



Re-winding wire machines, single wire flattening and spooling machines, multi wire flattening and banding lines, high technology staples production and packing lines, office staples production and packing lines, brads and “T” nails production lines, lines for the production of steel glued fibres for the concrete reinforcement, wire crimping lines for the steel brushes industry, packing machines for pencils



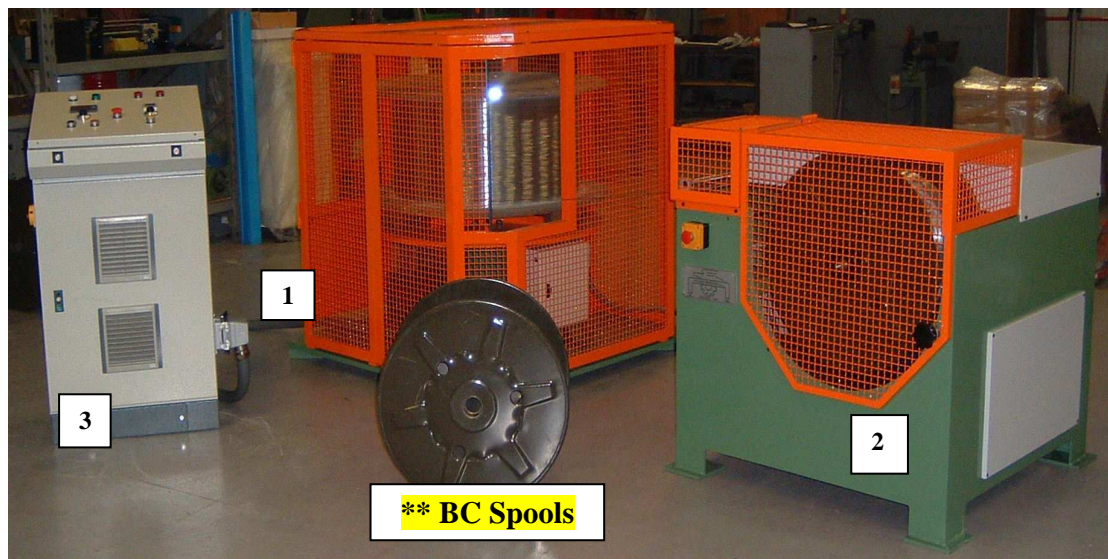
GENERAL CATALOGUE

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Wire re-winding machine model E. 30



The re-winding line Model E. 30 is suitable to re-wind the round wire from big spools of 1000 kg. to smaller spools from 30 to 250 kg. each one, (depending on the customer's necessity). The smaller spools of round wire produced with this machine, can be utilized for example to feed our multi wire flattening and banding lines F. 750 to produce glued band. With this machine the customer can choose the quantity of round wire to utilize and consequently the quantity of band to produce for each different round wire dimension, without the problem of having to feed the flattening machines with large quantities of wire of the same type. This machine can work **also starting from wire on coils ***, and in this way our customers can buy round wire from all the wire suppliers, (even from the Asian wire manufacturers who often have great difficulty to supply wire on spools). Thanks to the perfect electronic synchronism control between the un winder machine and the winding group, and the precise electronic tension control of the wires, (obtained through the fitting of **the absolutely latest generation of PLC controlled brushless motors and digital inverters**), the final winding quality on the spools of the round wire is so suitable it can be utilized without problems on our fast multi wires flattening and banding lines. The main panel is equipped with **a colour touch screen** with the display of any eventual problems present in the machine while working, with the alarms indication and the relative solutions so that even an Operator with no experience can operate this machine.

With the re-spooling machine Model E. 30 our customers can produce a good quality band also starting with bad wire on coils, because it can re-wind the wire into a good condition onto the steel spools. The other function of this machine is that customers can make smaller spools starting from a big spool of 1000 kg., reducing the investment cost of the wire load, making band with the multi wires flattening and banding lines.

The line is formed by: a **motorized rotating machine (1)** suitable to unwind the round wire, by **the winding machine (2)** suitable to re-wind the round wire onto steel spools, and by an **electronic control panel (3)**.

Technical information:

Production speed: adjustable from 0 to 8 meters per second

The total power required is: about 10KW

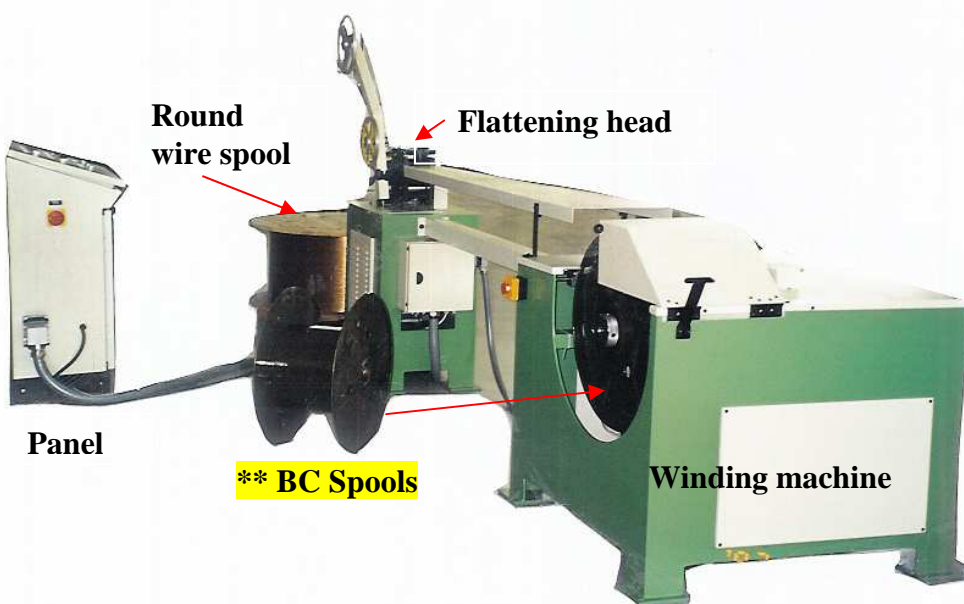
The footprint necessary is: mt. 7 x mt. 3.

The spooling machine can be designed to accept any dimension of customer's spools **or can utilize our steel spools types BC 80 and BC 250 ** expressly projected for staples wire purposes.**

Spool Type**	FLANGES	CORE DIAMETER	WIDTH	SHAFT HOLE	MAX.WIRE CAPACITY
BC 80	600 mm.	320 mm.	110 mm.	55 mm.	80 KG.
BC 250	600 mm.	320 mm.	300 mm.	55 mm.	250 KG.



Single wire flattening and spooling machine model **F. 100**



*** Wire on coil laid on the rotating platform (optional)**

THE SINGLE WIRE FLATTENING AND SPOOLING MACHINE MODEL F. 100, is starting its work by keeping the round wire from spools of 500 or 1000 KG. laid in a static position. The machine **is unwinding the round wire, it is straightening it, it is flattening it** to the final dimension requested by the band thickness that is necessary to produce, and **it is rewinding the flattened wire onto smaller spools**. This machine can work **also starting from wire on coils ***, and in this way our customers can buy round wire **from all the wire suppliers**, (even from the Asian wire manufacturers who often have a lot of difficulty in supplying wire on spools). To utilize the wire on coils, it is, however, necessary to add to the F. 100 machine **a rotating unwinding platform (1)**, (whose speed is synchronized through electronic controls), that is feeding the flattening group unwinding the round wire from the coil at the same speed of the F. 100.

The flattened wire on spools produced will then be ready to feed the gluing and banding lines of the customers, **(or of our production)**, that will produce a good quality staples wires band.

This solution of a single flattening machine is suitable **for small and medium staples production**; the customer can, in fact, prepare a small quantity of flattened wire and utilize these spools to feed the gluing and banding lines that are producing band on spools or to feed directly in line the production staples presses.

To be able to control the speed with very high precision, the synchronism between the flattening group and the final winding machine, the tension winding power, to this machine we have fitted **the absolutely latest technology in brushless motors driven by digital inverter controlled by a PLC**. Also present in the main panel **is a colour touch screen** with the display of any eventual problems present on the machine during the working, with the alarms indication and the relative solutions so that even an Operator with no experience can utilize the line.

Technical information:

The speed of the machine is very fast: up to 10 metres of wire per second.

The total power requested is : about 12 KW (18 KW utilizing also the rotating platform).

The footprint is: mt 7 x mt. 3 approx.

The line can be designed to accept the spools of our customers **or can be suitable for our steel spools types BC 80 and BC 250 ****

Spool Type**	FLANGES	CORE DIAMETER	WIDTH	SHAFT HOLE	MAX.WIRE CAPACITY
BC 80	600 mm.	320 mm.	110 mm.	55 mm.	80 KG.
BC 250	600 mm.	320 mm.	300 mm.	55 mm.	250 KG.



