



eme

Wire Drawing Machines & Maintenance



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# 40 years

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in the field of machines and systems for the steel sector.

EME has been operating for over 40 years in the field of design, construction, maintenance and overhaul of machines and systems for the steel sector, from drawing to the subsequent processing of steel and non-ferrous metal bars and coils.

The company was founded in Erba (CO) in 1977 and then moved in the following years to Cesana Brianza.

Initially the core business is focused on maintenance and revamping services of machinery: partial and/or total overhaul from both a mechanical and electrical point of view.

Subsequently, it was decided to include a design office in the company and to start designing and building new machinery.



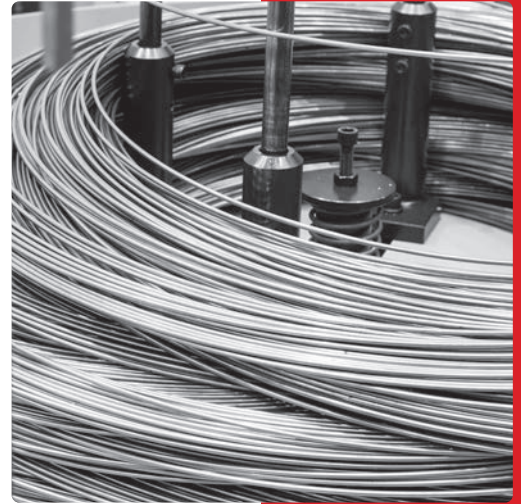
**EME** currently enjoys a **leadership** position in the **construction** and **overhaul** of **machines** and **plants** for the **steel industry.**

# target market

## WIRE DRAWING MACHINES SECTOR

EME produces combined coil-to-bar, coil-to-coil and bar-to-bar drawing lines for ferrous and non-ferrous materials.

Eme product range includes: decoilers, flying shears, pre-straighteners, straighteners, coilers, benches for loading and unloading bars, coil compactors etc.



## THE FASTENERS SECTOR

At the beginning of the 2000s EME began designing and building machines for cold forming machinery, gaining an important market share.

Market opportunities, innovation in design and the skills and experience in building this type of plants allowed EME development and success in this sector too.

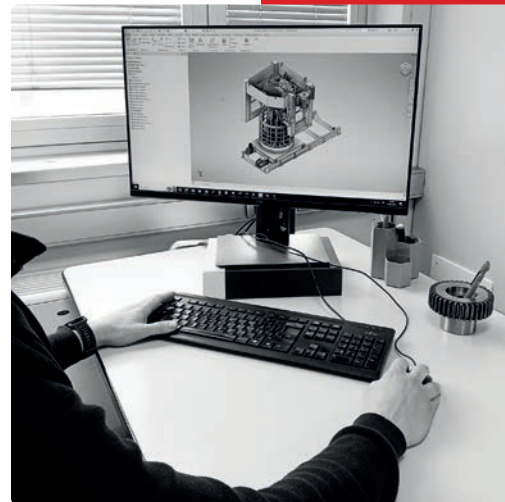




# design and construction

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Our machines are entirely made in EME: from the design phase, to the processing of spare parts up to the assembly of components.



# beyond construction

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## MAINTENANCE AND OVERHAULING

We give back life to the old with our maintenance service.

## URGENT REPAIRS AND SERVICE

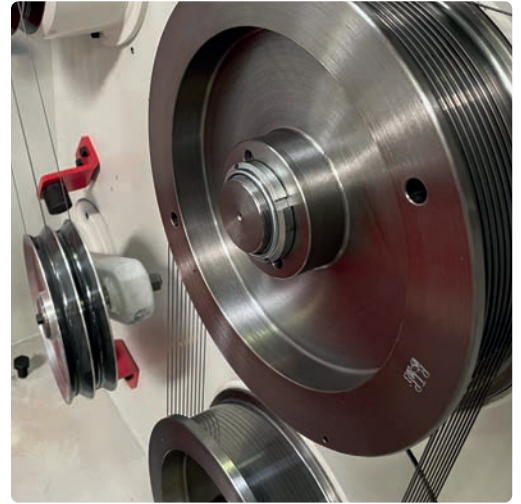
Not everything can be programmed and when it is not we are here to help you urgently repair you machines and spare parts.



