistical reports are processed and printed for each manufacturing batch
- It can be easily connected to a Computer to download measured data or to allow remote system programming.
- **No scrap:** the real time inspection allows the system to detect out-of-tolerance trends and return the product back within specification, avoiding any risk of rejects or complaints.
- **Saving in materials:** by keeping the product close to the lowest tolerance limit, considerable savings in materials can be achieved, thus allowing the cost of the system to be paid back in just a few months.
- **Labour savings:** the reliable and effective automatic control means the task of the extruder operator is made lighter.
- **Quality Certification:** the 100% inspection makes random sample checks redundant and allows the printing of detailed reports to prove product quality.



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**No. 1** Take-up suitable for the use of coils (DIN 1000) of maximum weight of 2500 kg and is placed on a translation unit that allows the stratification of the turns. The regulation of the plant is provided on the machine through a control panel. The counter meter function, adjustable from the principal electrical board, stop the system when it obtain the required quantity / length of flat wire.

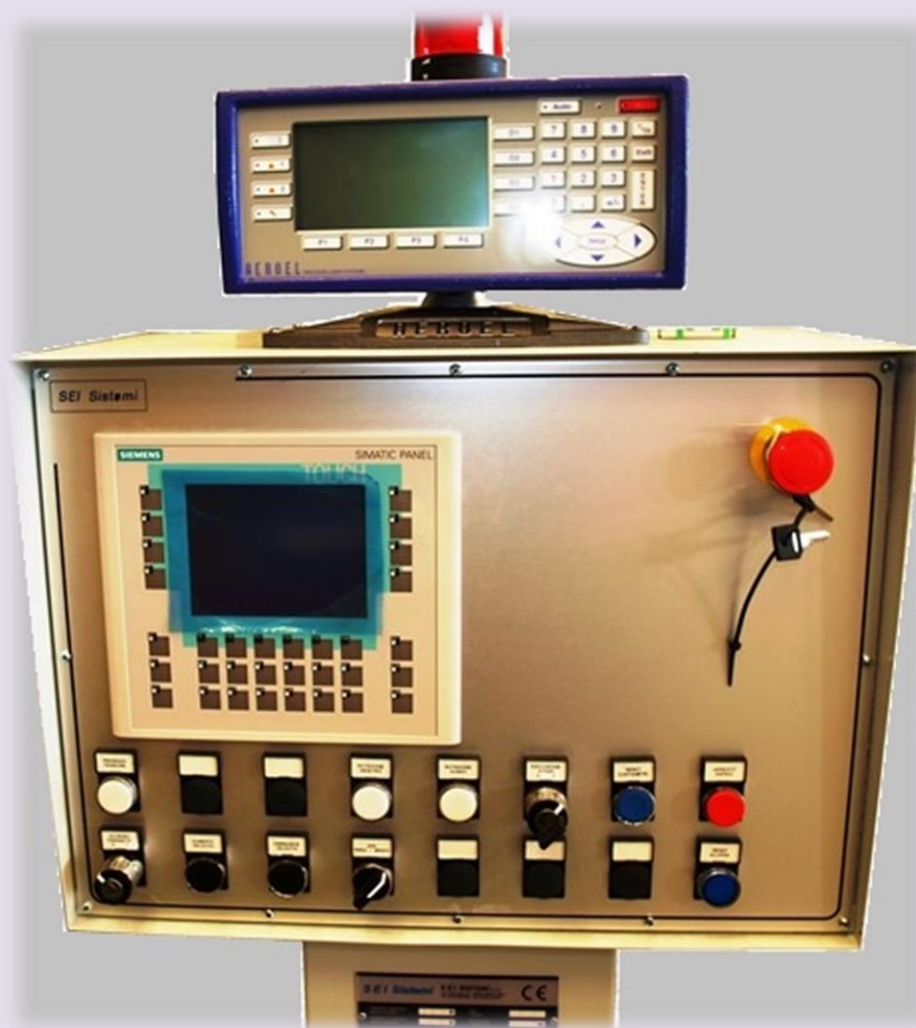
The tailstock and the discharge/ loading of the reel are hydraulically interlocked and the supply included a pneumatic emergency brake.



