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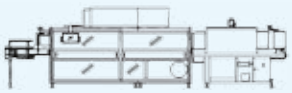
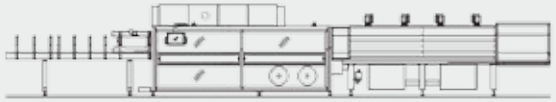
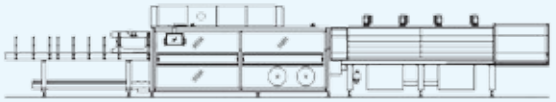
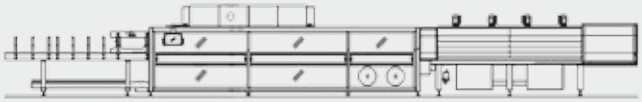
division

Shrinkwrappers		OUTPUT*		DIMENSIONS**	
LSK 25 F	FILM ONLY	25 PPM		8820 x 1620 x 2450 mm	28.94 x 5.31 x 8.04 ft
LSK 35 F / 90		35 PPM		7560 x 1620 x 2520 mm	24.80 x 5.31 x 8.27 ft
LSK 40 F		40 PPM		10070 x 1620 x 2450 mm	33.04 x 5.31 x 8.04 ft
LSK 25 P	PAD + FILM	25 PPM		8820 x 1620 x 2450 mm	28.94 x 5.31 x 8.04 ft
LSK 35 P / 90		35 PPM		8575 x 1620 x 2520 mm	28,13 x 5.31 x 8.27 ft
LSK 40 P		40 PPM		10070 x 1620 x 2450 mm	33.04 x 5.31 x 8.04 ft
LSK 25 T	TRAY ONLY TRAY + FILM	25 PPM		10115 x 1620 x 2450 mm	33.19 x 5.31 x 8.04 ft
LSK 35 T / 90		35 PPM		9870 x 1620 x 2520 mm	32.38 x 5.31 x 8.27 ft
LSK 40 T		40 PPM		11365 x 1620 x 2450 mm	37.29 x 5.31 x 8.04 ft
SK 400 F	FILM ONLY	40 PPM		12480 x 1600 x 2450 mm	40.94 x 5.25 x 8.04 ft
SK 500 F		50 PPM		13480 x 1600 x 2450 mm	44.27 x 5.25 x 8.04 ft
SK 600 F		60 PPM		14480 x 1600 x 2500 mm	47.51 x 5.25 x 8.20 ft
SK 800 F		80 PPM		15480 x 1600 x 2500 mm	50.79 x 5.25 x 8.20 ft
SK 502 F		100 PPM		14480 x 1800 x 2500 mm	47.51 x 5.90 x 8.20 ft
SK 602 F		120 PPM		15480 x 1800 x 2500 mm	50.79 x 5.90 x 8.20 ft
SK 802 F		140 PPM		16480 x 1800 x 2500 mm	54.07 x 5.90 x 8.20 ft
SK 1200 F HS	FILM ONLY 0.33 L aluminium cans Triple lane	150 PPM		16480 x 1600 x 2450 mm	54.07 x 5.25 x 8.04 ft
SK 1202 F HS		300 PPM		16480 x 1800 x 2450 mm	54.07 x 5.90 x 8.04 ft
SK1200F / SK1202F		450 PPM		16480 x 1800 x 2450 mm	54.07 x 5.90 x 8.04 ft
SK 400 P	PAD + FILM	40 PPM		12750 x 1600 x 2450 mm	41.83 x 5.25 x 8.04 ft
SK 500 P		50 PPM		13480 x 1600 x 2450 mm	44.23 x 5.25 x 8.04 ft
SK 600 P		60 PPM		14480 x 1600 x 2450 mm	47.51 x 5.25 x 8.04 ft
SK 800 P		80 PPM		15480 x 1600 x 2450 mm	50.79 x 5.25 x 8.04 ft
SK 502 P		100 PPM		14480 x 1800 x 2500 mm	47.51 x 5.90 x 8.20 ft
SK 602 P		120 PPM		15480 x 1800 x 2450 mm	50.79 x 5.90 x 8.04 ft
SK 802 P		140 PPM		16480 x 1800 x 2450 mm	54.07 x 5.90 x 8.04 ft
SK 1200 P HS	PAD + FILM 0.33 L aluminium cans	100 PPM		16480 x 1800 x 2450 mm	54.07 x 5.90 x 8.04 ft
SK 1202 P HS		200 PPM		16480 x 1800 x 2450 mm	54.07 x 5.90 x 8.04 ft
SK 400 T	TRAY ONLY TRAY + FILM	40 PPM		14240 x 1600 x 2450 mm	46.72 x 5.25 x 8.04 ft
SK 500 T		50 PPM		16040 x 1600 x 2450 mm	52.62 x 5.25 x 8.04 ft
SK 600 T		60 PPM		17040 x 1600 x 2450 mm	55,90 x 5.25 x 8.04 ft
SK 800 T		80 PPM		18040 x 1600 x 2450 mm	59.19 x 5.25 x 8.04 ft
SK 502 T		100 PPM		17040 x 1800 x 2500 mm	55.90 x 5.90 x 8.20 ft
SK 602 T		120 PPM		18040 x 1800 x 2450 mm	59.19 x 5.90 x 8.04 ft
SK 802 T		140 PPM		19040 x 1800 x 2450 mm	62.47x 5.90 x 8.04 ft
SK 1200 T HS	TRAY + FILM 0.33 L aluminium cans	100 PPM		19040 x 1800 x 2450 mm	62.47x 5.90 x 8.04 ft
SK 1202 T HS		200 PPM		19040 x 1800 x 2450 mm	62.47x 5.90 x 8.04 ft

PAG. 4

PAG. 6

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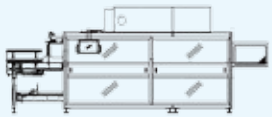
*Maximum output in packs per minute. The indicated output refers to 3x2 packs of 1.5 L stable containers. **Approximate length x width x height

TF SERIES

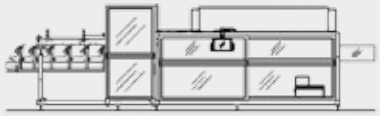
Trayformers without film

		OUTPUT*		DIMENSIONS**	
TF 400	TRAY ONLY	40 PPM		5375 x 1620 x 2450 mm	17.63 x 5.31 x 8.04 ft
TF 800		80 PPM		11500 x 1600 x 2450 mm	37.73 x 5.25 x 8.04 ft

PAG. 8

MP SERIES

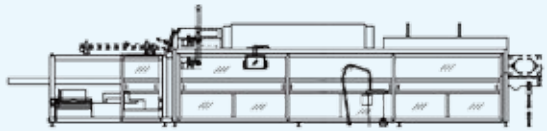
Cardboard sleeve multipackers

		OUTPUT*		DIMENSIONS**	
MP 150	CARDBOARD SLEEVES	150 PPM		7315 x 1600 x 2400 mm	24.00 x 5.25 x 7.87 ft
MP 300		300 PPM		7315 x 1600 x 2400 mm	24.00 x 5.25 x 7.87 ft

PAG. 10

LWP / WP SERIES

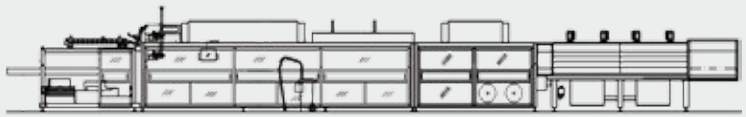
Wrap-around casepackers

		OUTPUT*		DIMENSIONS**	
LWP 30	WA CASE TRAY	30 PPM		7200 x 1820 x 3000 mm	23.62 x 5.97 x 9.84 ft
WP 400		40 PPM		10360 x 1940 x 2950 mm	33.99 x 6.36 x 9.68 ft
WP 500		50 PPM		11360 x 1940 x 2950 mm	37.27 x 6.36 x 9.68 ft
WP 600		60 PPM		12120 x 1940 x 2950 mm	39.76 x 6.36 x 9.68 ft
WP 800		80 PPM		12120 x 1940 x 2950 mm	39.76 x 6.36 x 9.68 ft