# multipass

## Multipass dry and wet drawing lines.

EME designs and builds multipass drawing machines for the dry or wet drawing of wire. Multipass drawing lines work through a series of steps in which the material is pulled through a sequence of dies with holes of progressively decreasing diameter which reduces the section until the desired diameter is obtained and other dimensional specifications.

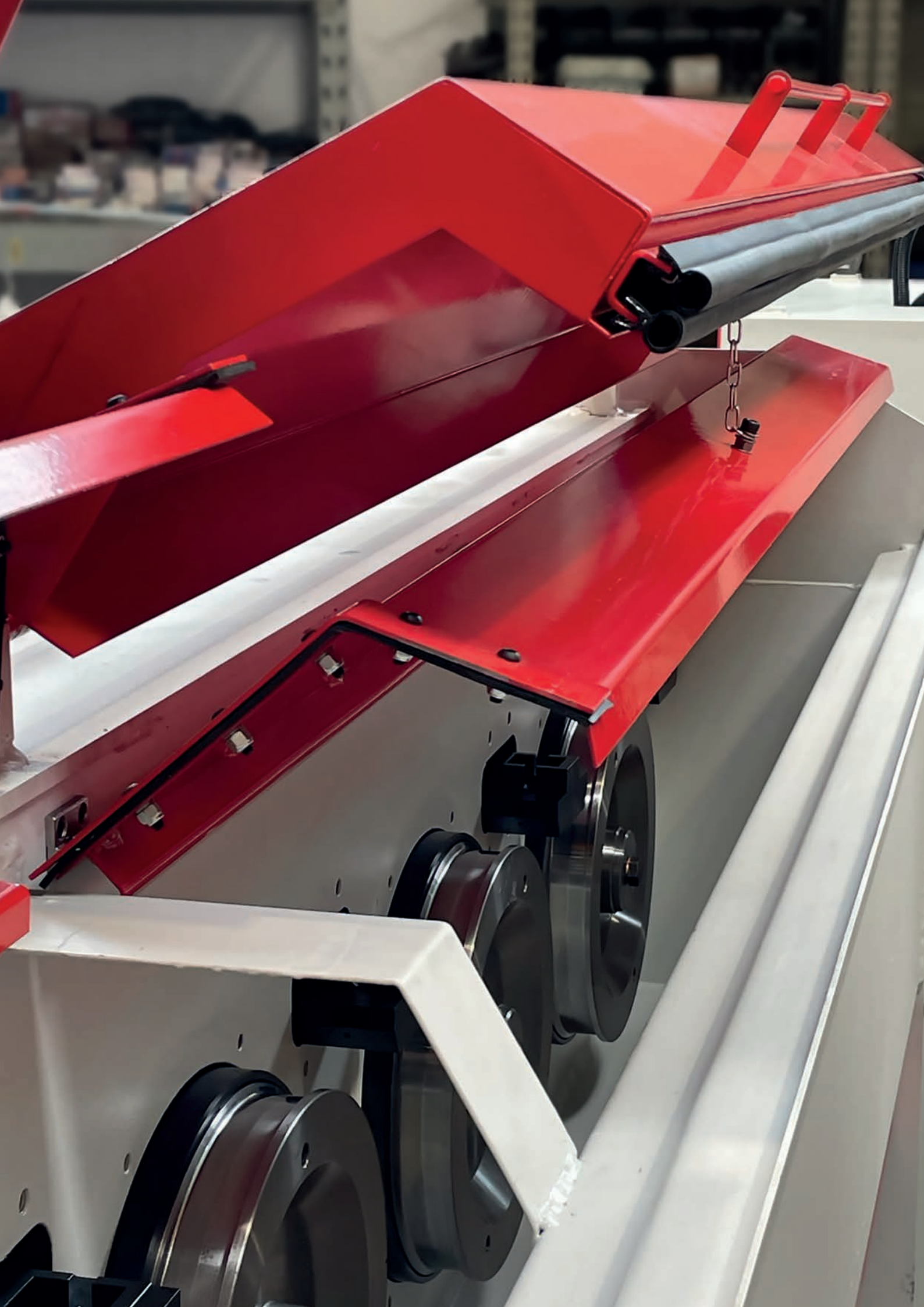


Used in the industry to produce wires, multipass drawing lines work through a series of steps in which the material is pulled through a series of dies with holes of progressively decreasing diameter which reduces the section until the desired diameter is obtained and other dimensional specifications.