Multi wires flattening banding & spooling **LINE F. 210 & F.750**



F. 210

The line model F. 210 is suitable to produce **any kind of band for office staples production**, (round wires till 0,60 mm. diameter), while **the line model F. 750** is suitable to produce **any kind of band for industrial staples production**, (round wires from 0,60 mm. to 1,80 mm. diameter). **The full optional lines are formed by:**

1) Multi wires flattening head complete of wires straightening system and wires guides at the feed-in. This group is provided with a closed circuit water cooling system for the flattening rolls and with chiller for electronically control of cooling temperature; this equipment is always maintaining the rolls temperature at the same level irrespective of the speed of the machine or of the wire dimensions or the external temperature. The flattening rolls stroke is adjustable through an electronically motorized system with micrometric control of the flattening dimension and it is also possible to separately adjust the two sides of the rolls, (left side or right side), so as to obtain a perfect parallelism of the rolls and the identical flattening dimension over the entire width of the band. The flattening group is equipped with 2 auto-cooled motors having a total power of about 12 KW.

2) To the above described flattening machine there is connected the gluing and drying group to form the band; in this group, complete with two gluing stations, we can fit either electronically controlled air dryers or the technology of an induction wires system to dry the glued band, this being formed by 2 drying coils, (one after each gluing station), one induction generator and one electronically controlled water cooling chiller with automatic temperature control. This system is PLC controlled and is able to automatically maintain the same drying temperature programmed by the Operator and does not depend on the wire diameter, on the speed of the machine or on the external temperature. This system is improving the quality of the final band in respect to the electronic hot air dryers, because it is working only inside the wire nucleus, exactly the opposite of the air blowers which are working also on the glue. **In addition to the induction heating system, there is also fitted one hot air blower** with temperature adjustment, that has the important function of keeping the band temperature high its during the transit along the line. The total drying group has a power of about 20 KW.

3) At the end of the gluing and drying line there is fitted a forced cold air blower system utilizing an air blower of 0,5 KW, This is necessary to definitively cool the band before it is wound onto the spool.

4) The line is continued with the NEW "high power" band puller system "able to produce a very high tension power on all the wires and to prevent the wires lengthening.

This band pulling group is motorized by an auto-cooled motor of 4 KW.

5) The electronic band winder system on spools, having a double motorization "in line" that permits a quick replacing of the full spool with an empty one without the necessity to stop the line, and this completes the band production line. This system is driven by two motors of 2 KW each one, (4 KW total), and is cooled through a blower of 0,5 KW.

6) One electronic control panel, very easy to use and able to keep the synchronism of all the line motors and to make an auto-adjustment of the whole line when the Operator is changing the line speed, is ending the lines. The panel control is equipped with colour touch screen panel and alarms display.

In the lines is also possible to assembly: automatically temperature controls for the glue drying process, digital band thickness dimension controls, digital width band dimension controls, internet connection, flattening rolls in tungsten carbide ..Etc. Etc.



F.750

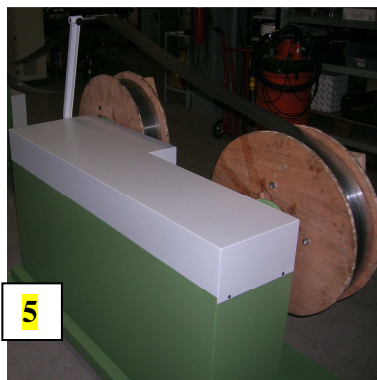
Parts of the line **F. 750**



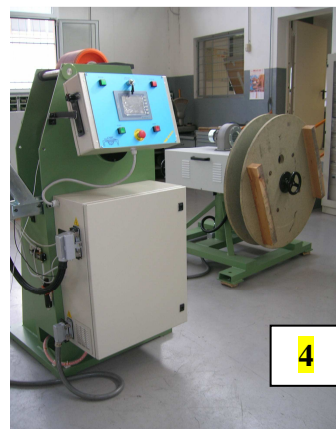
FLATTENING GROUP



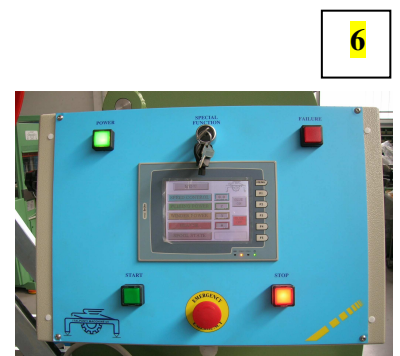
EXCLUSIVE INDUCTION HEATING SYSTEM TO DRY THE BAND



**IN-LINE MACHINE WITH
DOUBLE MOTORIZATION**



**“HIGH POWER” WIRES
PULLING GROUP**



**CONTROL PANEL WITH
TOUCH SCREEN**



Parts of the line F. 210

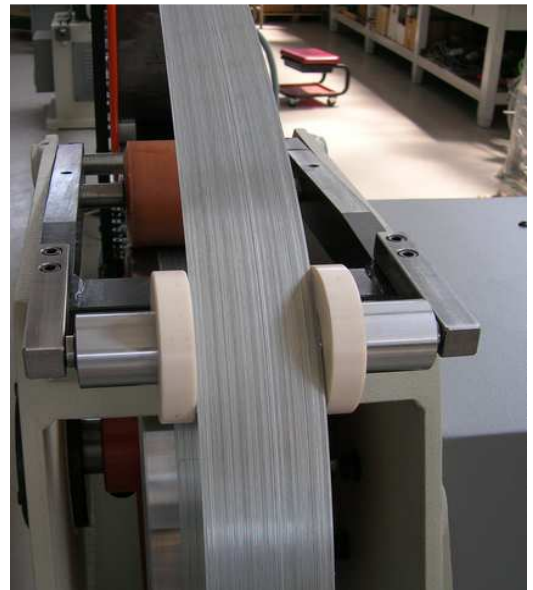


**ROUND WIRES SPOOLS STAND
FOR OFFICE STAPLES
PRODUCTION**

FLATTENING HEAD



ROUND MULTI WIRES FLATTENING ENTRANCE



WIRES BAND FINAL PULLER



**DRYING BAND
PROCESS UTILIZING
HOT AIR DRIERS**



WIRE INDUCTION HEATING PROCESS

(The maximum technology for the wires band gluing)

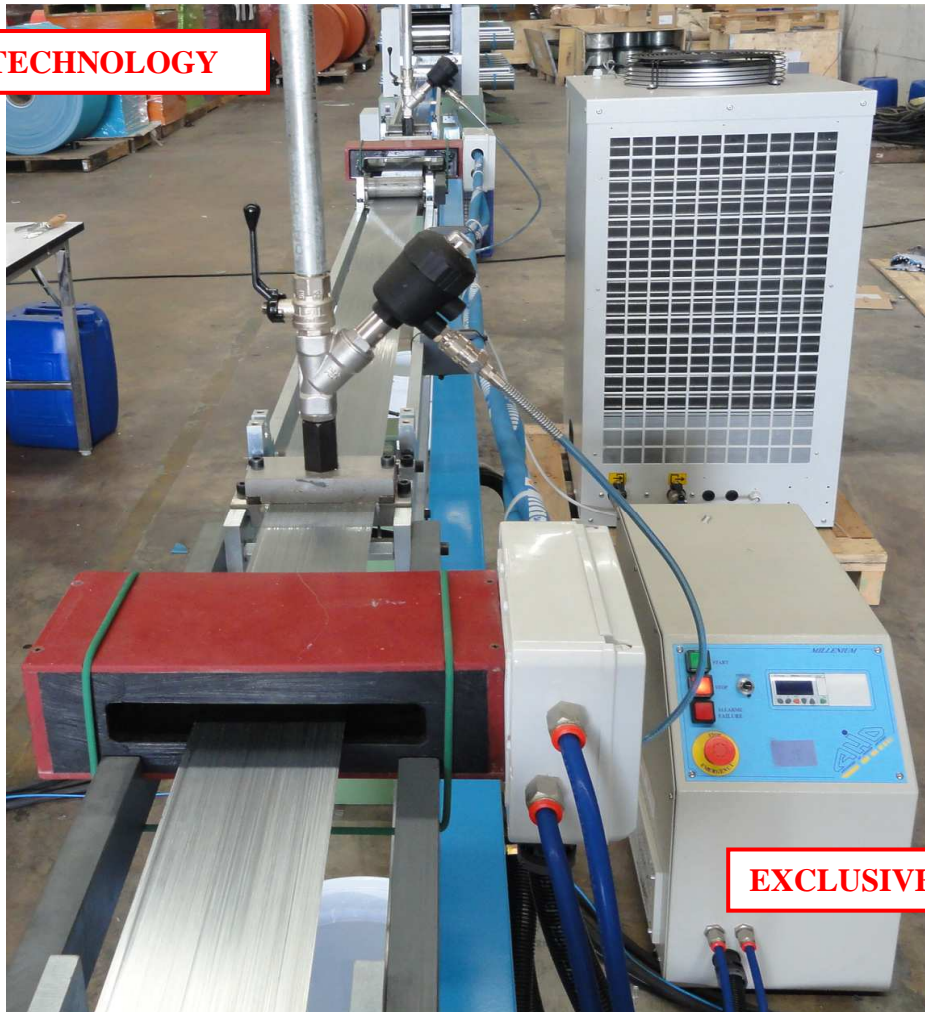
Induction heating is obtained through an inductor generator which is able to generate a magnetic field thanks to a remarkably intensity current at a specific frequency. By inserting the wires band inside the 2 inductor coils present in the line, (one per each gluing station), induced currents (I) are generated inside the wires structure. Thanks to the resistivity (R) of the band material, the power (P) dissipated by the material – in compliance with the Joule Law – is subsequently transformed into heat correspond to the following formula: $P=R \cdot I^2$.