PAG. 12

LCM/CM SERIES

Combined packers

		OUTPUT*		DIMENSIONS**	
LCM 30	FILM ONLY (CM SERIES) PAD + FILM TRAY ONLY TRAY + FILM CASE	30 PPM		12060 x 1820 x 3000 mm	39.57 x 5.97 x 9.84 ft
CM 400		40 PPM		18550 x 1940 x 2950 mm	60.86 x 6.36 x 9.68 ft
CM 500		50 PPM		19550 x 1940 x 2950 mm	64.14 x 6.36 x 9.68 ft
CM 600		60 PPM		21310 x 1940 x 2950 mm	69.91 x 6.36 x 9.68 ft
CM 800		80 PPM		22310 x 1940 x 2950 mm	73.20 x 6.36 x 9.68 ft

PAG. 16

Market segments

- still and carbonated mineral water
- carbonated soft drinks
- tea and energy drinks
- fruit juices
- beer, wine and spirits
- milk, yoghurt and milk-based products
- food and pet food
- edible oil
- detergents, chemicals and pharmaceuticals

Containers suitable to packaging

- bottles
- cans
- jars
- tins
- cartons
- other stiff containers

Data here mentioned are subject to changes without any notice.

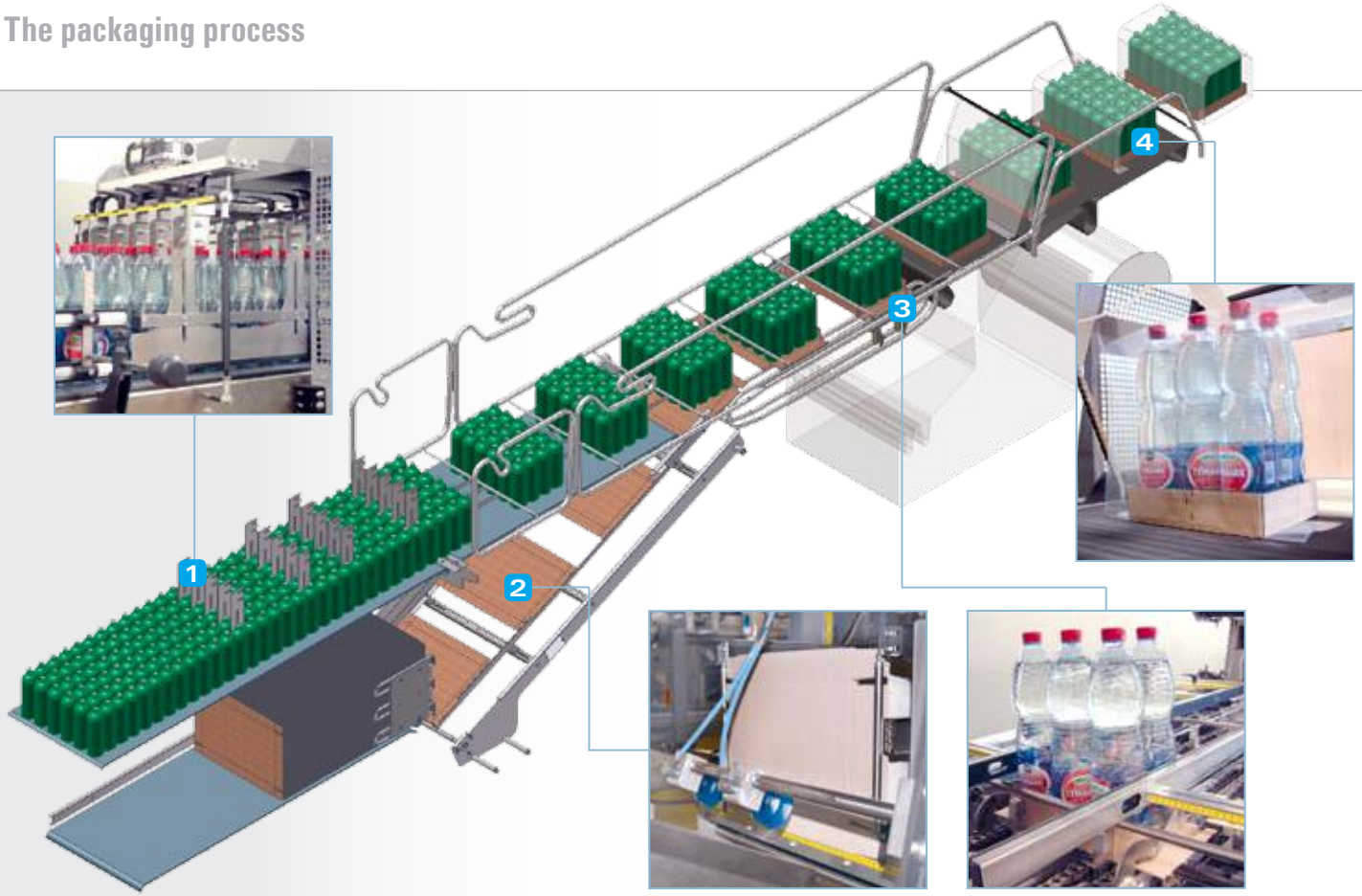
MODEL RANGE

LSK 25 F	LSK 25 P	LSK 25 T
LSK 35 F / 90°	LSK 35 P / 90°	LSK 35 T / 90°
LSK 40 F	LSK 40 P	LSK 40 T

UP TO 40 PPM

Low-medium speed shrinkwrappers

The LSK series is composed of automatic machines to pack plastic, metal or glass containers.
Depending on the model chosen, they can make packs in film only, cardboard pad + film, cardboard tray, cardboard tray + film.
LSK packers achieve an output rate up to 40 packs per minute, according to the machine model and the type of product to be handled.
Pack collations can vary according to the container shape, capacity and size; the most requested collations are: 2x2, 3x2, 4x3 and 6x4.
All LSK machines are equipped with a mechanical product-grouping system and a manual change-over system and, for outputs up to 35 packs per minute, are available also with a 90° machine infeed.



1 At the machine infeed, an oscillating unscrambler accurately lines up the loose containers carried by a conveyor belt featuring low-friction chains made of thermoplastic material.
In the pack formation section, the containers are clustered in the required format through a pneumatic device operating in alternate motion.

2 In P and T models, a corrugated cardboard pad or blank is picked from the blank magazine by an alternate motion picker composed of a group of vacuum suckers. The pad or the blank moves along the blank climb and gently places itself underneath the group of products in transit with the long side leading.

3 In the trayformer, special mechanical devices fold the blank's front and rear flaps.
The side flaps are sprayed with hot melt glue and then folded, thus forming the tray.

4 The unwinding of the film reel, placed in the lower part of the machine, is controlled by a progressive brake, which ensures the film constant tension.
Before the pack enters the shrinking tunnel, the film is wrapped around the container batch and overlapped at the base of the pack.

» Versatile range at competitive prices

The range of LSK packers also includes 3 models with a 90° infeed, which can pack briks, square and rectangular bottles and any other product of large or small size.

90° LSK packers also feature reduced sizes and are, therefore, the fittest solution to match the requirements of those clients who don't have much space available.