Using the uncoiler, the thread is positioned on the spool through an electronic layering device which optimizes the quality of the winding.

The machine is equipped with a central hydraulic system to control a tailstock and coil lifting. The drawing line developed by EME can be configured to perform a series of consecutive steps to obtain a finished product with extremely tight dimensional tolerances.





# multipass

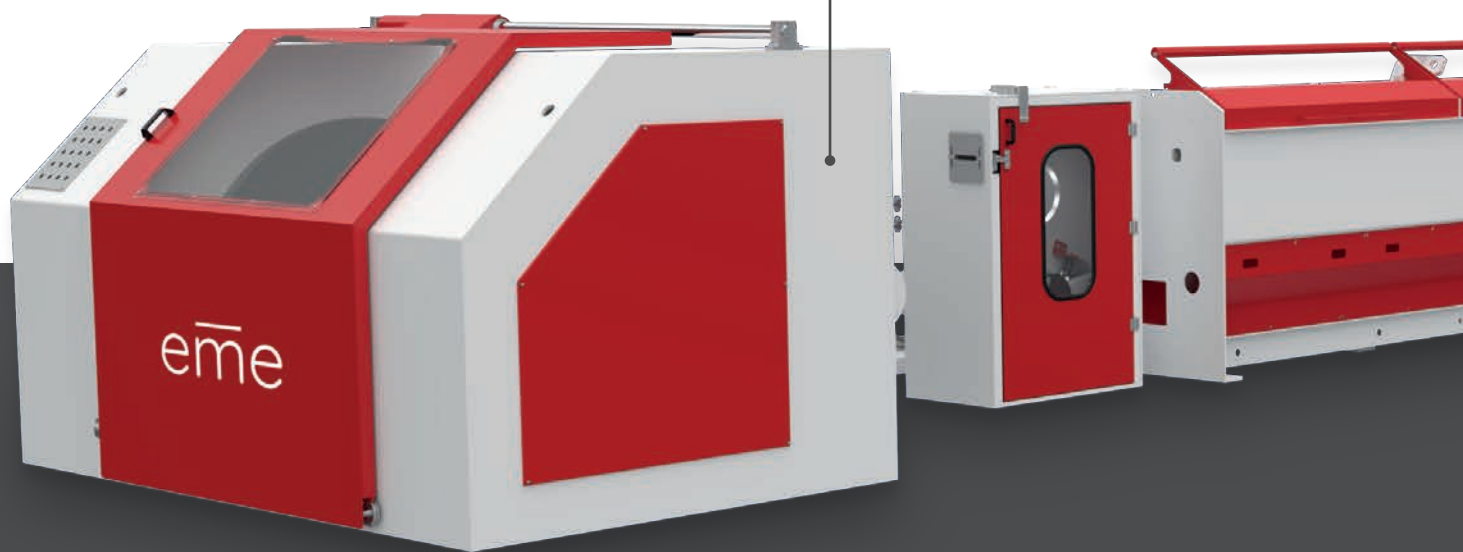
EME multipass drawing lines are designed to process aluminum and its alloys and reach a speed of 25 m/s and can generally be composed of:

- unwinder
- wet or dry drawing machine
- rewinder

All lines can be adequately customized.



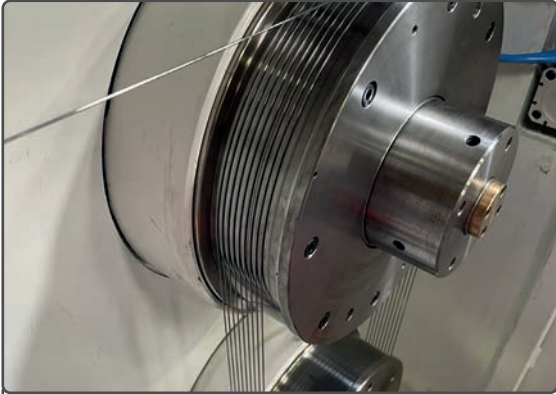
unwinder



## special supplies

EME has created a special machine for the recovery of waste material. This 5 pass drawing line was designed for converting material from flat to round.