Thanks to this process **the heating take place in a complete different way respect the traditional air heaters or electrical resistances**, (where the glue is dried from outside to inside). With the induction process in fact are only the wires to become very hot and **the heat is arriving from inside the wires to outside where is present the film of glue**. The glue is so “attracted” by the hot wires and in this way it is perfectly fusing on the wires surfaces without to lost the chemical characteristics.

The advantages of this system respect the traditional drying band systems are a lot:

- Higher speed of production are possible.
- Keeping of the same drying temperature not depending by the speed of the line, by the number of wires utilized and by the wires diameter because the drying temperature is electronically controlled.
- Possibility to adjust the drying temperature directly from the panel control of the production line and possibility to read the drying temperature on a display.
- Big reduction of the smell and fumes during the drying process.
- Risks of accidental fire reduced near the zero.
- Lower electrical power consume respect the obsolete electrical resistances and respect the hot air blowers.
- No solid glue residuals are forming on the band surface that appear very brightness.
- Automatically STOP and START of the drying process synchronized with the banding line
- Very fast temperature level reaching as at line start as at line stop.

EXCLUSIVE TECHNOLOGY



EXCLUSIVE TECNOLOGY



“High speed” production staples lines E. 200/A



E. 200 /A

The lines E. 200/ A is different to any other staples production machine present on the world market because it is equipped with an exclusive "two columns" stamping system guided. The power and the high speed of the press are suitable to produce **office staples**, (N0.10, 24/6, 26/6, 23, etc.), **fine heavy staples having a maximum band thickness of 0,90 mm. and a maximum legs length of 25 mm.**, (80, 84, 64, 3G, 71, 1400, T50, 7, 72, 1800, 380, etc.), **and carton closing staples**, (type 35 /15-18 and 32/15-18).

Very important: thanks to the mechanical characteristics of these presses, **no maintenance is necessary on the press for more than 10 years!!** The control panel is complete with a colour display showing any line problem and the relative solution, so for this reason the machine Operator needs no technical experience.. A PLC assembled in the control panel is **checking all the line**. Also present is a **programmable encoder** and **brushless motors driven by the latest generation of digital inverters**. The press is provided with an automatic system of “auto- release” that in just a few seconds is releasing the press in the case of a blockage at the closed die. A fast electronic system is able to open or to close in a few seconds the staples legs in respect to the crown, without the necessity of any manual intervention.

The line is formed by: (1) spools stand for 2 spools of band in line, (2) electronic band un winder complete with band straightening, (3) production press complete with one die, N° 1 motorized conveyor with adjustable speed and **the strips exit control**. One electronic panel (4) served by PLC is controlling all the working of the complete line.

Technical information:

Pressure power: 40 tons of pressing power.

Production speed: from 80 to 280 strokes minute.

Total weight: Kg. 2.850

Power required: about 10 kw.

Footprint: mt. 7 x mt. 3

Options for the line:

- electronically band feeder, (instead pneumatically), with noises closed to zero and with the legs length of the staples adjustable by PLC instead manually.
- Modem for the connection of the panel through internet



“High speed” production staples lines E.400/A



The line E. 400/ A is different to any other staples production machine present on the world market because they are equipped with an **exclusive** "four columns" double knuckle-joint press system expressly designed for a very high and precise production of staples. The particular down-movement of the ram, guaranteed by the special mechanical system of these machines, ensures there are no “spring backs” of the wire band during the staples stamping, (unlike what you experience when utilizing the common eccentric presses). With this stamping system the legs of the staples are keeping a perfect 90° angle in respect to the crown, not depending on the staples types produced or on the band thickness dimension. **Special air cushions prevent any press vibration** even at a production speed of over 250 strips per minute. Furthermore, all the work noise has been absolutely reduced in respect to the common eccentric press. The power and the high speed of the press are suitable to produce any kind of staples present on the world market, having a legs length up to 65 mm. and a maximum band thickness of 1,70 mm. This line can produce also “divergent” point staples:



Very important: thanks to the mechanical characteristics of these presses, **no maintenance is necessary on the press for more than 10 years!!** The control panel is complete with a colour display showing any line problem and the relative solution, so for this reason the machine Operator needs no technical experience.. A PLC assembled in the control panel is checking all the line. Also present is a programmable encoder and brushless motors driven by the latest generation of digital inverters. The press is provided with an automatic system of “auto- release” that in just a few seconds is releasing the press in the case of a blockage at the closed die. An electronic band feeder, programmable by the PLC is adjusting the staples legs lengths, while a fast electronic system is able to open or to close in a few seconds the staples legs in respect to the crown, without the necessity of any manual intervention.

The line is formed by: (1) spools stand for 2 spools of band in line, (2) electronic band un winder complete with band straightening, (3) production press complete with one die, pre-packing strips systems with coupling strips system for the heavy staples narrow crown, mechanically controlled staples ejection, N° 3 motorized conveyors for the strips exit control with adjustable speed. One electronic panel (4) served by PLC is controlling all the working of the complete line.

Technical information:

Pressure power: 50 tons.

Production speed: from 50 to 250 strokes minute.

Total weight: Kg. 3.200.

Power required: about 12 kw.

Footprint: mt. 8 x mt. 3

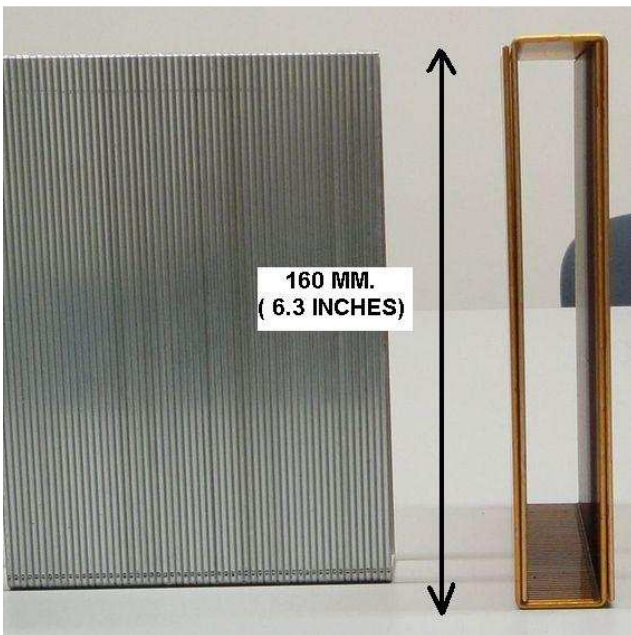
Options for the line:

- electronically band feeder, (instead pneumatically), with noises closed to zero and with the legs length of the staples adjustable by PLC instead manually.
- Modem for the connection of the panel through internet



“Extra long leg” staples production line E. 500/A

The line **E.500/A** is expressly designed to produce staples **having a leg length up to 160 mm., 6,3 inches**, (example staples types BS, S29 or similar):



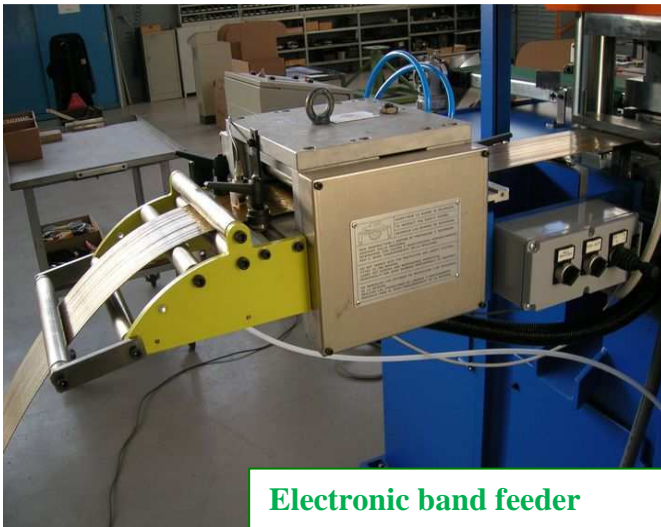
The technical differences respect the line E. 400/A are:

- Power of the press arriving at 75 tons.
- Total weight kg. 5.400
- High technology band feeder system able to feed the stamping die at a high speed with very long advancing steps of glued band.
- Special band straightening
- longer columns and bigger spaces between them to permit the special die assembling.
- Footprint: mt. 10 x mt. 3

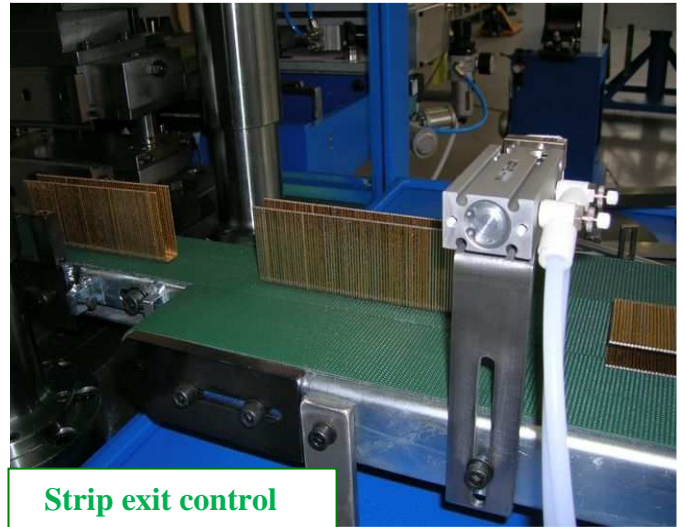
Of course this line is able to produce also all the others types of staples that is making the line E. 400/A