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
-	x	-	-

HEATED BLADE W.	RD	EASY LOAD
-	-	-

(Pag. 21)

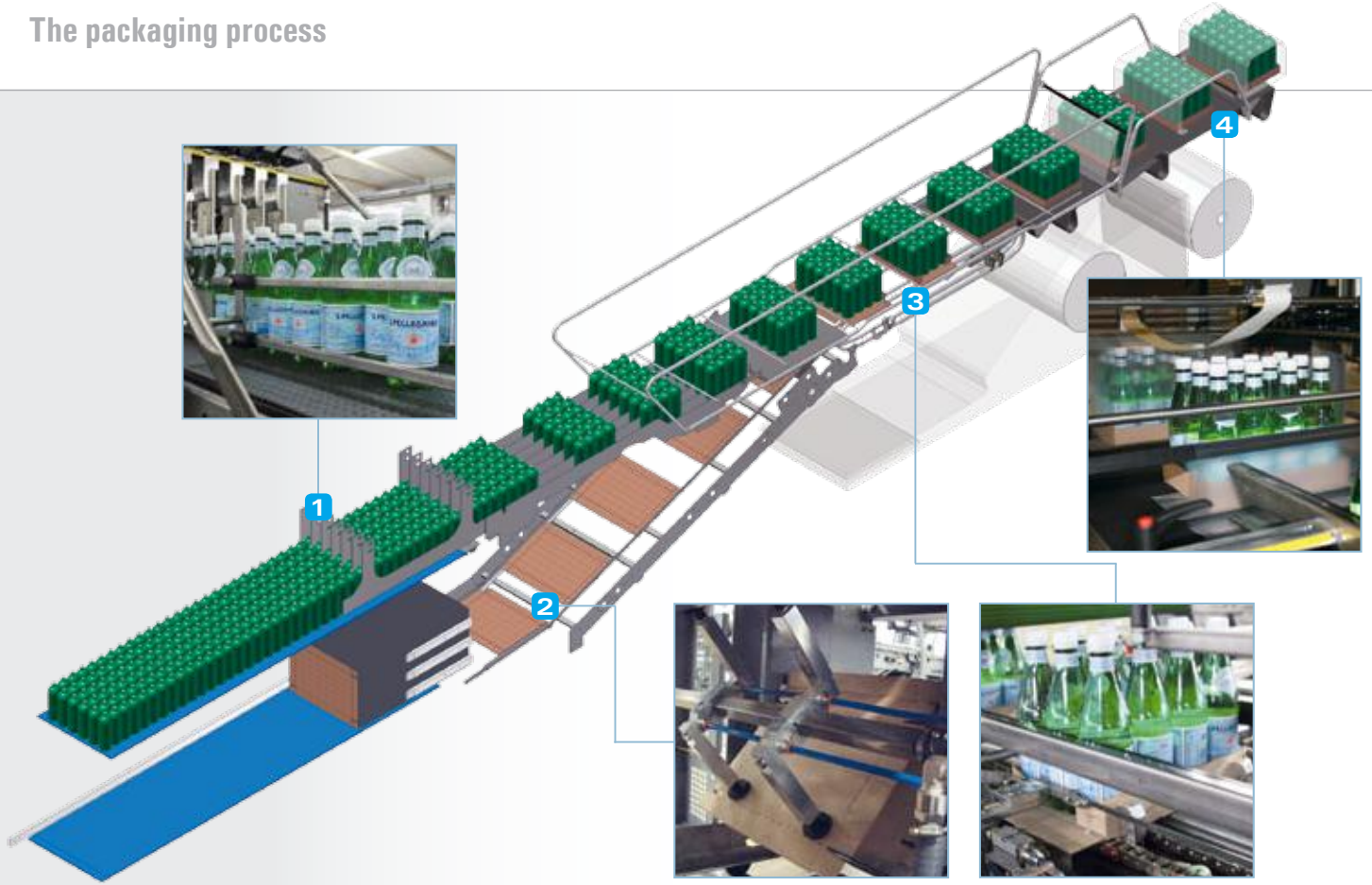
» MODEL RANGE

SK 400 F	SK 400 P	SK 400 T
SK 500 F	SK 500 P	SK 500 T
SK 600 F	SK 600 P	SK 600 T
SK 800 F	SK 800 P	SK 800 T
SK 1200 HS F	SK 1200 HS P	SK 1200 HS T
SK 502 F	SK 502 P	SK 502 T
SK 602 F	SK 602 P	SK 602 T
SK 802 F	SK 802 P	SK 802 T
SK 1202 HS F	SK 1202 HS P	SK 1202 HS T

UP TO 450 PPM

» Medium-high speed shrinkwrappers

The SK series is composed of automatic machines for packing plastic, metal or glass containers.
Depending on the model chosen, they can make packs in film only, cardboard pad + film, tray only, cardboard tray + film.
The SK series can achieve an output rate up to 450 packs per minute (on triple lane model), depending on the machine model and on the product to be packaged.
Pack collations can vary according to the container shape, capacity and size.
In general, the most requested collations are: 2x2, 3x2, 4x3 and 6x4.
All SK models are equipped with an electronic product-grouping system and are available in single, double and triple lane variants (optional) depending on the customer's requirements.
The change-over operation is automatic.



1 In the machine infeed, a group of guides accurately lines up the loose containers carried by a conveyor belt featuring low-friction chains made of thermoplastic material. In the pack formation zone, the containers are clustered in the required format through electronically synchronized dividing fingers and bars, operating in continuous motion.

2 In P and T models, a corrugated cardboard pad or blank is picked from the blank magazine by a rotary picker composed of two groups of vacuum suckers. The pad or the blank moves along the blank climb and places itself underneath the group of products in transit with the long side leading.

3 In the trayformer, special mechanical devices fold the blank's front and rear flaps.
The side flaps are sprayed with hot melt glue and then folded, thus forming the tray.

4 The unwinding of the film reels, placed in the lower part of the machine, is controlled by a brushless motor, which ensures the film constant tension.
Before the pack enters the shrinking tunnel, the film is cut by a knife equipped with motorised blade and then wrapped around the group of containers and overlapped on the bottom of the pack.

» Beehive packs

Smiflexi's LSK and SK shrinkwrappers can be equipped with a dedicated device, which arranges the containers (bottles or cans) in "staggered" alternating rows and keeps them in this manner during the process in which the pack is formed, thereby creating the characteristic beehive collation.
This is a newly-devised packaging solution, which offers considerable advantages in terms of reduced production and palletizing costs since the latter can take place without the insertion of an interlayer between layers, ensuring the customer substantial savings on the purchase of packaging materials.
This is possible thanks to the greater stability and compactness of beehive packs, inside which the containers are "jammed" into one another and where gaps are minimized (contrary to what occurs in the traditional and perfectly rectangular packs).
All this allows space optimization on the pallet.