wet or dry drawing machine



rewinder



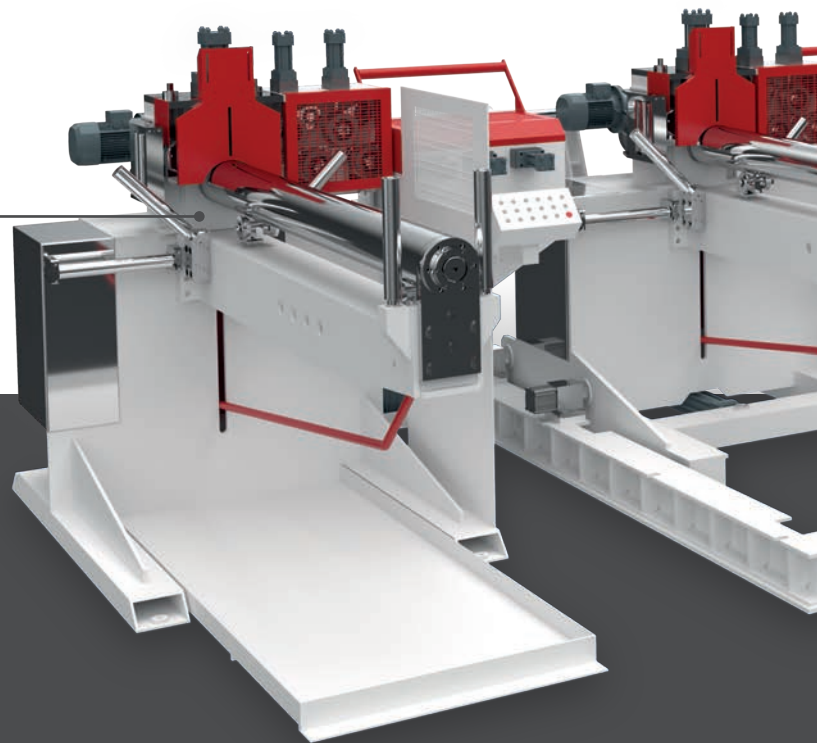
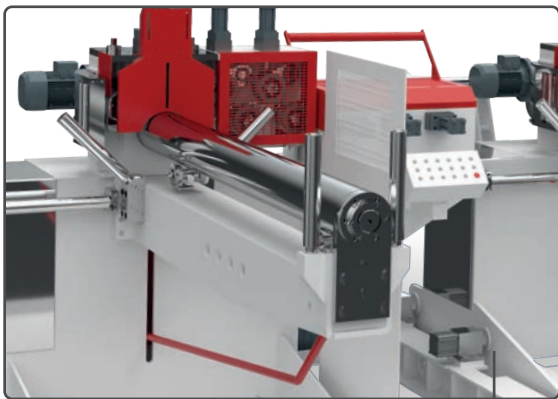


# PS

power driven uncoilers

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They are used for uncoiling and straightening the wire for cold formers, nut formers and bolt makers.



## advantages

Reduction of material cost (hot-rolled rod instead of cold-draw material).

Reduction of Inventory (one rod size for many different diameter).

Exact size control and improved tool life.

Cold-draw material without kinks and abrasions.

Higher quality finished products.

