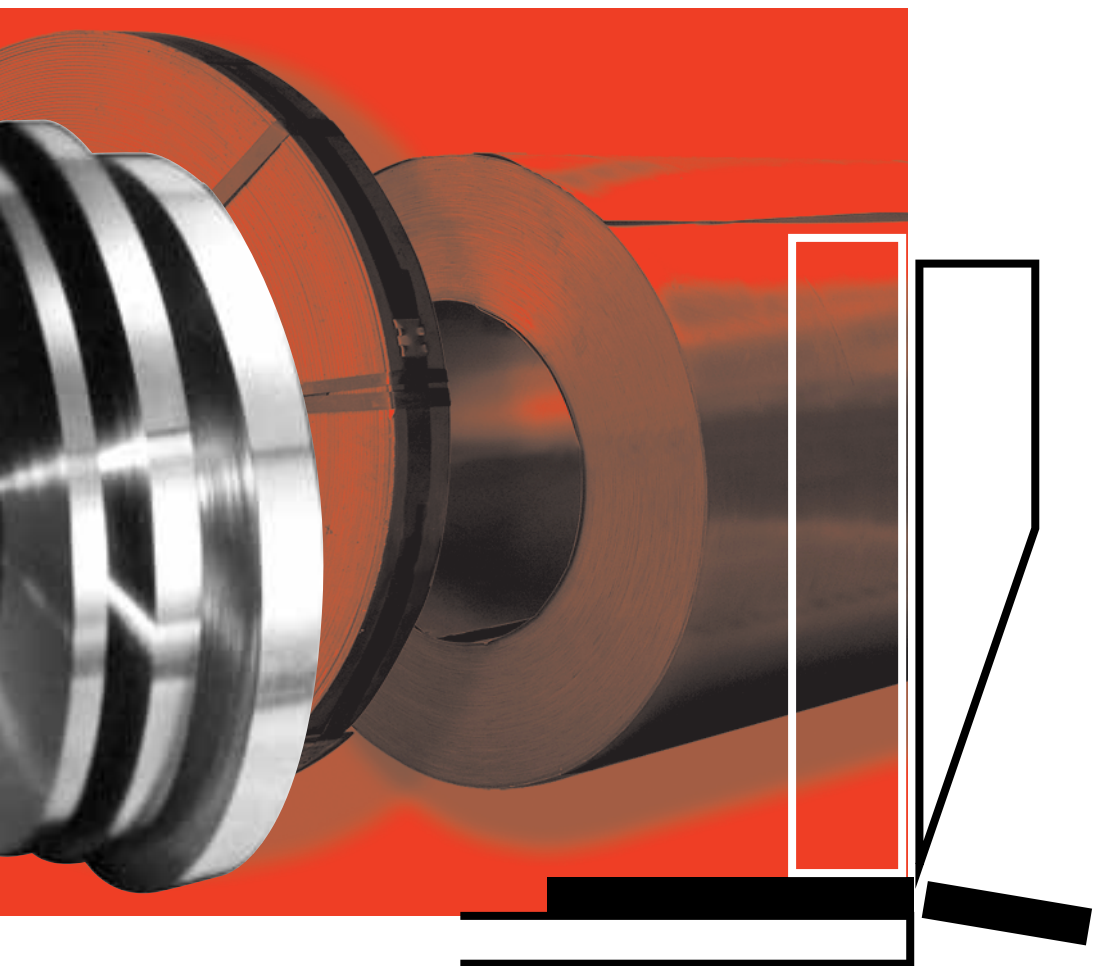


CUTTIN' LINES

CUT-TO-LENGTH AND SLITTING LINES



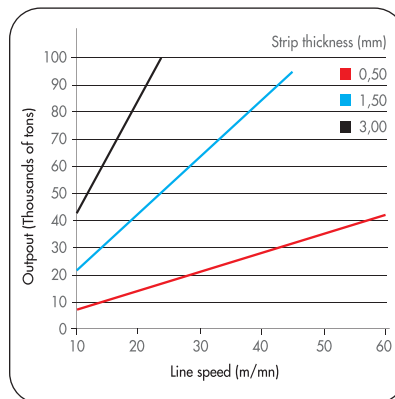
FLEXIBLE CONTINUOUS FORMING PROCESSES

www.dimeco-alipresse.com

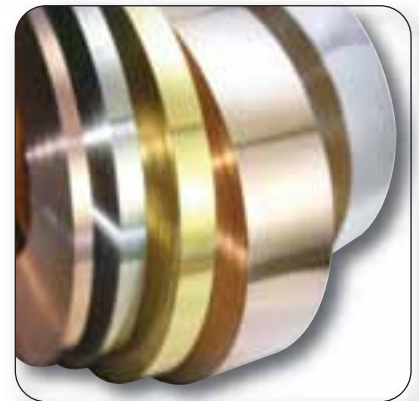
THE CUTTIN' LINES® CONCEPT : PRODUCTIVITY AND

scope of application and anticipated benefits

Based on its wide standardised coil feeding lines program, DIMECO offers a large range of Cut-To-Length and slitting lines showing outstanding price for value.



Annual capacity of a Cut-To-Length line



For all materials

SCOPE OF APPLICATION

DIMECO Cut-To-Length lines are principally intended for Original Equipment Manufacturers and contract manufacturers wishing to integrate the blanking activity into their operations in order to improve their competitiveness and reactivity. Medium size Service Centres may also find an appropriate price for value in choosing a DIMECO Cut-To-Length line.

DIMECO Cut-To-Length lines are suitable for coils from 100 kg to 33 tons and up to 2 metre wide.

TYPES OF BLANKS TO BE PRODUCED

The required dimensions, accuracy, flatness, squareness of blanks to be produced will influence the design of the Cut-To-Length line.

Finishing operations (marking, film application, etc.) may be advantageously integrated in the line. The type of packaging required (pallet type, different packaging levels...) will define the downstream section of the line.

WHY INVESTING IN A CUT-TO-LENGTH LINE ?

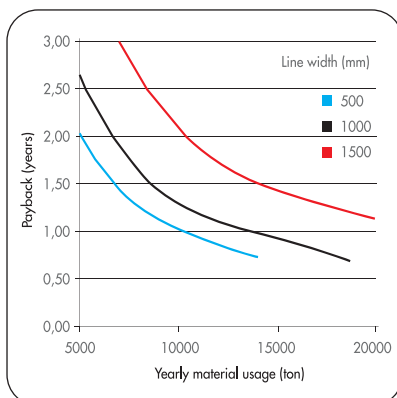
At manufacturers, the decision, is based on a "make or buy" analysis between purchasing blanks from service centres or in-house manufacturing on a new Cut-To-Length line, of all or part of their blank requirements.

The integration of blanking operations usually generates a reduction in the cost price of products, an increase in reactivity to lumpy market demand, a better control of raw material cost variations, an improvement in the quality and a reduction in inventories.

WHICH EXPECTED PAYBACK ?

Investment in a Cut-To-Length line could prove to be very quickly profitable, often, in less than 2 years. The payback can be as short as the material is expensive, as annual consumption is high as the maximum width of parts to be cut is moderate.

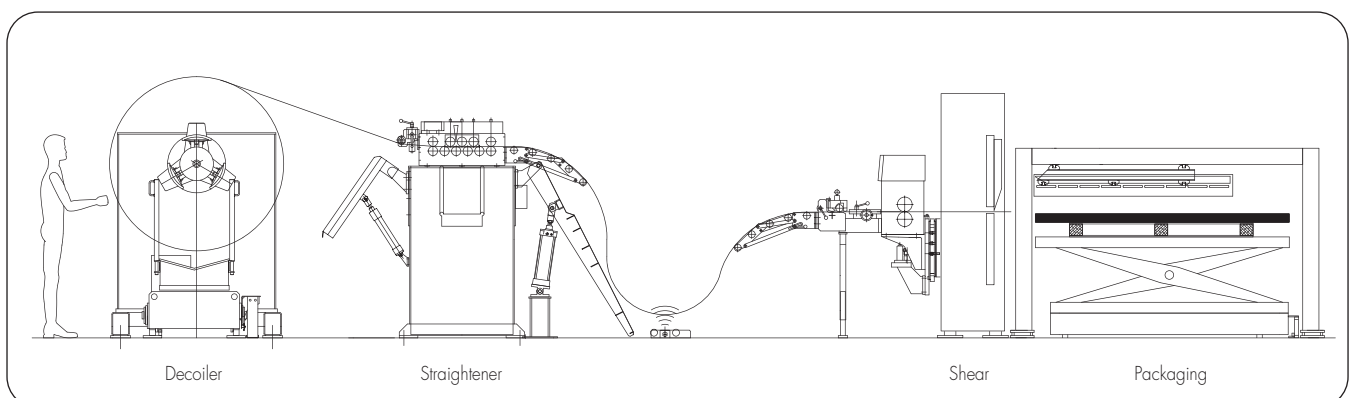
It is worthwhile carrying a feasibility study when material yearly consumption is above 2,500 tons.



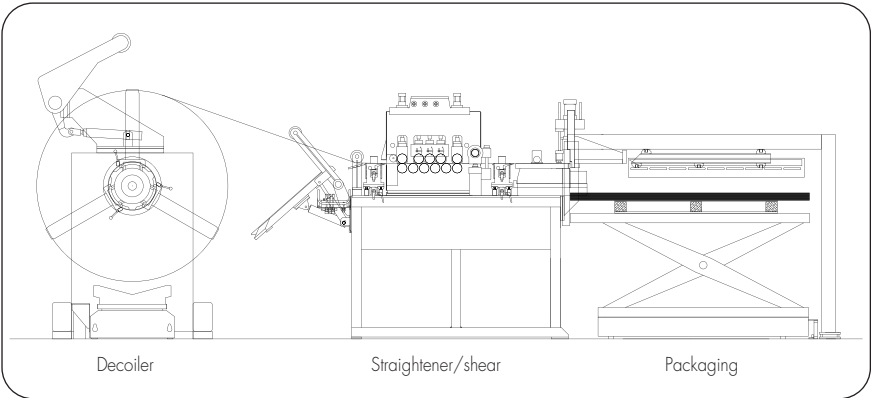
Profitability of the Cut-To-Length line

TARGETED PRODUCTIVITY AND FLEXIBILITY

The Cut-To-Length line can reach speeds up to 60 m/min or more. However, the actual capacity of a Cut-To-Length line is revealed by the number of blanks produced per hour or day, integrating stops and changeovers.



"Conventional" Long line layout



Short line layout

LINE LAYOUTS

A Cut-To-Length line is generally made up of a coil management and decoiling module, a device for straightening the strip, a shearing system and a blank packaging module.

The "conventional" layout of the line reveals a loop and a start-stop shear. It enables relatively high output and significant versatility.

The "short" line which integrates a combined straightener-feeder, is more limited in productivity. It is cost effective and offers a 40% saving of the occupied area. It is well suited to thick materials. The "loopless" line with a flying shear is often used for processing very delicate materials or when output requirements are higher.

STRONG INTEGRATION CAPABILITY

DIMECO integrates in its Cut-To-Length lines the additional technologies required for the delivery of a turnkey system : marking, welding, assembly, handling...

The line may also be integrated into other company I.T. systems. By means of the ETHERNET network, the Cut-To-Length line may exchange with the ERP the production programs, together with real time line operating parameters.

DEVELOPMENT PROCESS

The Cut-To-Length line is designed as per your specifications. The final design of the line is the result of various exchanges between the customer's engineers and DIMECO.

The range of strip thicknesses to be processed will have a major impact on the line complexity. The poor quality of processed coils may lead to a choice of more sophisticated machines.

The design and manufacturing of the Cut-To-Length line are following the principles of the ISO 9001 quality insurance standards. "Milestones" are established, revealing the main stages of the project: design approval, provisional acceptance at DIMECO, final acceptance on site, etc.

ROBUST AND RELIABLE EQUIPMENT

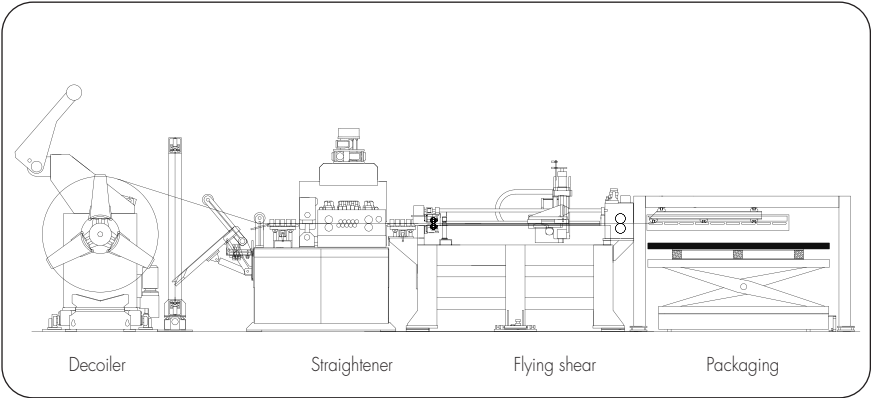
The structure of the Cut-To-Length line is based on standardised modules, which reliability has been proven and costs optimised.

The OPTIMASTER® or SIMOSTAR® numerical control supervises the Cut-To-Length line. They are based on respectively, BOSCH-REXROTH or SIEMENS components, which reliability and maintainability are well known.

Equipped with safety fences, the DIMECO Cut-To-Length lines comply with latest EC safety regulations.



SIMOSTAR® panel



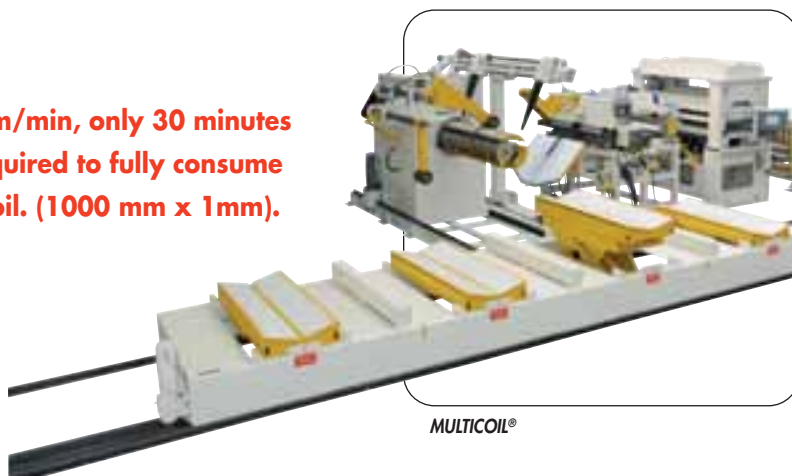
Flying shear layout

The training of your operators is often carried out in your own language thanks to the international network of DIMECO agents.

DIMECO lines may be fitted with a modem enabling remote maintenance by DIMECO engineers.

COIL MANAGEMENT AND DECOILING

At 30 m/min, only 30 minutes are required to fully consume a 8 t coil. (1000 mm x 1mm).



MULTICOIL®



Double decoiler

NUMEROUS COIL CHANGES

The high decoiling speed of a Cut-To-Length line leads to frequent coil changes.

Furthermore, sites following the "Lean manufacturing" practices are constantly seeking cuts in inventories. They only cut the number of blanks required for subsequent production, thus multiplying the number of coil changes.

The Cut-To-Length line operator often has to change the coil more than 10 times per shift. Without special attention to the changeover time, the Overall Equipment Effectiveness (O.E.E.) of a Cut-To-Length line can easily fall below 40%.

S.M.E.D. ACTIVITY OUTPUT

After a changeover organisation phase, which will result in significant benefits, the customer should make sure that the configuration of the Cut-To-Length line is adapted to quick changeovers.

The loading of the new coil on the decoiler and its preparation makes up the longest task of the coil changeover time. Then comes the time required for the recoiling and insertion of the new strip.

The various adjustments (decoiler alignment, straightener, coil keepers, speed, etc.) may cause numerous problems which are often the source of an exponential increase in the changeover time.

A MUST : THE DOUBLE DECOILER

This enables unstrapping and strapping of the coil in full operator's safety even when the line is operating. In order to be efficient, the double decoiler should get coil alignment and holding accessories fitted on both mandrels.

The MULTICOIL® system consists of several mobile carts moving perpendicularly to the decoiler mandrel, each cart receiving a coil. The operator may get available the coils which he must use during his work shift.

"PITSTOP" COIL CHANGEOVER

The "PITSTOP" configuration of the Cut-To-Length line allows the insertion and recoiling of the strip without manual action in less than 3 minutes and offers automatic adjustment of all the machine parameters when selecting the part from the production list menu.

SAFETY OF OPERATORS

With an increase in coil weights and material yields, the decoiler becomes a machine presenting major safety risks for the operator. Pressure arms, safety light curtains, enable personnel protection to be ensured without having a negative effect on the performance of the line.



Movable decoiler

The safety of operators must be guaranteed by selecting accessories adapted to the decoiler.



Rear loop



Quadruple decoiler

FLATTENING THE STRIPS

WHICH DEFECTS TO BE CORRECTED ?

High quality coils only present a single shape defect i.e. the coiling defect called "coil set". With coils of a lesser quality, other defects may be found (crossbow, camber, long or wavy edges, centre buckles) which may be more difficult to correct with the straightening equipment.

When it crosses the straightening rollers, the strip passes through a succession of alternate deflections. Depending upon the design of the straightening machine and its adjustments, a variable portion of the strip thickness exceeds the yield strength of the material. This portion is called the "plastification" ratio.

