

ALL FOR AL

ADVANCED TECHNOLOGIES FOR ALUMINIUM

## ADVANCED TECHNOLOGIES FOR ALUMINIUM

Emmebi provides a wide variety of automatic packing machines and integrated systems for the aluminium industry, in addition to finishing machines. They are high quality plants with major investments in technology, for the medium-upper market segment. The offered products are the result of our customers' requirements, whose cooperation, far from being simply a commercial relationship, implies mutual trust and involvement over what their basic needs are, their production capacity and the solutions that Emmebi can propose.



AUTOMATION



PACKING



FINISHING

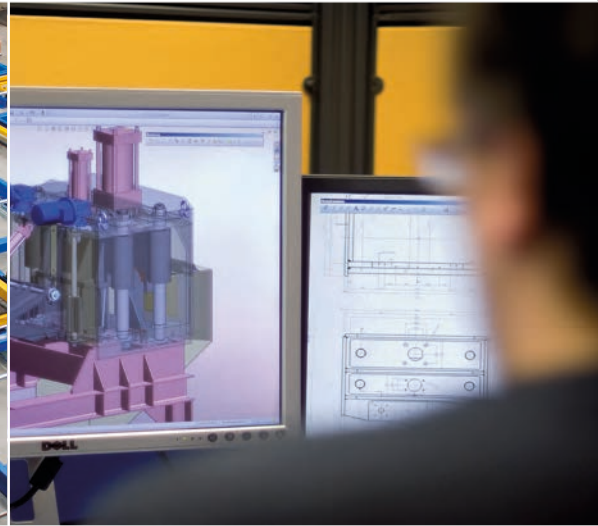
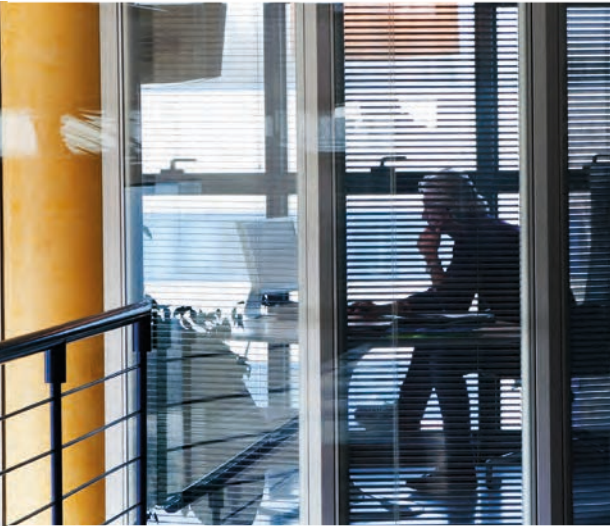
## A COMPANY THAT LOOKS AHEAD

Over the years, the firm has renovated and expanded its productive facilities several times. It has developed, on the one hand, a plan for continual innovation, allowing it to offer its customers products that are more and more

in the van, from the point of view of their performance and reliability; and, on the other hand, to go beyond mere packing and finishing technologies. Emmebi, however, has preserved its ability in offering its customers a variety of

plants, planned and built to size, that meet every industrial requirement, while guaranteeing a product which is 100% MADE IN ITALY. Experience, technological know-how, high quality standards and an extremely rich offer of plants and services: these are Emmebi's current and future strengths.









AUTOMATION





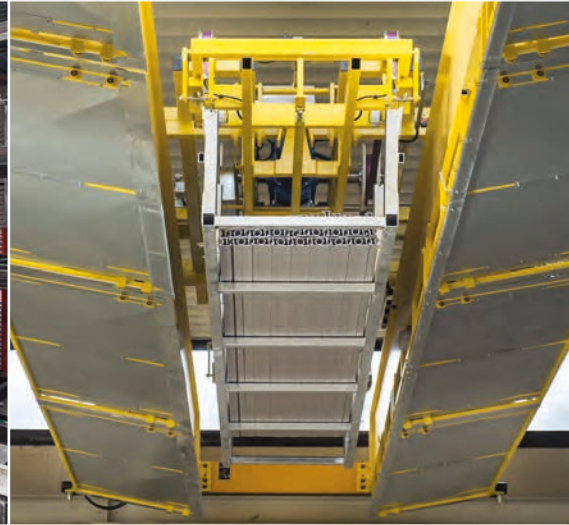
The Emmebi philosophy is to turn the market's needs into challenging projects to make production processes as efficient as possible. We design and realize equipment to automatize complete extrusion plants to guarantee extremely high performances.



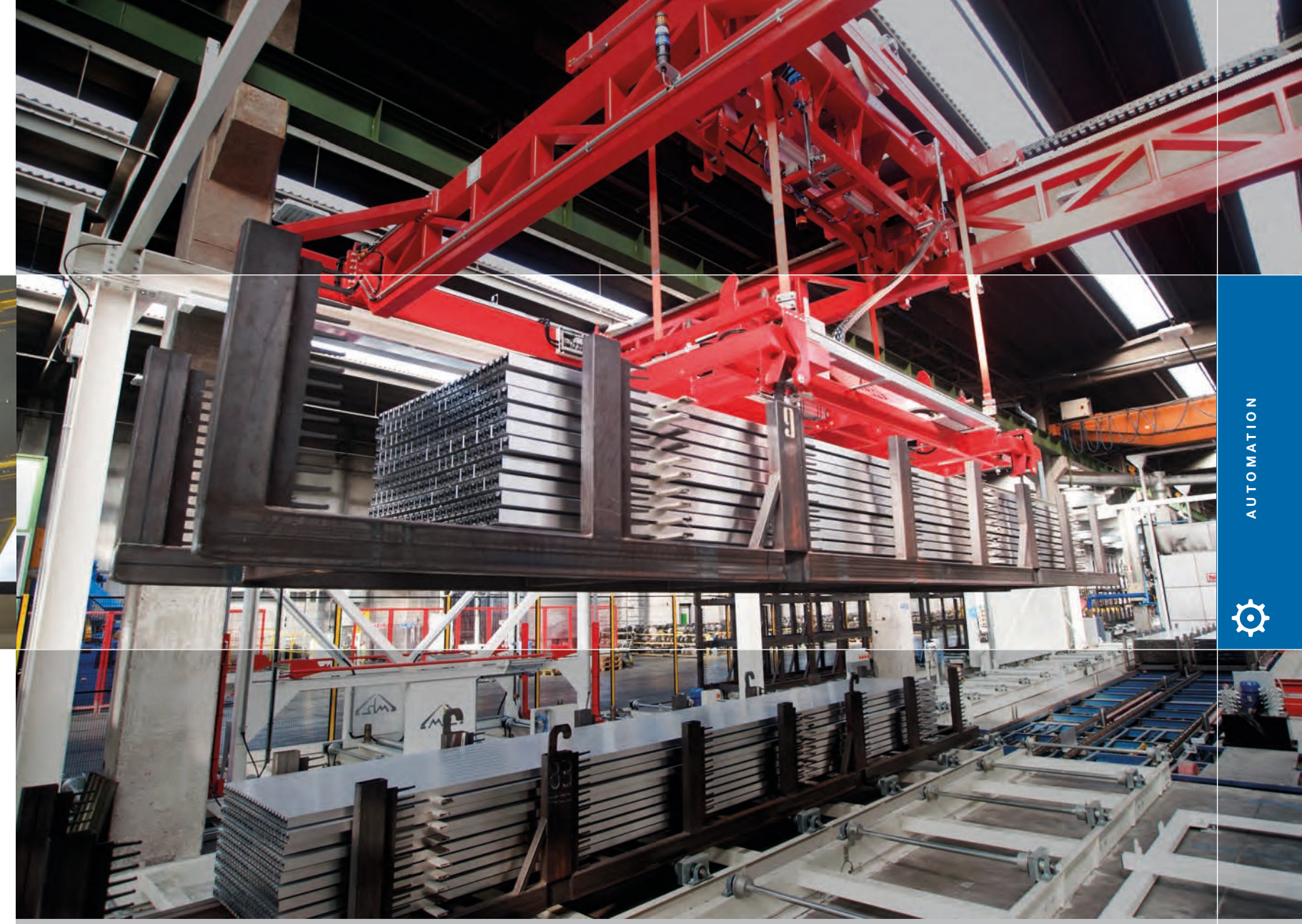




## AUTOMATION



Several solutions have been developed to optimize available space, automation and logistics of extrusion, anodizing and painting plants. The range includes automatic systems extending from the exit of aging ovens to the storage of final bundles and shipping.