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
x	x	x	-

HEATED BLADE W.	RD	EASY LOAD
x	-	x

(Pag. 20 - 21 - 22 - 24 - 25)

UP TO 80 PPM

MODEL RANGE

TF 400
TF 800

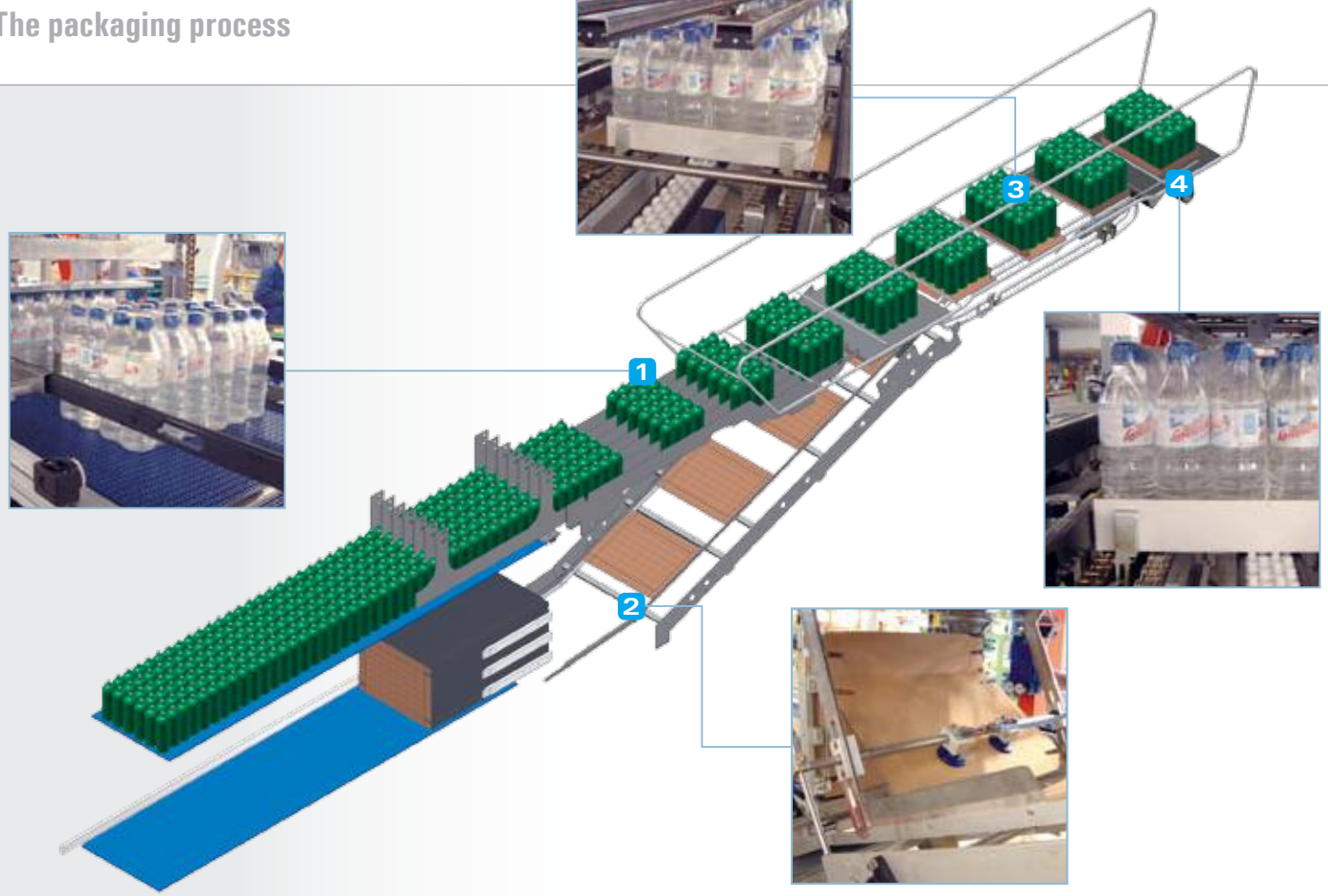
Trayformers without film

The TF series includes automatic machines for the packaging of plastic, metal and glass containers in cardboard trays without film. Trays can be octagonal or rectangular, with walls measuring the same height.

TF trayformers can achieve an output rate up to 80 packs per minute, according to the machine model and the product to be packaged. Pack collations can vary according to the container shape, capacity and size; in general, the most requested collations are: 2x2, 3x2, 4x3 and 6x4.

All TF800 models feature an electronic grouping system; the change-over operation is automatic.

TF trayformers can turn into SK shrinkwrappers for the packaging in film at any time, through the insertion of additional modules.



1 TF800 model: at the machine infeed, a group of guides accurately lines up the loose containers or the packs carried by a conveyor belt featuring low-friction chains made of thermoplastic material. In the pack formation section, the containers are clustered in the required format through electronically synchronized dividing fingers and bars, operating in continuous motion. TF400 model: the packaging process takes place as described in points 1 and 2 of LSK series.

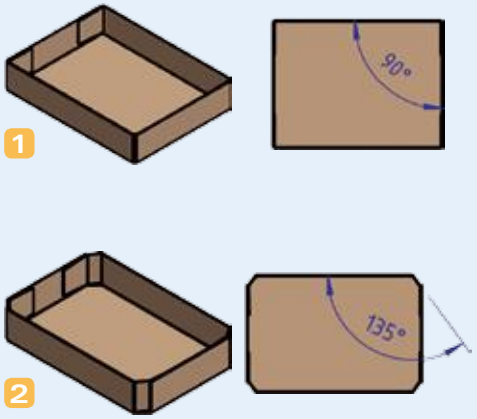
2 A corrugated cardboard blank is picked from the blank magazine by a rotary picker composed of two groups of vacuum suckers. The blank moves along the blank climb and gets underneath the group of products in transit with the long side leading.

3 In the trayformer, special mechanical devices fold the blank's front and rear flaps.
The side flaps are sprayed with hot melt glue and then folded, thus forming the tray.

4 The packs coming out of the trayformer can be conveyed either to the palletizer or directly to the storage area.

» Trays for all needs

All TF models can pack products in rectangular (1) or in octagonal trays (2).
Therefore, the end user can select the most suitable solution for customizing, distributing and palletizing its packages.



» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
-	-	-	-

HEATED BLADE W.	RD	EASY LOAD
-	-	-

» MODEL RANGE

MP 150
MP 300

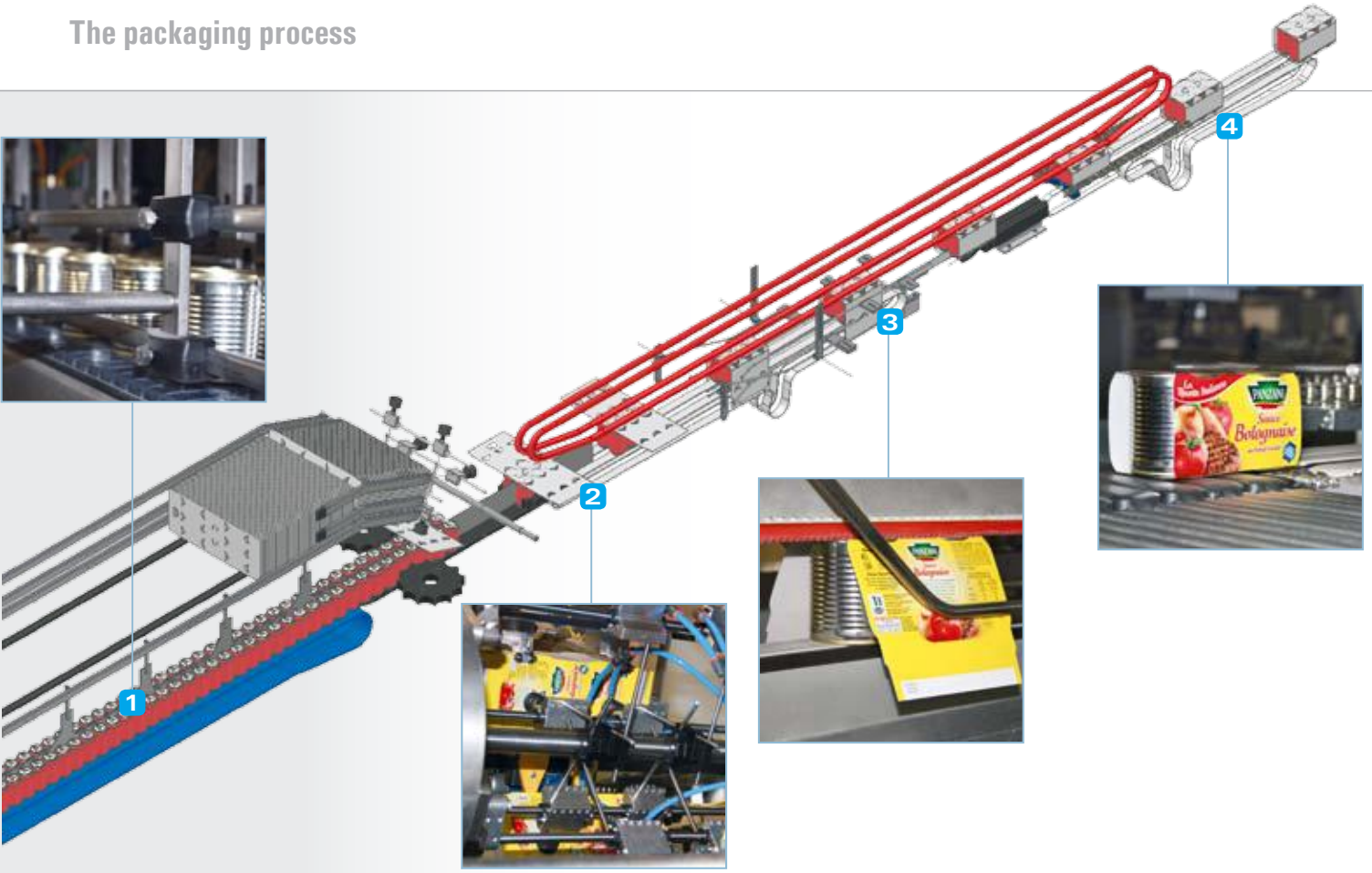
UP TO 300 PPM

» Cardboard sleeve multipackers

The MP series includes automatic machines for the packaging of plastic, metal and glass containers in overlapping cardboard sleeves.

MP multipackers can achieve an output rate up to 300 packs per minute, depending on the machine model and on the product to be packaged. Low or medium capacity containers can be packed in OTT (Over The Top) or NT (Neck Through) system. With unusually-shaped products, the pack can be strengthened by adding a top/bottom retaining flap which keeps the containers perfectly steady inside the cardboard sleeve.

Pack collations can vary according to the container shape and size; in general, the most requested collations are: 1x3, 1x4, 2x2, 2x3 and 2x4. All MP models feature an electronic grouping system; the change-over operation is manual.



1 At the machine infeed, a group of guides smoothly lines up the loose containers carried by a conveyor belt featuring low-friction chains made of thermoplastic material.

2 In the pack formation section, the containers are clustered in the required format through electronically synchronized dividing fingers, operating in continuous motion.
At the same time, a cardboard blank is placed upon the products in transit.

3 A mechanical device folds down the two longest sides of the cardboard blank; then, the pack bottom is sealed with hot melt glue.
The choice of a "hot melt glue sealing" instead of a "mechanical tucked-in closure" ensures stiffer and steadier packages.

4 In the models equipped with the "TR module - translating conveyor at the machine output", the packs at the machine outlet can be positioned on multiple lanes (from 1 to 7) by means of translating plates, before being conveyed to another packaging machine or directly to the storage area.

» The RD divider

The RD divider is an optional device available on all models equipped with the TR module; it rotates and distributes the packs on multiple lanes.
It is available in the electronic and automatic version and can handle both simple and complex patterns, with a maximum inlet speed of 300 packs per minute.
The packs coming out of the machine in short side leading can be turned by 90°, in order to change their leading side from short to long.

» "BF – Bottom Flap" module

All models with "BF" module are equipped with a system which forms packs featuring containment flaps at the bottom of the pack.

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
x	-	-	-

HEATED BLADE W.	RD	EASY LOAD	
-	x	-	(Pag. 20 - 11)

» MODEL RANGE

LWP 30

UP TO 30 PPM

» Wrap-around case-packers

LWP series features automatic machines for packing plastic, metal or glass containers in corrugated cardboard cases and/or trays without film.

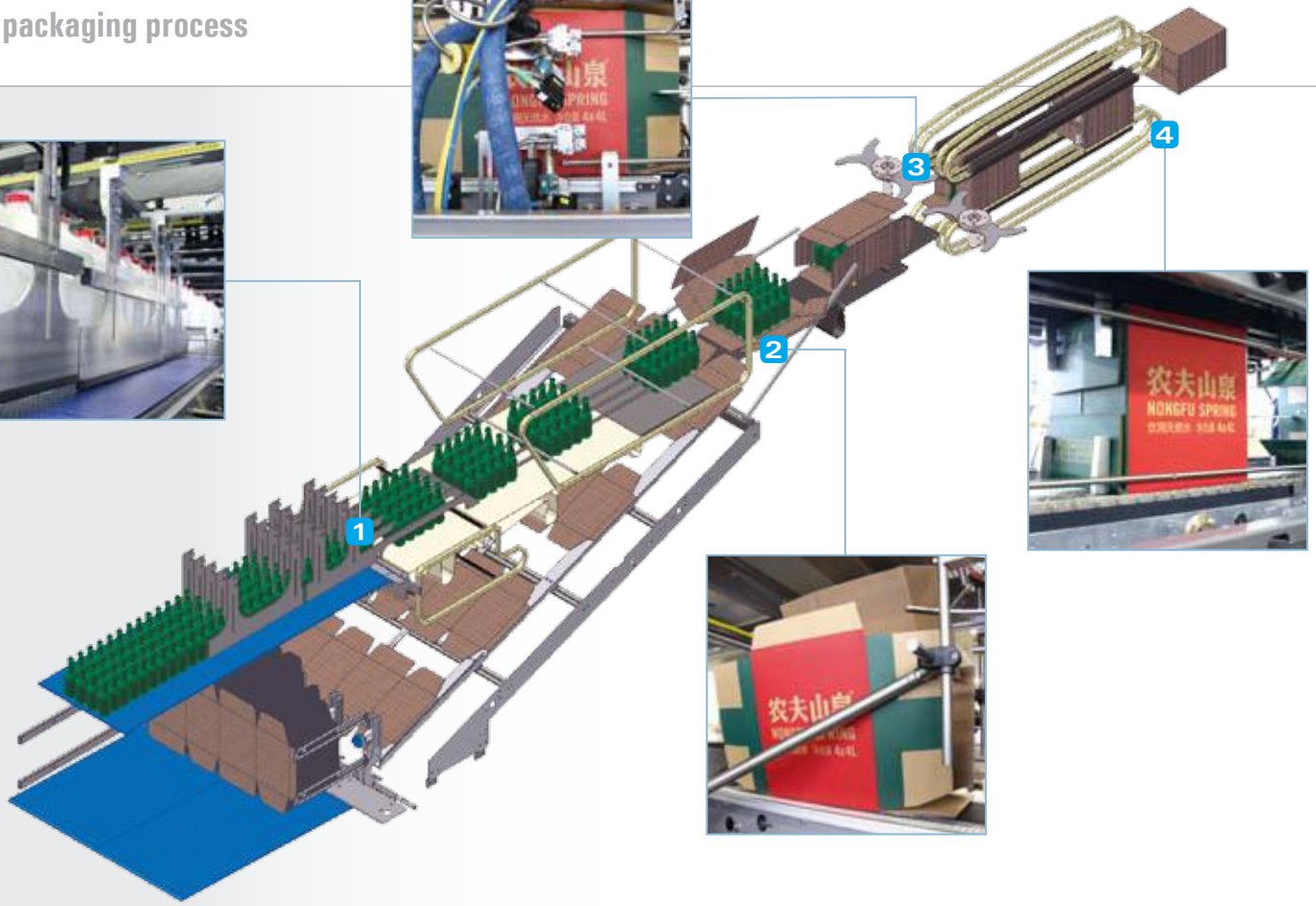
Trays can be octagonal or rectangular, with same or different height edges.