The Leveller has a high number of rolls and numerous adjustment axis enabling a reduction or remedying of major coil defects: crossbow, camber, long or wavy edges, centre buckles

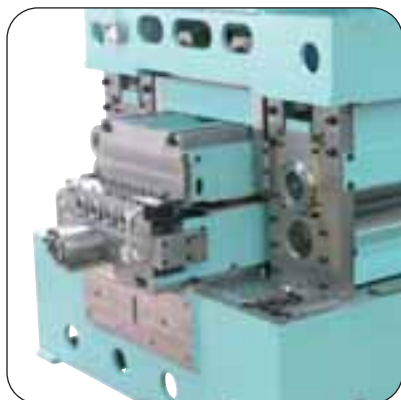
CHOOSING THE RIGHT STRAIGHTENING MACHINE

A simple and cost efficient straightener may be used for processing high quality coils.

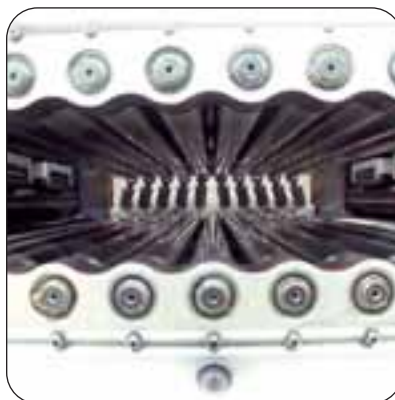
On the other hand, the correction of shape defects in poor quality coils will lead to the integration of a precision straightener or a leveller in the Cut-To-Length line.

The choice of a leveller will also be necessary if the requirements in terms of blank appearance and flatness are demanding.

A range of more than 100 standardised straightening and levelling machines is available at DIMECO.



Detachable cassette straightener



21 roller straightener



9 adjustment axis, 6 high leveller



Detachable rollers

3 TYPES OF STRAIGHTENING MACHINES

The standard straightener has a limited number of rolls. It enables a level of approx. 50% plastification to be achieved, which is adequate for correcting coil set.

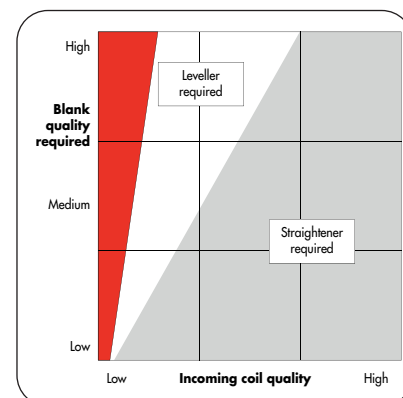
The "precision" straightener generally got a high number of rolls fitted according to specific layouts which enables an increased plastification ratio to be achieved, thus efficiently correcting coil set and most of crossbow defects.

Levellers are high end machines which reach high levels of plastification (> 80%).

HIGH QUALITY DESIGN AND MANUFACTURING

The geometry of the straightening equipment, notably the parallelism of rollers is essential to obtain optimum straightening. Our frames are machined on precision machining centres. Rollers are guided by low backlash needle bearings.

A special attention is paid to the production of the rollers. They are case hardened, ground and trued to guarantee maximum impact toughness and a hardness of 60 HRC. Additional special treatments are optional : hard chromium plating, TOPO-CHROME®, etc.

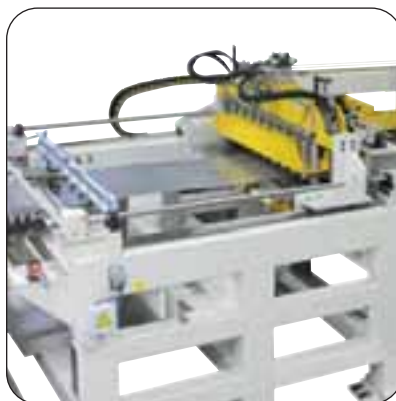


Straightener or Leveller ?

The straightener selection is the trickiest stage in the definition of a Cut-To-Length line.

SHEARING AND STRIP PREPARATION

The shear is the machine which generally defines the speed of the Cut-To-Length line.



Flying shear



Oscillating shear

THE CUTTING SHEAR

The shear is obviously the key machine in the Cut-To-Length line. Depending up on the output rate, thicknesses and types of material to be cut, one may opt for a pneumatic, hydraulic or electromechanical shear.

Pneumatic shears are reserved for light applications for cross sections less than 650 mm².

Electromechanical shears enable highest output and big cross sections.

Hydraulic shears enable cutting of the largest sections but are normally limited in terms of speed.

If the thicknesses range is wide, the selected shear will necessarily feature an adjustable blade gap, which can be manual or powered and programmable. If the cut shape is not straight, the shear may be replaced by a press and a shearing tool showing the desired cutting profile.

THE FLYING SHEAR

In general, the feeding movement of the strip is stopped for the period during which the shear cuts. When the line speed is high or when material is delicate, a flying shear is preferred. The shear is fitted on a mobile cart, which movement is controlled by servomotors. The cart is synchronised with the strip and enables the cutting shear stroke without stopping the strip.

OSCILLATING SHEAR

In certain applications intended notably for silicon steel sheets or automobile parts, the manufacturer cuts trapezoidal blanks in order to reduce raw material costs.

In this instance, the Cut-To-Length line is equipped with one or several oscillating shears. The shear is then fitted on a mechanism enabling rotation around a vertical axis. The angular displacement is servo controlled and monitored by the line supervisor.

CROPPING SHEAR

In order to get cleancut coil ends, a cropping shear can be fitted at the entry of the line. It will enable the incorrect part of the coil to be scrapped and will result in an easier introduction of the strip into the Cut-To-Length line.

EDGE TRIMMING

If the quality of the coil is inadequate, a trimming shear with circular knives can be fitted. Located at both sides of the strip, they will enable a few millimetres of incorrect strip to be scrapped.

To a certain extend, the manufacturer can also use this device to reduce the coil width, thus dropping the number of coils kept in the inventory



Edge trimmer



Cropping shear



Mechanical shear

SLITTING AND RECOILING

LINE STRUCTURE

DIMECO slitting lines feature reasonable performances, well suited to the requirements of Original Equipment Manufacturers wishing to integrate the slitting process in their works.

The production process of coils at steel mill results in variable thicknesses within the strip. Indeed, the strip centre shows a slightly greater thickness than the edges.

After slitting, the recoiling of several strips on the same mandrel results in different linear speeds. The differences are greater as the thickness is less and the number of cuts is increased as the coil quality is poor.

RECOILING

Depending up on the application, a tension stand may be placed at the entry of the recoiler.

The recoiler is chosen from a wide selection of machines ranging from 1000 kg to 25 tons.

The strips are fixed on the recoiler by means of a hydraulic clamping system. The strips are guided by a separator arm.

Slit coils may be removed from the drum by means of a crane or pushed out into a double or quadruple turret.

**Performance well-fitting
O.E.M. requirements.**

**Up to 50 m/min,
thickness from 0.1 to 2 mm.**



Separator arm



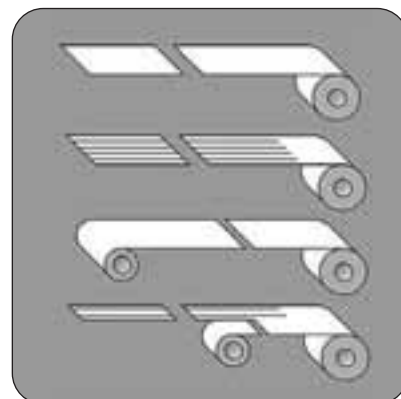
Accurate guiding of the strip



Slitting head



Scrap recoiler



Different production modes of a combined line

When differences in the length of the recoiled strips become too high, a pit of an adequate depth should be installed.

SLITTING HEAD

The slitting head is made up of a fixed lower shaft and a detachable upper shaft. The standard head shows up to 12 sets of circular knives. The knife positioning is generally manual, thanks to a knife's ruler. The automatic knife positioning on the shafts or the rapid head changeover may be offered as an option.

Depending up on strip thickness, the edge trim scrap is removed to a baller or to a scrap chopper or recoiled.

COMBINED SLITTING/CUT-TO-LENGTH LINES

These are very cost efficient and versatile solutions. On the same equipment, from a single coil feeding line, one can cut-to-length, slit, blank or split a coil.

By using a lengthwise shear to slit the blank, together with a part nesting software, one can cut blanks to various dimensions from the same coil.

**"Combined" lines
featuring Cut-To-Length
and slitting, offer
exceptional flexibility
at an affordable budget.**

STACKING AND PACKING SECTION

Well designed packaging facilitates storage and subsequent operations.

A WIDE RANGE OF SYSTEMS

The design of the stacking system will depend up on numerous parameters: line speed, size and weight of the blanks, type of material, complexity of the stacking pattern. We can arrange the output of your Cut-To-Length line by selecting various features from a wide range of available solutions.

GRAVITY PROCESS

For basic applications, a simple retractable flap system implemented immediately after the shear will be adequate. The blank will be dropped onto the pallet and positioned by guides or a tacking system.

ROBOT CONTROLLED STACKING

When the packaging method is complex, robot controlled stacking is carried out with one or several anthropomorphic robots.

The most sophisticated equipment shows systems enabling the fast removal of moving parts on the conveyor then ensuring more complex stacking patterns.

CONTINUOUS STACKING

In the fastest lines, stacking is carried out continuously. Blanks may be stacked on at least two positions. Removal of the full pallet is carried out while the stacker is filling another empty position.



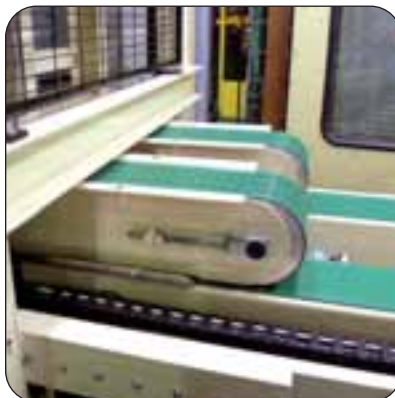
Simple stacker with flaps



2D Stacker with magnetic suckers



Robot controlled packaging



Vacuum belt stacker



Pallet handling

GRIPPING THE BLANKS

After shearing, the blank may be removed by a roller ejector.

For faster lines, magnetic or vacuum belt conveyors can be used.

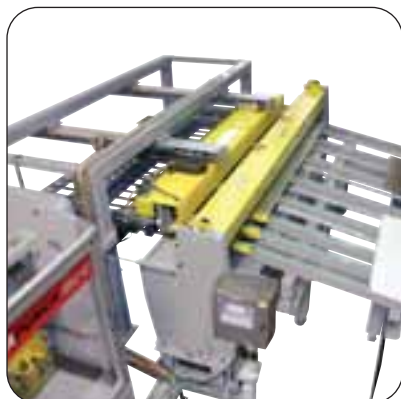
2D Cartesian robots fitted with suckers or magnetic systems may also be implemented.

PALLET MANAGEMENT

A set of roller conveyors ensure filling and removal of pallets. At the stacking station, the pallet is located on a height controlled lifting table.

OTHER INTEGRATED FUNCTIONS

countless possibilities



Lengthwise shear



Strapping

The PROFIBUS system ensures straightforward networking of various machines and accessories.

HIGH PERFORMANCE LINE SUPERVISION

A DIMECO Cut-To-Length line is monitored by standardised SIMOSTAR® control based on the SIMOTION® technology from SIEMENS®. It offers numerous possibilities of control and interfacing with other devices (Profinet, Profibus, Ethernet, etc.).

On the basis of an optimised kernel, DIMECO engineers develop programs specific to your application.

The colour graphic touch screen terminal is programmable in Wincc.

ASSEMBLY

Some lines may simultaneously cut 2 different superposed material strips. At the line output, both strips may be seamed by means of welding, crimping or bonding devices, which are integrated in our system.

PROTECTION OF THE BLANK

When the manufacturer is working with delicate materials (pre-painted, stainless steel, aluminium blanks etc.), a protection of the blanks is often necessary. A plastic film application system on one or both sides of the strip is integrated in the line.

A paper film application can also be provided based on an electrostatic process.

IDENTIFICATION

Requirements in terms of identification and traceability of the products are becoming more and more stringent. We are frequently integrating ink-jet printing systems, laser marking or labelling systems. Printed text can be composed by the line supervisor, on the basis of process data collected on the line or from data received from other company information systems. Measurement or weighing systems can be installed and used in real time.

PACKAGING

The Cut-To-Length lines which are operated in Service Centres generally require an in-line blank packaging system. This module may include various devices as pallets building system, strapping units, various protective or reinforcement product insertion equipment.

A stretch wrapper may also be located at the end of the line.



Spot welding of 2 superposed strips



Inkjet marking Unit



Foil application (top/bottom)

FROM THE CUT-TO-LENGTH LINE TO THE F.M.S.

a very simple step to make

FLEXILINES®
FLEXIBLE CONTINUOUS FORMING PROCESSES

The addition of a few
punching or forming operations
improves the profitability
of the Cut-To-Length line.



LINAPUNCH® MC-E N.C. punching machine



Crosswise adjustable rollformer

SCRUTINISE DOWNSTREAM MANUFACTURING OPERATIONS

The majority of blanks produced from a Cut-To-Length line later undergo other punching or forming operations. A more cost effective process is obtained by achieving the greatest number of operations possible on the Cut-To-Length line before packing the blank.

A DIMECO Cut-To-Length line has a complete decoiling system and a reliable and accurate strip feeder. It is therefore easy and cost efficient to aggregate additional operations to the line such as punching, rollforming or bending, without reducing the performances of the Cut-To-Length line.

N.C. PUNCHING

Punching operations may be carried out by using the proprietary "MULTISTEP" technology. Each feed length becomes variable and programmed in order to accurately locate the strip under the actuator and the desired tool.

Depending up on the application, the actuator may be pneumatic, hydraulic or electromechanical. If the same tool is due to punch at different crosswise locations on the strip, an additional N.C. "y" axis may be implemented by means of a servo driven transverse moving cart.

DIMECO offers a wide range of standardised punching solutions: from the simple hydraulic unit to the hydraulic or servo-electric 2 axis NC punching machine LINAPUNCH®.

FLEXIBLE ROLLFORMING

It is very suitable to integrate rollforming in a coil fed manufacturing line. Rollforming is a rapid and cost effective process for forming metal strips. It is well suited to the forming of long parts, complex cross sections, for thicknesses generally between 0.1 mm to more than 5 mm.

Rollforming is also suitable for forming delicate materials (aluminium, copper, pre-painted, etc.) and for the processing of very high yield steel.

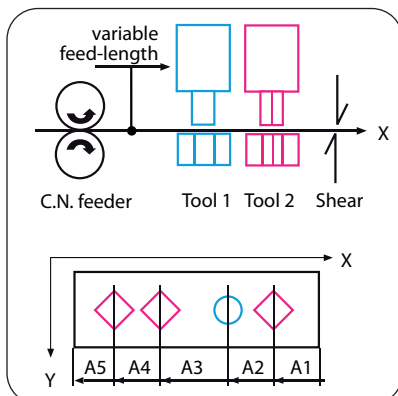
N.C. BENDING

Bending technology guarantees a high geometrical quality of manufactured parts. Bending enables the cost effective production of an infinite number of different shapes with standardised tooling. Bending is essential if parts are to be formed on 4 edges. When numerically controlled, bending enables the shape of the manufactured section to be instantly changed.

LIMITED ADDITIONAL COSTS

The integration of punching and forming features from the beginning of the line project leads to optimized additional costs.

With limitations, a DIMECO Cut-To-Length line may also be upgraded after commissioning.

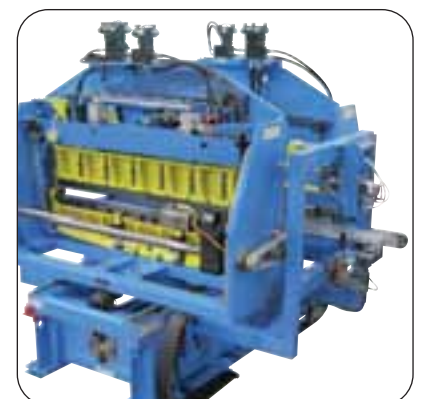


The MULTISTEP punching technology : principle

For further information
relating to F.M.S. from DIMECO,
please see our specific
FLEXILINES® brochure.