AUTOMATION





## AUTOMATION

1

SCRAP SHEAR MACHINE

2

STACKER/DE-STACKER

3

BASKET HANDLING

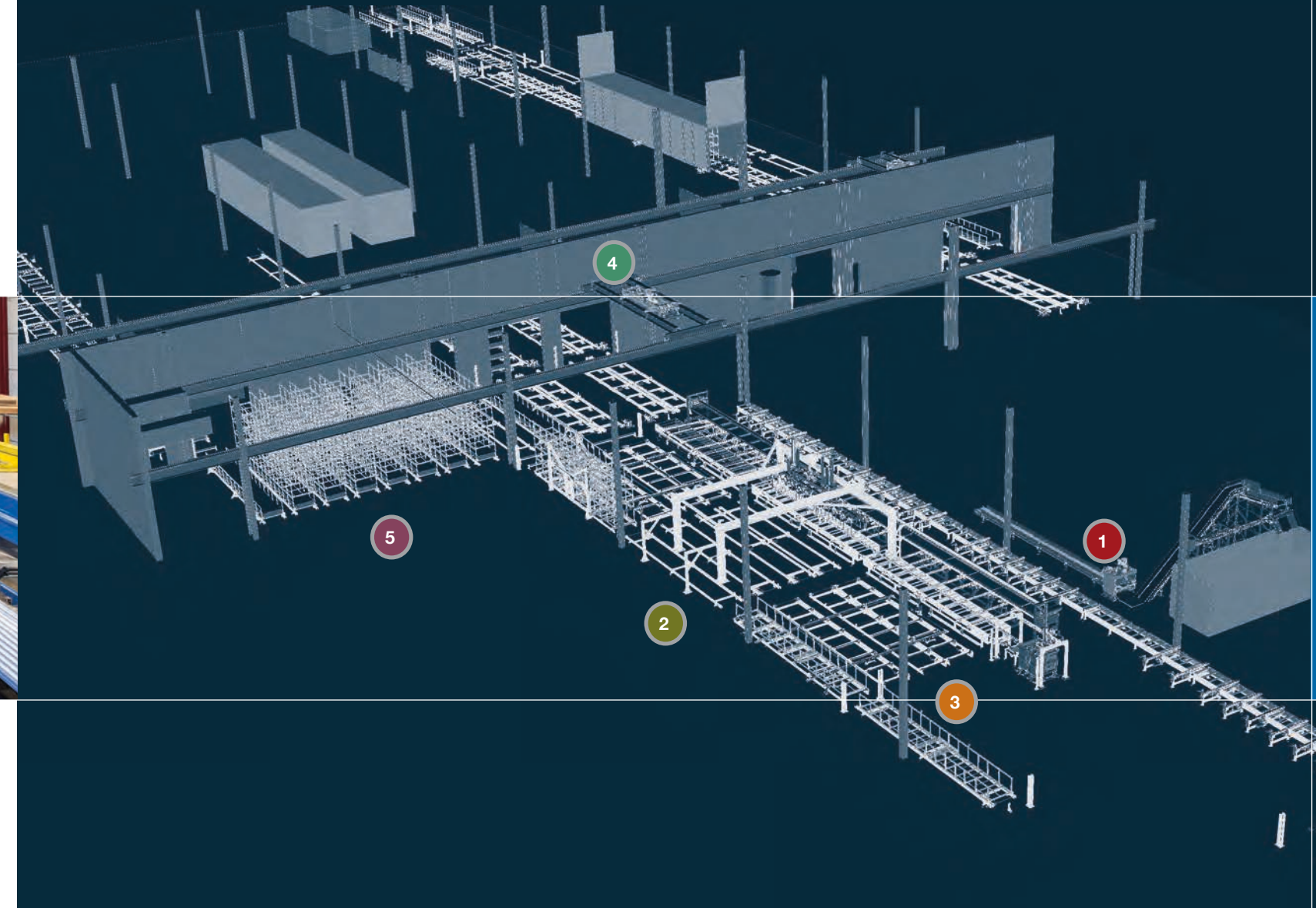
4

BRIDGE CRANE

5

BASKET STORAGE





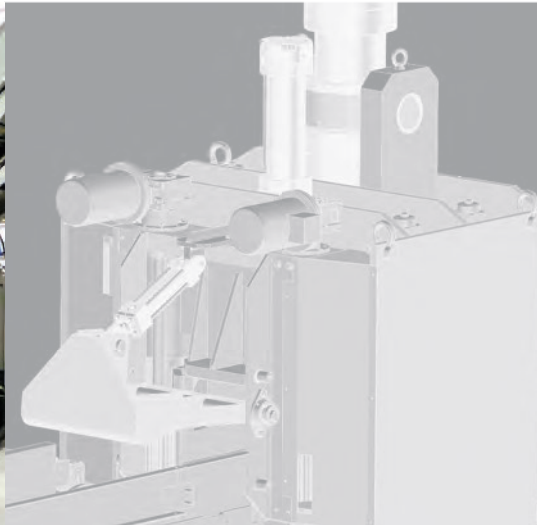
AUTOMATION



AUTOMATION



## SCRAP SHEAR machine



Machine to press and cut scrap profiles for scrap volume reduction. Different models are available.



AUTOMATION





## SCRAP SHEAR machine

AUTOMATIC CYCLE



Operation of the machine is completely automatic and hydraulically-driven. The scrap sections arriving from the conveyor are inserted into the machine. An optical switch automatically starts the crushing cycle and advances the profiles to the preset cutting distance. At the preset distance the hydraulic press lowers and crushes the profiles; once crushed, the hydraulic shear lowers and cuts the profiles.

CONVEYOR



The shorter, sheared scraps are handled with a set of belts that drops the profiles on a box or a conveyor.

## SCRAP SHEAR MACHINE

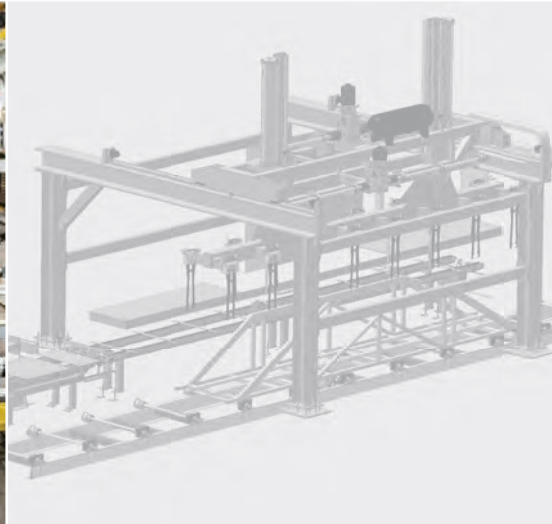
Shearing force range (t)	70 - 120	* as per customer's request
Max sizes manageable [mm]	width 400 x height 200	
Shear movements	hydraulic	
Shearing cycle time (s)	12 approx	
Max scrap density (kg/m <sup>3</sup> )	250 - 400	* depending on shearing force
Max profile linear weight (kg/m)	15	* no solid bars nor aged aluminium profiles
Infeed conveyor	Rubber belts reinforced with steel wires	
Belt width (mm)	500	
Exit belt	special steel belts	







## STACKER/DE-STACKER



Stacker/de-stacker systems to handle layers of profiles in a completely automatic way by using spacers of different material. A fixed steel structure supports on overhead manipulator, transversally movable. On the crosspiece pliers are installed to allow loading/unloading of layers of profiles. The stacker/de-stacker systems can be designed to work simultaneously with extra baskets.

The system is supplied with a Spacer Recovery Unit to stack spacers into a spacer box by using magnets or a vacuum system, depending on the type of material of the spacers.



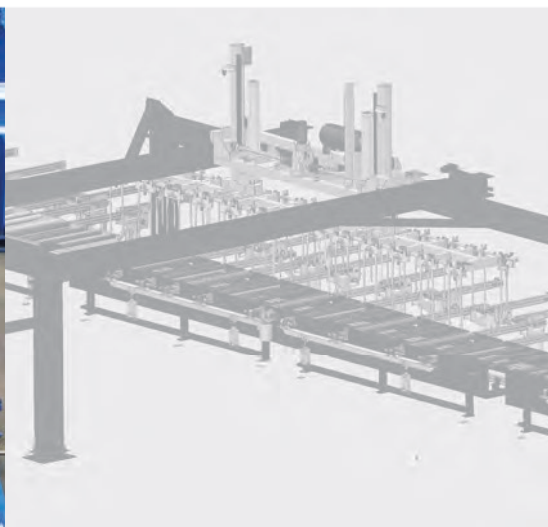
AUTOMATION



AUTOMATION



## DE-STACKER





AUTOMATION



AUTOMATION



## BASKET HANDLING



EMMEBI can handle the entire flow of material in a fully automatic way, from the automatic stacker to the aging oven and to the storage area. Customized handling systems can move the baskets by means of bridge cranes, shuttles, roller or chain conveyors.



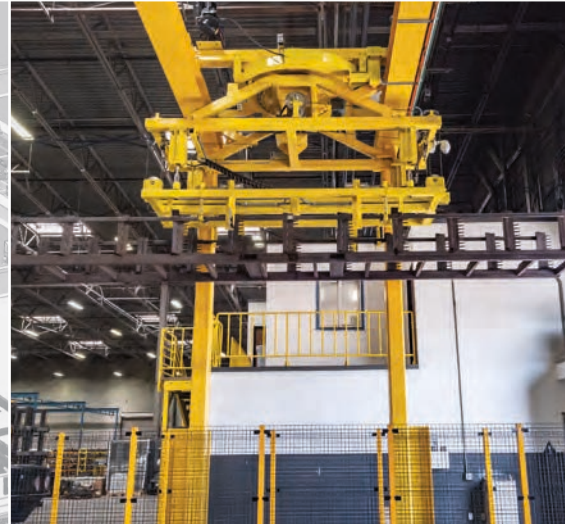
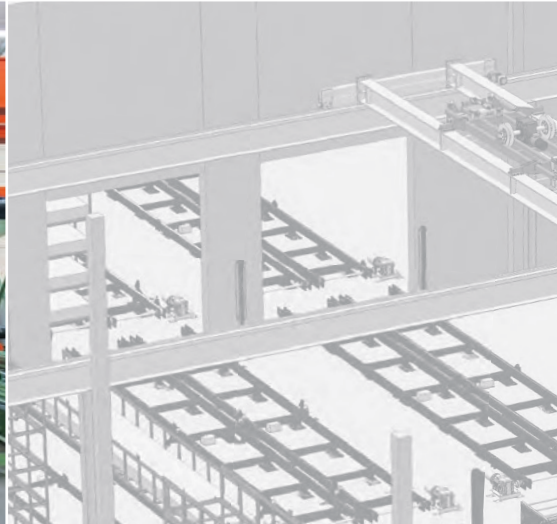
AUTOMATION



AUTOMATION



## BRIDGE CRANE



Our process cranes are tailored to meet the needs of our customers' production processes, both for the steel and aluminium industries. They are designed and built to meet specific requirements, through manual control, semi or fully automated operating sequences, from lifting and positioning of the material, to serving a specific machinery or storage.



AUTOMATION

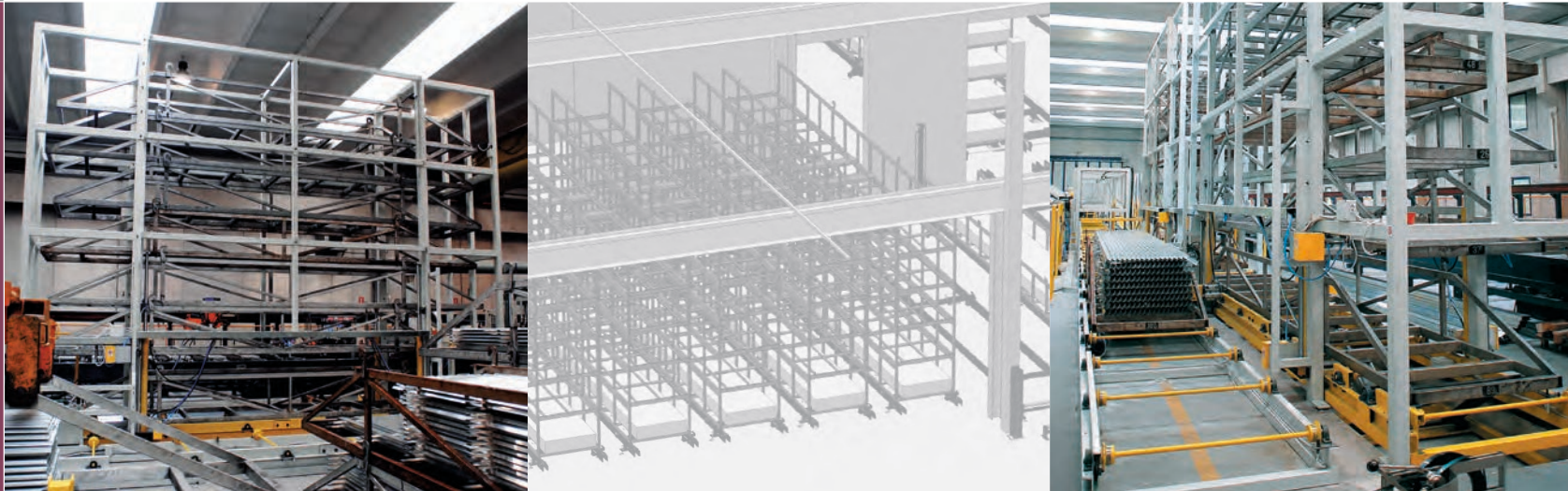




AUTOMATION



## BASKET and BUNDLE STORAGE



An automatic system for handling full/empty baskets or bundles to optimize space with no manual operations.