LWP wraparound packers run up to 30 packs per minute, depending on the product handled and on the packing pattern.

Different pack collations can be formed according to the container's shape, capacity and dimensions; the most popular formats on the market are 2x3, 3x4 and 4x6.

LWP packers are equipped with a mechanical product-grouping system and can be configured with either in-line or 90° in-feed conveyor belts, depending on the customer's requirements.

The format changeover is manual.



1 At the machine infeed a motorised oscillating sorter lines up loose containers along a conveyor belt featuring low-friction chains made of thermoplastic material.
In the pack-forming unit products are grouped in the chosen packing pattern by means of an alternate-motion pneumatic device.

2 A sheet of corrugated cardboard is picked from the blank magazine by an alternate-motion picker with vacuum suckers; the carboard blank is then carried up along the blank ramp and positioned under the incoming pack collation with short leading side. In the case/tray forming unit the cardboard blank is folded and wrapped around the products by means of special guides.

3 Later on flap-folding devices fold first side flaps and then upper/lower flaps on both the front and the back of the pack.
Hot-glue sealing makes the case highly resistant.

4 At the machine outlet the case walls are pressed by special guides.
Such system ensures perfect and durable pack squaring, if compared to pressing systems with rotating chains, which cannot provide the same quality standard.

» Fridge packs

Smiflexi wraparound packers can pack bottles and cans in pack collations specifically designed to fit into the limited space offered by fridge compartments, therefore named "fridge packs".
A pre-scored breakaway panel tears off for convenient access to the bottles.

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
-	-	-	x

HEATED BLADE W.	RD	EASY LOAD
-	-	-

(Pag. 23)

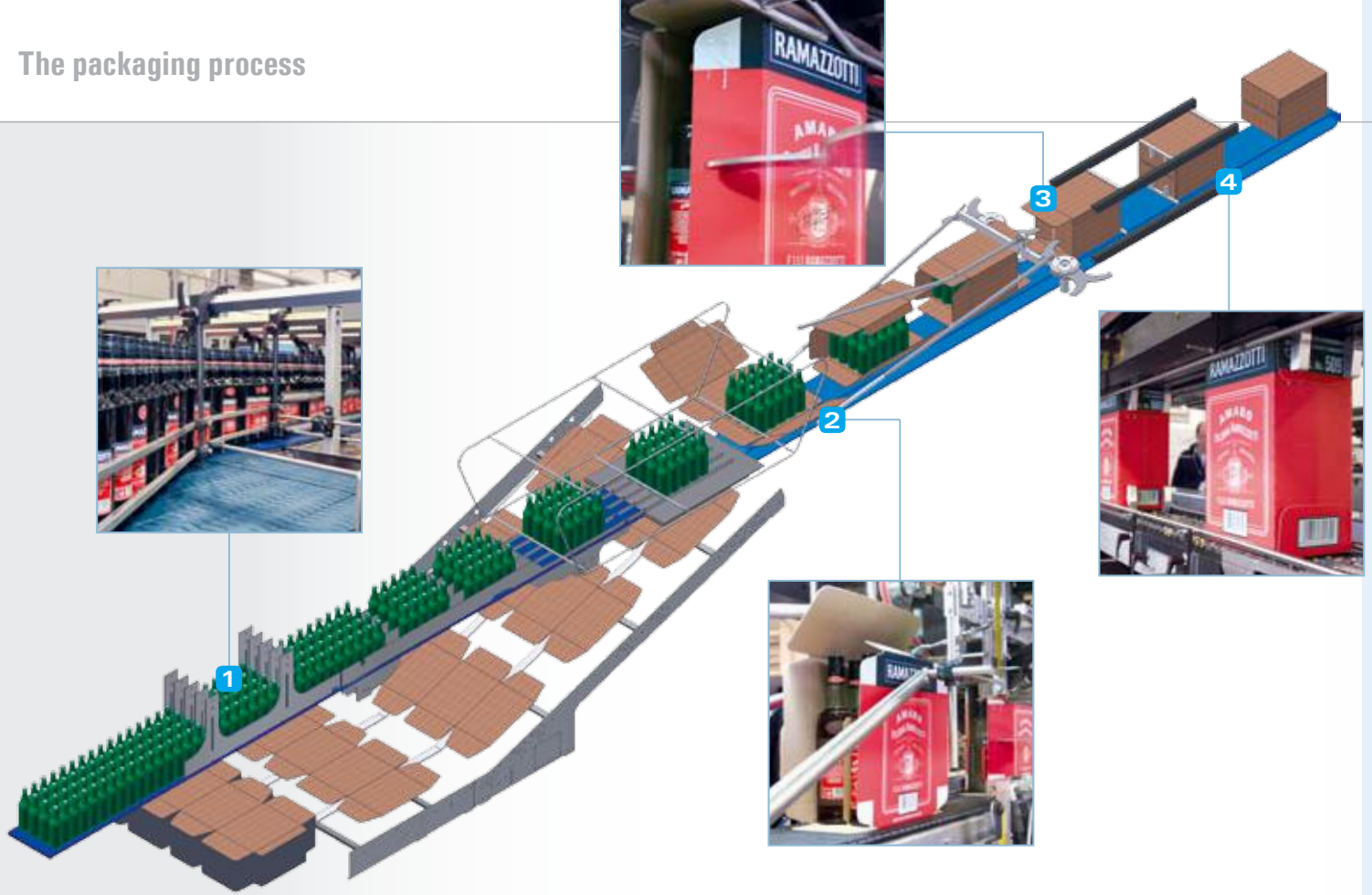
MODEL RANGE

WP 400
WP 500
WP 600
WP 800

UP TO 80 PPM

Wrap-around case-packers

The WP series includes automatic machines for the packaging of plastic, metal and glass containers in corrugated cardboard cases and/or trays without film. The trays can be octagonal or rectangular, with walls measuring either the same height or different heights. The WP casepackers can achieve an output rate up to 80 packs per minute, according to the machine model and to the product. Pack collations can vary according to the container shape, capacity and size; in general, the most requested collations are: 2x3, 3x4 and 4x6. The blank magazine capacity of all WP models can be increased through additional modules.
Moreover, all WP casepackers are equipped with an electronic grouping system and can be supplied with in-line or 90° infeed conveyor, according to the customer's needs.
The change-over operation is automatic.



1 At the machine infeed, a group of guides smoothly lines up the loose containers carried by a conveyor belt featuring low-friction chains made of thermoplastic material.
In the pack formation zone, the containers are clustered in the required format through electronically synchronized dividing fingers and bars, operating in continuous motion.

2 A corrugated cardboard blank is picked from the blank magazine by a vacuum-free picker with rubberized chains; it moves along the blank climb and gets underneath the group of products in transit with the short side leading. In the tray/case former, the cardboard blank is folded and wrapped around the products by means of special guides.

3 The flap folding devices fold the blank's side flaps and then the top/bottom flaps of both the front and back side of the pack. The hot melt glue sealing ensures a very high resistance of the pack.