PUNCHING-BENCH®



DIMEFORM® NC bending

CUSTOMER APPLICATIONS

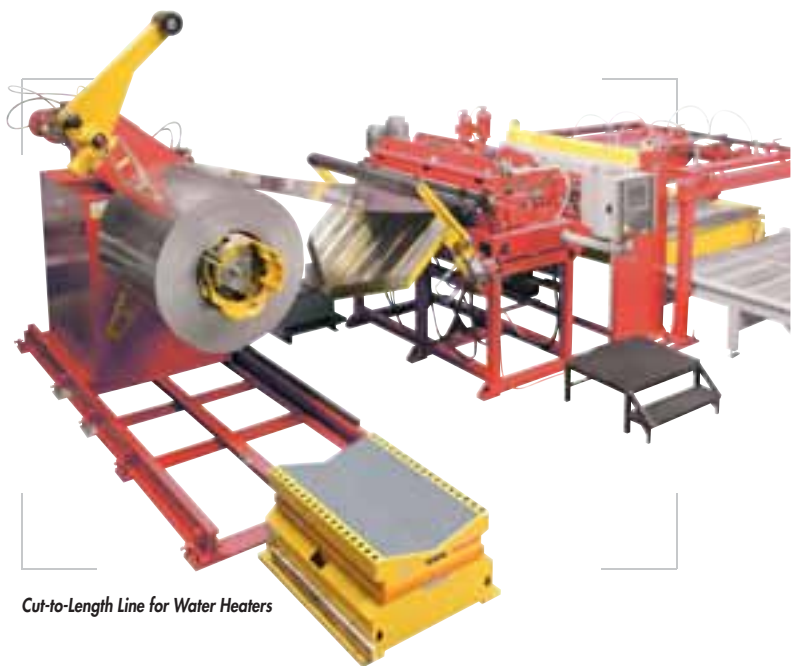
**Original Equipment
Manufacturers**

Contract Manufacturers

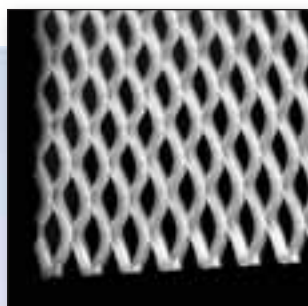
Service Centres

IN NUMEROUS BUSINESS FIELDS

- Home appliances
- Claddings, roofing and other building products
- Exhaust Systems and wheels for passenger cars and trucks
- Water heaters and boilers
- Motor and Transformer Laminations,
- Electric enclosures
- Metal Furniture
- Service Centres for Steel, Aluminium and other metals
- ...



Cut-to-Length Line for Water Heaters



References : ALFALAVAL, PORTAKABIN, KME, GREIF, WHIRLPOOL, ARCELOR-MITTAL, INDIAN-RAILWAYS, FAURECIA, MEFRO, VAILLANT, ELRING, SYMAGA, DAGARD ...

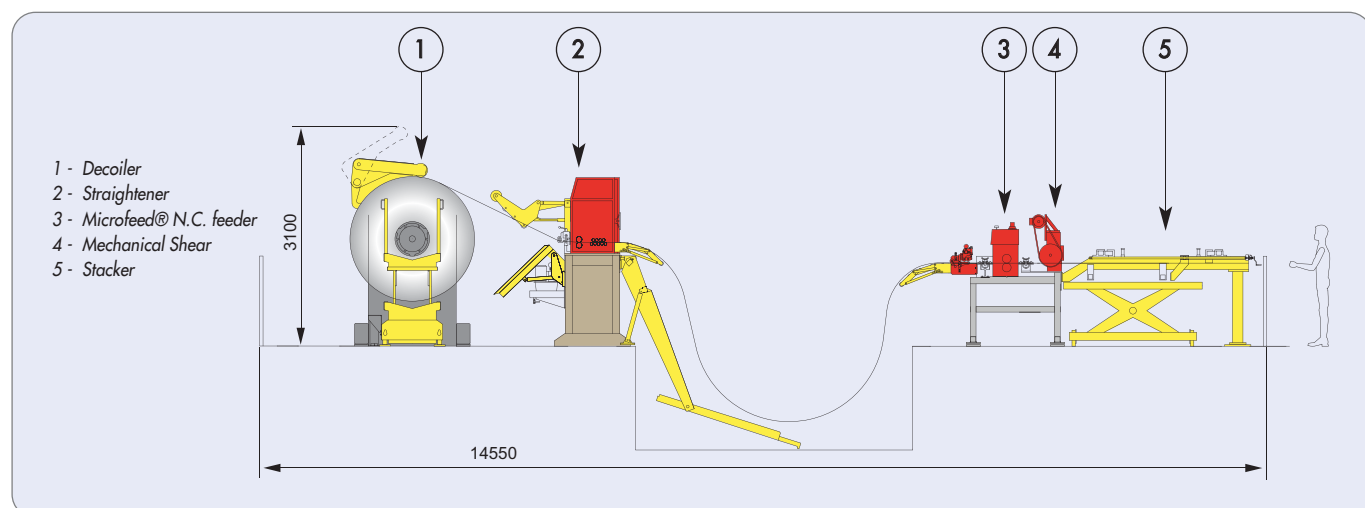
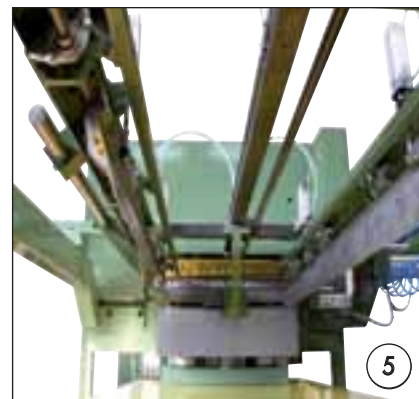
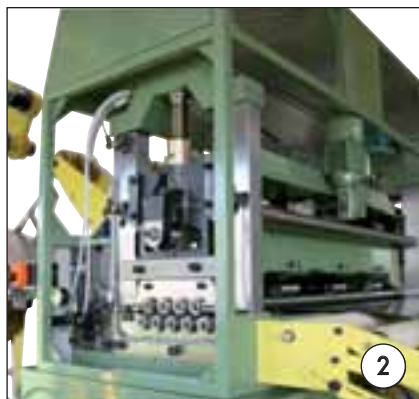
LONG LINE

home appliances

- Max Width : 1,000 mm
- Max Length : 2,000 mm
- 0.4 mm < Thickness < 2.0 mm
- Max Speed : 60 m/mn
- 38 Spm for L = 1,000 mm
- Mild Steel.

ADVANTAGES OF THE SOLUTION

- Designed for intense usage: 3 shifts, 7 day operations.
- Loading of 15-ton coil without any manual job.
- 9 roller precision straightener fitted with backup rolls.
- Double Stacking table.
- Stacking on pallet or into containers dedicated to each blank size.
- Line supervision thanks to the SIMOSTAR®.
- Control (SIEMENS SIMOTION hardware).



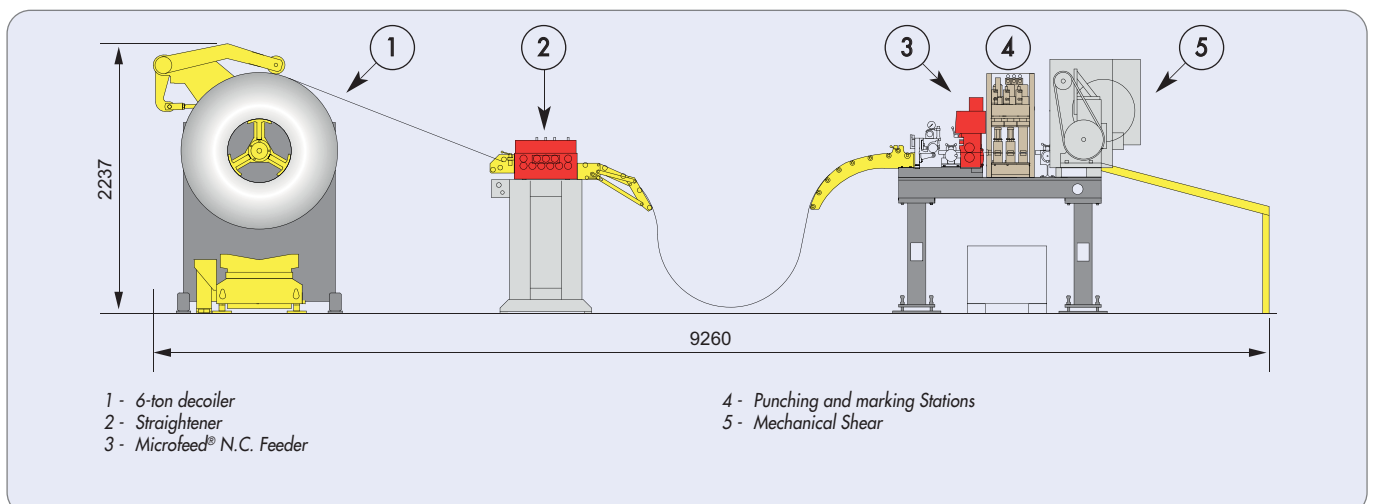
CUT-TO-LENGTH AND MARKING LINE

exhaust system components

- Max Width : 800 mm
- Max Length : 2,000 mm
- 0.6 mm < Thickness < 2.0 mm
- Speed : 40 m/mn
- 20 Spm for L = 1,000 mm
- Cold rolled, galvanised or stainless steels.

ADVANTAGES OF THE SOLUTION

- Loading of 6-ton coil without any manual job.
- The double 3.5-ton unit and one 10-ton unit are programmable.
- Simple Punching and notching operations can be performed in-line.
- Integrated embossing marking unit.
- Quick Part changeover in less than 10 minutes.
- Line supervision and part programming are monitored through the SIMOSTAR® control (SIEMENS SIMOTION hardware).



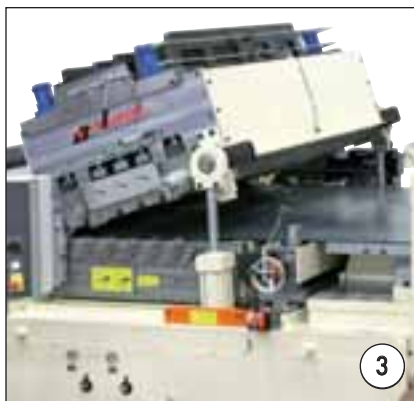
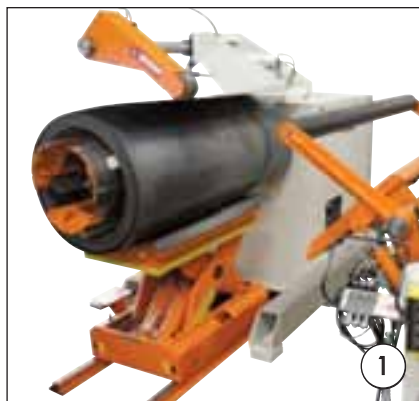
SHORT LINE FOR THICK STRIPS

expanded metal

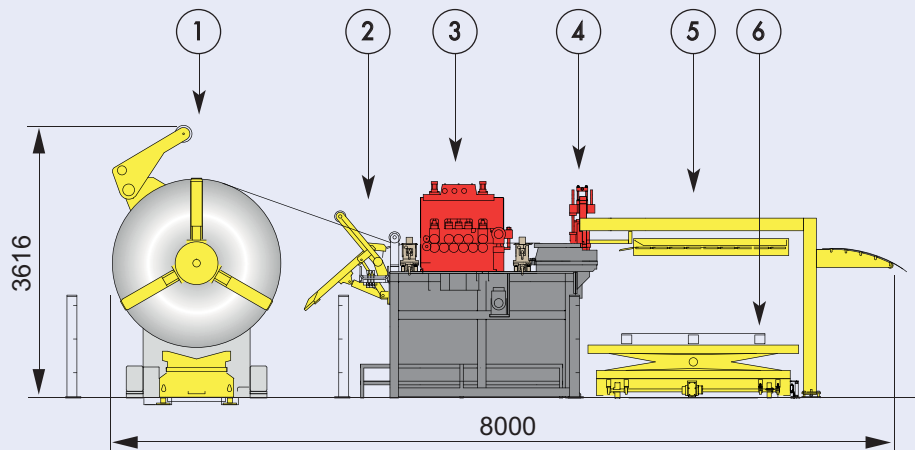
- Max Width : 2,000 mm
- Max Length : 2,500 mm
- 1.0 mm < Thickness < 4.5 mm
- 4 Spm for L = 2,500 mm
- Hot or cold rolled steel, stainless steel. Aluminium, copper, pre-painted steel.

ADVANTAGES OF THE SOLUTION

- 8-meter long very compact line.
- Loading of 15-ton coil without any manual job.
- Straightener-feeder with crocodile head opening for easy roll cleaning.
- Hard chromed rolls for better durability.
- Stacking onto a lifting table with automatic stack levelling.
- Possibility to switch to a press regular feeding mode, with integrated loop control.



- 1 - 15-ton Decoiler
- 2 - Peeling Table
- 3 - Straightener-feeder
- 4 - Hydraulic shear
- 5 - Stacker
- 6 - Lifting Table



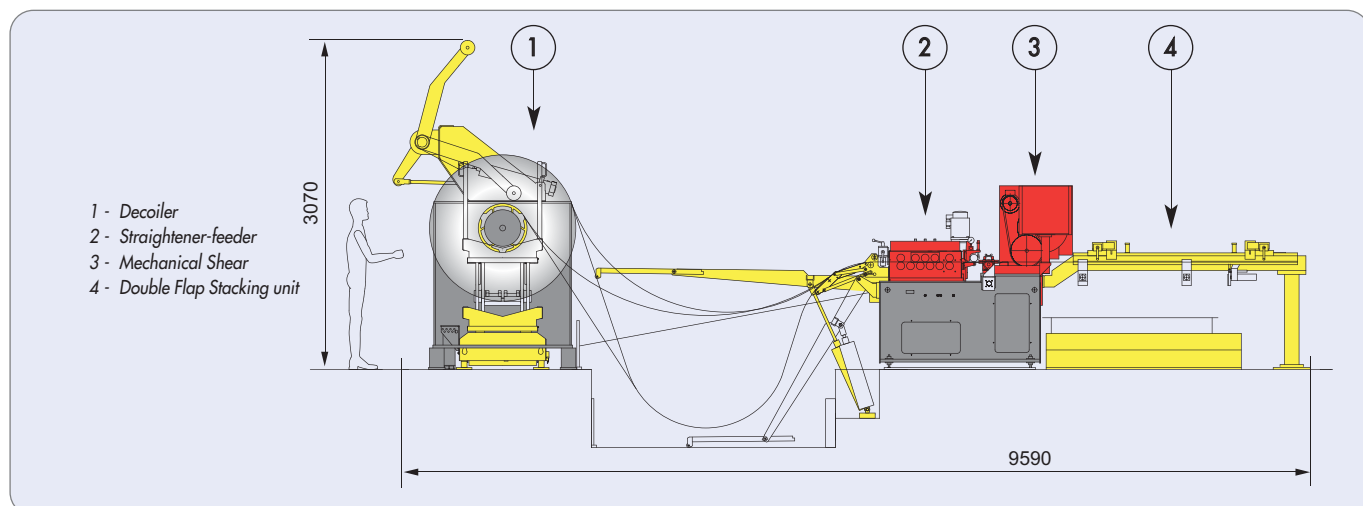
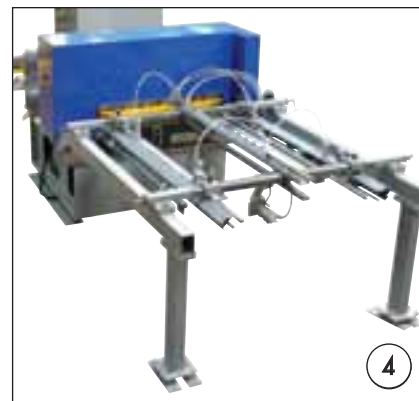
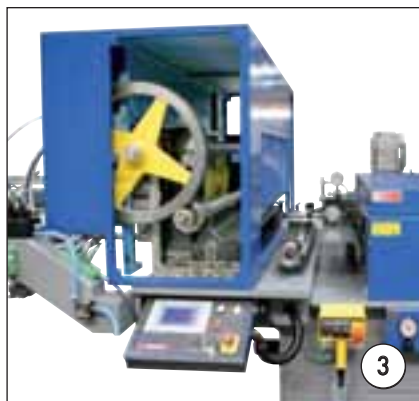
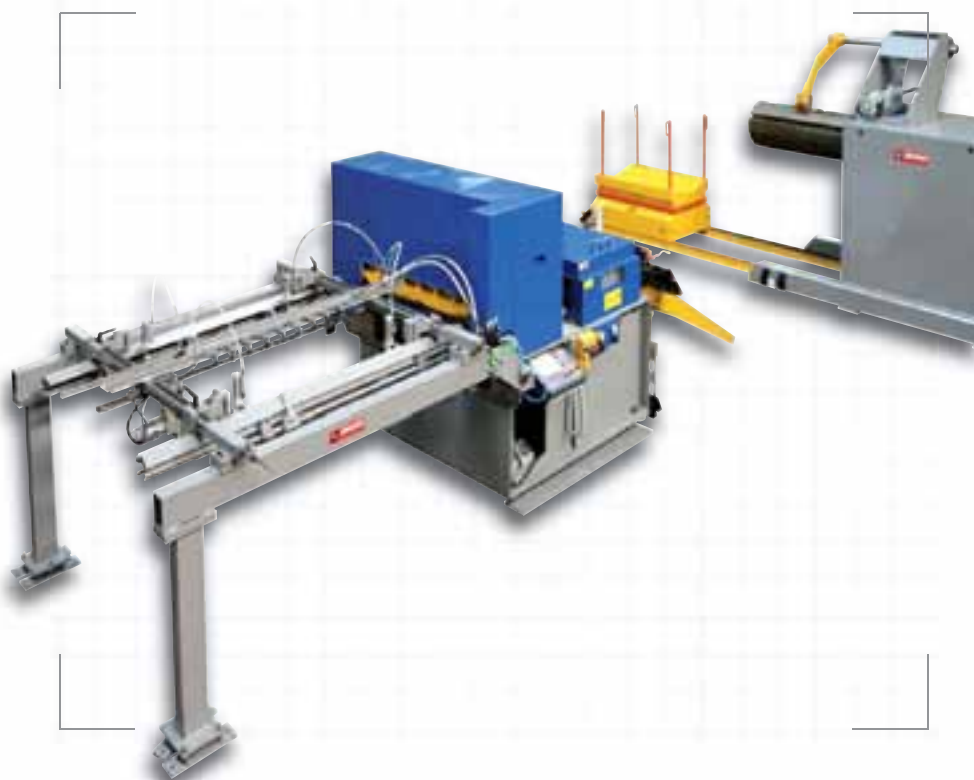
COMPACT AND COST EFFECTIVE LINE

metal packaging, drums

- Max Width : 1,250 mm
- Max Length : 1,800 mm
- 0.8 mm < Thickness < 1.2 mm
- 10 Spm for L = 1,000 mm
- Mild Steel.