AUTOMATION





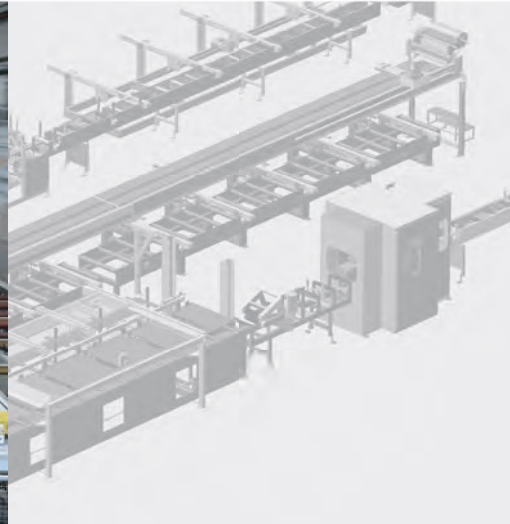
# PACKING LINES







## PACKING LINES



Emmebi provides a wide variety of automatic packaging machines and integrated systems for aluminium profiles. They range from the “stand alone” machine to the more complex line, fit to meet considerable output capacities. The kinds of packaging are multifarious, including spiral wrapping, adhesive tape application or envelope formation.

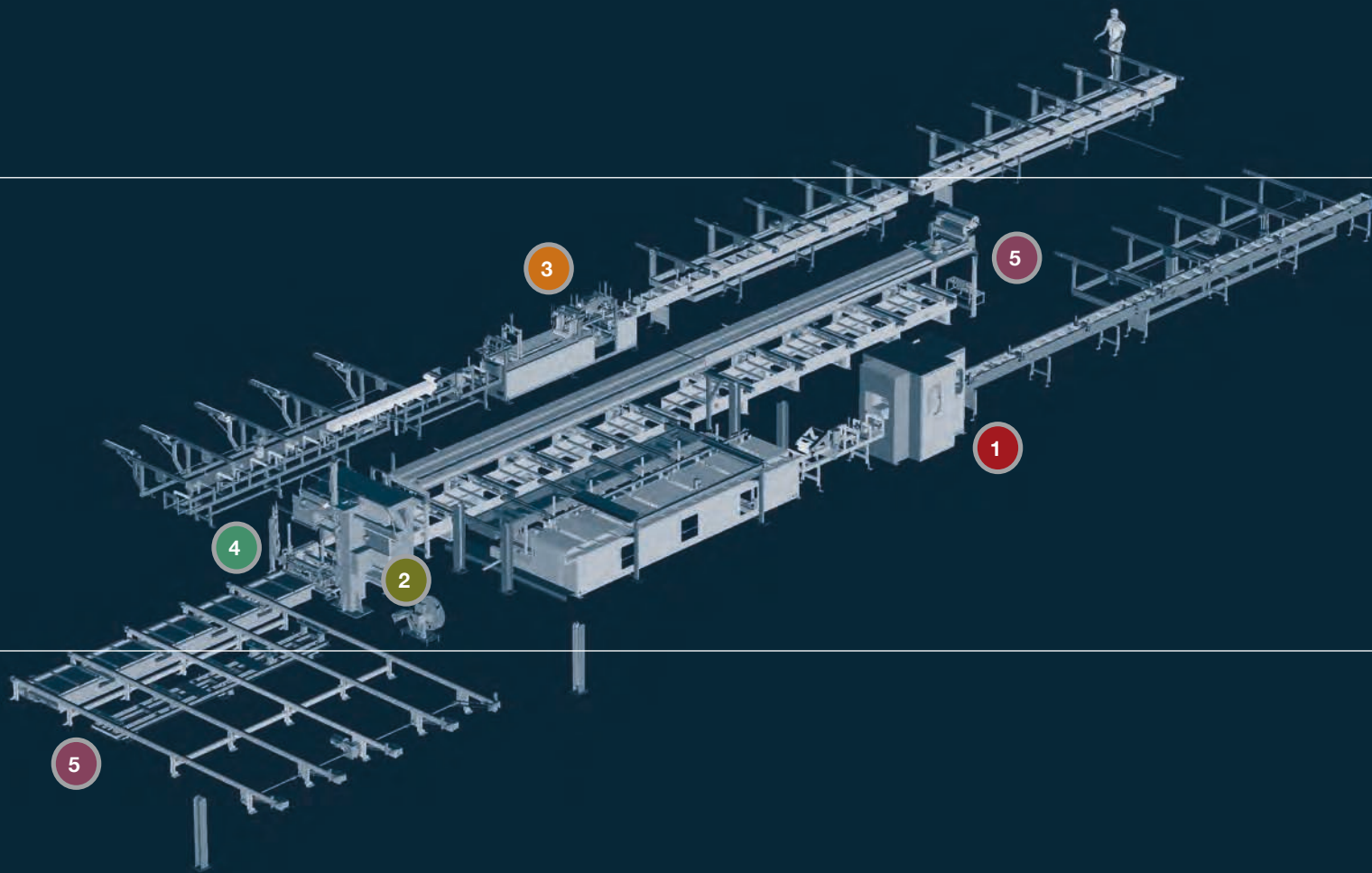


PACKING LINES



## PACKING LINES

1	<b>SPIRAL WRAPPING MACHINES</b>	<b>FOR SUB-BUNDLES</b>	“SMALL EASY” / “SMALL ADVANCED” / “SMALL ADVANCED PLUS” / “COMPACT”
2		<b>FOR MASTER BUNDLES</b>	“BULK” / “BULK” + QUICKWOOD” WOOD BATTEN LOADER
3	<b>TAPING MACHINES</b>	<b>FOR SINGLE PROFILES</b>	“MAN1 TF” / “MAN1TV” / “MAN3 TV”
4	<b>STRAPPING MACHINES</b>	<b>FOR BUNDLES</b>	WITH PLASTIC OR STEEL
5	<b>PACKAGING OPTIONS</b>		MINI BUNDLE WRAPPERS / LIFTING DEVICES / PAPER PULLER / ROBOT / WEIGHING SYSTEMS

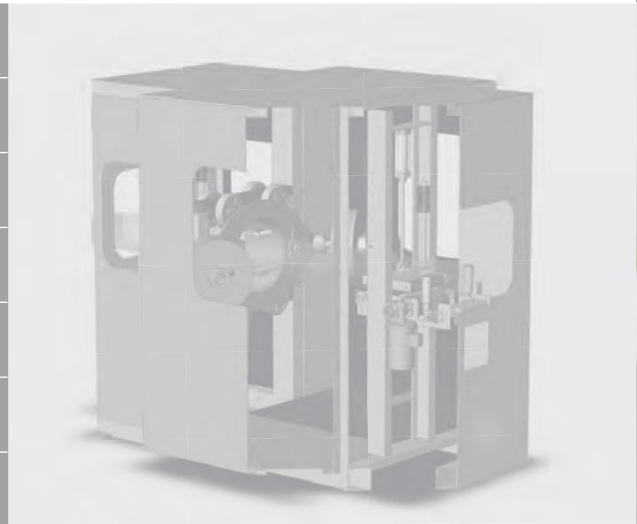






## PACKING LINES

MACHINE	MODEL
SMALL	SMALL EASY
	SMALL ADVANCED
	SMALL ADVANCED PLUS
	AUTOMATISMS FOR SMALL LINE
COMPACT	COMPACT WITH/WITHOUT AUTOMATIC TAPING
	AUTOMATISMS FOR COMPACT LINE



Machines to spiral-wrap single - or bundles of – profiles, with paper, stretch film or plastic. Various models are available, from the simpler to the more advanced, highly productive ones, ideal when implemented with automatic systems, such as loaders, unloaders to guarantee your working flow is constant and uninterrupted.





## SMALL wrapping machine

SMALL EASY



The SMALL EASY wrapping machine is the ideal, economically advantageous and winning choice for wrapping aluminium profiles, whether with extensible film, paper or plastic material. In case of plastic or paper packaging, operator-driven taping of package extremities with adhesive tape is required.

SMALL ADVANCED



The SMALL ADVANCED wrapping machine - a more advanced model - is equipped with a taping machinery to bind both head and tail of the product with adhesive tape, should you opt for paper or polythene wrapping. Technical features are the same as the SMALL EASY's ones, but it doesn't require an operator being present for the taping operations.

SMALL ADVANCED PLUS



The features of the SMALL ADVANCED PLUS wrapping machine are identical to those of the SMALL ADVANCED model except that the cutting of the wrapping material uniting the two contiguous profiles takes place during profile advancement, non-stop. The non-stop operation places the SMALL ADVANCED PLUS machine at the top of the production speed category.

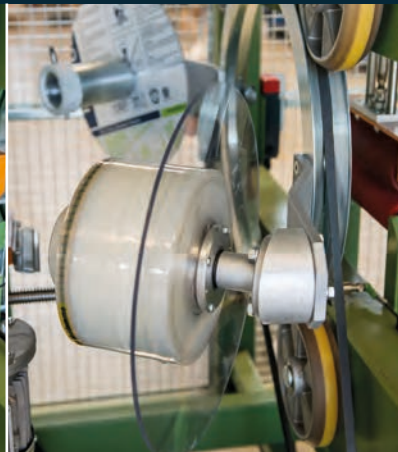
## DIFFERENT WRAPPING MATERIAL



Spool carriage group with plastic



Spool carriage group with paper



Spool carriage group with stretch film

Bypass



Full wrapping



Head-Tail wrapping



Band wrapping



Reinforced wrapping



Working Cycles



SPOOL CARRIAGE



The machine is equipped with a single spool for stretch film and a double spool for paper or nylon. Extensible film-wrapping allows you to achieve high packaging performances and speeds. Spools are placed at a 180° angle and may be switched on manually by using a locking device.

CLAMP AND CUTTING UNIT



It is also equipped with a device for holding and cutting stretch film, allowing the machine to do its work in a fully automatic way.

CENTERING DEVICES



A set of pneumatic centring rollers ensures perfect product positioning before the wrapping stage.

PNEUMATIC PRESSERS



Furthermore, it is furnished with automatic pressure rollers to ensure vertical stability of the product during the wrapping stage.

AUTOMATIC ADVANCEMENT



A set of rubber advancement rollers enables automatic advancement of the product when the first profile/package to be paper-wrapped comes along. After initial application of protective material on the product, the machine begins the spiral-wrapping process and stops automatically once the last profile leaves. By placing profiles one after the other, a continual, non-stop wrapping operation is guaranteed.

AUTOMATIC TAPING



The SMALL ADVANCED machinery is fitted with a device for applying adhesive tape to profile ends. Cutting of the wrapping material takes place during machine downtime through an acceleration roller tear.

PNEUMATIC PRESSERS



The equipment is fitted with automatic, exit pressure rollers on the wrapping machine, to ensure product stability during the acceleration stage.

MOVABLE AUTOMATIC TAPING



The SMALL ADVANCED PLUS is fitted with a trolley for packaged bundle taping, to be synchronized with profile advancement speed.