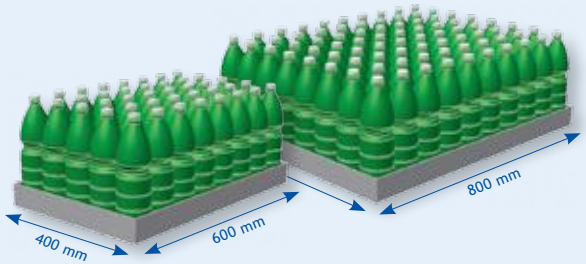
4 At the machine outlet, the pack walls are pressed by special guides.
This system guarantees a perfect and lasting squaring of the cases, unlike rotary chain pressing systems which cannot provide the same quality level.

» Extra-large pack capability

Smiflexi WP wraparound packers now feature also XL models, which can form both standard-sized closed cases and extra-large cardboard trays as big as 1/4 or 1/2 europallet.

This solution allows consistent cutbacks on operating costs, if compared to existing systems composed of two machines: one wraparaound packer to realize standard 2x3, 3x4, 3x5 and 4x6 pack collations; and one tray-packer to put up to 80 bottles in trays as big as 1/4 or 1/2 europallet.

WP XL wraparound packers also ensure further savings on costs thanks to optimisation of operational and storage areas, lower consumption of packaging materials and reduction of energy costs.



» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
x	-	-	x

HEATED BLADE W.	RD	EASY LOAD
-	-	x

(Pag. 20 - 23)

UP TO 30 PPM

» MODEL RANGE

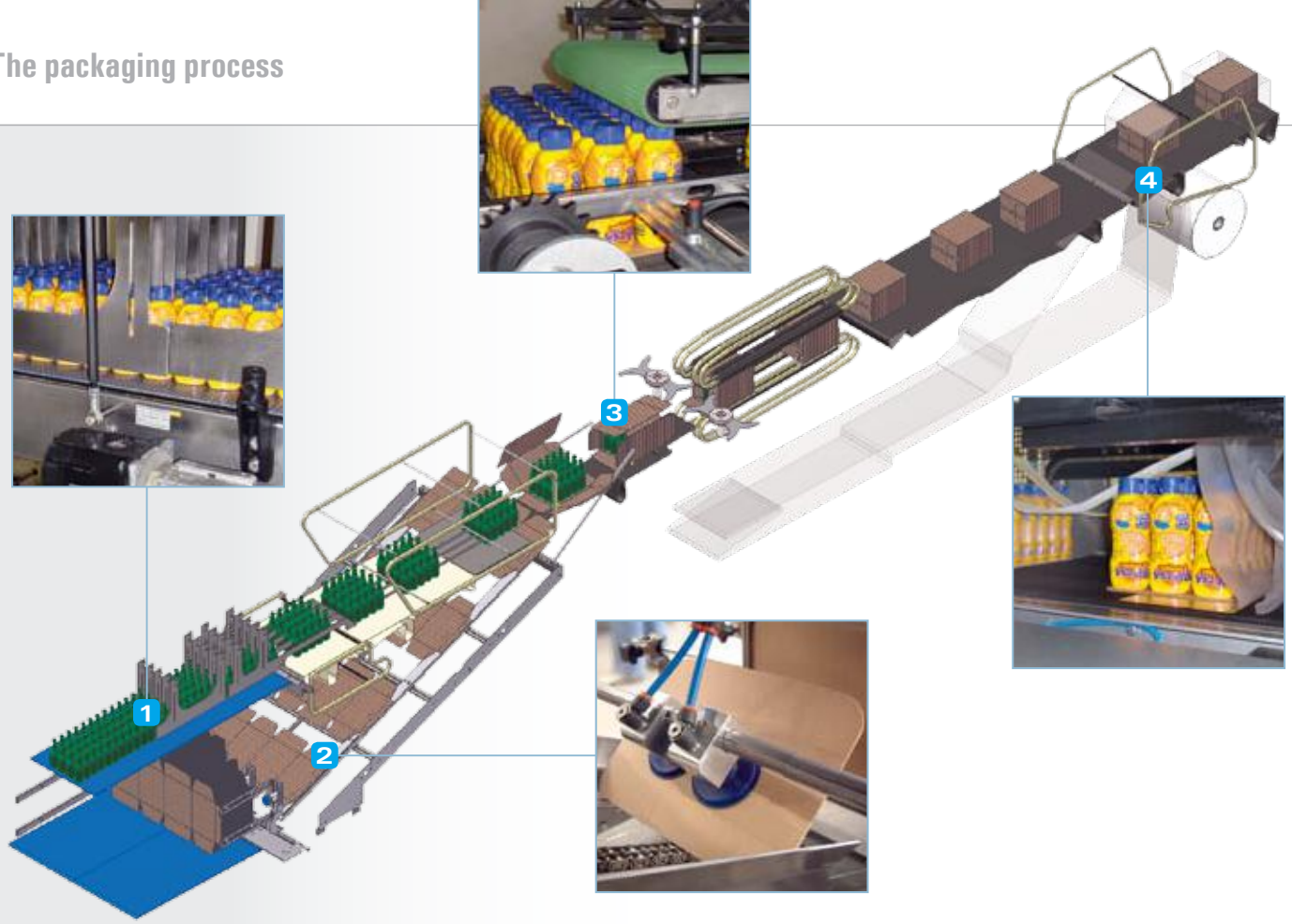
LCM 30

» Combined packers

LCM automatic machines combine in one system the functions provided by wraparound packers and shrinkwrappers, for the packaging of plastic, metal and glass containers in closed cases, on cardboard pad + film, on cardboard tray + film, and in cardboard tray only. Trays can be octagonal or rectangular, with same or different height edges. LCM packing machines run up to 30 packs per minute, depending on the product handled and on the packing pattern.

Different pack collations can be formed according to the container's shape, capacity and dimensions; the most popular formats on market are 2x3, 3x4 and 4x6 in closed boxes, 4x3 and 6x4 on tray+film, 3x2 and 4x3 in film only. LCM packers are equipped with mechanical product-grouping system and can be configured with either in-line or 90° in-feed conveyor belts, depending on the customer's requirements.

The format changeover is manual.



1 At the machine infeed a motorised oscillating sorter lines up loose containers along a conveyor belt featuring low-friction chains made of thermoplastic material.
In the pack-forming unit products are grouped in the chosen packing pattern by means of an alternate-motion pneumatic device.

2 In case of packaging in closed case, on pad or tray, a sheet of corrugated cardboard is picked from the blank magazine by an alternate-motion picker with vacuum suckers; the carboard blank is then carried up along the blank ramp and positioned under the incoming pack collation with short leading side (wrap-around case) or long leading side (tray).

3 Depending on the packaging features, in the case/tray forming unit the cardboard blank is folded and wrapped around the products by means of special guides.
Later on flap-folding devices fold first side flaps and then upper/lower flaps on both the front and the back of the pack.
Hot-glue sealing makes the case highly resistant.

4 If set in the packaging program, the film is wrapped around the pack in transit and overlapped on its bottom and then enters the shrink tunnel.
The unwinding of film reels - positioned in the lower part of the machine – is adjusted by a progressive brake which provides constant film tensioning.

» Versatile packs

Besides the cases with traditional sealing, the LCM, CM, LWP and WP models can make cases with joining flaps. Cases can be highly customized by printing images on the 5 visible sides, thus becoming an excellent vehicle of product marketing and promotion, and provide as well a higher protection of the case content.