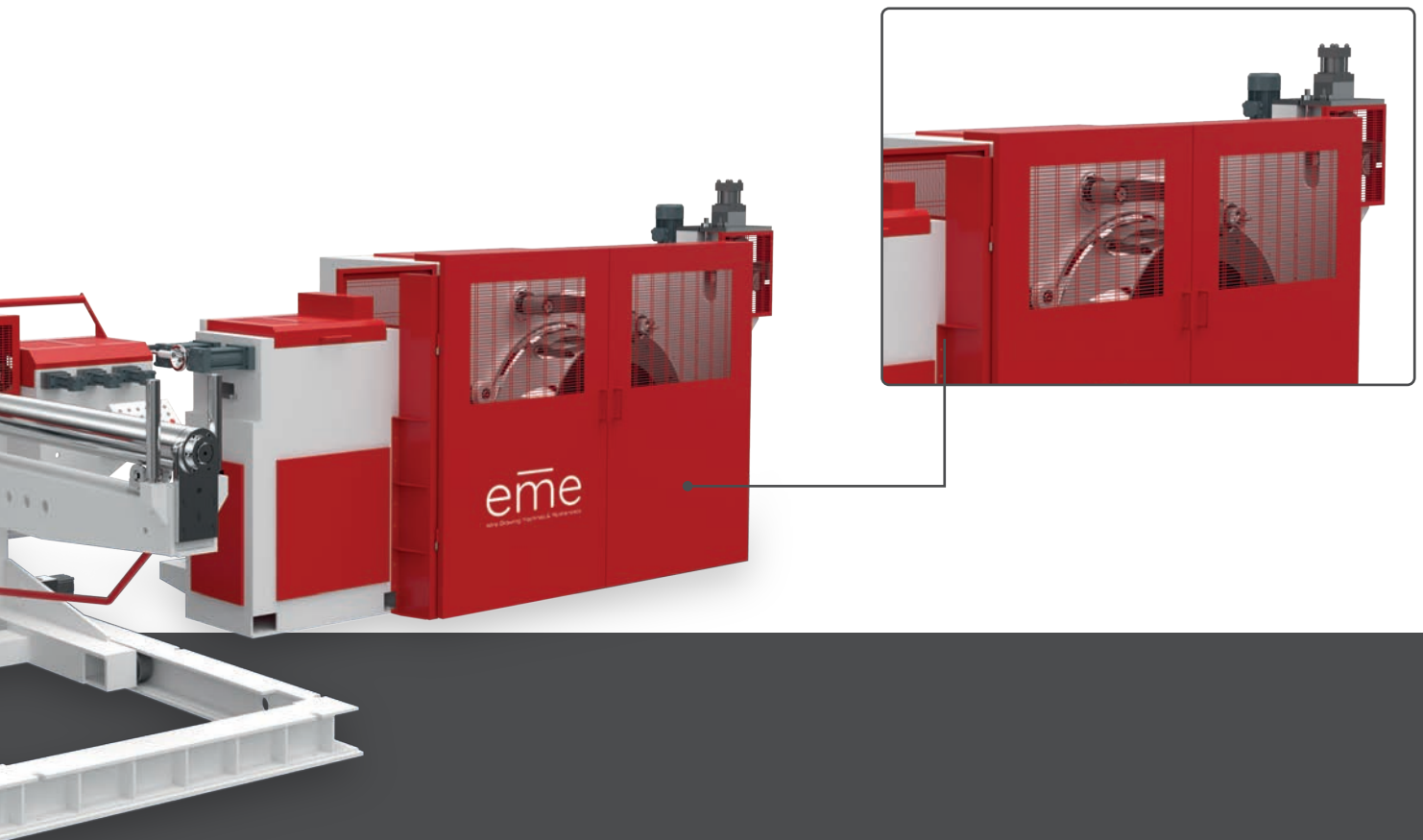
Reducing the pull-back on the header feed rolls (coil weight do not effect the header).

Drawn wire is pre-warmed without "age hardening" with improved metal formability.

# MTL

in line drawing machines

Used for drawing or gauging wire for cold former for screws, bolts, nuts, chain machines, bendings, straightening and cutting machines, nail machines.



## advantages

PS pre-feeds and prestraightens the wire with only one operation.

Downtime for the operation of coil changeover is reduced.

Reduced load of the cold formers feed rolls.

Elimination of straightening unit.

Floor space reduction for coils with large diameter.