MACHINE	SMALL EASY	SMALL ADVANCE	SMALL ADVANCE PLUS
Max sizes manageable [mm]	250xh150	250xh150	250xh150
Min sizes manageable [mm]	50xh50	50xh50	50xh50
Min. processing length [mm]	2500	2500	2500
Functioning with paper/plastic	automatic (manual taping operation only if required)	automatic	automatic
Functioning with stretch film	automatic	automatic	automatic
Max product speed [m/min]	21 m/min with stretch - 2 operators 12 m/min with paper/plastic - 3/4 operators - manual taping required	21 m/min with stretch - 2 operators 18 m/min with paper/plastic - 2 operators - automatic taping	21 m/min with stretch/paper/plastic - 2 operators - flying automatic taping
Photocell indicating the presence of an incoming or outgoing product	yes	yes	yes
In-and-out automatic presser group	yes	yes	yes
Clamp and cutting group	if required	yes	yes
Spool carriage group	single spool for stretch film at request double spool for paper/plastic	single spool for stretch film/paper double spool for paper/plastic	single spool for stretch film/paper double spool for paper/plastic
Taping machine	no	fixed taping machine	movable taping machine
Display con touch screen	no	yes	yes
SPOOLS			
Inner spool/tape diameter [mm]	76	76	76
Outer spool diameter [mm]	Stretch film 200 Paper 400 Plastic 400	Stretch film 200 Paper 400 Plastic 400	Stretch film 200 Paper 400 Plastic 400
Spool height [mm]	Stretch film 125 Paper 100 ÷ 125 Plastic 100 ± 125	Stretch film 125 Paper 100 ÷ 125 Plastic 100 ± 125	Stretch film 125 Paper 100 ÷ 125 Plastic 100 ± 125
Material specifications	-	Stretch film 20 ÷ 30 µm Plastic 60 µm	Stretch film 20 ÷ 30 µm Plastic 60 µm
Outer tape diameter [mm]	-	100	100
Tape height [mm]	-	20	20



## SPIRAL WRAPPING FOR SUB-BUNDLES



### Automatizms for SMALL Lines



The automatizms in the wrapping, taping and cutting process of the packaging material make the SMALL series perfect both as machines to be integrated in lines and as isolated wrapping centres.

#### ROLLERS



The machine is equipped with plastic or galvanized iron rollers depending on the kind of profile to be packaged.

#### PUSHERS



Also, it is equipped with a set of pneumatic pushers made of plastic to extract the packaged bundles.

#### FEEDING



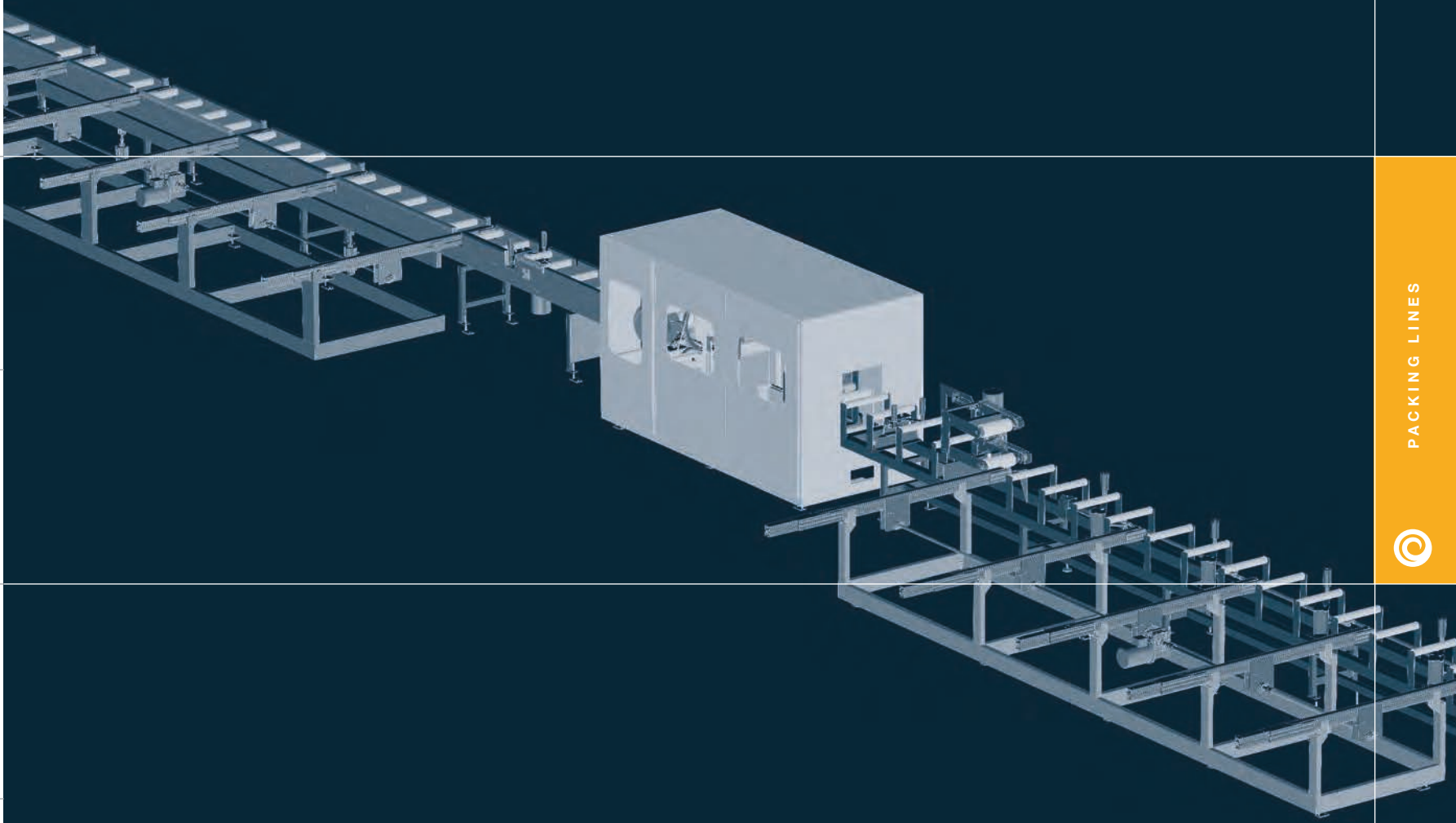
#### FEEDING STATION

A set of polyurethane, steel-reinforced belts, providing pneumatic handling, ensure the transfer of the material to be packaged right up to the conveyor leading into the machine.

#### OUTFEED CONVEYOR



The wrapped packages are ferried right over to the end of the roller conveyor, where a set of vertical, pneumatically-controlled rollers, pushes the packages sideways right over to the inclined accumulation table. Alternatively, the machine can be equipped with a set of belts for automatic accumulation of sub-bundles.





## SPIRAL WRAPPING FOR SUB-BUNDLES



### COMPACT wrapping machine



#### MODELS

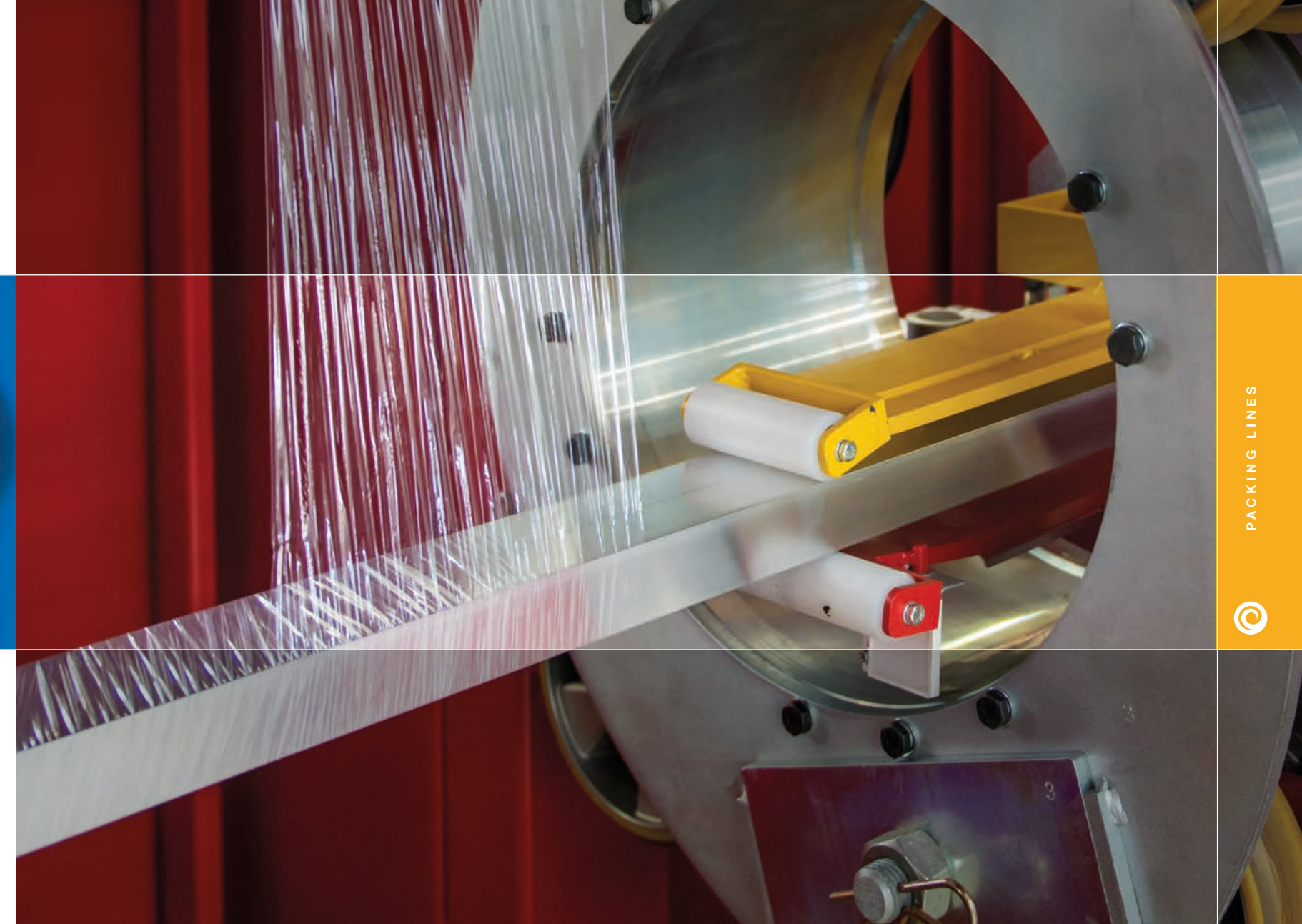
SINGLE WRAPPING MACHINE

INTEGRATED WITH AUTOMATIC TAPING



The COMPACT machine is placed at the highest levels of product spiral-wrapping with extensible film, polyethylene or paper.

COMPACT - which can be included in high productivity plants - stands out for its flexibility, while offering absolutely cutting-edge performances both in terms of processing and duration.



## SPIRAL WRAPPING FOR SUB-BUNDLES



### **COMPACT** wrapping machine

DOUBLE SPOOL WITH PAPER



SINGLE SPOOL WITH PAPER



The machine enables you to wrap with paper of various types and thickness by using either a double or single, 1.100 mm. diameter coil, thus making longer processing possible, without any downtime to change the coil.

Also, the machine can be fitted with a double coil to wrap materials with stretch film or plastic.