ADVANTAGES OF THE SOLUTION

- 9.5-meter long Compact line.
- Loading of 10-ton coil without any manual job.
- Combined NC servo straightener-feeder.
- Mechanic Shear.
- Stacking onto a lifting table with automatic stack levelling.
- Line supervision thanks to the SIMOSTAR® Control (SIEMENS SIMOTION hardware).



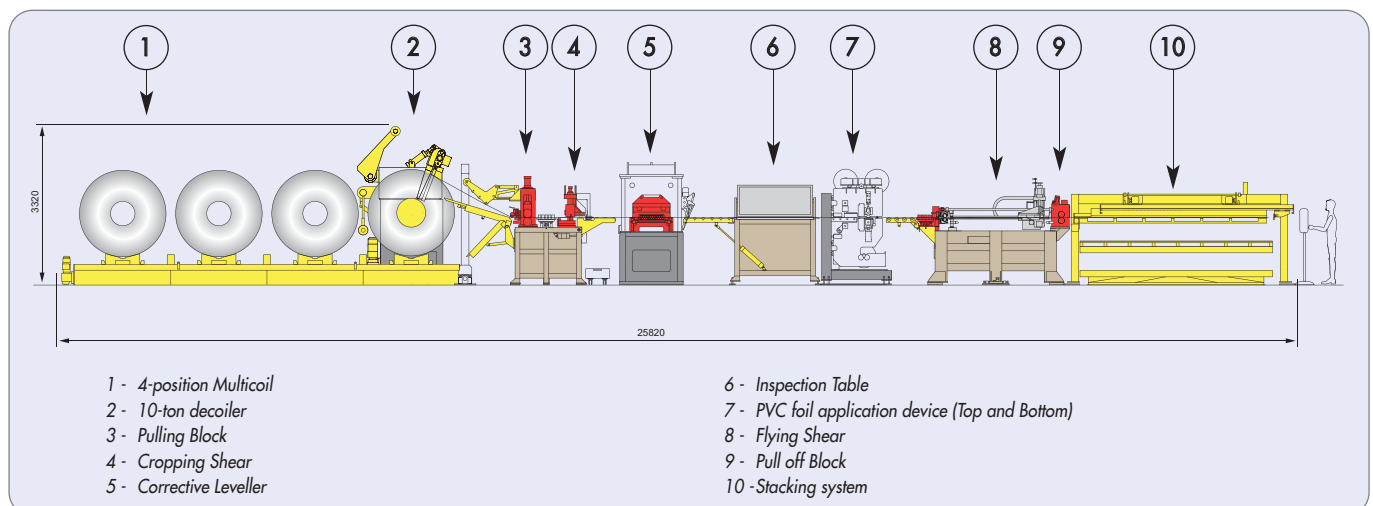
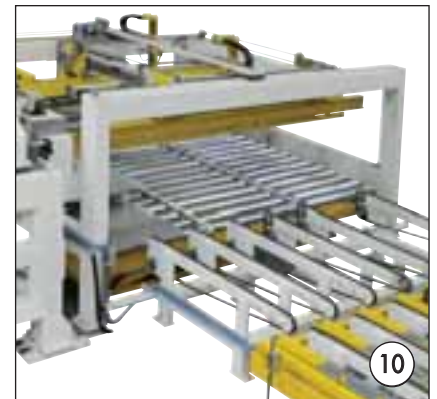
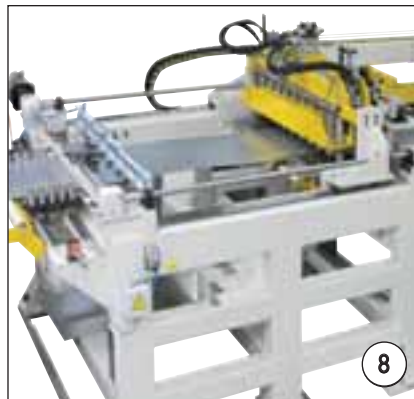
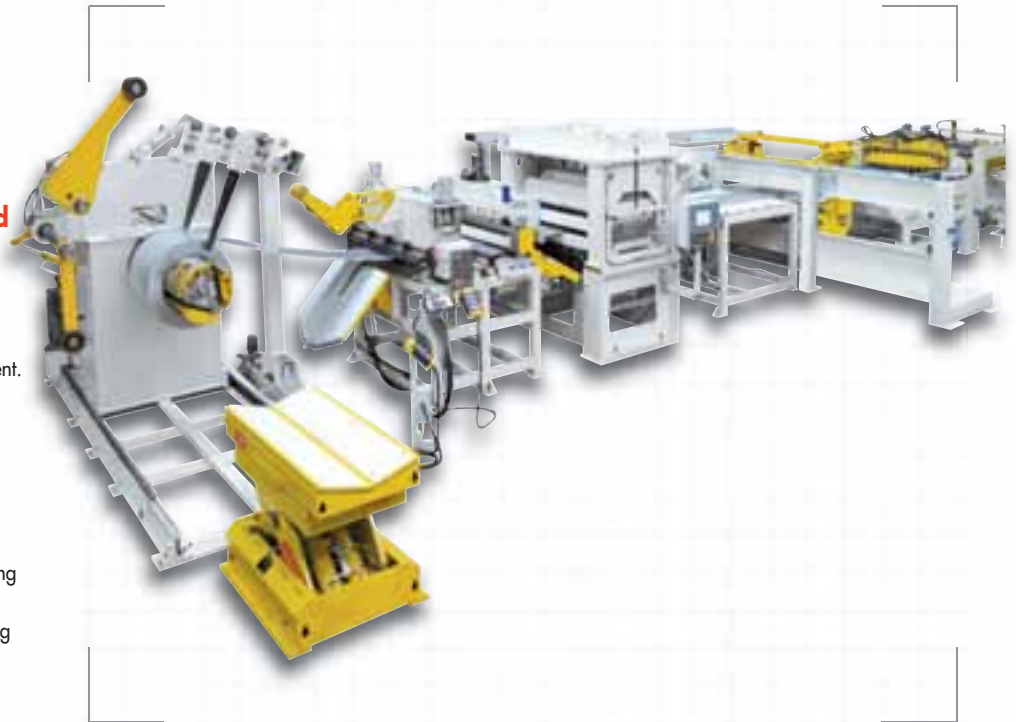
11 SERVO-AXIS CORRECTIVE LEVELLER AND FLYING SHEAR

building finishing parts

- Max Width : 1,500 mm
- Max Length : 4,000 mm
- 0.6 mm < thickness < 2 mm
- Speed : 40 m/mn
- 14 Spm for L = 2,000 mm
- Aluminium, black or pre-painted steel. Galvanized steel

ADVANTAGES OF THE SOLUTION

- Dynamic control of the 10-ton decoiler alignment.
- Fully electric 21 roll Leveller.
- Excellent levelling quality thanks to the "6-high" leveller design.
- Less than 10 minutes coil changeover.
- Keeping the same streep width, instant part length change, without stop nor scrap.
- The Line Supervisor sequences the manufacturing orders downloaded from ERP in order to stack blanks on the same pallet in order of decreasing length.



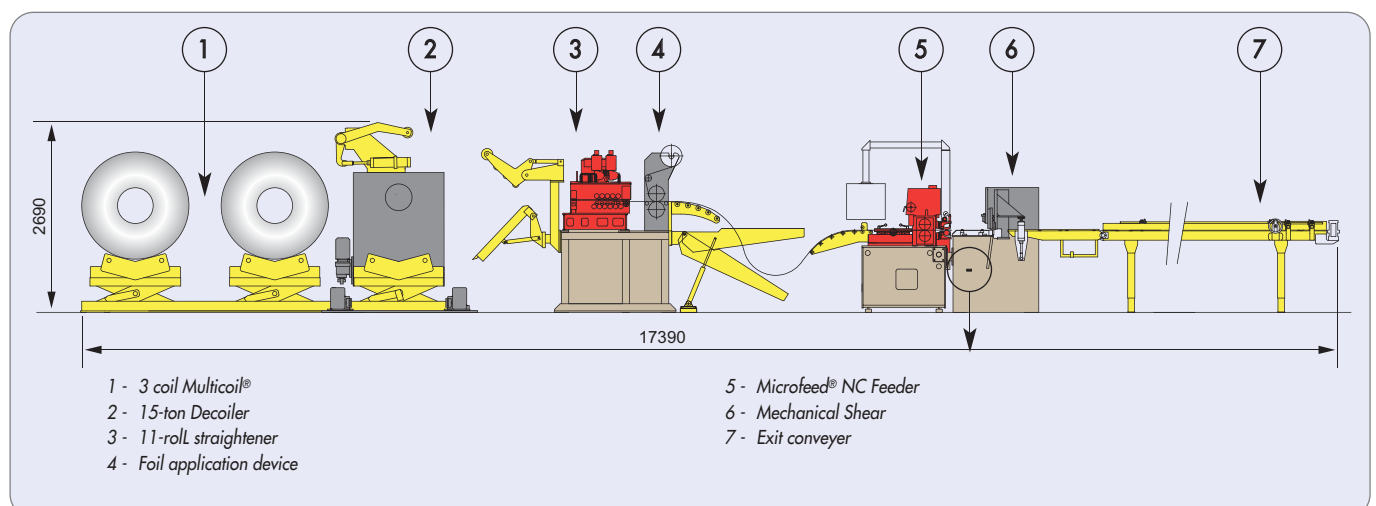
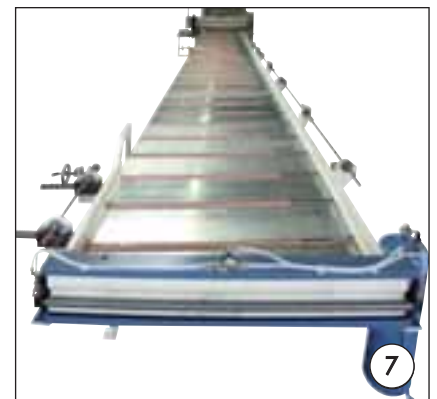
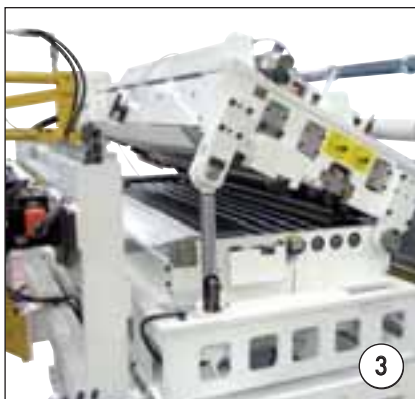
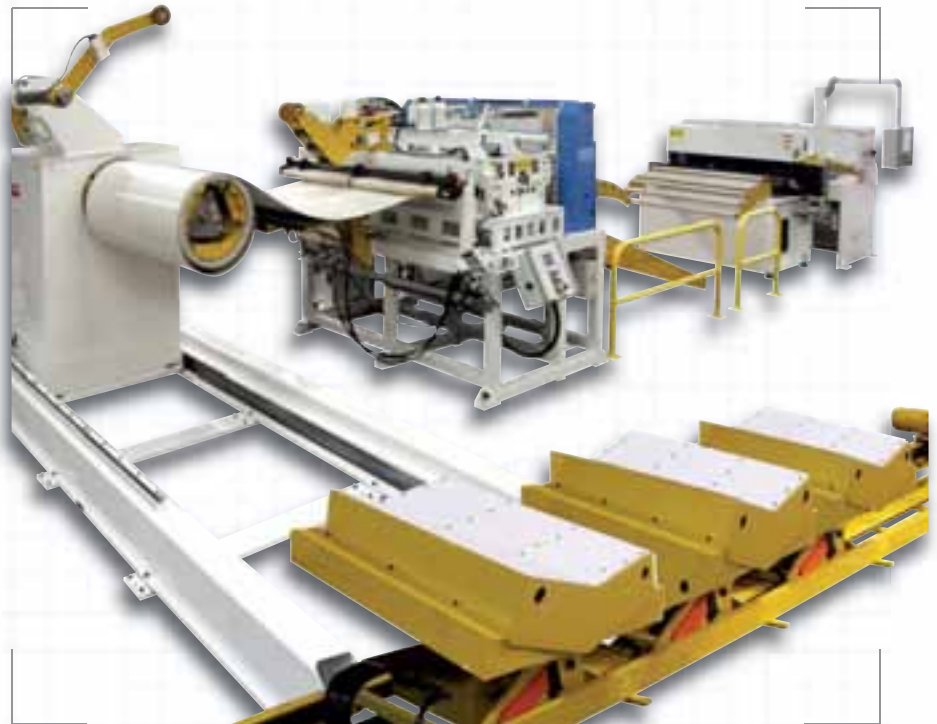
LONG LINE – FEEDING OF A ROLLFORMING MACHINE

claddings

- Max Width : 1,550 mm
- Max Length : 12,000 mm
- 0.5 mm < Thickness < 1.5 mm
- 5 Spm for L = 12,000 mm
- Prepainted steel.

ADVANTAGES OF THE SOLUTION

- The MULTICOIL® device allows 3 coils to be available at any time.
- Loading of 15-ton coil without any manual job.
- Integration of a foil application device and a lubrication system.
- Crocodile head opening for easy roll cleaning
- The exit conveyor also insures blank tacking before entering into the rollformer.



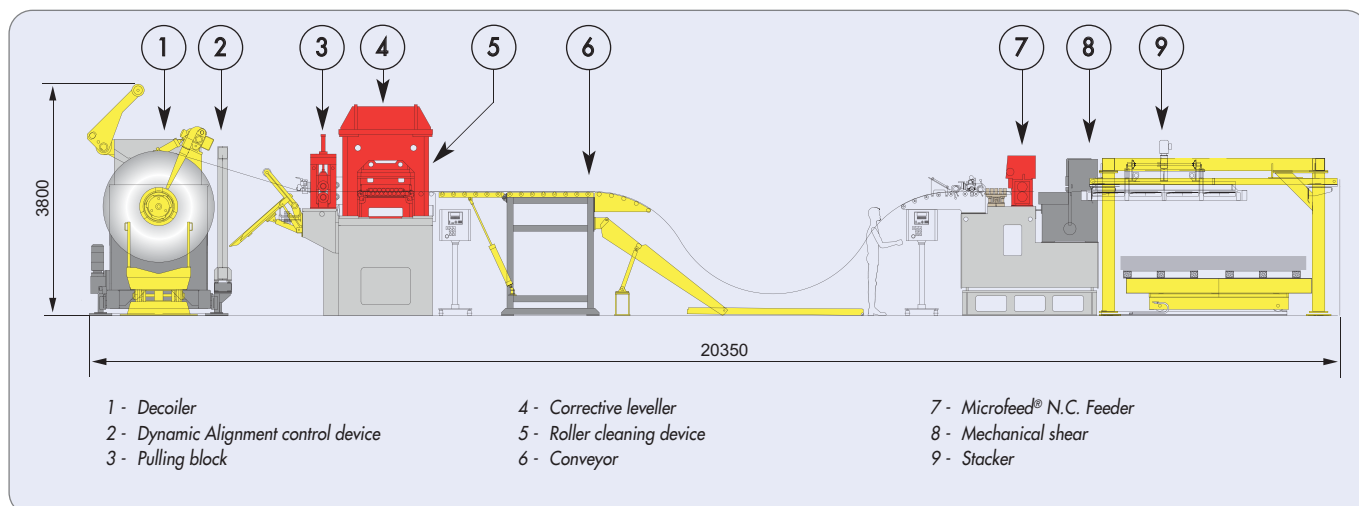
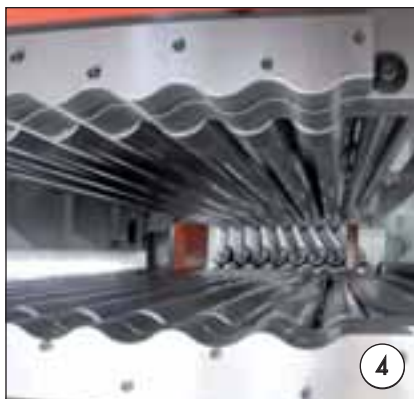
LONG LINE WITH CORRECTIVE LEVELLER

steel service centre

- Max Width : 1,600 mm
- Max Length : 3,000 mm
- 0.8 mm < Thickness < 4.0 mm
- 10 Spm for L = 3,000 mm
- Hot or cold rolled steel, galvanised steel.

ADVANTAGES OF THE SOLUTION

- Layout without loop pit, nor civil works.
- Loading of 25-ton coil without any manual job.
- Moving decoiler with dynamic alignment control.
- Fully electric, 9 adjustment axis leveller
- 17 rolls and 7 adjustable back-up roll rows
- Hard chromed rollers for a better durability.
- Featuring a roll cleaning device.
- Stacking on a lifting table with automatic stack levelling.
- The line is automatically configured as per required blank dimensions.