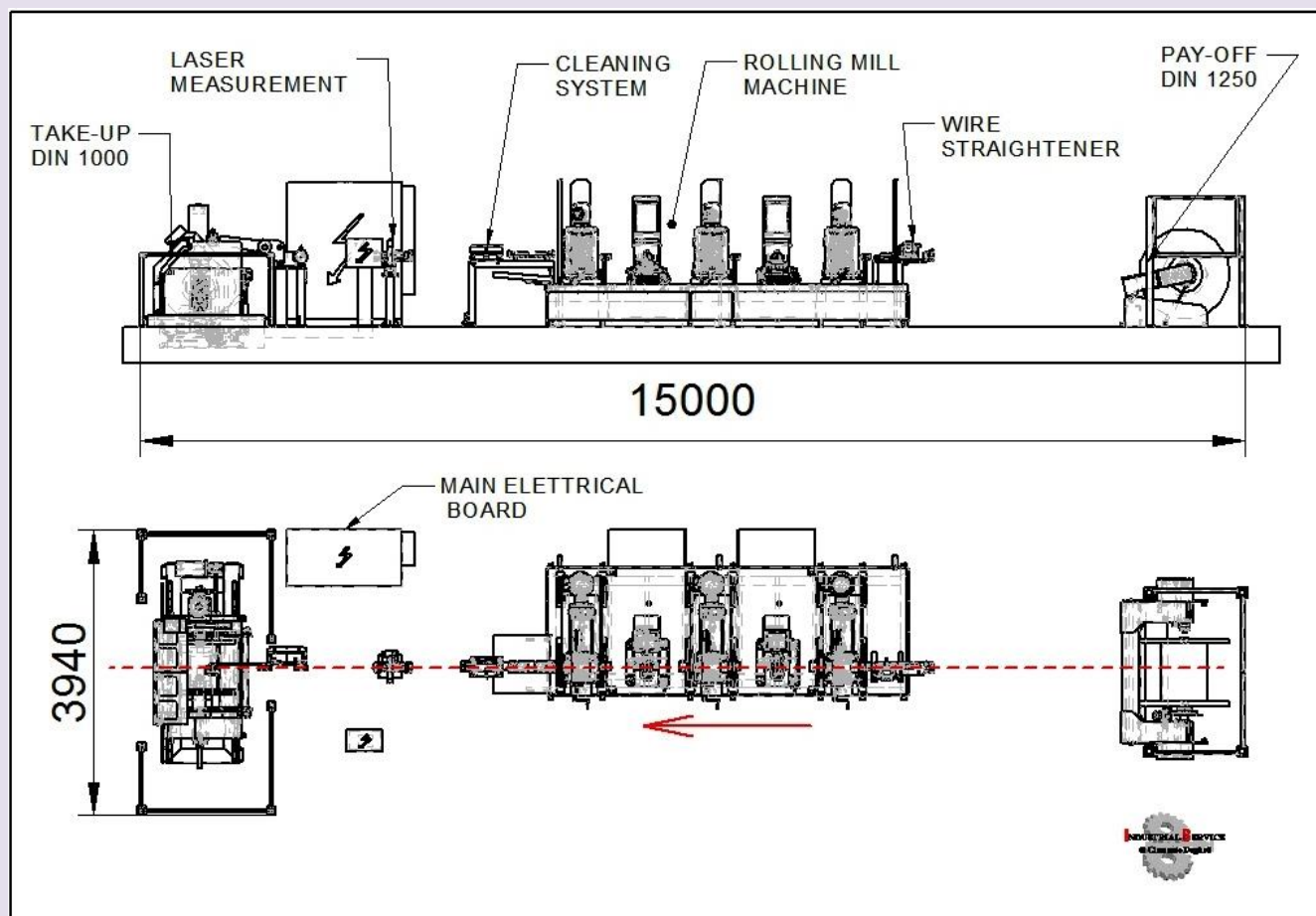


**Electrical System:** We declare that this product is in compliance to the European standard EN 60204-1.

This system is built in a cabinet placed on the machine, equipped with controls and electronic adjustments of all functions of machines, PLC, keyboard and display, showing speed, dimension of the cylinders and description of alarms.



## LAY-OUT



## TECHNICAL SPECIFICATION OF THE ROLLING MILLS LINE AT 3 CAGES

Total electrical power installed: 80 kW

Electrical power supply(cages): no. 1 x 22 kW - no. 2 x 15 kW

Mechanical power to the cylinder: 1150 Nm

Cylinder diameter : no. 1 Ø240 mm - no. 2 Ø180 mm

Cylinder width: 100 mm

Minimum surface hardness: 64 Hrc

Adjustable speed: 0÷150 m/min

Max water capacity: 35 ÷ 40 L/min

Power supply 3-phase : 380 v - 50 Hz

Max diameter of flat wire in development in the rolling mill line: Cu Ø 10 mm / Al Ø 16 mm

Minimum size flat wire of the exit of the rolling mill line: 3 x 1 mm (width x thickness)

Visit our website: **[www.industrialservice-pd.it](http://www.industrialservice-pd.it)**

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