DOUBLE SPOOL WITH PLASTIC



SINGLE SPOOL WITH STRETCH FILM





## COMPACT wrapping machine

FULLY AUTOMATIC CYCLE



Once the section is fed into the machine, the reel starts automatically. After two or more turns, the transfer rollers transport the profiles until the wrapping operation is finished. At this point a clamp holds and cuts the wrapping material, allowing for exit of the profile.

AUTOMATIC TAPING



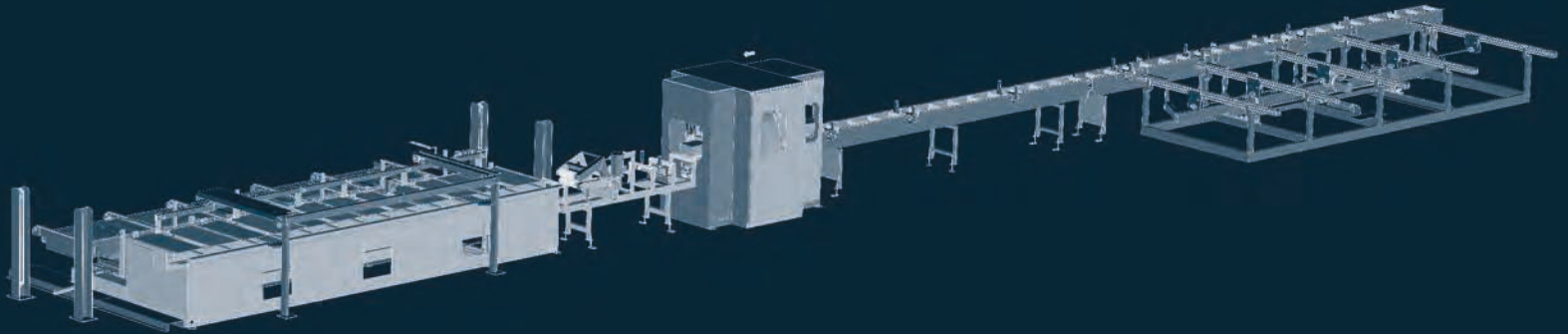
The Compact wrapping machine can be integrated with a taping machine. After the spiral wrapping process is complete, a special device is used to automatically tape the head and the tail ends of two adjoining packs. All the operations described take place automatically while the profiles are moving. The transfer of the bundling system is controlled by a motor controlled by frequency drive. No adjustments are required for different bar lengths.

Max sizes manageable [mm] without taping	250xh250
Max sizes manageable [mm] with taping	250 x 150
Min sizes manageable [mm]	50xh50
Min. processing length [mm]	3000
Functioning with paper/plastic	automatic
Functioning with stretch film	automatic
Max product speed [m/min] (variable through an inverter)	42 m/min with stretch 42 m/min with paper/plastic 30 m/min with big paper roll
Photocell indicating the presence of an incoming or outgoing product	yes
In-and-out automatic presser group	yes
Clamp and cutting group	if required
Spool carriage group	single spool for stretch film/paper - double spool for paper/plastic
Taping machine	no
Display con touch screen	no
<b>SPOOLS</b>	
Inner spool diameter [mm]	satellite spools 76 - big paper roll 350
Outer spool diameter [mm]	Satellite stretch film 200 Satellite paper 400 Satellite plastic 400 Big paper spool 1100
Spool height [mm]	Satellite stretch film 125 Satellite paper 100 ÷ 125 Satellite plastic 100 ± 125 Big paper spool 150
Inner tape diameter [mm]	76
Outer tape diameter [mm]	100
Tape height [mm]	20





## Automatizms for **COMPACT** wrapping machine



The Compact wrapping machine, which is always integrated in lines, includes different options to automatically load profiles/sub-bundles, to form sub-bundles into a master bundle and to unload the material.





SPIRAL WRAPPING FOR SUB-BUNDLES



## Automatizms for COMPACT wrapping machine

UNLOADING FROM PAINTING



AUTOMATIC LOADER FOR SUB-BUNDLES



AUTOMATIC SUB-BUNDLE UNLOADER



AUTOMATIC BUNDLE STACKER



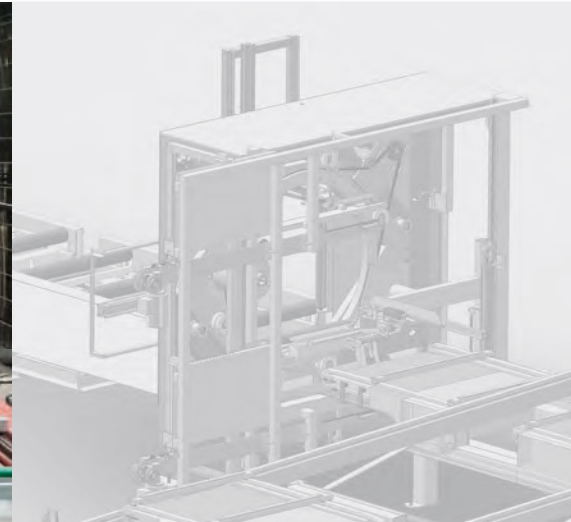
## SPIRAL WRAPPING FOR MASTER BUNDLES



MACHINES

BULK

BULK + QUICKWOOD WOOD BATTEN LOADER



Wrapping machine to wrap continuously - or at step - the final bundle with stretch film: it can be integrated with a robot for the automatic positioning of wood, during wrapping operations. The result is a compact and safe bundle, replacing the strapping operations.



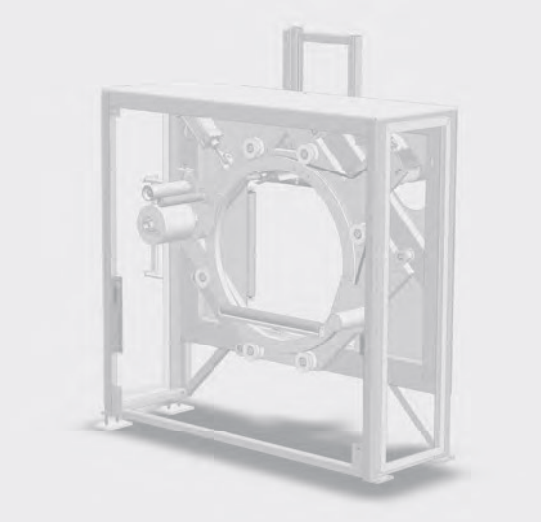
PACKING LINES



## SPIRAL WRAPPING FOR MASTER BUNDLES



### **BULK** wrapping machine



The machine is made to support a coil to wrap packages with stretch film.



PACKING LINES



## BULK wrapping machine

PNEUMATIC MOVEMENT OF THE RING



Operation of the machine is fully automatic. It is fitted with a pneumatic movement to ensure that the master bundle is positioned in the centre of the wrapping ring in compliance with the dimension of the bundle. This movement ensures that when applying material to the bundle, this takes place in a uniform way, ensuring maximum tightness.

SUPPORT ROLLERS



The machine is fitted with vertical support rollers designed to maintain the package during formation and transport. Its vertical support rollers are pneumatically adjusted to the correct size of the package being formed.

Max sizes manageable [mm]	700xh650
Min sizes manageable [mm]	350xh150
Min. processing length [mm]	3000
Functioning with stretch film	automatic
Max product speed [m/min]	15 with stretch
Electronic control centering of the ring in relation to the dimension of the bundle	yes
Rotation speed	through inverter
Photocell indicating the presence of an incoming or outgoing product	yes
In-and-out automatic presser group	yes
Clamp	yes
Spool carriage group	single spool for stretch film
Display con touch screen	yes
<b>SPOOLS</b>	
Inner spool/tape diameter [mm]	76
Outer spool diameter [mm]	Stretch film 200
Spool height [mm]	Stretch film 250







## QUICK WOOD wood batten loader



Device designed to automatically insert wood battens onto the final package during the external wrapping process. It is capable of inserting up to 5 battens to the top and bottom of the bundle.

Storage units for the battens enable a completely automatic process allowing the operator to perform other tasks.



PACKING LINES



SPIRAL WRAPPING FOR MASTER BUNDLES



## QUICK WOOD wood batten loader

FULL WRAPPING WITH WOOD BATTENS



WORKING CYCLE



Bypass



Full wrapping



Head and tails wrapping



Band wrapping with/without wood battens



Band wrapping with wood battens

Max sizes manageable [mm]	700xh650
Min sizes manageable [mm]	350xh150
Min. processing length [mm]	3000
Functioning	automatic
Wood batten sides	2 (or 4 sides at customer request)
Storage for wood battens	up to 5 (standard)
Photocell indicating the presence of an incoming or outgoing product	yes
In-and-out automatic presser group	yes
Clamp	yes

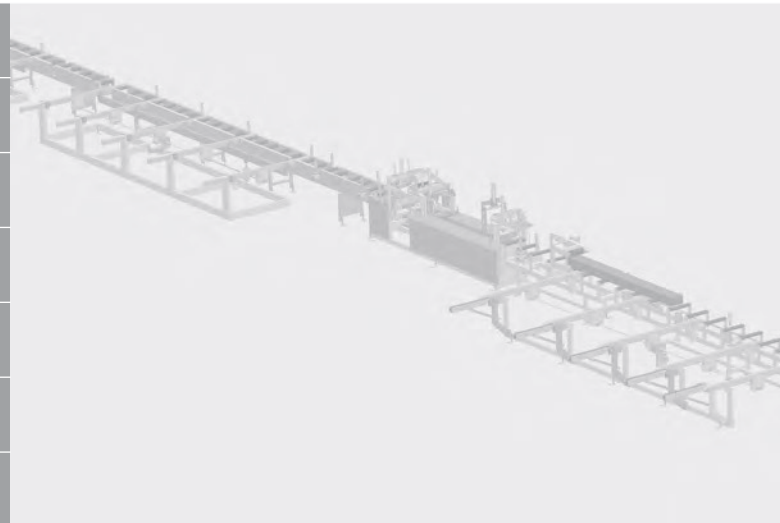


## TAPING MACHINES



**MAN** series

MACHINE	MODELS
<b>TAPING</b>	<b>MAN1 TV - 2 OR 4 SIDES</b>
	<b>MAN3 TV</b>
	<b>MAN1 TF</b>



The machine is used to apply adhesive film on both upper and lower profile surfaces, or on all 4 section sides, so that individual profiles can be processed. It can be equipped with automatic loading and unloading stations.