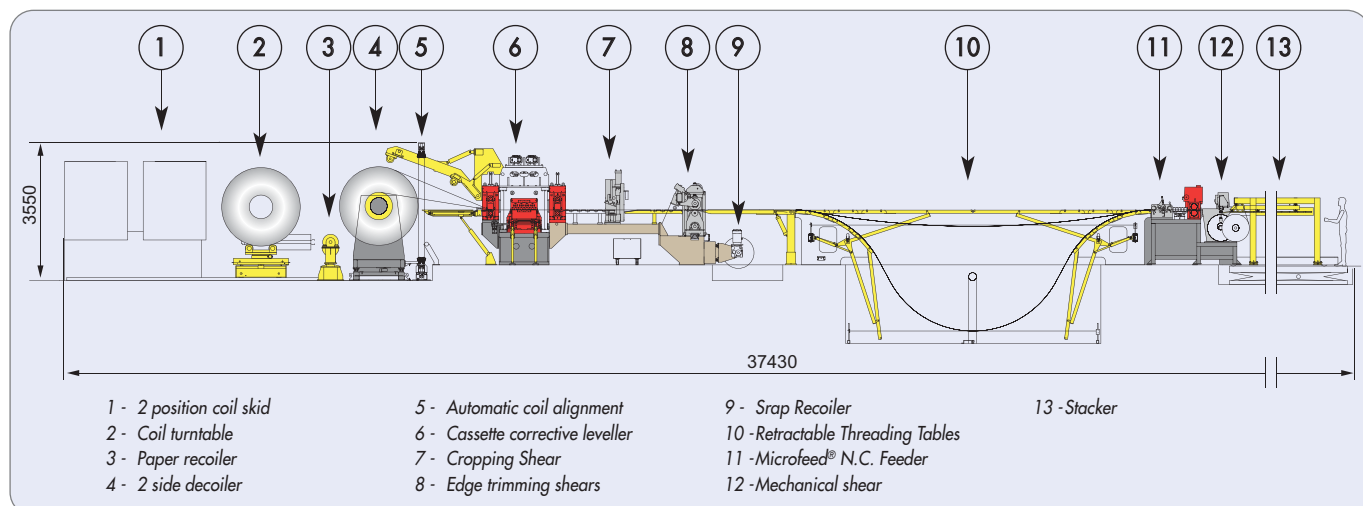
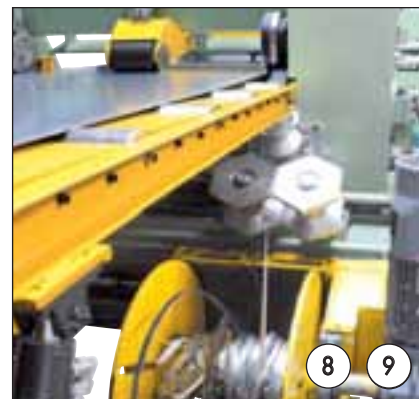
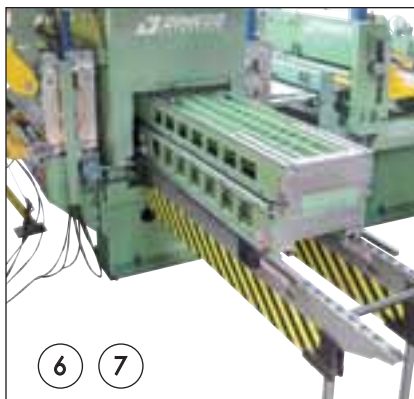
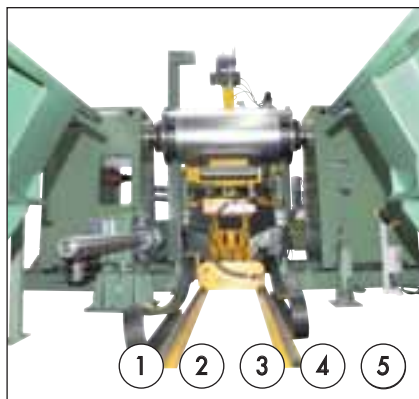
LONG LINE WITH CORRECTIVE LEVELLER

railway coaches

- Max Width : 1,600 mm
- max Length : 7,500 mm
- 0.2 mm < Thickness < 6.0 mm
- 18 Spm for L = 1,000 mm
- Hot or cold rolled steel, stainless steel.

ADVANTAGES OF THE SOLUTION

- Loading of 10-ton coil without any manual job.
- Inner coil diameter ranges from 470 to 850 mm.
- Fully electric, 9 adjustment axis leveller.
- "6 high" levelling structure fitted in a detachable cassette. It includes a straightening roll layer, an intermediate roll (needles) level and seven adjustable back-up roll rows.
- 2 cassettes fulfils the entire thickness range : one with 13 x 45 mm dia. rolls and one with 9 x 80 mm dia. rolls.
- Hard chromed rollers for a better durability.
- Cropping and edge trimming shears to also process poor quality coils.



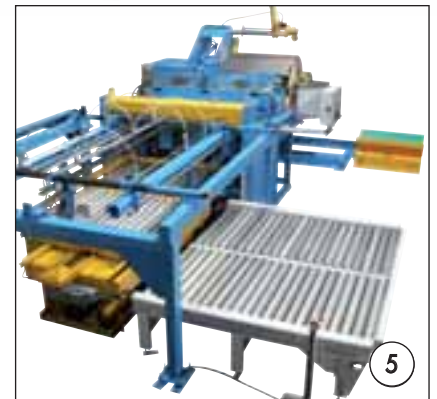
SHORT LINE FOR DELICATE STRIPS

water heater tanks

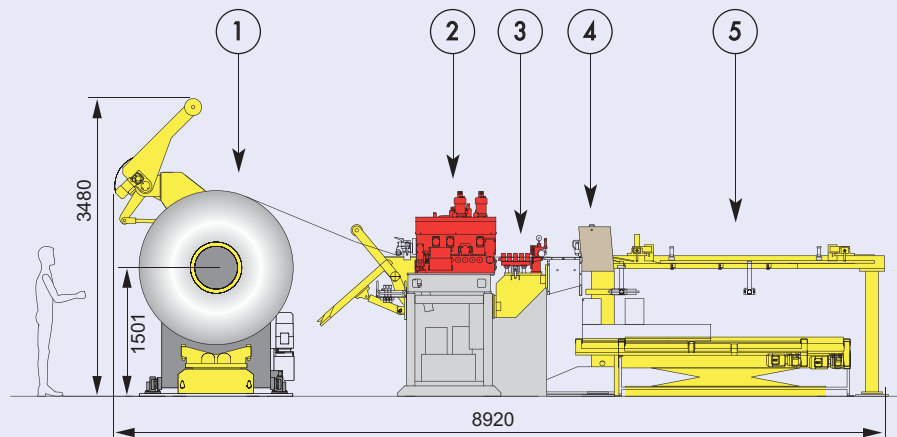
- Max Width : 1,600 mm
- Max Length : 2,500 mm
- 1.0 mm < Thickness < 2.0 mm
- 10 Spm for L = 1,000 mm
- Ferritic or austenitic stainless steel

ADVANTAGES OF THE SOLUTION

- 9-meter long compact line.
- Loading of 15-ton coil without any manual job.
- Straightener-feeder with crocodile head opening for easy roll cleaning.
- Special guiding devices to assure material integrity and blank squareness.
- Stacking on a lifting table with automatic stack levelling.
- Automatic evacuation of the full pallet.



- 1 - 15-ton Decoiler
- 2 - Straightener-feeder
- 3 - Squaring Guide
- 4 - Mechanical Shear
- 5 - Stacker and lifting table



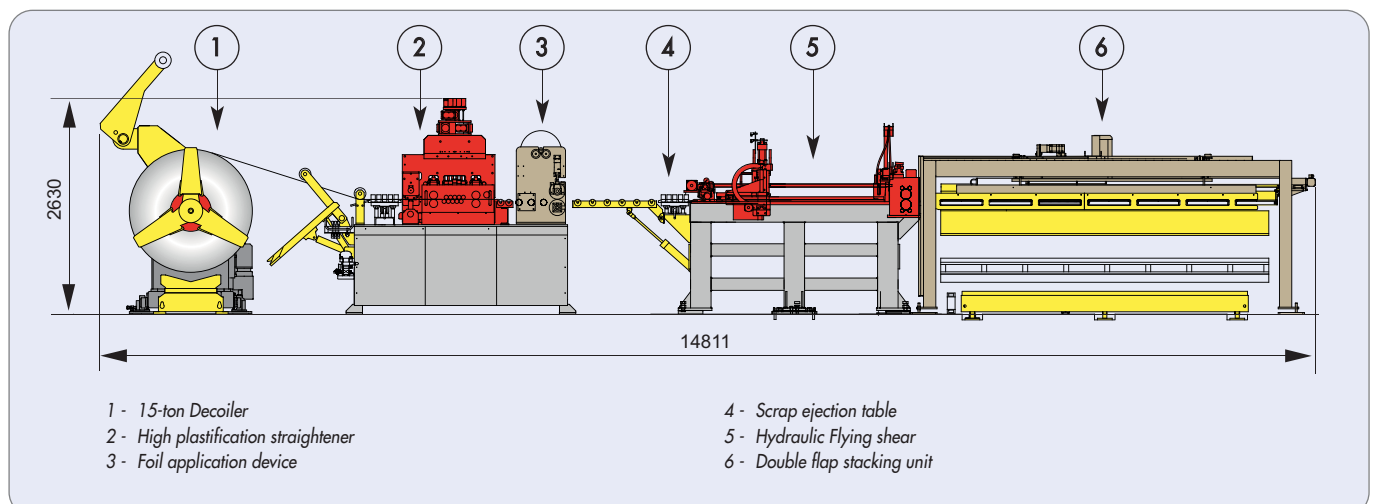
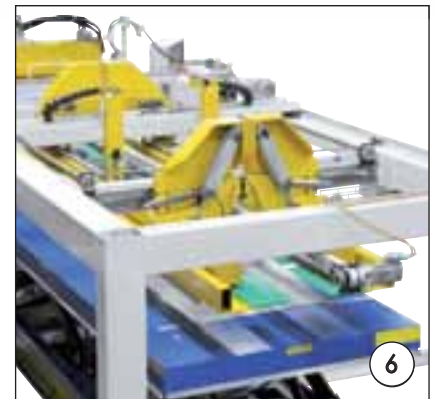
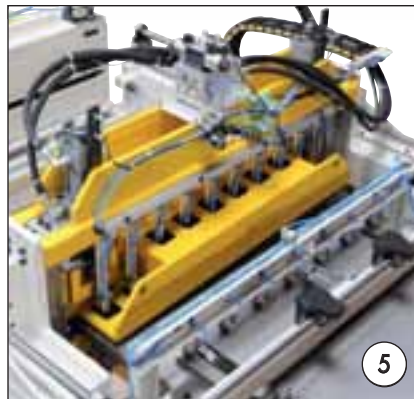
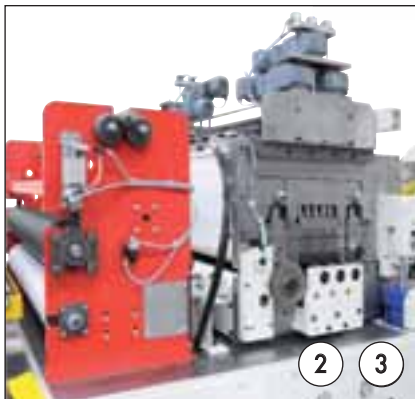
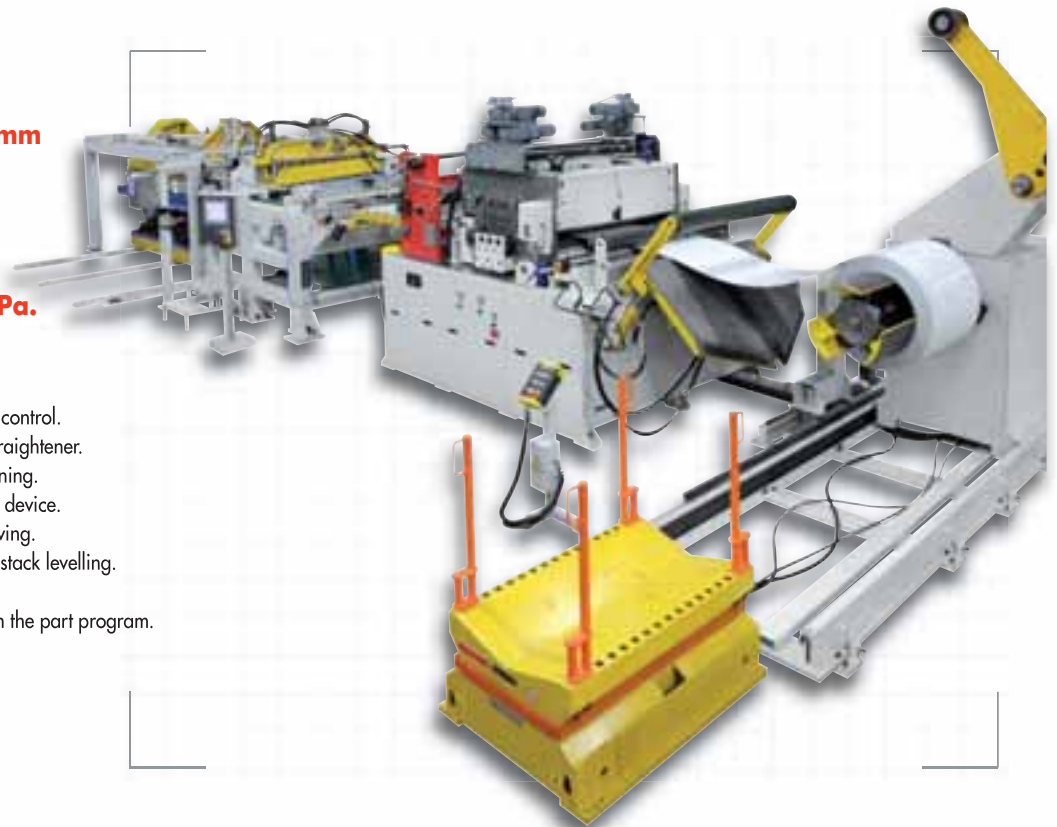
FLYING SHEAR LINE FOR DELICATE MATERIALS

aluminium service center

- Max Width : 1,500 mm
- Max Length : 6,000 mm
- 0.8 mm < Thickness < 2.5 mm
- Speed : 12 m/mn
- 12 Spm for L = 1,000 mm
- Aluminium with yield strength from 50 to 400 MPa.

ADVANTAGES OF THE SOLUTION

- Moving decoiler with Dynamic Alignment control.
- 10 x 50 mm dia. roll high plastification straightener.
- Crocodile opening head for easy roll cleaning.
- Electrostatic paper or PVC foil application device.
- Flying shear allowing continuous strip moving.
- Stacking on a Lifting table with automatic stack levelling.
- Automatic evacuation of the full pallet.
- Ink-jet marking with message integrated in the part program.