Some equipments assembled on the presses E. 200/A, E 400/A & E. 500/A



Electronic band feeder



Strip exit control



Strip coupling system



Touch screen panel



Multi strips stamping system utilizing the lines E. 200/A, E. 400/A & E. 500/A

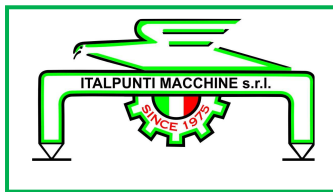
With the lines E. 200/A , 400/A & E. 500/A is possible to make a **multi strip production**, (the maximum band width acceptable is 200 mm.). Through a special band cutting system assembled in the die group is possible to divide the bands into 2 or 3 or 4 or 5 strips that will be after stamped simultaneously. In this way it is possible to produce up to 5 strips of staples simultaneously with each stroke of the press **arriving at producing up to 1000 strips of staples per minute!!**



Multi strip stamping system starting from a band of max 250 wires
(Up to 5 strips of 50 wires for each press stroke of the office staples type N0.10)



Double band staples production and packing:
(2 strips each press stroke for the staples types 80, 380, 84, 71, T50, 88, 1400 Etc...)



Double staples bands production line

Our production range also includes the manufacture of a special line making staples utilizing **2 glued bands simultaneously**. The very important characteristics of this line is that we can also include, (for the large crown fine staples production), **a double strips coupling machine** and **a final box packing machine**, both designed to be able to pack “in line” all the staples production made by the press with the 2 bands. The presses utilized for the double bands lines are the **E. 400/A & the E. 500/A**, which are specially modified respect the standard presses as in the die area, as in the electronically band feeder, as in the staples ejection system as in the software.



Technical informations:

Pressure power: The line **E. 400/A** has 50 tons, the line **E. 500/A** has 75 tons.

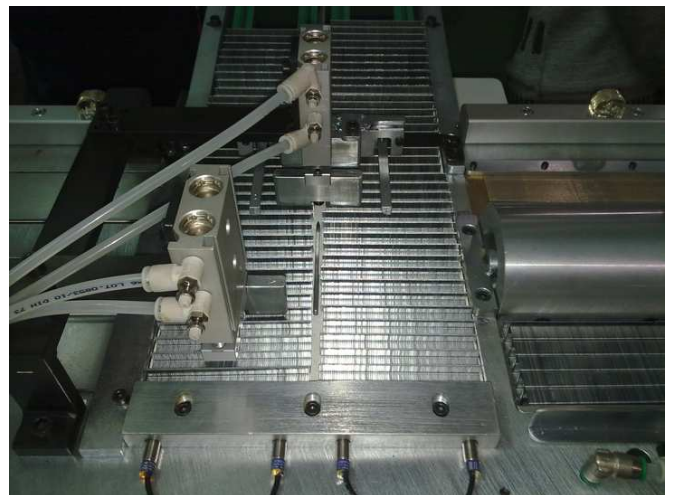
Production speed for both the lines: from 150 to 400 strips per minute.

Production speed of the fine staples large crown packing system: 400 strips per minutes

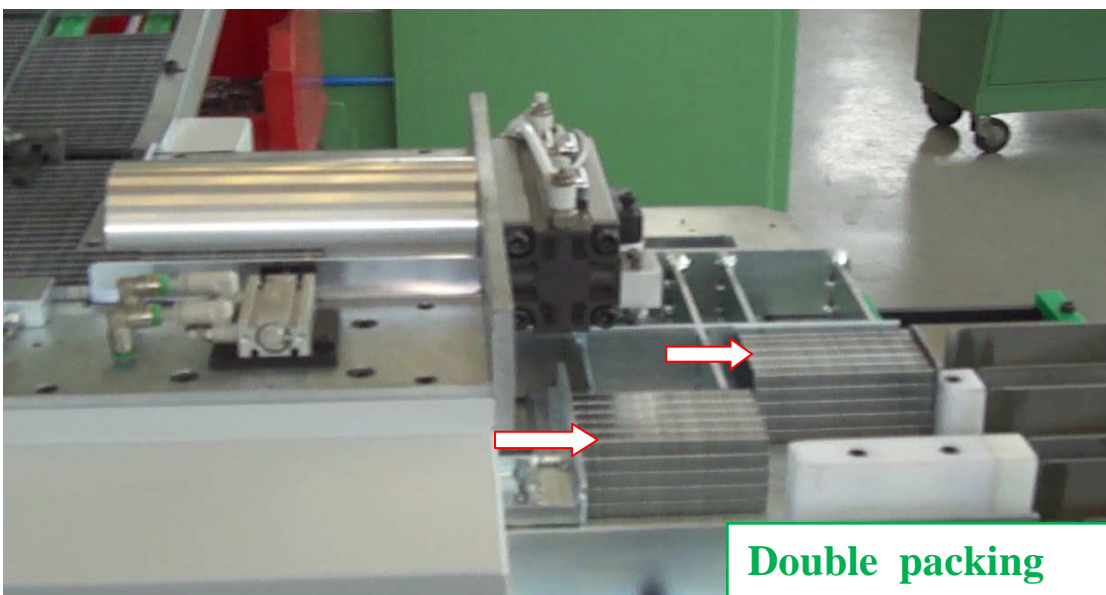
Total weight: The line **E. 400/A** has a total weight of Kg. 3.200, The line **E. 500/A** has a total weight of Kg. 5.800

Power required: The line **E. 400/A** is requiring about 12 kw, The line **E. 500/A** is requiring about 15 kw,

Footprint: mt. 8 x mt. 3 (E. 400/A) - mt. 10 x mt. 3 (E. 500/A)



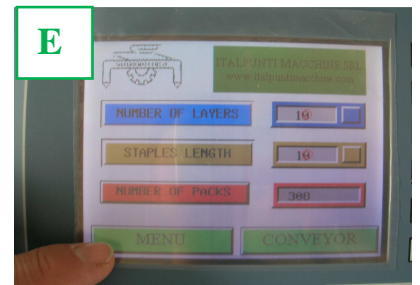
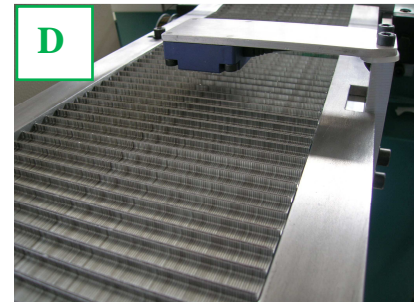
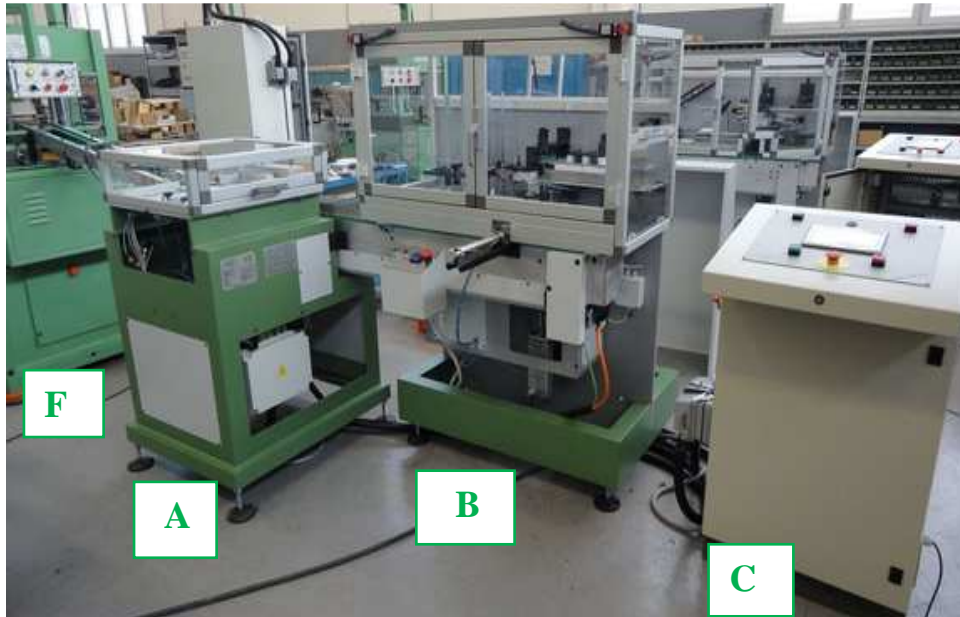
Double Production



Double packing



PACKING LINE FOR FINE INDUSTRIAL “LARGE CROWN” STAPLES M. 140 + F. 180



For the staples types: 80, 84, 64, T50, 800, 680, 71, 88, 72 and similar.

The strip coupling machine **model M.140**, (picture **A**), is able to receive the staples strips from our production presses, (**picture F**) or from the customer's production presses on condition that all the strips are arriving on the packing machine conveyor **all laid on the crown and with the legs up**. (Picture **D**). In our staples presses the strip ejection is controlled and is just designed to be connected to the packing machine M. 140. The staples strips are entering to the M. 140 machine that is coupling the strips, is making different layers according to the customer's needs, (programmable by the PLC), and is forming a pack of strips having the correct quantity of staples necessary to complete one carton box. At this point the pack of strips is ejected from the machine and is ready **to be easily packed manually by one operator only into the carton boxes**, or the same pack of strips can be introduced automatically into the F. 180 machine **to have a fully automatic packing process**.