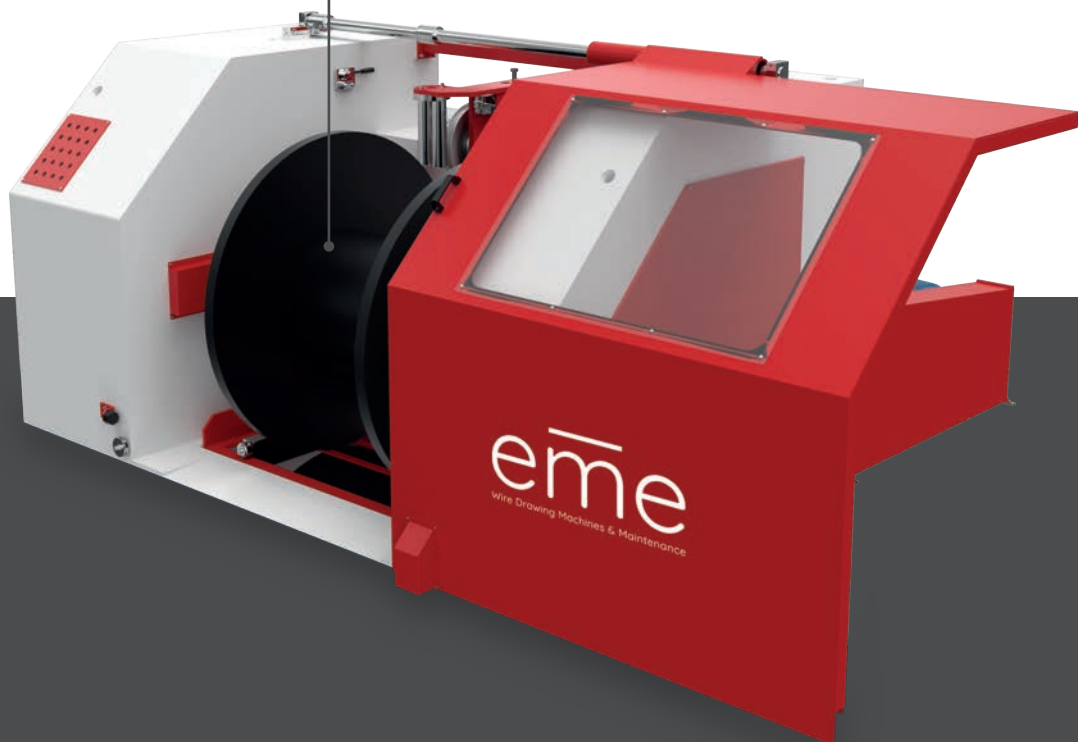
Safety operator with automatically stopping of the production machine for bound coil conditions .

# high precision winding machines

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The winder has the function of winding the drawn wire coming out of the drawing machine.

The wire is wound on a take-apart reel with a maximum diameter of 1250 mm and a span of 750 mm.



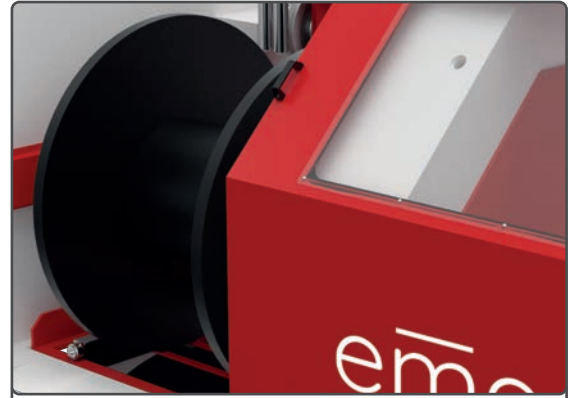
The machine is equipped with a hydraulic control unit for controlling a tailstock and the reel lifting system.

Complete the equipment a pneumatic stop brake.