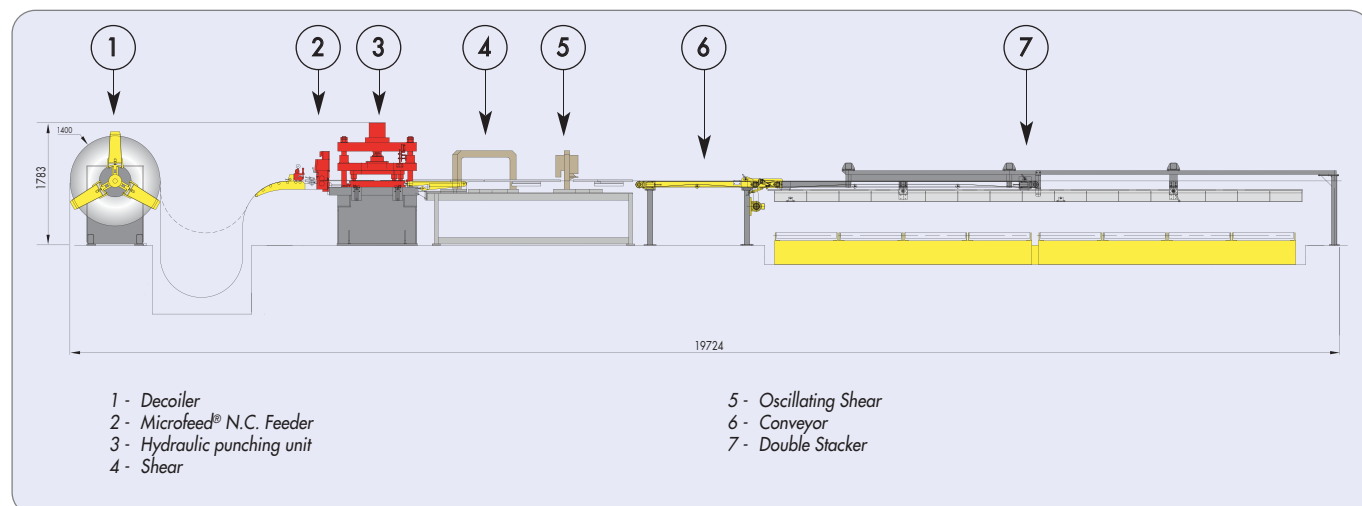
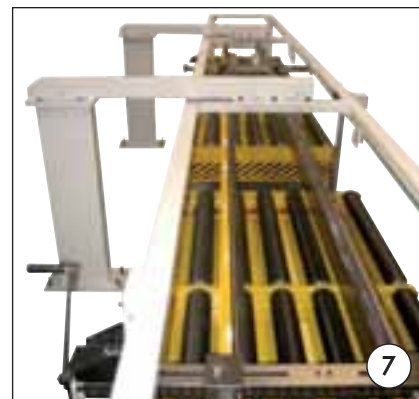
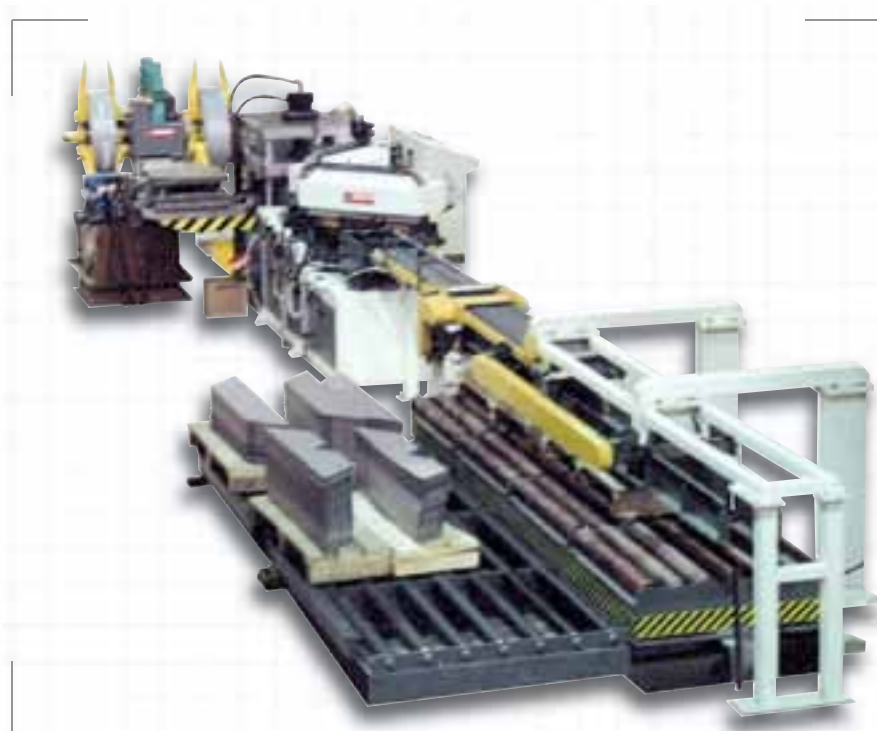
SPECIAL SHAPE BLANKING LINE

transformer laminations

- Max Width : 400 mm
- Max Length : 2,000 mm
- 0.3 mm < thickness < 0.6 mm
- Speed : 80 m/mn
- 33 Spm for trapezoid
of L = 1,000 mm.
- Silicon steel.

ADVANTAGES OF THE SOLUTION

- Ideal for medium size batches. On the same line, blanking of all shaped parts incorporated in a transformer, i.e. 8 parts with or without notching or punching.
- Blank sorting unit with a 2 station stacker.
- Part programming directly on the line terminal.
- Various models can be produced in a row without stop nor scrap.



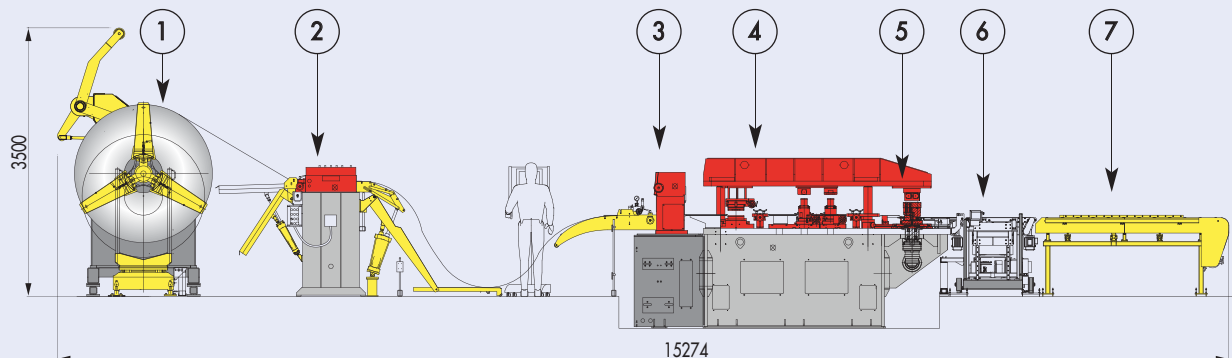
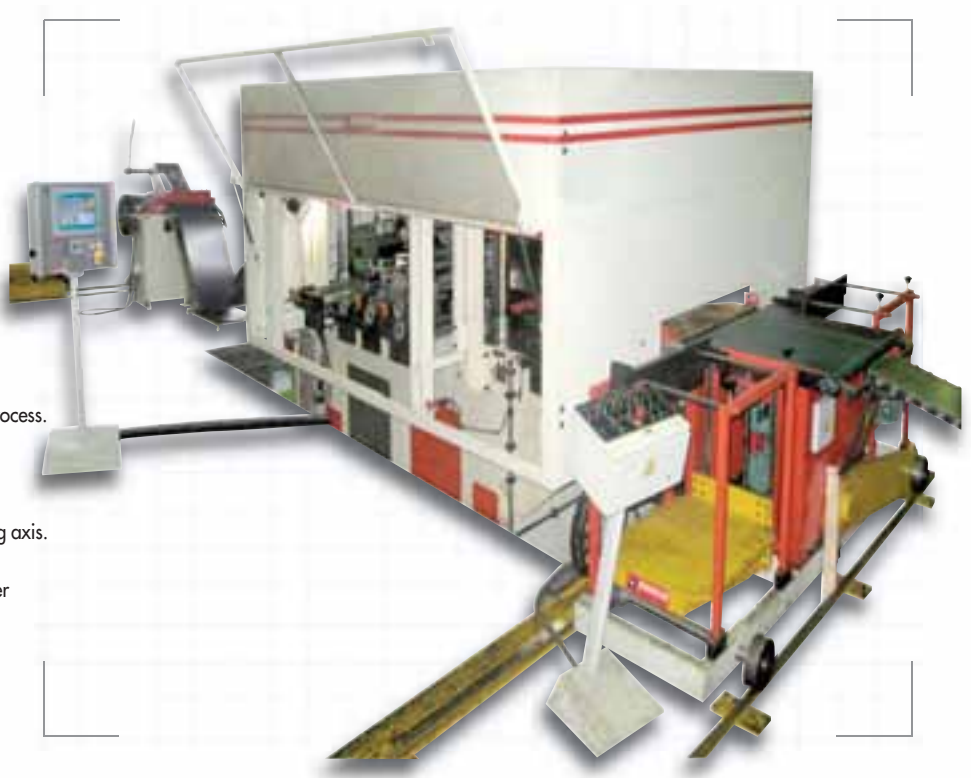
LINE WITH OSCILLATING SHEAR FOR TRAPEZOIDAL BLANKS

exhaust system components

- Max Width: 800 mm
- Max Length: 2,000 mm
- 0.6 mm < thickness < 2.0 mm
- Speed: 40 m/mn
- 38 Spm for L = 1,000 mm
- Cold rolled, galvanised or stainless steels.

ADVANTAGES OF THE SOLUTION

- Up to 60 blanks per minute.
- 10 % scrap reduction compared to manual existing process.
- The 80-ton Flexipress® bolster houses the oscillating shear, the notching and punching tools.
- In-line marking.
- Integrates a shear on a servo driven $\pm 30^\circ$ swivelling axis.
- Actuation of each of the tool is programmable.
- The 2 different blanks are split in a 2 position stacker fitted with lifting tables.



- 1 - Decoiler
- 2 - Straightener
- 3 - Microfeed® N.C. Feeder
- 4 - Flexipress®

- 5 - Oscillating Shear
- 6 - 2-position stacker
- 7 - Exit conveyor

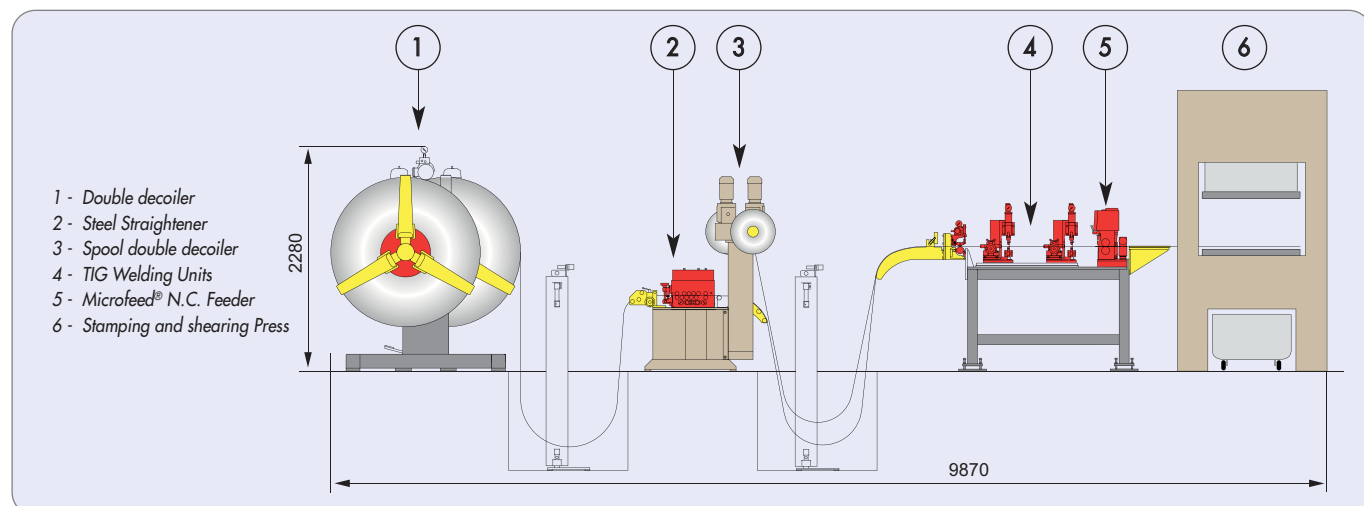
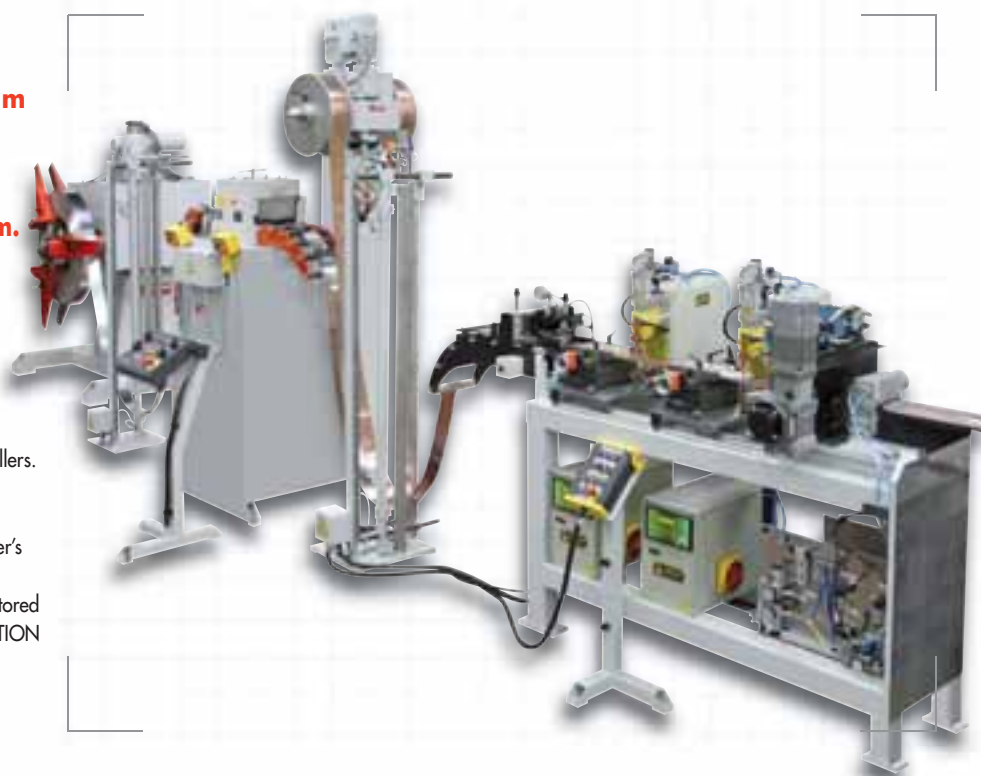
DUAL STRIP CUT-TO-LENGTH AND WELDING LINE

dual layer heat exchangers blanks

- Max Width: 130 mm
- Max length : 1,100 mm
- 0.05 mm gauge copper + 0.3 mm gauge stainless
- 20 Spm for L = 1,000 mm
- Length cutting accuracy : +/- 0.1 mm.

ADVANTAGES OF THE SOLUTION

- 2 powered double decoilers for quick coil changeovers.
- Automatic straightener speed adjustment as per cutting rate.
- Hard chromed and superfinished straightening rollers.
- Integration of 2 dual strip welding stations and a lubrication unit.
- Stamping and shearing performed on the customer's straight side press.
- Line supervision and part programming are monitored through the SIMOSTAR® control (SIEMENS SIMOTION hardware).



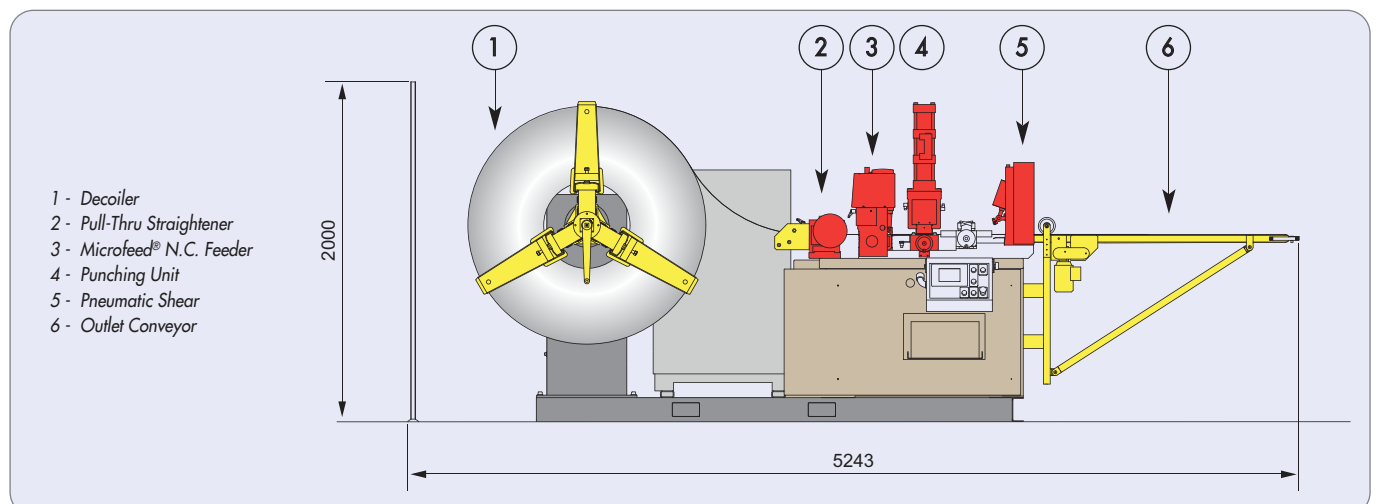
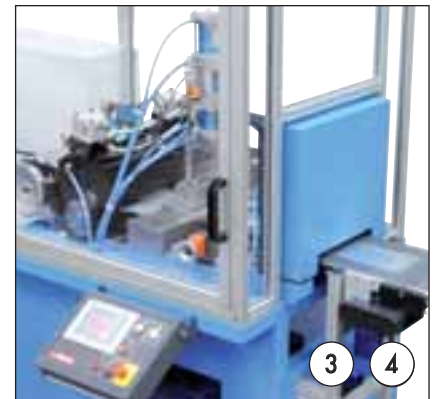
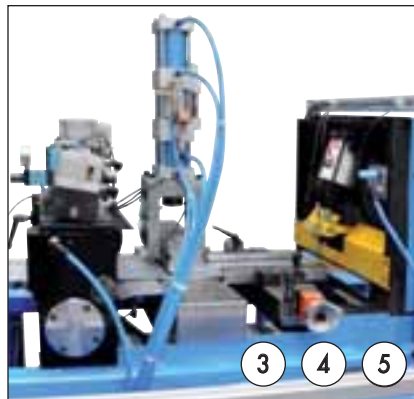
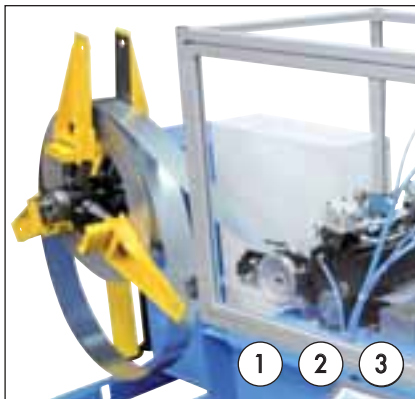
COMPACT LINE FOR THIN GAUGES

ventilation ducts and tubes

- Max Width : 300 mm
- 0.4 mm < Thickness < 1.0 mm
- 20 Spm for L = 500 mm
- Galvanised Steel.