The final packing machine **model F. 180**, (Picture **B**), is automatically forming and gluing the carton boxes starting **from an open carton**, (a much cheaper solution to substantially reduce packaging costs!), and then the packs of staples are introduced inside the formed box. The final operation of the machine F. 180 is to close the carton and to eject the final boxes from the line.

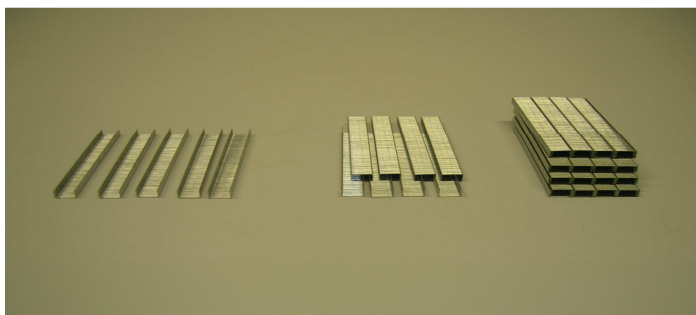
All the operations **are controlled by one electronic panel**, (Picture **C**), served by a PLC that is able to check all the operations of the line step by step, and to stop it in case of any problem. A color touch screen, (Picture **E**), is showing all the line functions, the possible alarms and the relative solutions to make the Operator's work very easy, and with which it is also possible to set the length of staples legs and the number of layers inside the box without any manual intervention.

Production capacity: the line can receive to 250 strips of staples per minute from the presses.

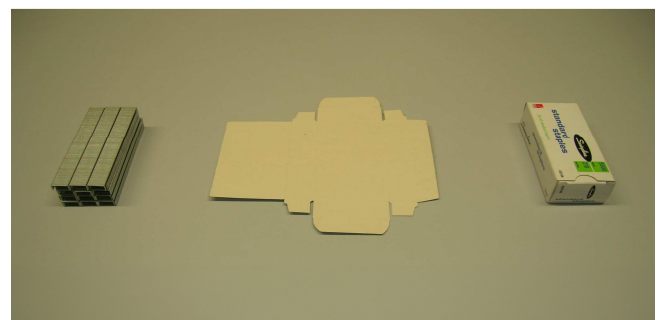
Power utilized: about 3 kw approx. for all the line, (the M.140 machine is only utilizing 1,5 kw).

Footprint: mt. 4 x mt. 2, (only mt. 2 x mt. 2 for the M. 140 machine).

Air consumption: about 150 liters/minute.



OPERATIONS OF THE MACHINE M. 140



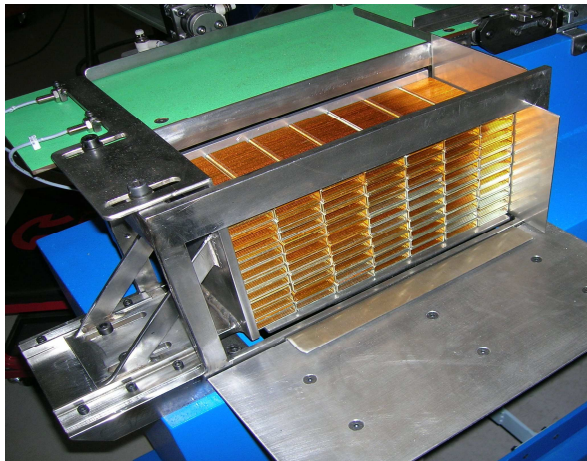
OPERATIONS OF THE MACHINE F.180

The 2 machines can be sold also separately.



Strips coupling and packing machine for heavy staples narrow crown MODEL M. 160

The automatic strips packing line **MODEL M. 160** is suitable to receive the “narrow crown” strips of the most common heavy staples, **(example types 55, 92, GSI, GS, N, M, KG, BSC and similar), in all the legs lengths**, from the E. 400/A or E. 500/A staples production lines. The machine is coupling and “stratifying” the coupled strips into different layers to the customer’s choice, with the number of layers easily changeable through the PLC:



After that the machine is pushing the formed pack of strips into a preformed carton box manually positioned by the operator where the product exits the machine:



Utilizing this machine **one operator only is able to follow as the staples production line as the final packing in box alone**, working at the maximum production speed possible for the press. The machine is controlled by **an electronic panel** complete of colour touch screen where is possible to change the number of layers or the different crown dimension in few second.

Technical information:

Production capacity: the packing machine can receive from 80 till 150 strips of staples per minute depending by the legs.

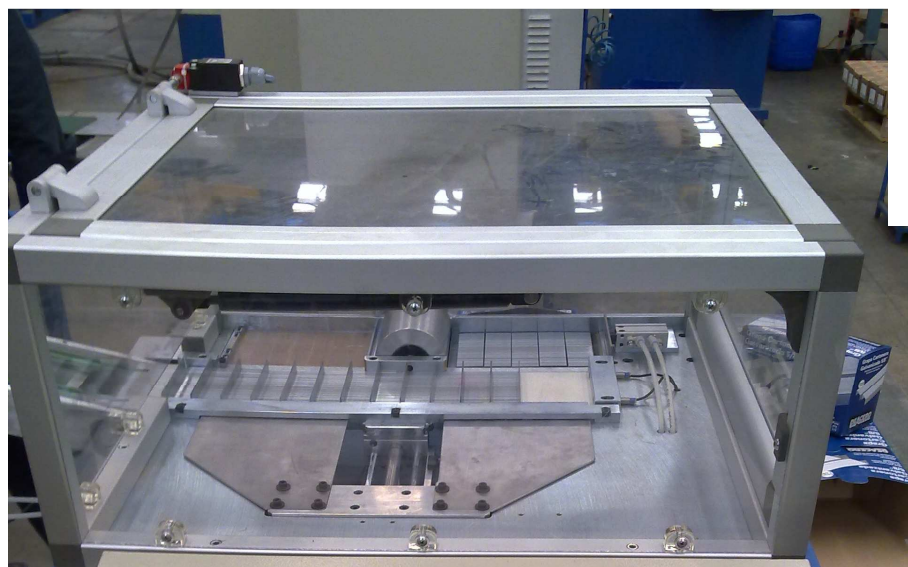
Power utilized: about 3 kw approx.

Footprint: mt. 3 x mt. 2



Strips packing machine for Carton closing staples MODEL M. 180

The automatic strips packing line **MODEL M. 180** is suitable to receive the “large crown” strips for carton closing staples, **(type 35 /15-18 and 32/15-18 and similar).** from the E. 400/A or E. 500/A staples production lines. The machine is “coupling” the strips and is making different layers to the customer’s choice with the number of layers changeable through the PLC.



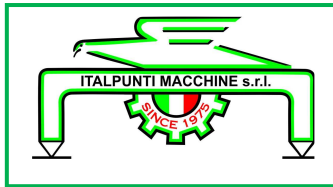
Utilizing this machine **only one Operator** is able to follow the staples production line as well the final packing into the box and with all machines working at the maximum production speed possible for the press. The machine is controlled by an **electronic panel** complete with colour touch screen from where it is possible to change the number of layers in just a few seconds.

Technical information:

Production capacity: the packing machine can receive from 90 to 150 strips of staples per minute.

Power utilized: about 3 kw approx.

Footprint: mt. 3 x mt. 2



Multi wires flattening, banding and office staples production lines models I.M. 100 and I.M. 210 (starting from round wires on spools).

The complete lines for office staples production **Model I.M. 100 and I.M. 210** have been expressly designed for the production of office staples. In realising the design of these lines, the attention of our Engineer was concentrated on realizing presses having **the highest possible production speed and the highest stamping precision**, as these are the fundamental characteristics necessary for a good final quality of the staples produced. **One I.M. 210 line has, for example the same production capacity as about 90 single wire machines**, and is always making a perfect staple, constantly maintaining the same characteristics for the entire production time, and, very important, these lines are **requiring only ONE worker** to follow all the processes from the flattening of the round wires right up till the final production of the staples..Thanks to these characteristics, the lines have been really appreciated since we introduced them.

All over the world the biggest Companies making office staples, are now utilizing these machines for their own high quality staples production .The **I.M. 100 and I.M. 210 lines** are formed by: **A) Spools stand, B) Multi wires Flattening group complete with wire straightening** able to flatten all the wires simultaneously, (up to 150 wires for the I.M. 100 line and up to 210 wires for the I.M. 210 line), with a maximum difference of +/- 0,01 mm. between all the flattened wires, **C) gluing and drying group to form the band** utilizing electronic air dryers with temperature control, or, on request the **exclusive high-technology induction heating of wires** designed by us, **D) high power wires puller** group able to maintain the tension of all the wires during the gluing process and to prevent any wire lengthening, **E) "high speed" production press with staples strips exit control system**, predisposed to be connected to our automatic packing equipments or to facilitate manual packing. An **electronic panel with PLC complete with colour touch screen** is driving the complete line. **Fitted to both the staples production lines there is a special multi strips stamping system**, able to cut the band of 150 wires made by the I.M. 100 line into 2 or 3 pieces of 50 wires each one or able to cut the band of 200 wires made by the I.M. 100 line in 4 pieces of 50 wires each . With this multi strips stamping system the line I.M. 210 is able to produce for **example up to 800 strips of 50 wires of the staples type N0. 10 or type 24/6 per minute!!**

Technical information:

Pressure power: Line I.M. 100 **25 tons**, Line I.M. 210 **40 tons**.