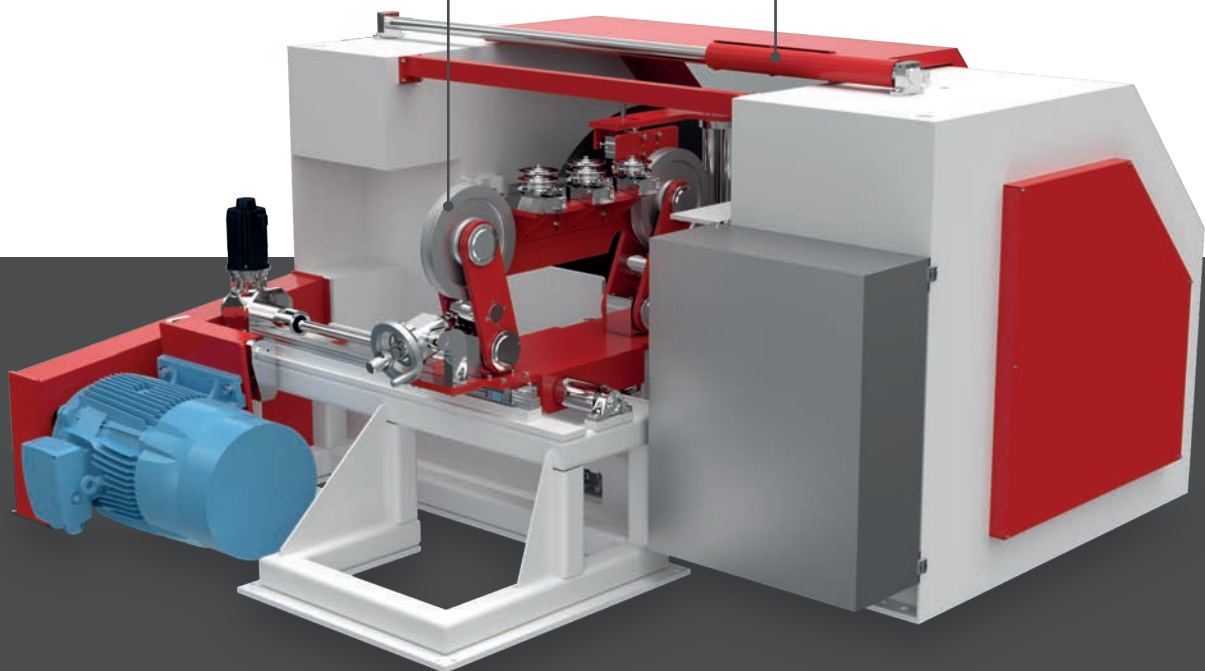




The machine will be equipped with a special wire guide with rolls and a tilting nose suitable for controlling the angle for correct high precision winding.



The reel must be adequately constructed to receive the diameter wire 4-5 mm in high precision winding. For diameters less than 5 mm the winding will be random.



External thread guide unit with ball screw suitable for high precision winding.  
Pulley group with the possibility of tilting to work with the two reel sizes of 760 and 1250 mm.

# low relaxation production lines



## pc wire and pc strand

Dedicated to the working of low relaxation steel wire for pre-stressed concrete, ensure a technological process with very high performance and excellent quality.

Steel wire, with high carbon content, is used as structural reinforcement for various applications: beams, multi-storey buildings, bridges, docks, highway barriers, railway sleepers, suspension cables etc.

This type of steel wire must be LOW RELAXATION when subjected to heavy loads (especially when used with concrete). To obtain a wire with these features, a stress-relieving treatment is required and must be subjected to a load equal to 40% of the breaking limit, while it is heated in an oven to a temperature of 400°C and then rapidly cooled. Heat treatment allows the material not to lose elasticity.

## pc strand

Strand wire consists of a group of seven cold-drawn wires having a central wire (core wire) around which six wires are helically wound in one layer and with uniform pitch.

Primarily intended for the construction industry to produce precast concrete elements, rock and soil anchors, concrete piles, as well as for pre-stressing and post-tensioning applications.