# TAPING MACHINES



## MAN series

MAN1 TF



MAN1 TV



MAN3 TV



MACHINE	MAN 1 TV	MAN 2 TV / MAN 3 TV	MAN 1 TF
Max sizes manageable [mm]	300xh200	300xh200 x 3	300xh200
Min sizes manageable [mm]	25xh25	30xh20 x 3	30xh20
Min. processing length [mm]	3000	3000	3000
Max processing length (mm)	8000	8000	8000
Number of profiles at the same time	1	3	1
Number of sides to be taped	2 or 4 (option)	2	2 or 4 (option)
Functioning with adhesive tape	automatic	automatic	automatic
Cutting	automatic hot cutting - without stop of the machine	automatic hot cutting - without stop of the machine	automatic hot cutting - with stop of the machine
Product speed [m/min] (variable through an inverter)	45 m/min with automatic loading 25 m/min with manual loading	40 m/min with automatic loading	30 m/min with automatic loading 20 m/min with manual loading
Photocell indicating the presence of an incoming or outgoing product	yes	yes	yes
Number of adhesive rolls	2 or 4	6	2 or 4
In feed and out-feed conveyors	option	option	option
SPOOLS			
Inner spool/tape diameter [mm]	76	76	76
Outer spool diameter [mm]	350	350	350
Spool height [mm]	300	300	300

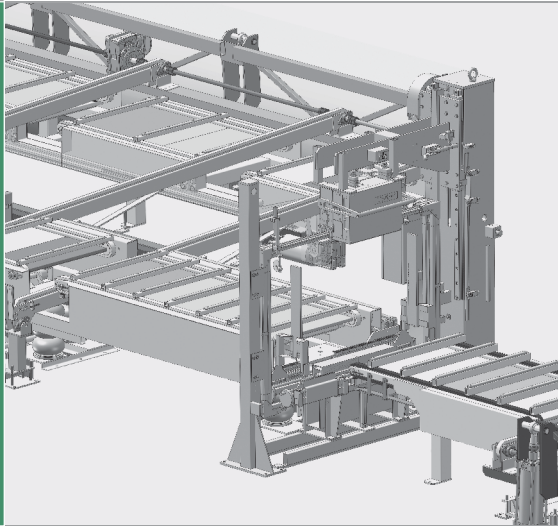




## STRAPPING



## STRAPPING MACHINES



Semi-automatic strapping machine with steel strap.



Fully automatic strapping machine with steel strap and automatic insertion of wood on the 4 sides of the bundle.



Steel strapping machine.



Plastic strapping machine incorporated in a fully automatic packing.



PACKING LINES





## OPTIONS



### MODELS

PAPER PULLER

HYDRAULIC JACKS

MINI BUNDLE WRAPPER

ROBOTIC SYSTEMS



A packing line, included in high productivity plants, offers the possibility of being integrated with several items, aimed at improving performances in the plant, and quality of the final product up to the end-user, while optimising ergonomic demands and safety.



PACKING LINES





## PULLER



The automatic puller unwinds rolls of paper/nylon/ cardboard to prepare sheet to be used for interleaving operations during bundle forming or, in case of cardboard, when preparing boxes.

The paper puller works continuously, by depositing one sheet on top of the other.



PACKING LINES





## JACKS



Hydraulic jacks are used for the purpose of maneuvering profiles to a height that is ergonomically correct for the operator/bander. Hydraulic jacks are individually selectable, so as to manipulate each jack separately.

## MINI BUNDLE WRAPPER



Machine to wrap sub-bundles with extensible nylon during the assembling phase. The machine is provided with pneumatic vertical movement. It can work independently or simultaneously with several machines. Max. sub-bundle size: width 150 mm x height 200 mm



PACKING LINES

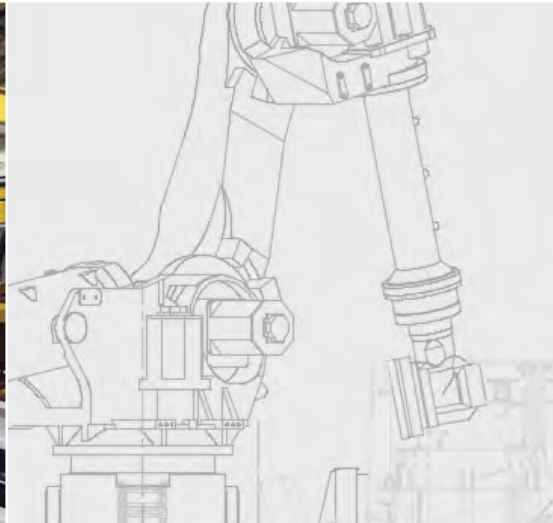




PACKING OPTIONS



## ROBOTIC SYSTEMS



Automatic plants, integrated with robotic systems for the handling of aluminium or steel bars.



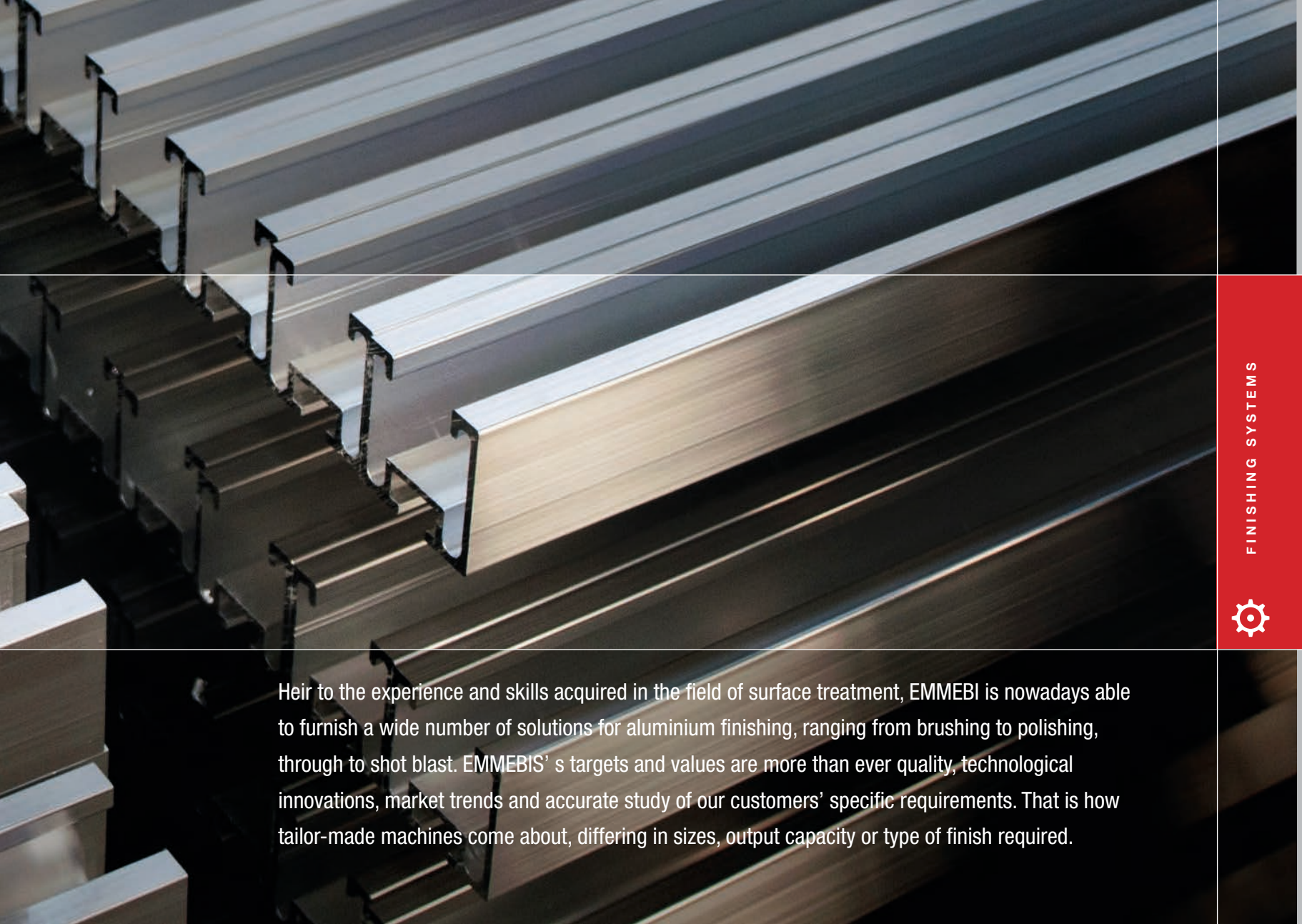
PACKING LINES





## FINISHING SYSTEMS





Heir to the experience and skills acquired in the field of surface treatment, EMMEBI is nowadays able to furnish a wide number of solutions for aluminium finishing, ranging from brushing to polishing, through to shot blast. EMMEBIS' s targets and values are more than ever quality, technological innovations, market trends and accurate study of our customers' specific requirements. That is how tailor-made machines come about, differing in sizes, output capacity or type of finish required.