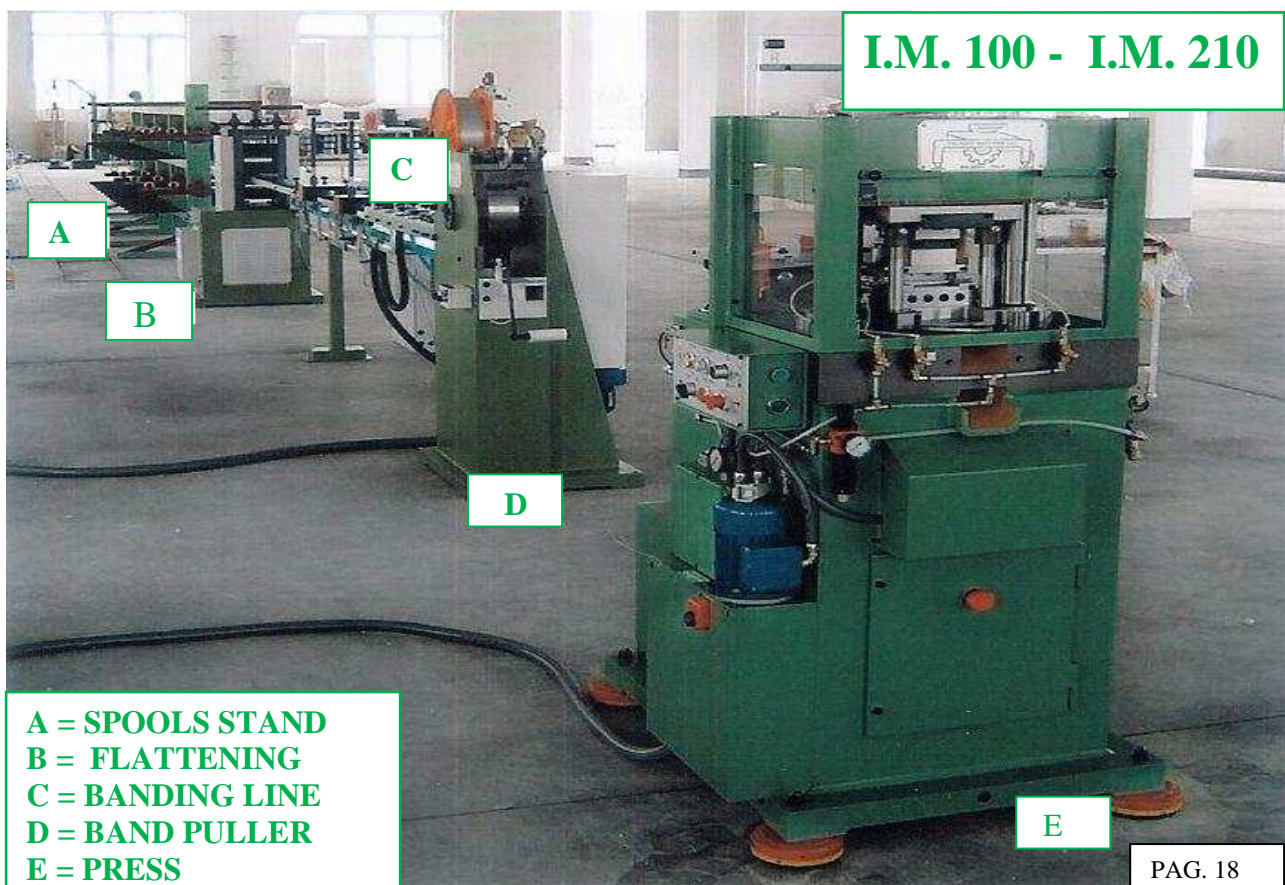
Strokes per minute of both the presses: **up to 250**

Electrical power necessary: 25 KW for the I.M. 100 line and 30 KW for the I.M. 210. line

Footprint: Line I.M. 100 **excluding the spools stand**, about 12 metres x 3 metres

Line I.M. 210 **excluding spools stand**, about 13 metres x 3 metres

Both the presses utilized in the lines have 2 columns guides to drive the main ram of the press.





Office staples production and packing

“all in line” (from round wires on spools to final boxes).



To pack automatically the office staples produced by the lines I.M. 100 and I.M. 210 before decrypted there are 2 possibilities: it is possible to connect a **packing system “in line” to the staples production**, (in this case the production presses can only produce 1 strip per stroke because is not possible to control “in line” a multi strips stamping system), or it is possible to utilize **packing lines separate to the staples production** through the lines VMF 1800 or VMF 2000 decrypted in the following page, (in this case is possible to utilize the multi staples strips stamping production with the presses).

The “**all in line**” **packing system** is formed by the coupling and layering strips machine **model M. 140** just before decrypted, that in this case is designed to be able to receive **office staples**, connected to the final boxing machines **model F. 180**.

The solution all in line is mainly utilized with the **I.M 210 to produce and pack the staples type 26/6 having 210 wires per strips**, because can be made with the press in one single strip. On the contrary for the office staples having short strips of 50 wires each one is preferred the separated packing to permit to the press a more profitable multi strips production. In case of an “all in line” the operations from flattening to final boxes are **controlled by one electronic panel only with colour touch screen and** utilizing a PLC that is able to check and synchronize all the operations of the of the line step by step and to stop it in case of any problem.

Technical information:

Production capacity: the packing system “all in line is able to receive up to 250 strips per minute from the production presses.

Footprint: “all in line” about mt. 18 x mt. 3.



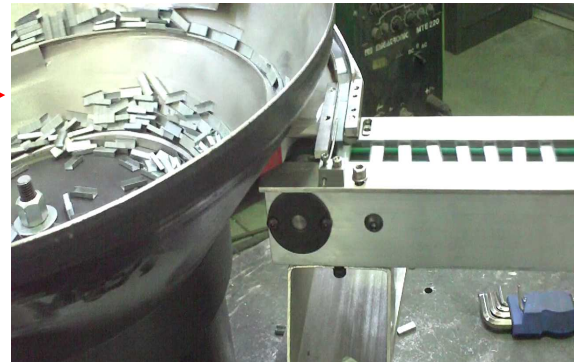
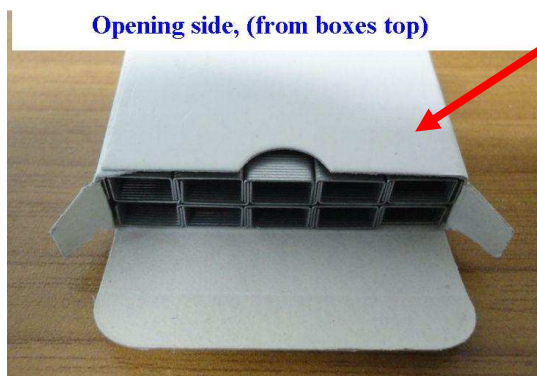
Examples of boxes containing 5.000 staples type 26/6 (Usa standard with 210 wires per strip).



Office staples packing systems “separated” from the staples production lines models: VMF 1800, VMF 1800 “high performance” & VMF 2000.

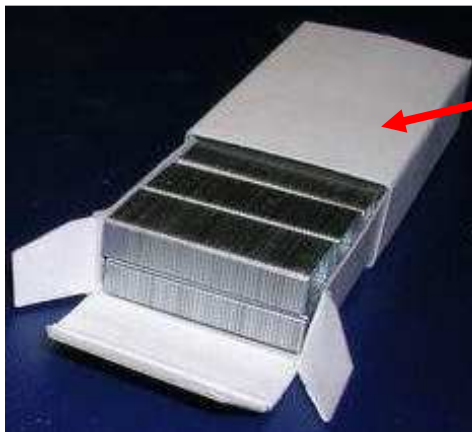
The “separated” packing system are so formed:

Line VMF 1800 “Standard” = N° 1 vibrator V 2000 → that is able to select the staples strips one at a time and to turn all of them laid on the crown, N° 1 staples strips conveyor, N° 1 strips coupling and layering machine model M. 140 and N° 1 final boxing machines model F. 180 that is suitable to make boxes in one piece:



Line VMF 1800 “high performance” = N° 2 vibrators V 2000 , N° 2 staples strips conveyors, N° 1 “double head” strips coupling and layering machine model M. 140 and N° 1 final boxing machines model F. 180 that is suitable to make boxes in one piece.

Line VMF 2000 = N° 1 vibrator V 2000 , N° 1 staples strips conveyor , N°1 strips coupling and layering machine model M. 140 and N° 1 final boxing machines model F. 200 that is suitable to make boxes in 2 pieces.



The operations of all the lines are controlled by one electronic panel with touch screen, one PLC is checking all the operations of the line step by step and is stopping it in case of any problem. Because the packing line is working separate to the staples production line, more than one packing line can be utilized to pack all the big multi strips production made by one line I.M. 100 or one line I.M. 210.