ADVANTAGES OF THE SOLUTION

- Cost effective solution with a pull-through straightener.
- 4-meter long compact line, fitted on a movable base.
- Only air and power supply. No hydraulics.
- Cut-to-length accuracy : +/- 0.1 mm.
- Possible to punch a 28 mm max dia. hole.
Programmable position of the hole (lengthwise).
- Line supervision thanks to the SIMOSTAR®
Control (SIEMENS SIMOTION hardware).



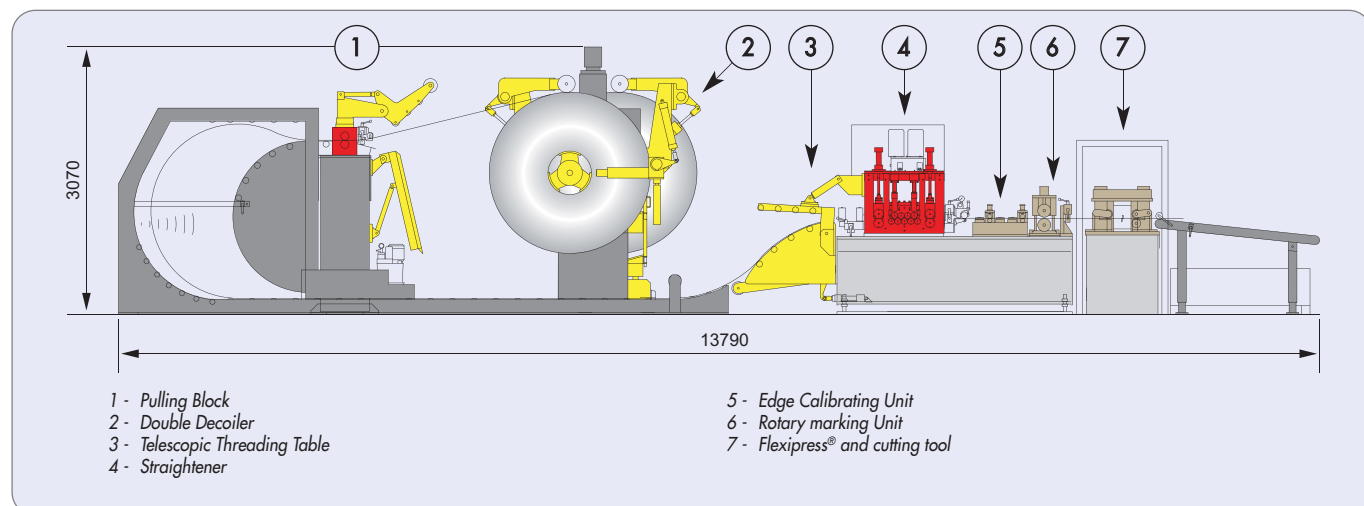
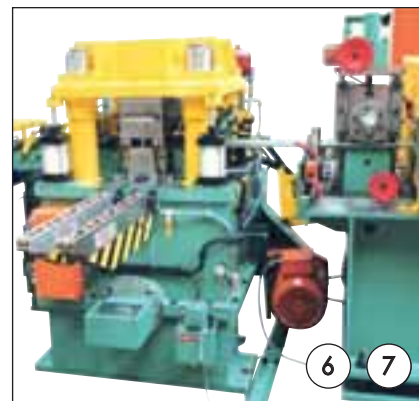
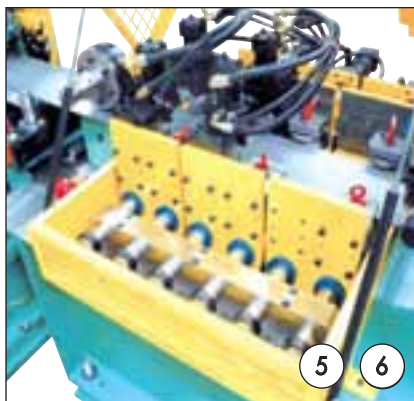
REAR LOOP LINE FOR HEAVY GAUGE STRIPS

wheel rims for passenger cars

- Max Width : 270 mm
- Max Length : 1,450 mm
- 1.6 mm < Thickness < 5.0 mm
- 25 Spm for L = 1,120 mm
- High yield strength steel (670 Mpa).

ADVANTAGES OF THE SOLUTION

- The rear loop layout avoids harmful scratches and allows higher feeding rates.
- Coil loading while line running thanks to double decoiler and coil car.
- Hydraulic edge calibration unit.
- Rotary marking unit.
- Excellent shearing quality thanks to the column guided tool fitted on a 60-ton FLEXIPRESS® mechanical press.
- Stacking in a blank buffer allowing coil change without stopping downstream processes.
- Coil changeover in 6 minutes.
- Blank type change in less than 10 minutes.



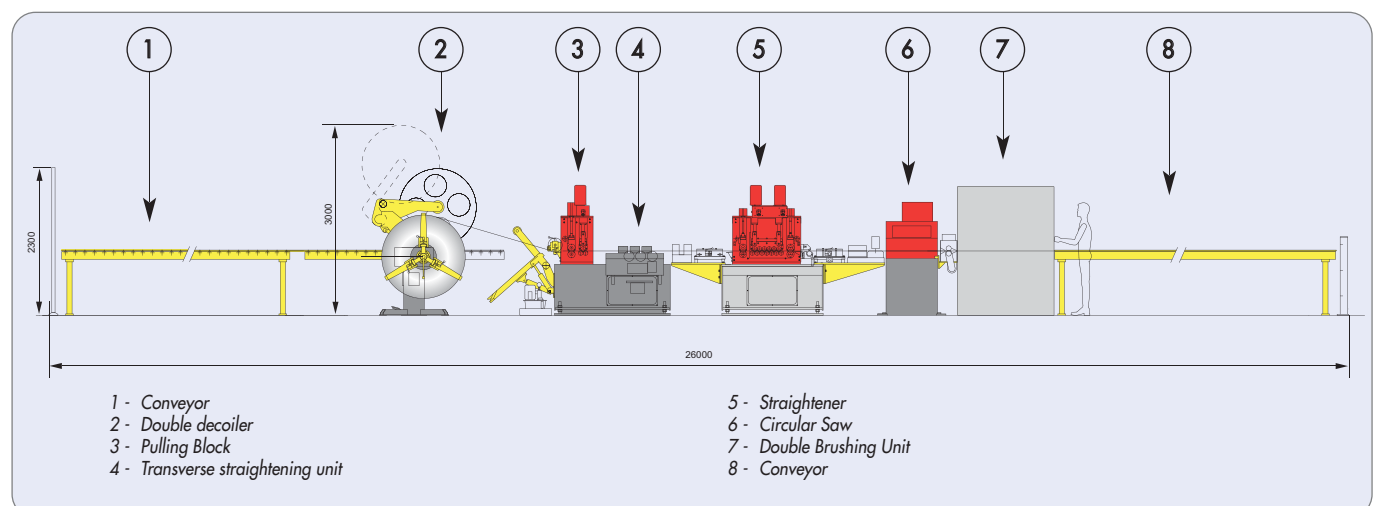
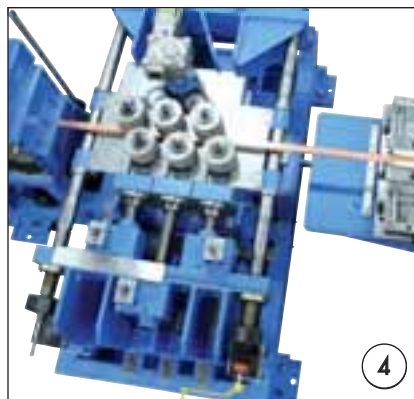
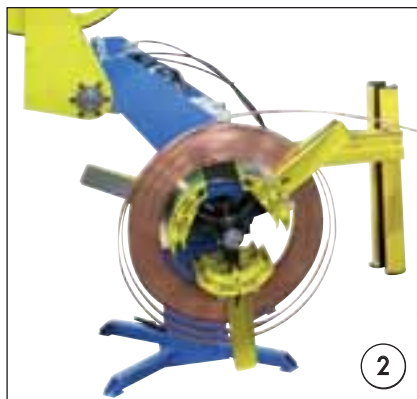
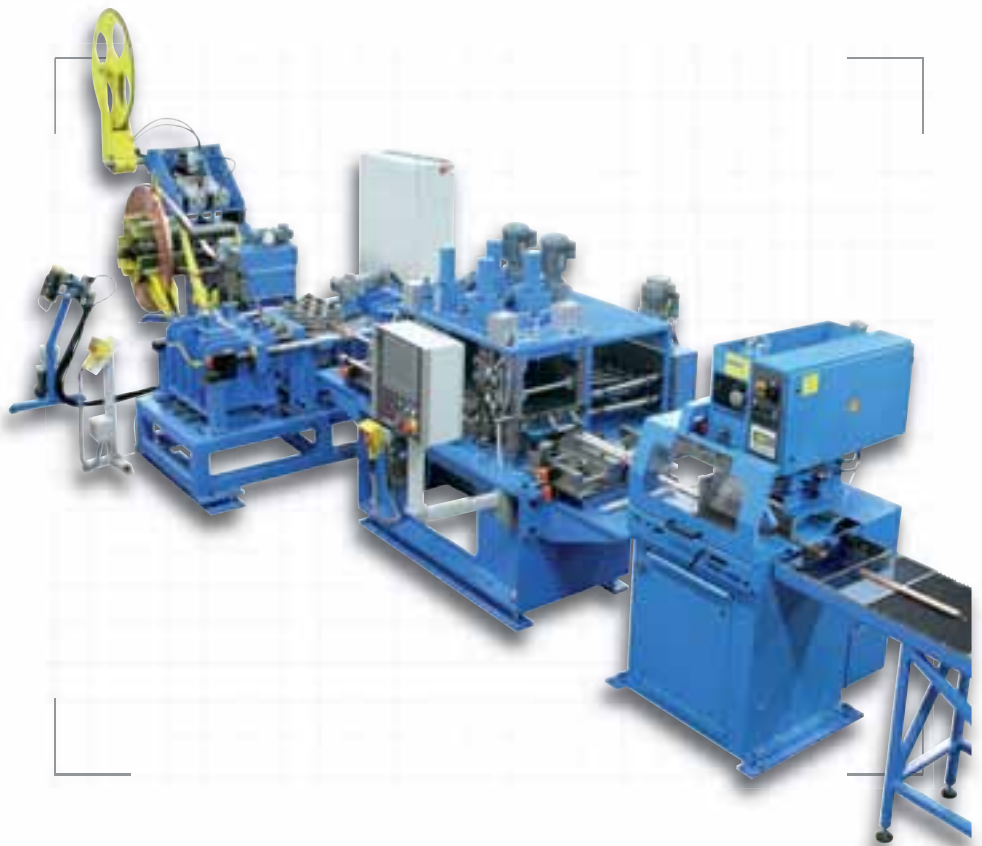
THICK COPPER PROCESSING LINE

copper bars

- Width from 30 mm to 200 mm
- Max length : 13,000 mm
- Thickness < 14 mm
- Max Speed : 25 m/mn
- Annealed or hardened copper.

ADVANTAGES OF THE SOLUTION

- Line feeding from 12 meter bars or from 1 ton coils.
- Excellent levelling quality thanks to the 13 roll straightener and the 7 roller transverse straightening unit.
- Cutting with circular saw.
- Integration of a double brushing unit and various wiping units.



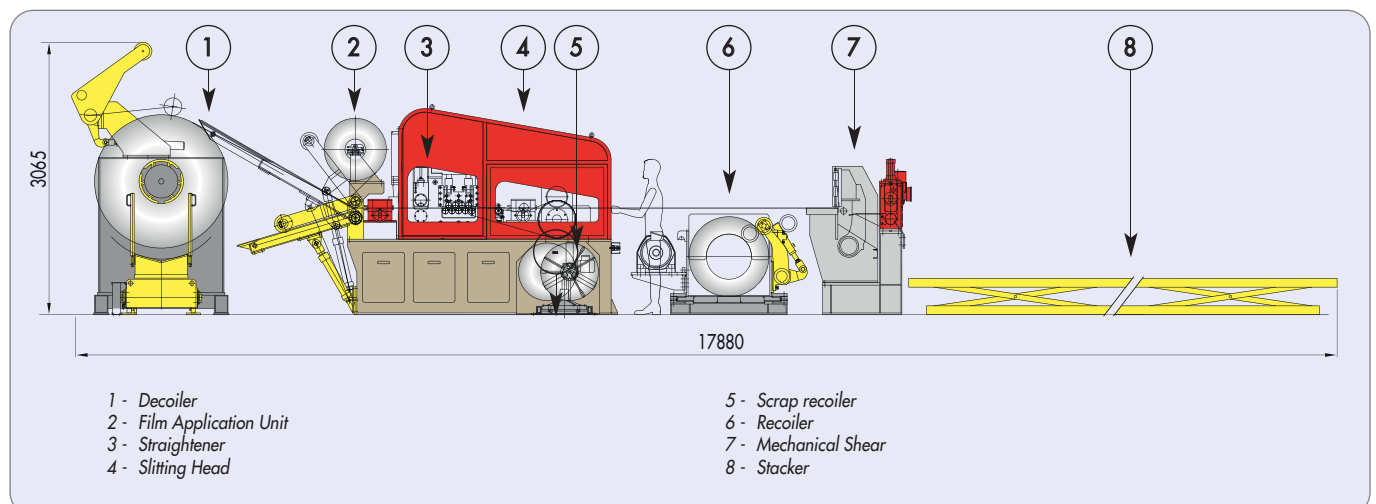
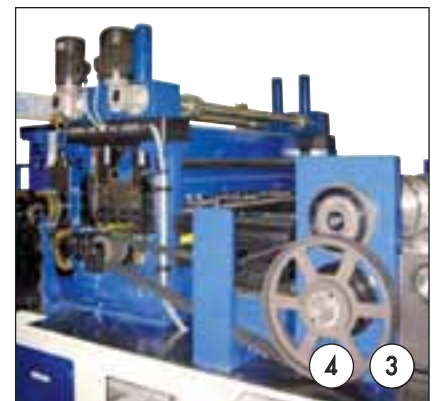
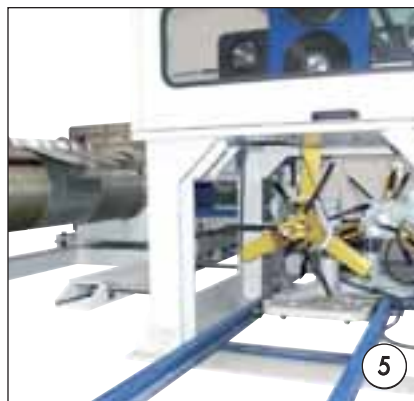
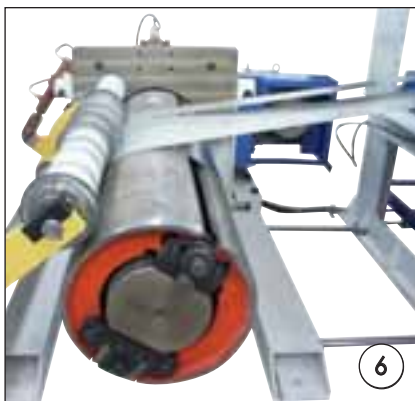
CUT-TO-LENGTH AND SLITTING COMBINED LINE

steel service centre, contract manufacturing

- Max Width : 1,500 mm
- Max length : 8,000 mm
- 0.6 mm < Thickness < 3.0 mm
- 12 Spm for L = 1000 mm
- Hot rolled, stainless or pre-painted steel.

ADVANTAGES OF THE SOLUTION

- 4 running modes available :
 - Cut-to-length
 - Slitting
 - Coil splitting
 - "blanking" (combined Cut-to-length and slitting).
- The straightener head, the film application and the slitting units are fitted onto the same base.
- Possibility to slit or trim 7 slit multis or edges.
- Easy to pull out scrap recoiler.
- Double arm unloading turret.
- Up to 8 m x 1.5 m blank stacking on an automatic stack levelling lifting table.