## FINISHING SYSTEM

1

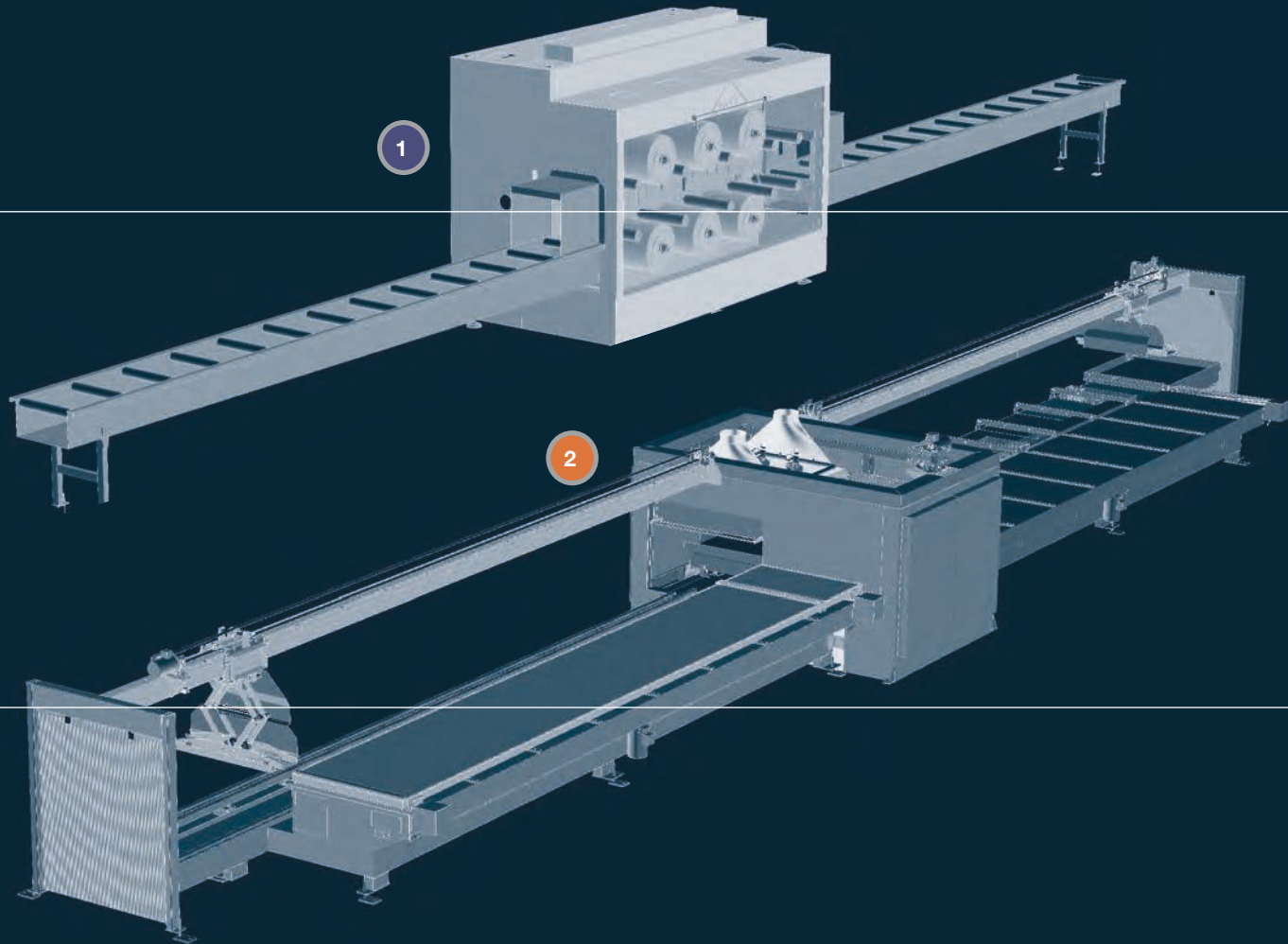
### BRUSHING MACHINES

"DYNAMIC 4" BRUSHING MACHINE  
"DYNAMIC 6" BRUSHING MACHINE  
"DYNAMIC 10X" BRUSHING MACHINE

2

### POLISHING MACHINES

"PULILUX 1999 FC" POLISHING MACHINE  
"PULILUX 4999 FC" POLISHING MACHINE





## BRUSHING MACHINES



### MODELS

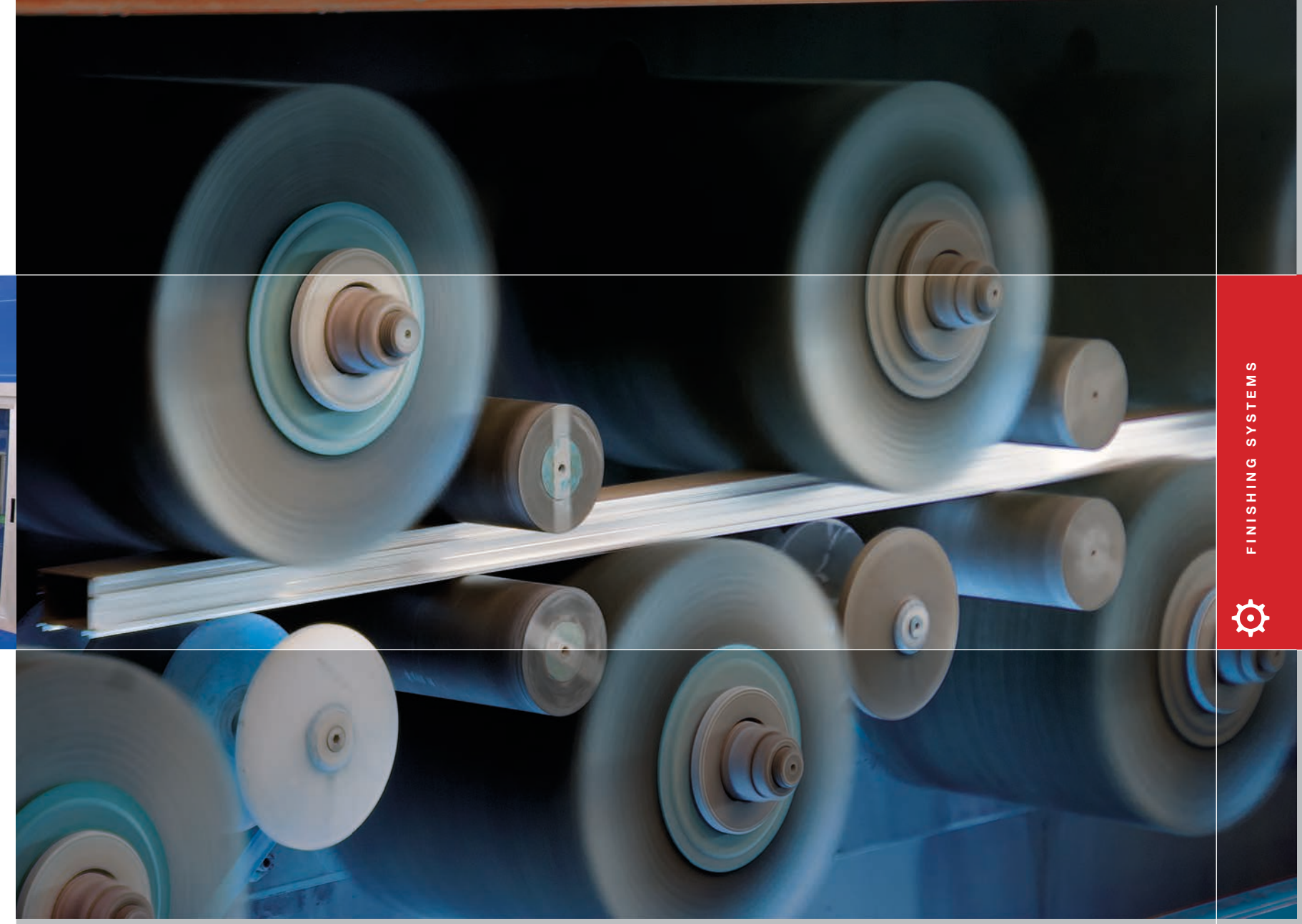
“DYNAMIC 4” BRUSHING MACHINE

“DYNAMIC 6” BRUSHING MACHINE

“DYNAMIC 10X” BRUSHING MACHINE



The machine is employed to get rid of superficial defects - such as extrusion marks, signs of manipulation, storage or transport signs - in order to provide surfaces with a satin finish, displaying multiple aesthetic aspects, prior to the anodizing process, but even before the painting stage, with an aim to improving surface quality. Several models are available, depending on the output capacity required.



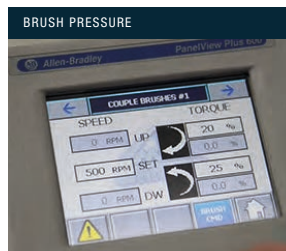
FINISHING SYSTEMS





DYNAMIC 4

The “Dynamic 4” machine has 4 brush heads, so as to operate at the same time on two sides of the profiles.



BRUSH PRESSURE

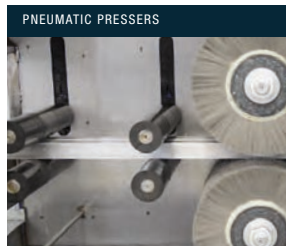
Brush pressure is hydraulically controlled by cylinders as follows:

- independently on each brush
- at the same time all upper brushes and pressure rollers
- Top and bottom



DYNAMIC 6

The “Dynamic ” machine has 6 brush heads, so as to operate at the same time on two sides of the profiles. It is destined to our most demanding customers.



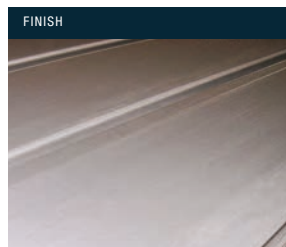
PNEUMATIC PRESSERS

The machine is equipped with automatic pressure rollers to ensure vertical stability of the product during the wrapping stage.



DYNAMIC 10X

“DYNAMIC 10X” is a machine with 10 brush heads - 5 above and 5 below, the last 2 couples of brushes placed with a 45° inclination - to obtain, in addition to multiple aesthetics linear finishes, a cross aspect.



FINISH

A wide range of finishes can be obtained, from deep, visible lines to smooth surfaces with visible line defects, or any elimination of lines after anodizing.



MULTIPLE SETTINGS

The machines enable you to obtain varying types of satin finish by setting different brush speeds and the processing speed, and by interchanging different types of brushes and their grit.



CROSS FINISH

Sample of cross finish.

MACHINE	DYNAMIC 4	DYNAMIC 6	DYNAMIC 10X
Number of brushes	4 (2 above and 2 below)	6 (3 above and 3 below)	10 (3 above and 3 below + 2 above and 2 below at 45°)
Type of Brushes	steel - tynex	steel - tynex	steel - tynex
Brush dimensions	400 OD x 76 ID x 400 mm	400 OD x 76 ID x 400 mm	400 OD x 76 ID x 400 mm
Brush speed	Variable from 0 - 1000 rpm	Variable from 0 - 1000 rpm	Variable from 0 - 1000 rpm
Brush pressure	independent on each 4 brush or simultaneous on each brush and roller	independent on each 6 brush or simultaneous on each brush and roller	independent on each 10 brush or simultaneous on each brush and roller
Minimum Working width	20 mm	20 mm	20 mm
Maximum Working width	400 mm	400 mm	400 mm for straith lines
Minimum Working height	5 mm	5 mm	280 mm for cross lines
Maximum Working height	300 mm	300 mm	5 mm
Minimum Working length	1500 mm	1500 mm	300 mm
Maximum Working length	7000 mm	7000 mm	1500 mm
Working speed	0 - 40 mt/min	0 - 40 mt/min	7000 mm
Brush motor	No. 4 x 5kW	No. 6 x 5 kW	0 - 40 mt/min
Transfer motor	0,75 kW	0,75 kW	No. 10 x 5 kW
Up-down Brush motor	1,5 kW	1,5 kW	0,75 kW
Hydraulic pump	0,55 kW	0,55 kW	1.5 kW
Fan Motor	0,75 kW	0,75 kW	0,55 kW