Production capacity:

The packing line **VMF 1800 “standard”**, (one piece box), can pack till 12 boxes of 1.000 pieces each one per minute.
The packing line **VMF 1800 “High performances”**, (one piece box), can pack till 15 boxes of 1.000 pieces each one per minute.

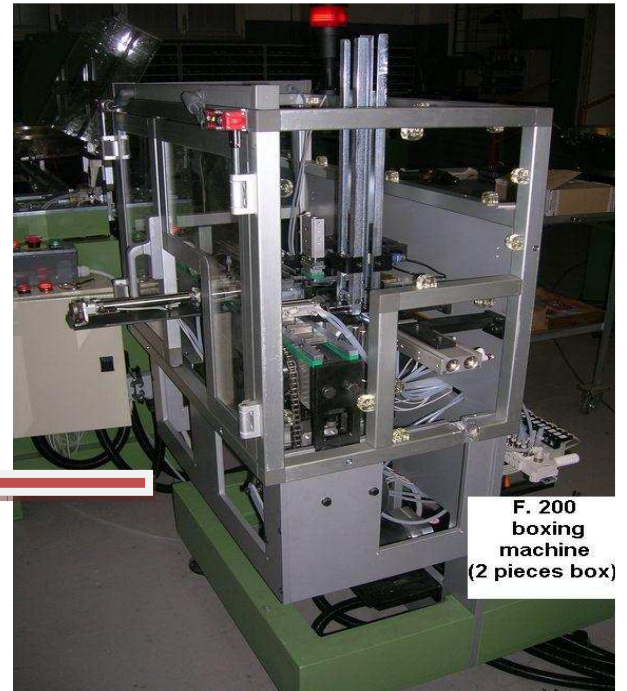
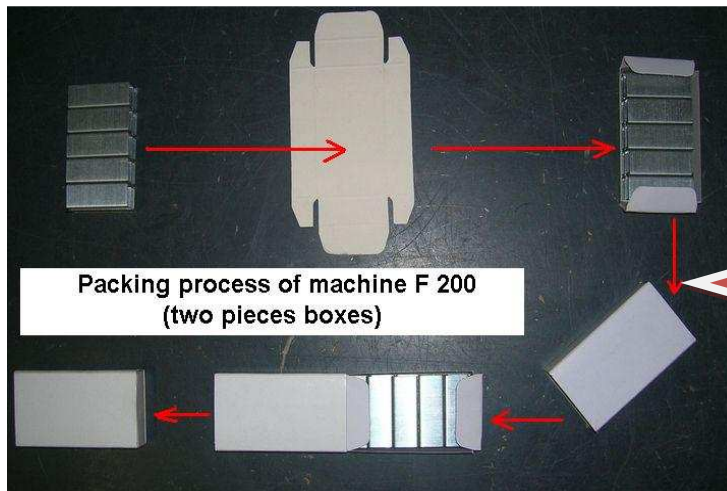
The packing line **VMF 2000** , (2 pieces box), can **pack till 10 boxes of 1.000 pieces each one per minute.**

Technical information:

Power utilized: about 4 kw for all the line,

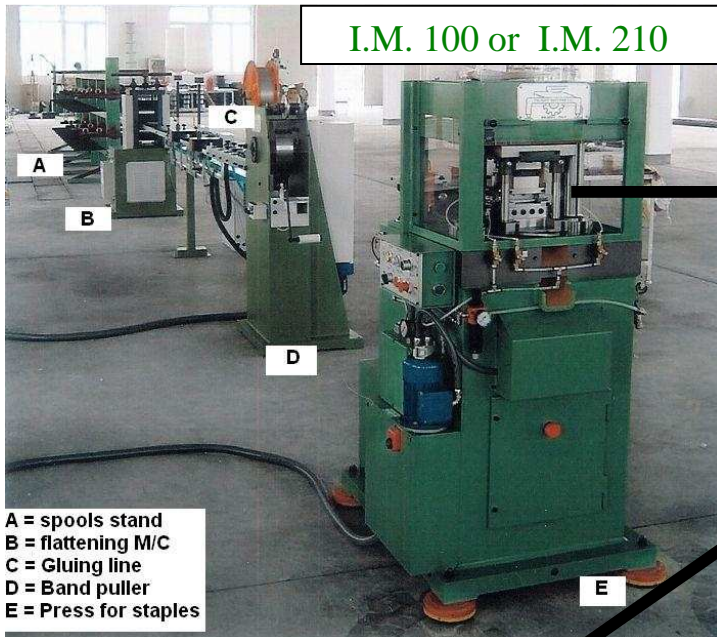
Footprint: mt. 6 x mt. 2,

Air consumption: about 250 litres/minute.



Packing processes of the lines VMF 1800 & VMF 2000

I.M. 100 or I.M. 210



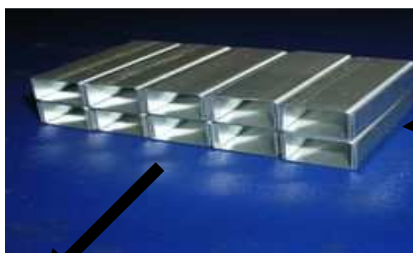
Multi strips staples production



Staples strips adjustment with vibrator



Strips coupling and layering





Bigger boxing machine Model F. 160

(Suitable to make a big carton box containing 10 or more smaller boxes)

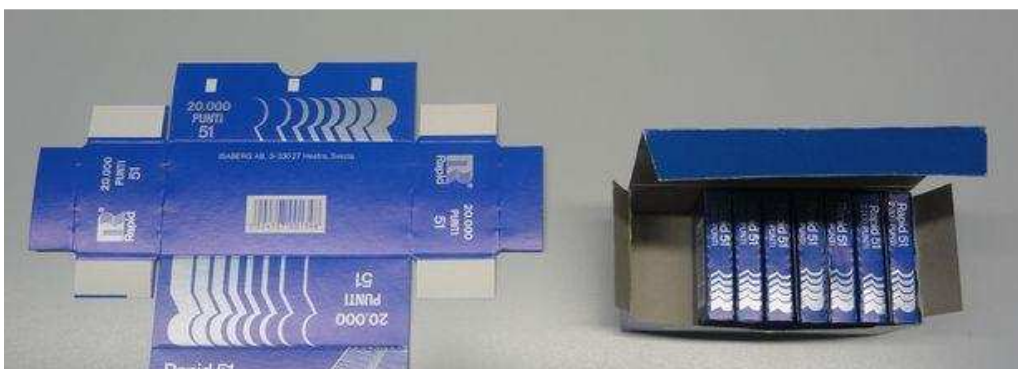
The machine M 160 can be connected in line to the office staples packing machines VMF 1800 or VMF 2000 and is able to form and to glue automatically a big carton box containing a number of smaller boxes of 1000 staples on customer's request. This machine is working synchronized with the others machines.



Production capacity: the packing machine can receive all the small boxes made by the line VMF 1800 or VMF 2000 connected in line.

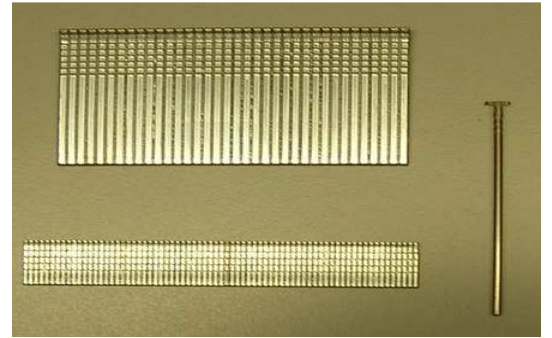
Power utilized: about 4 kw approx.

Footprint: mt. 2 x mt. 2





Brads production line model F. 75/A



The Brads line F.75/A is a complete hydraulic machine where the operations necessary for changing the dies are very easy. The maintenance of this machine is close to zero and the very simple pressing system based on hydraulically cylinders is not requiring any kind of adjustment. The complete line is formed by: **band spools stand** able to hold two spools of band "in line" that allows you to change the empty spool with the full one in just a few minutes, an **electronic band un winder** complete with **band straightening** automatically operating in relation to the press production speed, **hydraulic production press complete with 2 dies to produce 16 and 18 gauge brads**, "high power" **oil chiller** with electronic control of the temperature. One **general panel control with colour "touch screen"** and PLC, complete with check control, displaying all the eventual line alarms and the relative solutions. Also fitted to the machine is a **Strips coupling system** able to turn the strips produced by the press with the heads arranged one opposite to the other, to form groups of strips and with the quantity programmable by the Operator through the PLC and to divide the groups of strips one separated from the other on a motorized conveyor. This system greatly facilitates the final manual packing of the brads into box **utilizing the same worker who is also following the production press**. All the movements of the machines are controlled one by one by the PLC, that immediately stops the press in case of a problem to prevent any possible breakages of the die.

Technical information:

Pressure power about 200 bars

Motor power: 13 kw

Weight of complete line: 3.900 kg.

Footprint: mt. 7 x mt. 3

Speed of production: 60 strips of brads per minute with programmable speed adjustment control.