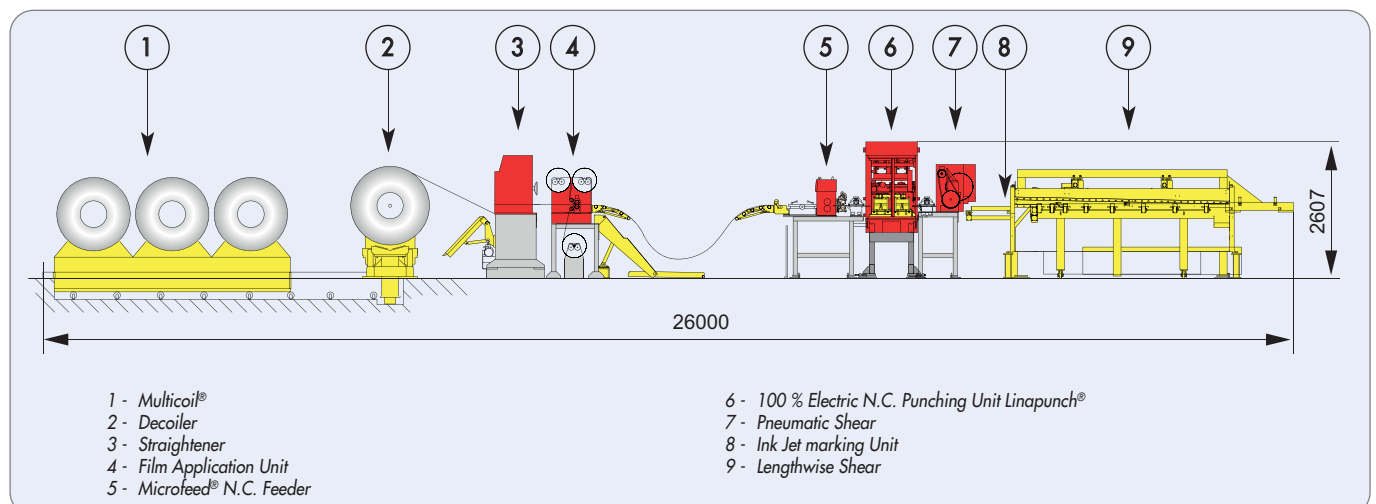
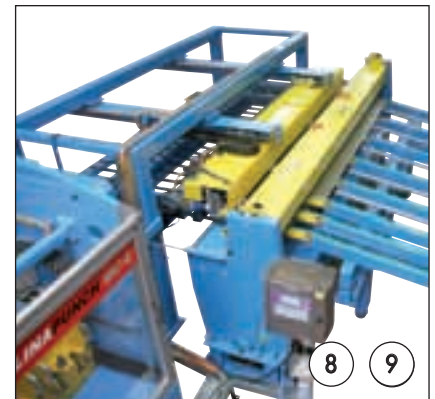
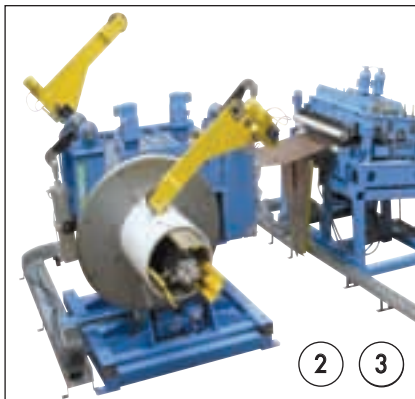
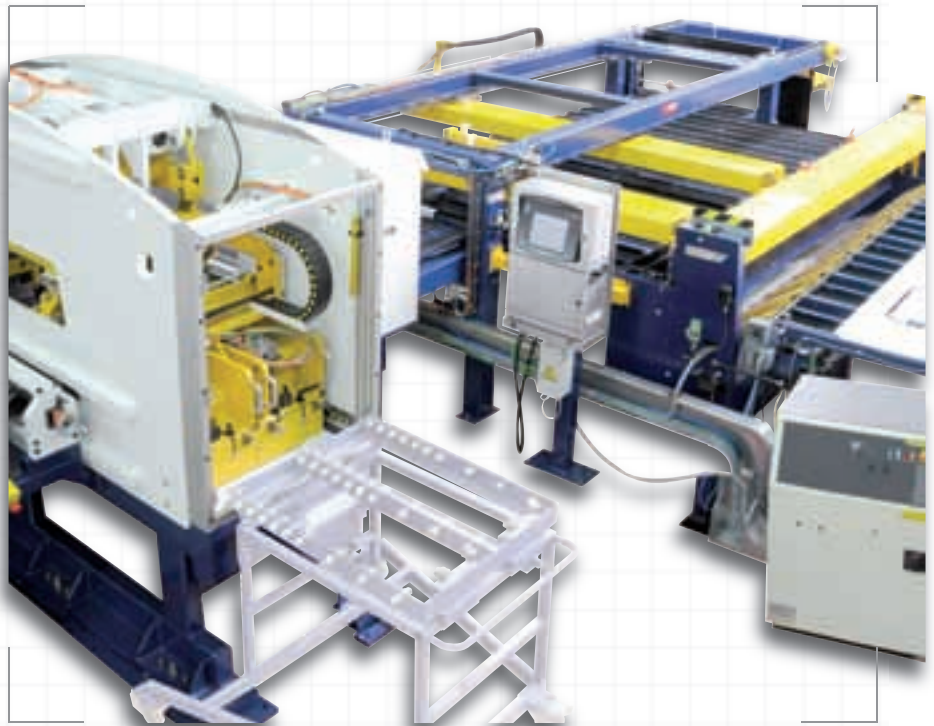
CUT-TO-LENGTH AND LENGTHWISE SHEARING COMBINED LINE

clean room and other partitioning panels

- Max Width : 1,300 mm
- Max Length : 6,000 mm
- 0.4 mm < Thickness < 1.0 mm
- 5 Spm for L = 1,000 mm
- Cold rolled, galvanised, stainless or pre-painted steel.

ADVANTAGES OF THE SOLUTION

- Generates a drastic cut in number of inventoried coils.
- Excellent cutting quality thanks to mechanical lengthwise shear.
- With the LINAPUNCH® and a part nesting software, possibility to cut blanks to various lengths from the same coil.
- "Slits" up to 12 blanks.
- A robot stacks onto 9 pallets.



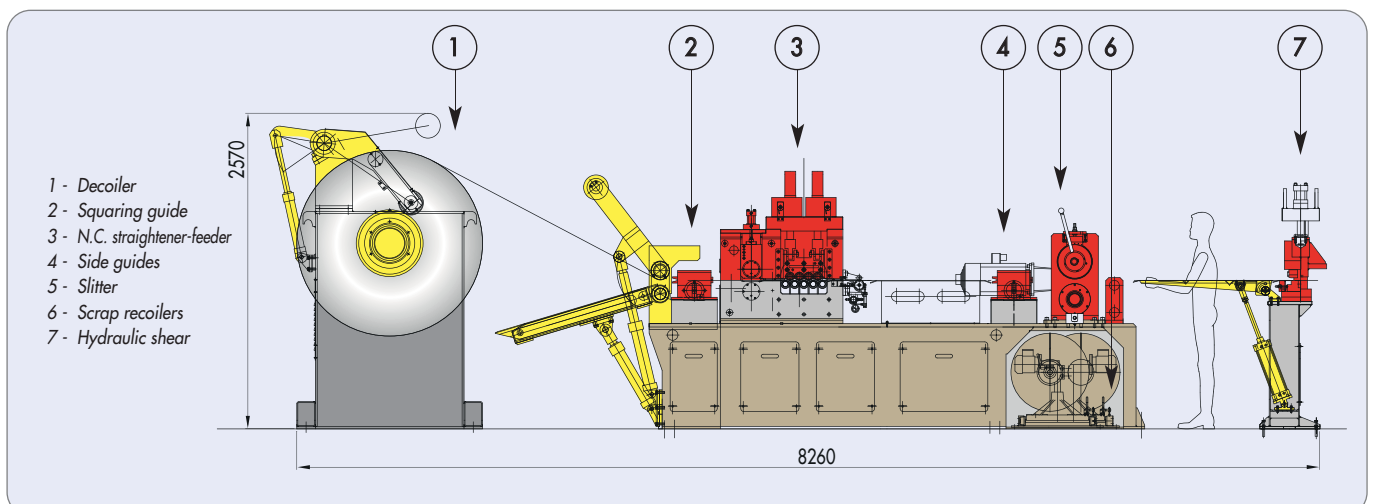
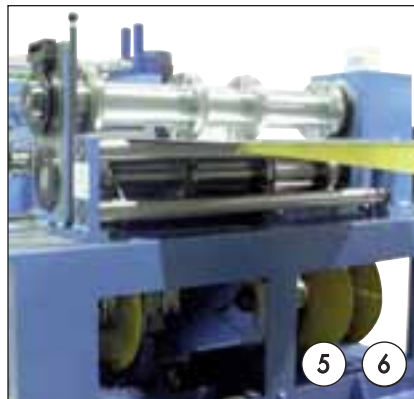
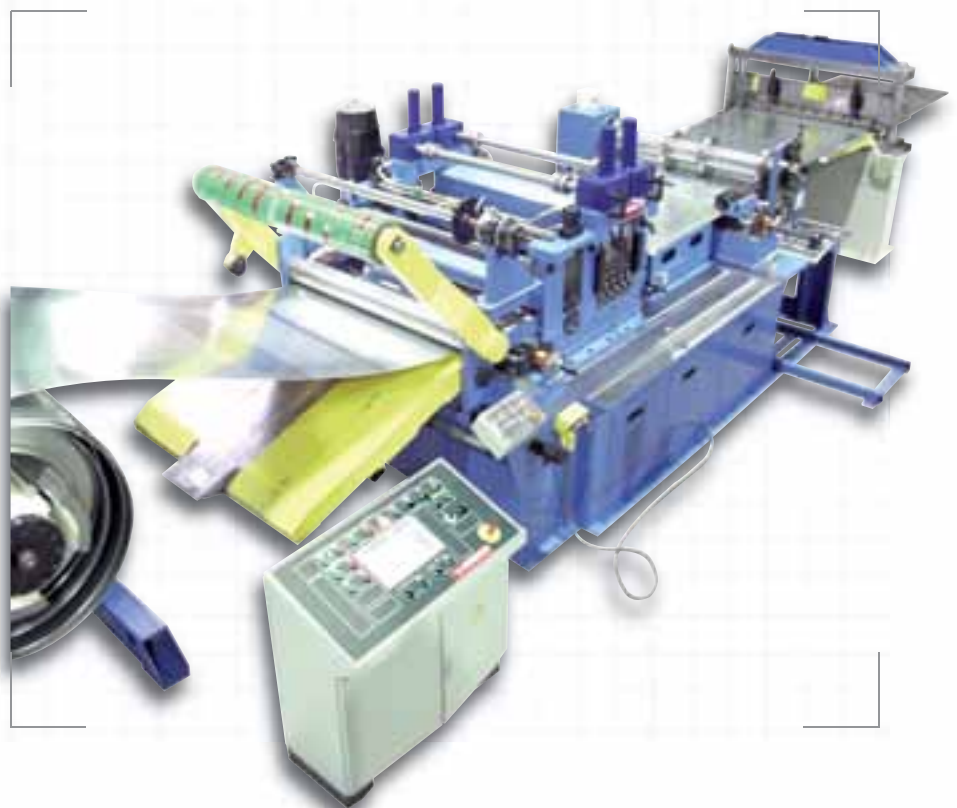
BLANKING LINE, COMBINED CUT-TO-LENGTH AND SLITTING

modular building

- Max Width : 1,300mm
- Max Length : no limit
- 0.4 mm < Thickness < 3.0 mm
- 15 Spm for L = 1,000 mm.
- Cold rolled, galvanized, pre-painted steels.

ADVANTAGES OF THE SOLUTION

- 2 running modes available :
 - Cut-to Length
 - "blanking" (combined cut-to-length and slitting).
- The Straightener, the film application and the slitting units are fitted onto the same base.
- Capability of slitting of up to 6 slit mults and trimming of 2 edges.
- Easy to pull out scrap recoiler.
- Ready to receive 2 additional notching units at a later stage.



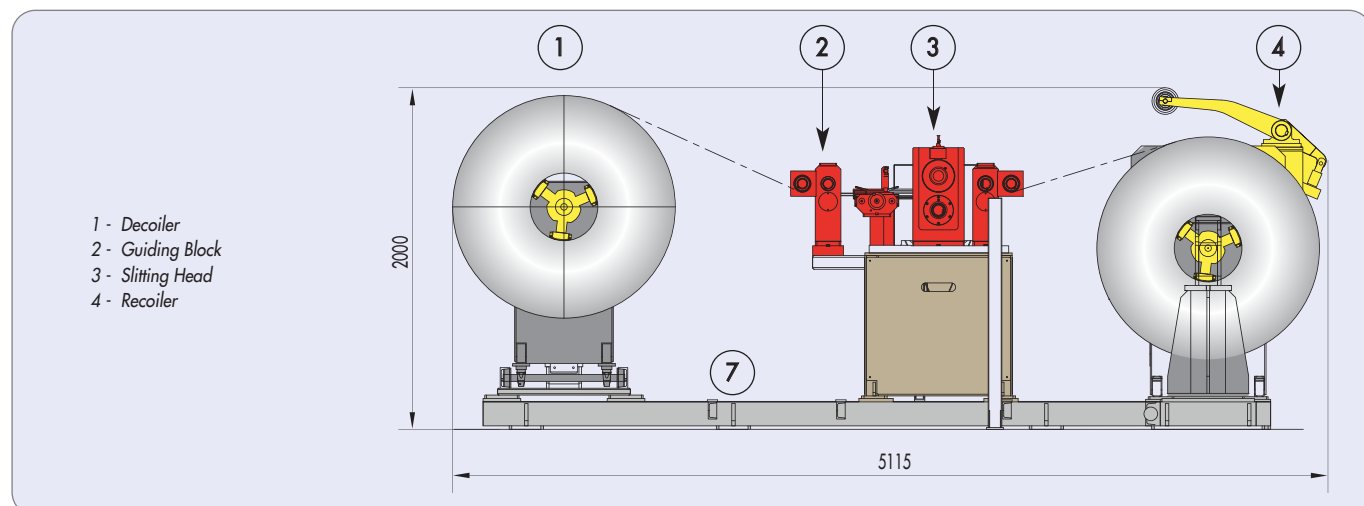
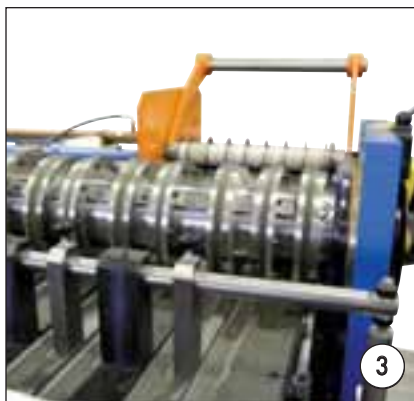
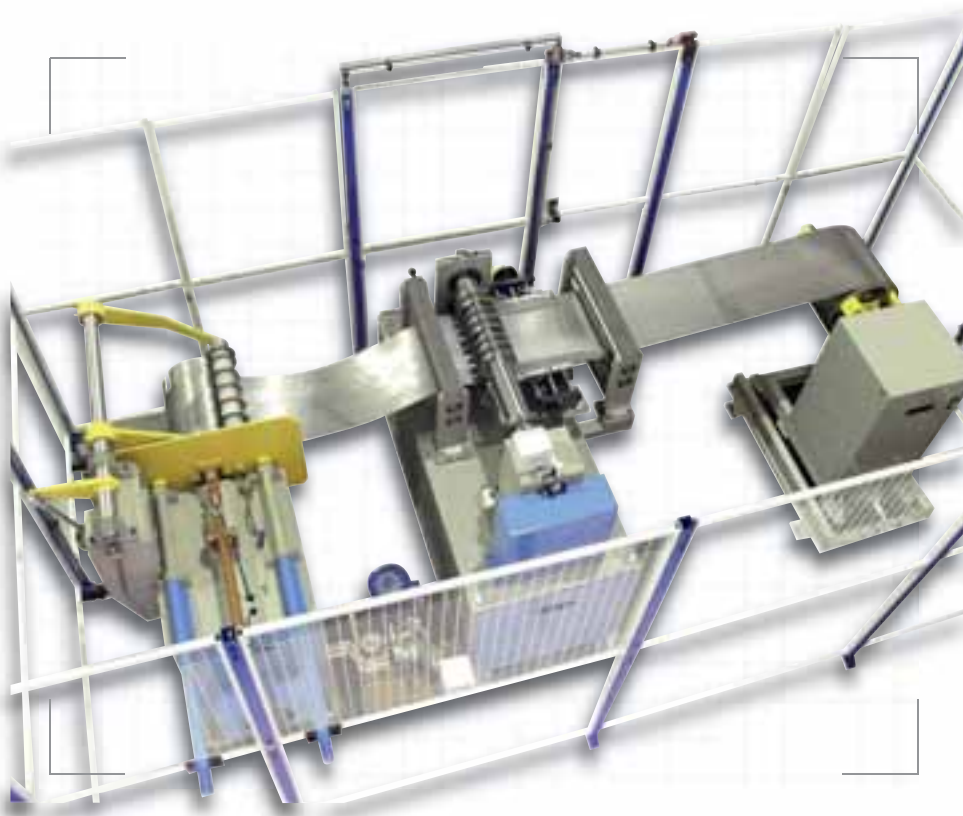
SLITTING LINE

automotive gaskets and shielding systems

- Max Width : 650 mm
- 0.1 mm < Thickness < 0.3 mm
(2 mm Aluminium)
- Speed : 50 m/mn
- Cold rolled or stainless steel.
Aluminium.

ADVANTAGES OF THE SOLUTION

- A one-piece platform welcomes the 3 machines and safety fences.
- Assisted decoiler alignment.
- One pair of deflector rolls at line inlet and outlet.
- Capacity of slitting of up to 11 slit mults and trimming of 2 edges.
- Hydraulic coil pushing off device.





YOUR ONE STOP SHOP



**Flexible
manufacturing
systems**



**Press shop
automation**



**Coil and tool
handling**



**Hydraulic
systems
and presses**



your distributor



contact@dimeco.com

DIMECO
2, rue du Chêne - 25480 PIREY - FRANCE
Tél. +33 (0)3 81 48 38 00
Fax +33 (0)3 81 48 38 28
contact@dimeco.com www.dimeco.com