## POLISHING MACHINES



### MODELS

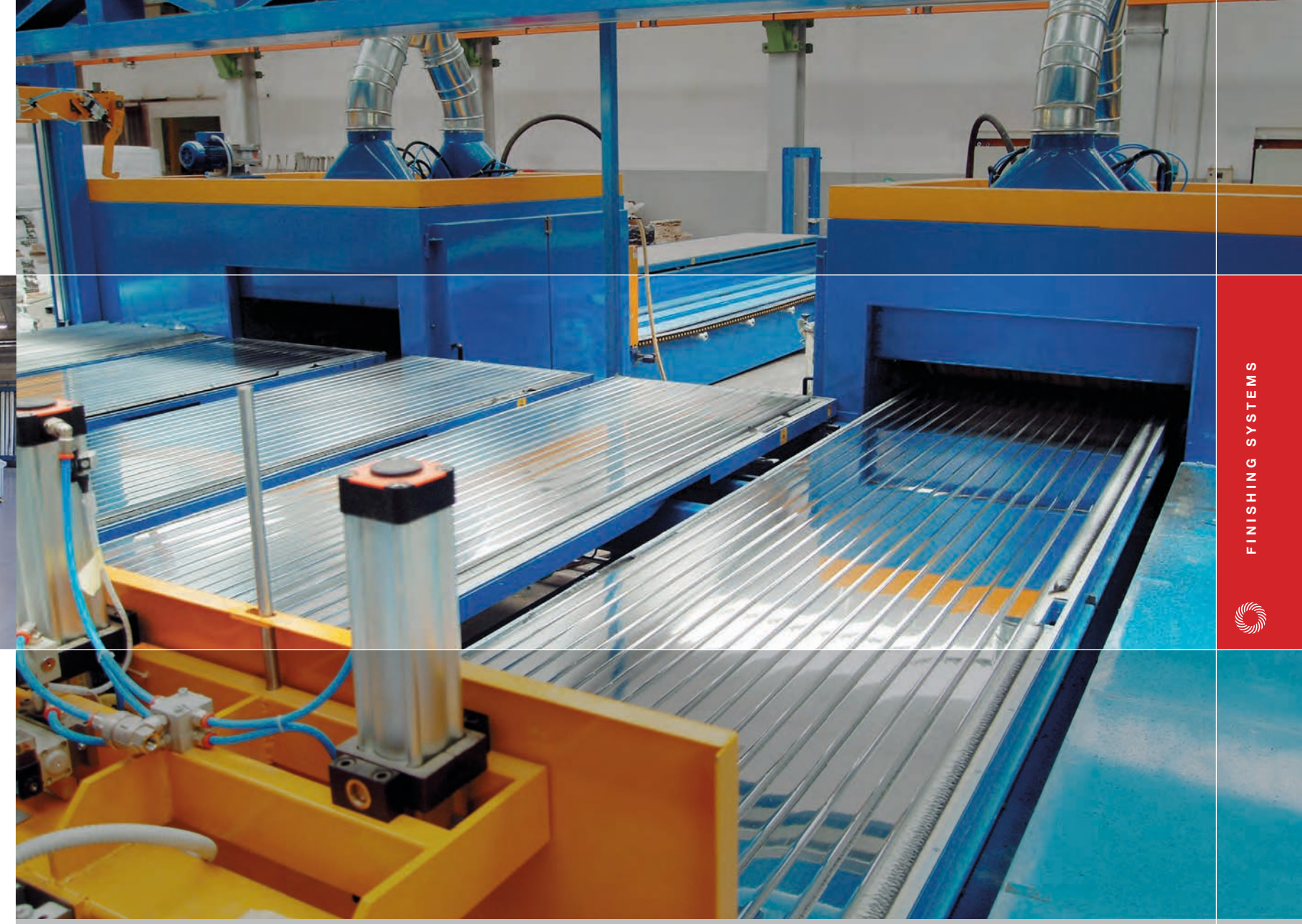
Polishing machine PULILUX1999 FC

Polishing machine PULILUX4999 FC

SPECIAL POLISHING MACHINES at customer's request



The purpose is to eliminate all small imperfections on profile surface, providing that extra, special lucid effect. The processing cycle is carried out with either cotton, sisal or Scotch Brite brushes, installed on a fixed unit, and by using abrasive paste. It is supplied complete with one or two movable tables to feed and unload the profiles, depending on the customer's requirements.



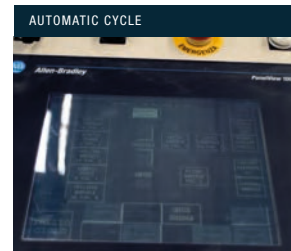
FINISHING SYSTEMS





PULILUX 1999 FC

“PULILUX 1999 FC” is a machine with one movable table and a fixed head where the brushes are installed.



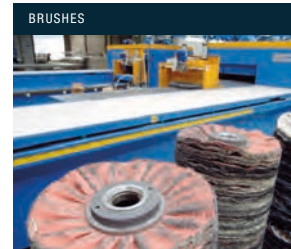
AUTOMATIC CYCLE

The processing cycle is extremely simple, given that the system is highly automated, by previous setting of several parameters. By installing an optional database, the system enables you to memorize specific working cycles for each profile.



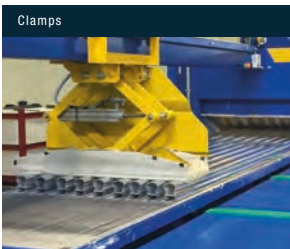
PULILUX 4999 FC

It is equipped with a double movable table and loading and discharging operations from one platform take place while the other platform is being employed in the finish cycle.



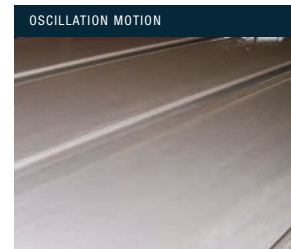
BRUSHES

The machine can be equipped with a hydraulic press to facilitate the mounting of brush discs into the appropriate brush-carrier shafts.



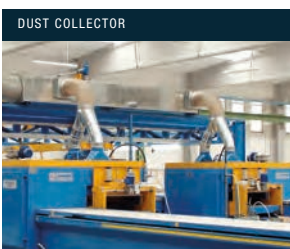
Clamps

To ensure a thoroughly safe processing cycle, the machine is fitted with aerial clamps to lock profiles during processing. Besides assuring absolute profile locking, this pneumatic system is advantageous in that it polishes short and long profiles without intervening manually on the strokes.



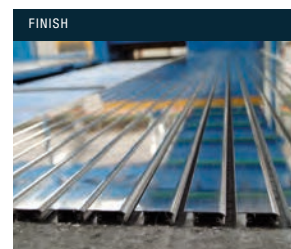
OSCILLATION MOTION

Also, it can be fitted so as to oscillate, to ensure a homogeneous finish, should the treatment of sheet or profiles having very large surfaces be required.



DUST COLLECTOR

Being the dust collector fixed in the same servicing spot, suction is excellent, as the dust collector is linked directly to the head where the finishing cycle takes place, and where the paste-spraying guns are mounted.



FINISH

Sample of shining finish.

MACHINE	PULILUX 1999 FC	PULILUX 4999 FC
Number of tables	1 working table	1 working table + 2 auxiliary tables for loading and unloading operations
Table length	7200 mm for profiles having a max length of 7000 mm	7200 mm for profiles having a max length of 7000 mm
Table width	1000 mm	1000 mm
Transfer speed	0-20 m/min	0-20 m/min
Transfer motor	3 kW	3 kW
Type of Brushes	cotton / sisal / scotch-brite	cotton / sisal / scotch-brite
Number of brush rolls	2	2
Brush dimensions	500 OD x 130 ID	500 OD x 130 ID
Brush speed	Variable from 0 - 2000 rpm	Variable from 0 - 2000 rpm
Brush motor	37 kW x 2	37 kW x 2
Motor for the brush set climb and descent	1,5 kW	1,5 kW
Minimum profile length with clamps	3500 mm	3500 mm
Minimum profile length with mechanical locks	1000 mm	1000 mm
Maximum profile height	200 mm	200 mm
Structure weight	8500 kg	12000 kg
Dust aspirator motor	7,5 kW	7,5 kW
Dust aspirator capacity	6500 m3/h	6500 m3/h
Abrasive paste distribution	6 high pressure spray guns	6 high pressure spray guns
Oscillation motion	at request	at request
Hydraulic press to assemble the brush wheels	at request	at request
Productivity	60 m2/h	100 m2/h
Processing cycle	fully automatic with database to memorize working cycles	fully automatic with database to memorize working cycles



## REFERENCES

**UNITED STATES** CARDINAL ALUMINUM \_ THE WILLIAM BONNELL CO. (NEWNANGA, CARHAGETN, KENTLAND) \_ WESTERN EXTRUSIONS \_ INDALEX (GIRARD GA, ELKARTIN) \_ FRONTIER ALUMINUM \_ KEYMARK CORP. \_ AFCO \_ MPP \_ MACKLANBURG-DUNCAN \_ SAPA (PORTLAND OR) \_ KAISER ALUMINUM (KALAMAZOO) \_ NANSHAN AMERICA \_ PENNEX \_ CRYSTAL FINISHING \_ SIERRA \_ GORDON ALUMINUM \_ SAPA \_ TENARIS \_ LINETEC \_ PRIES \_ MID-STATES \_ **CANADA** ALTEX \_ EXTRUDEX \_ CANART **BRASIL** 3M \_ COMPANHIA BRASILEIRA DE ALUMINIO S.A. \_ ALCOA (TUBARAO, SOROCABA, RECIFE, UTINGA, RIO DE JANEIRO) \_ HYDRO ALUMINIO \_ ACRO \_ ASA \_ PRODEC \_ OLGA COLOR \_ NUOVA TAMBORE' \_ TEC VIDRO \_ ROMETAL **CHINA** ASIA ALUMINIUM \_ HYDRO **ARGENTINA** SCRANTON **PARAGUAY** VIDRIOCAR \_ ALUKLER \_ 3M **VENEZUELA** ALUMINIOS PIPO **MEXICO** CUPRUM (MEXICO CITY, MONTERREY) **THAILAND** ALUMET \_ THAI METAL **AUSTRALIA** AEA \_ CAPRAL \_ G. JAMES \_ INEX \_ APA/EPA **NEW ZELAND** FLETCHER \_ MCKECHNIE **UNITED ARAB EMIRATES** GULF EXTRUSION \_ AL JABER EXTR. \_ E.E.F. \_ AL HAMAD \_ ELITE EXTRUSIONS \_ WHITE ALUMINIUM **BAHRAIN** BALEXCO **JORDAN** MODAL **QATAR** QALEX **ISRAEL** EXTAL \_ ALUBIN \_ MZPA **SAUDI ARABIA** AUPCO (JEDDAH, DAMMAN) \_ ALTAISEER \_ AL ANDALUS **SYRIA** MADAR **NETHERLAND** BOAL \_ SAPA \_ ALUMET **BELGIUM** PROTEC \_ ALIPLAST \_ E-MAX \_ MALVE \_ BOAL **NORWAY** SAPA MAGNOR **FINLAND** PURSO **FRANCE** ALCAN FRANCE \_ ELMADUC \_ HYDRO PUGET **POLAND** ALBATROS \_ YAWAL \_ CORTIZO **GERMANY** KUEBERIT \_ HYDRO ALUMINIUM \_ AWB **SLOVENIA** IMPOL **CROATIA** FEAL HRVATSKA **SOUTH AFRICA** WISPECO \_ HULAMIN **ILE DE LA REUNION** LCB SASU **SPAIN** ANODIAL ESPANOLA \_ FACOLOR \_ LAMINEX \_ ALCOA \_ PERFILES DE ALUMINIO \_ INALSA \_ EXTRUAL **PORTUGAL** ANODIL **GREECE** ALUMIL \_ ALMACO \_ ELVIAL \_ ETEM **TURKEY** AKSAN \_ ASTAS \_ CUHADAROGLU **RUSSIA** VORONEZH \_ REALIT \_ AKFA \_ DOORHAN \_ MAK **UKRAINE** UKRSPETSMET **MAROCCO** INDUCER **ITALY** ALUCOLOR \_ INDINVEST \_ PROFILATI \_ LT ALLUMINIO \_ TRAFILERIE EMILIANE SUD \_ PANDOLFO ALLUMINIO \_ ETA \_ TRAFILERIE PASSERINI \_ OCMA \_ ANODALL \_ TRAFILERIE ALLUMINIO ALEXIA \_ ALEX \_ GASTALDELLO \_ PASTURI \_ ETNALL \_ BBC \_ RALOX \_ ALUXCOLOR OX \_ STRATO \_ METAL SUD \_ SIVER \_ SOCOM \_ TECNOAL \_ OXICOLOR \_ ANODALL \_ GALLOX \_ ANODALL \_ OSSIDA \_ CLM \_ MEXALL \_ VIBA \_ COROXAL \_ PFA \_ OSSIDAL \_ TAKLER \_ ESTRAL **SAN MARINO** ALUTITAN \_ ALLUMINIO SAMMARINESE







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