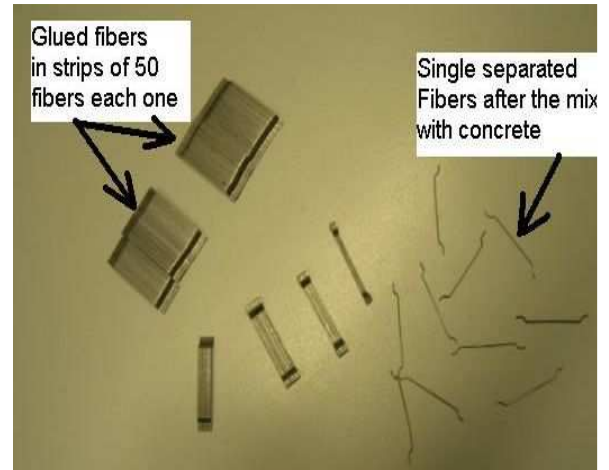


Complete banding and production lines models I.M. 100/F & I.M. 210/F to produce concrete glued steel fibres

To produce the glued concrete fibres we are offering **the lines**

I.M. 100 /F and I.M. 210/ F .

The gluing drying process fitted is only the one utilizing the induction heating of the wires, (because the glue utilized is a water based glue), and the complete die is expressly designed to stamp the fibres. The remaining parts of the lines are the same utilized for staples production, and for this reason **it is possible to produce the office staples as well the concrete glued fibres** utilizing the same lines by just changing some parts. The maximum round wires diameter that is it possible to use with these lines is 0,60 mm. for the line I.M. 100/F and 1,00 mm. for the line I.M. 210/F. In case it is necessary to produce bigger diameter fibres, we can supply the same powered press used in our E. 400/A. line
The fibres design can be agreed with the costumer and we are at your disposition tot also design dies to customers fibres design.



Technical characteristics:

Pressure power: The line I.M. 100 has **25 tons**, the line I.M. 210 has **40 tons**.

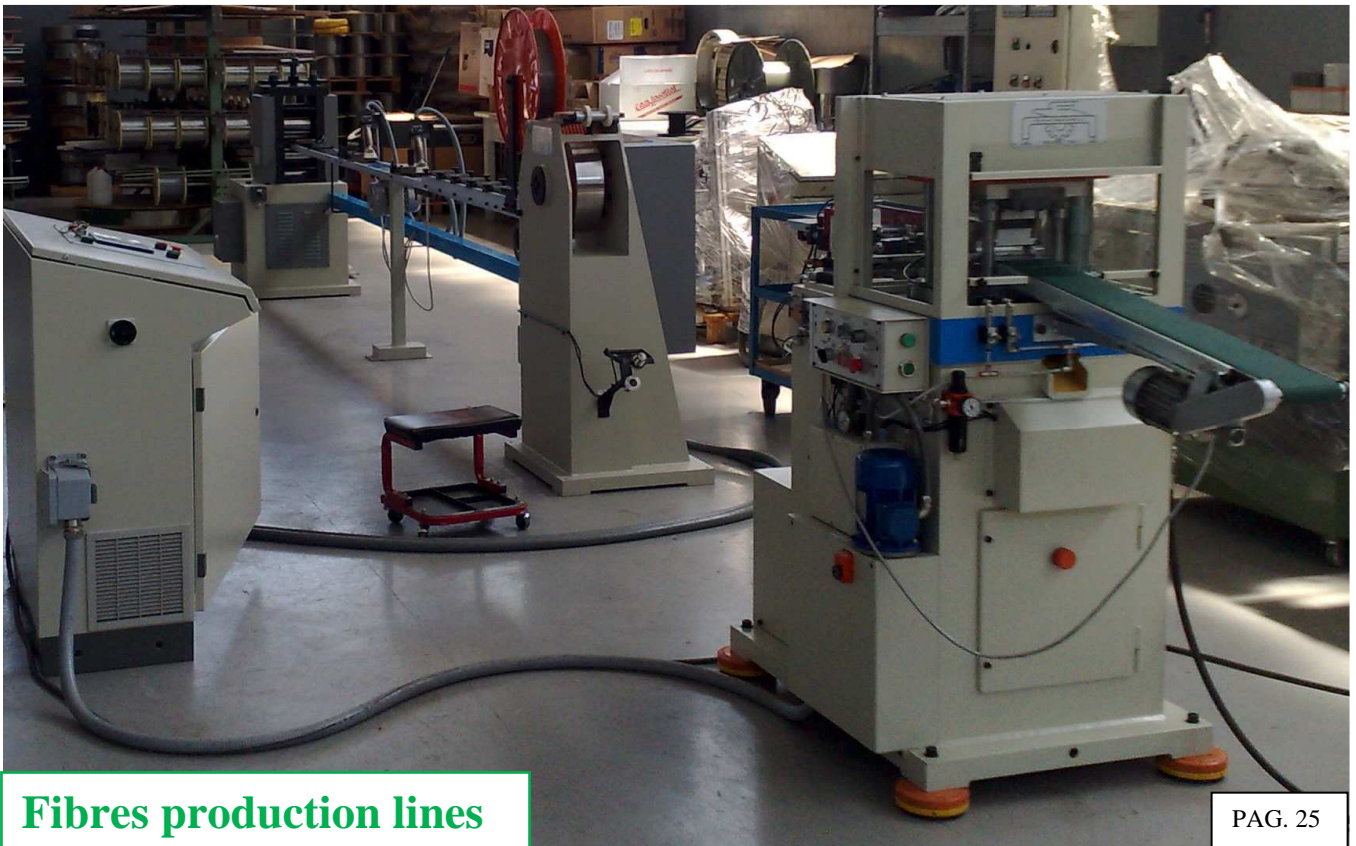
Strips of glued fibres per minute of both the presses: over 250

Production capacities: the production capacity in Kg. depends on the number of wires utilized simultaneously, by the diameters of the wires and by the length of the fibres produced.

Electrical power necessary: 25 KW for the line I.M. 100 and 30 KW for the line I.M. 210.

Footprint: Line I.M. 100, **excluding spools stand**, about 12 metres x 3 metres

Line I.M. 210 **excluded spools stand** about 13 metres x 3 metres



Fibres production lines



Some utilization of the glued steel concrete fibres

The steel concrete fibres are made utilizing round steel wire on spools. Our line is making a small flattening multi wires operation necessary to have a better control of all the wires during the banding process. The wire are glued utilizing a water base glue, (having the characteristics to dissolve during the mixing of the fibres with the concrete), after the formed band is dried and is arriving under our presses to be stamped. The final product are cut and deformed strips of wires ready to be utilized for the concrete reinforcement.



Reinforcing for concrete floor



Concrete tunnel reinforcing



Bridge construction



Final result of the product after mixing in the concrete



Crimping wires line for the production of steel brushes wire Model D 250

The crimping wires lines **model D 250** is able to utilize up to 250 round wires simultaneously. **Through the crimping wires group**, formed by 4 adjustable toothed rolls, and then 2 subsequent passages, the wires are all crimped forming a "plait" with a diameter of about 15 mm..

At this point **the wires winding group** is winding the plait of crimped wires onto a spool that can hold about 50 or more kg. of wire. All the line is controlled by **one general control panel** equipped with colour touch screen panel and complete with a PLC control.

The crimping group and the winding group are working synchronized and the Operator can adjust either the production speed or the tension power applied on the final winding onto the spool.

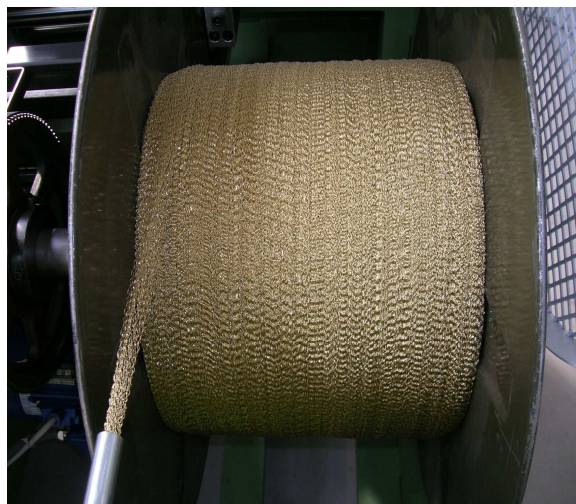
Technical information:

Wires range: from diameter 0,30 to diameter 0,80 mm.

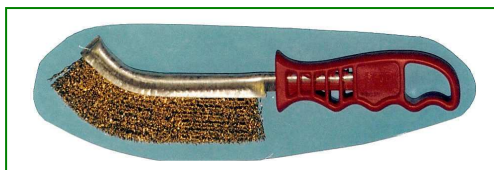
Power of the line: approx 15 KW

Footprint: excluding spools stand, mt. 6 x mt. 3

Speed of production: up to 40 metres of crimped plait per minute



The plait of crimped wires made by the line D 250 is utilized in the steel brushes industries:





Pencils packing machine Model P 180

The pencils packing machine **Model P 180** is suitable to pack 1 layer of pencils inside a carton box formed and glued automatically by the machine starting from an opened punched carton through a “wrap around packing system”. The group of pens ready to be packed must be pushed inside the chain containers of our machine that will move the packs under the box forming group where will be automatically packed. The packing speed of our machines is of about 14 boxes per minute. The movement of the container chain is made through a technological brush-less motor connected to an high precision coaxial gear reduction and all will be controlled by PLC. The machines is equipped by a panel control directly assembled on the machines bodies.

Footprint: mt.1, 5 x 1,0 x 1, 50 height

Total weight: about 250 Kg.