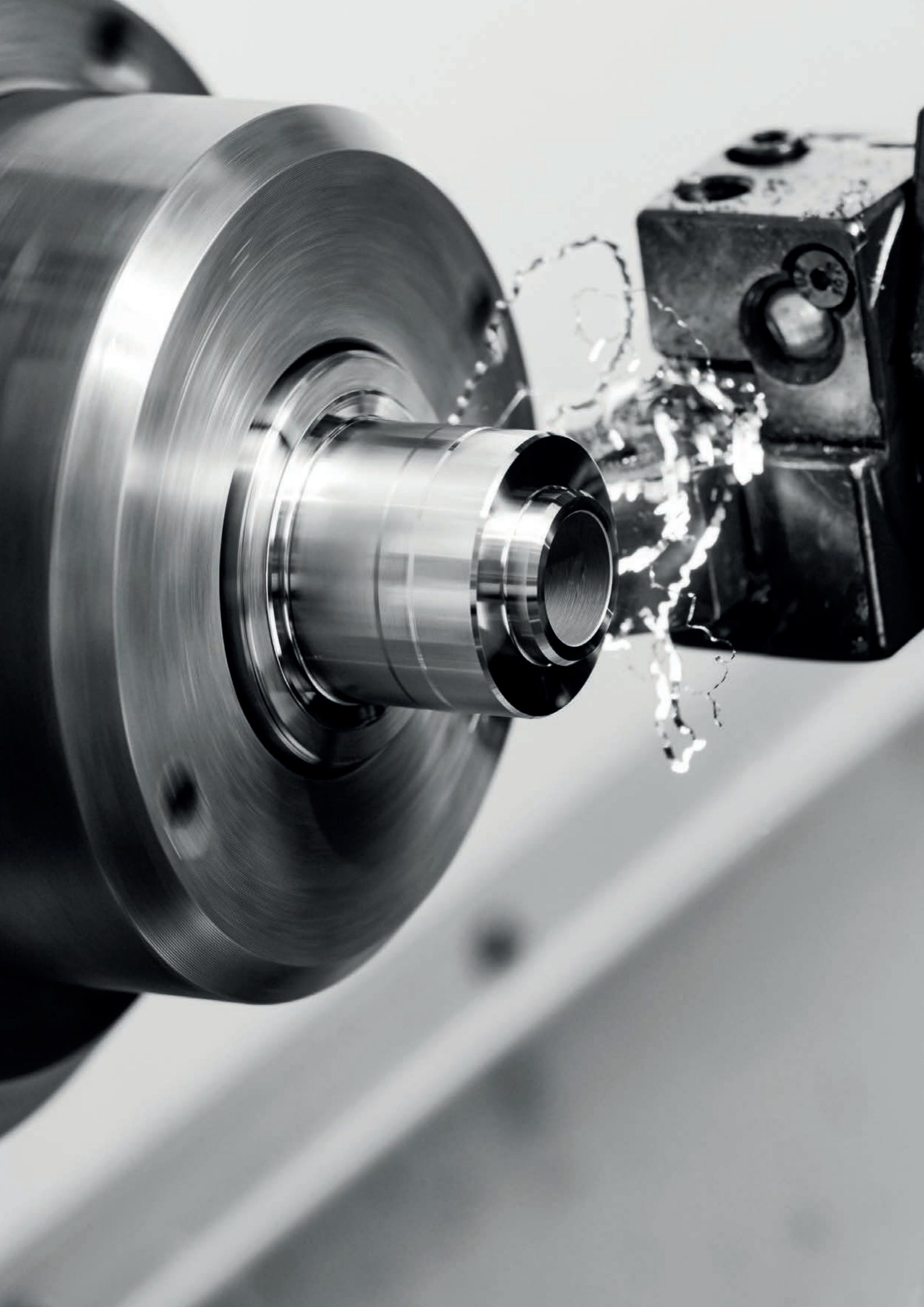
The number of wires forming a strand can vary. The simplest strand is the 7-strand strand. The strands can be used to make more complex cables, but they can also be used individually. If the different layers are wound in the same direction, they are defined as parallel wire strands, vice versa as crossed wire strands.

High carbon steel ropes used in the construction industry are made up of 7 strands.

Low relaxation ropes are used in beams and structures of multi-storey buildings, pylons, tensile structures, river dams, road works, motorway barriers and bridges, large tunnels, nuclear power plants, tie rods, suspension cables, etc.









# between our new production range

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## MULTIPASS LINES

For dry and wet drawing of wire.  
To process aluminium and its alloys.

### MTL

(in line wire drawing machines)

Used for drawing or gauging wire for cold former for screws, bolts, nuts, chain machines, bendings.

### PS

(pre-straighteners and decoilers)

Used for UNCOILING and STRAIGHTENING the wire for cold formers, nut formers and bolt makers.

## HIGH PRECISION WINDING MACHINES

External thread guide unit with ball screw suitable for high precision winding. Pulley group with the possibility of tilting to work with the two reel sizes of 760 and 1250 mm.

## PC WIRE AND STRAND

Dedicated to the working of low relaxation steel wire for pre-stressed concrete, ensure a technological process with very high performance and excellent quality.

wire drawing machine & maintenance





Via Prà Trebbia, 4  
23862 Civate - LC

+39 031 658050  
info@emesrl.com

where can you find us?



[emesrl.com](http://emesrl.com)