1) Traditional closure

2) Closure with joining flaps

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
-	-	-	x

HEATED BLADE W.	RD	EASY LOAD
-	-	-

(Pag. 23)

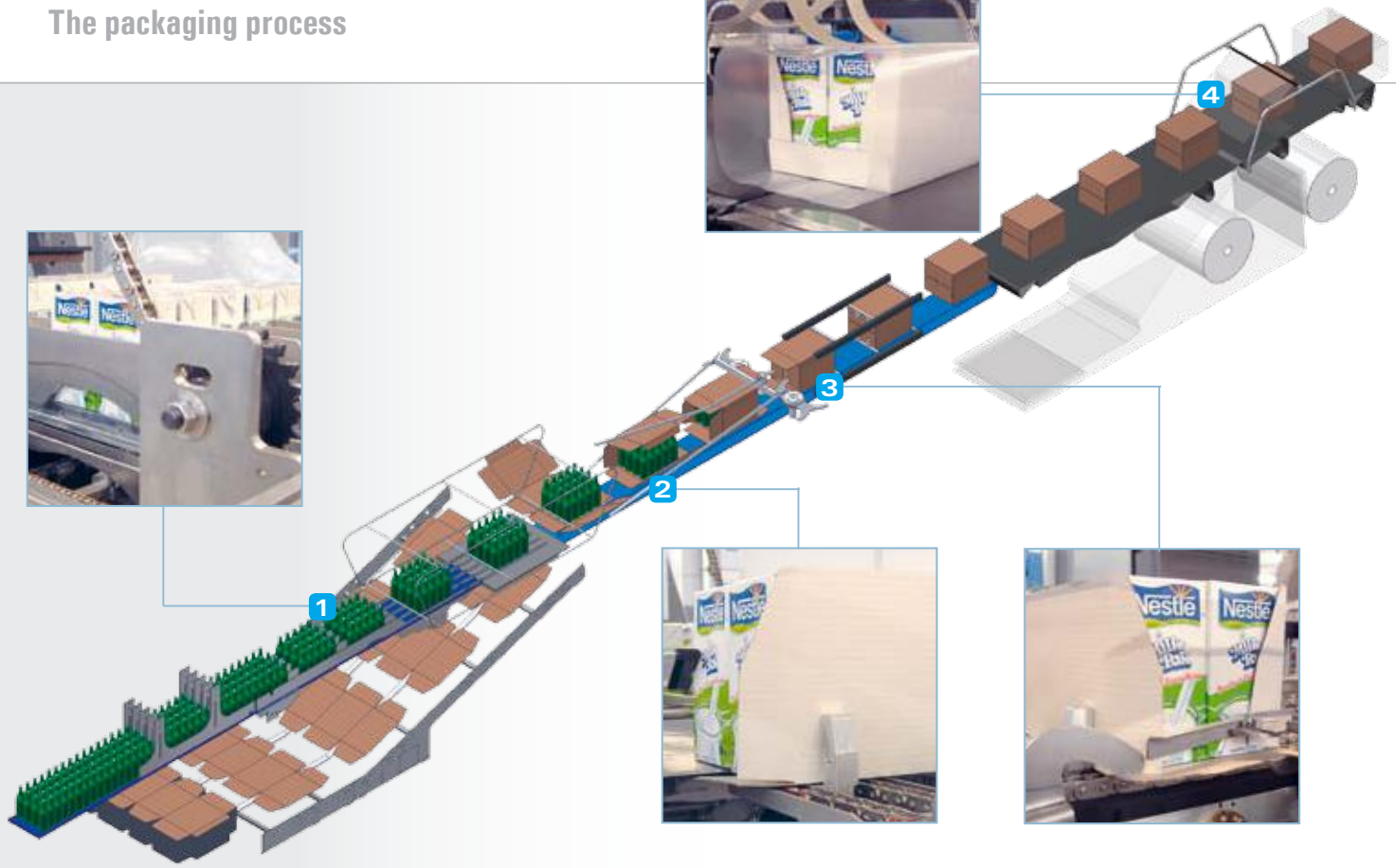
UP TO 80 PPM

» MODEL RANGE

CM 400	CM 600
CM 500	CM 800

» Combined packers

The CM series includes automatic machines gathering into a single unit the functions of a wrap-around casepacker and of a shrinkwrapper, for the packaging of plastic, metal or glass containers in the following package types: cardboard case; cardboard pad + film, cardboard tray + film; cardboard tray only and in film only. Trays can be octagonal or rectangular, with walls measuring either the same height or different heights. CM machines can achieve an output rate up to 80 packs per minute, according to the machine model, the type of product and the selected format. Pack collations can vary according to the containers shape, capacity and size; in general, the most requested collations are: 2x3, 3x4 and 4x6 for wrap-around cases and 4x3 and 6x4 for tray + film packs. The blank magazine capacity can be increased through modular additional modules. All CM packers feature an electronic grouping system and can be supplied with in-line or 90° infeed conveyor, according to the customer's needs.
The change-over operation is automatic.



1 At the machine infeed, a group of guides smoothly lines up the loose containers carried by a conveyor belt featuring low-friction chains made of thermoplastic material.
In the pack formation section, the containers are clustered in the required format through electronically synchronized dividing fingers and bars, operating in continuous motion.

2 In case of packaging in closed box, on pad or tray, a corrugated cardboard blank is picked from the blank magazine by a vacuum-free picker with rubberized chains; it moves along the blank climb and gets underneath the group of products in transit.
The products move on with the short side leading (wrap-around case) or with the long side leading (tray).

3 In the tray/case former, the cardboard blank is folded and wrapped around the products by special guides.
Then, the flap folding devices fold the blank's side flaps and afterwards the top/bottom flaps of both the front and back side of the pack. The hot melt glue sealing ensures a very high resistance of the pack.

4 In case of packaging in film only, or whenever required, film is wrapped around and overlapped under the pack in transit towards the shrinking tunnel.
The unwinding of the film reels, located in the lower part of the machine, is controlled by brushless motors, in order to ensure a constant tensioning of the film.

» Now featuring also film only

A wide array of packaging solutions is now available with Smiflexi CM series.
CM machines are indeed designed to combine in one versatile and flexible system the functions provided by wraparound packers and shrinkwrappers.
A smart investment in a cost-cutting, space-saving solution will result in top-level packages in film only, on tray+film, on pad+film, on tray only, in completely or partially closed box.
While the machine is working in "wraparound case" or "tray only" mode, the shrinking tunnel and the film wrapping unit are automatically disabled by the machine control system.
CM machines are particularly suitable for production lines frequently switching products and formats.
What's more, Combi-packers can be easily adjusted to handle new products and packing patterns if required by marketing strategies.

» AVAILABLE ACCESSORIES

TLESPACK	TS	EASY OPEN	PID SBP
x	x	x	x

HEATED BLADE W.	RD	EASY LOAD
x	-	x

(Pag. 20 - 21 - 22 - 23 - 24 - 25)

TLESPACK®
Tray LEss Stacked PACK

» Features

The TLESPACK® allows to pack cans on two layers without inserting any pad or tray in between. It is installed at the inlet of Smiflexi packers and it consists of two infeed conveyors running one above the other. The TLESPACK® can achieve a maximum output of 60 packs per minute and can pack cans in the following patterns: 12 (3x2 on two layers), 16 (4x2 on two layers), 18 (3x3 on two layers) and 24 (4x3 on two layers).

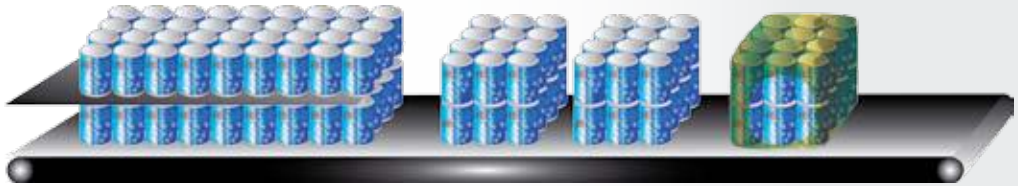
In order to be able to be stacked steadily one upon another, cans must be of the “fit-in” type.

» Advantages

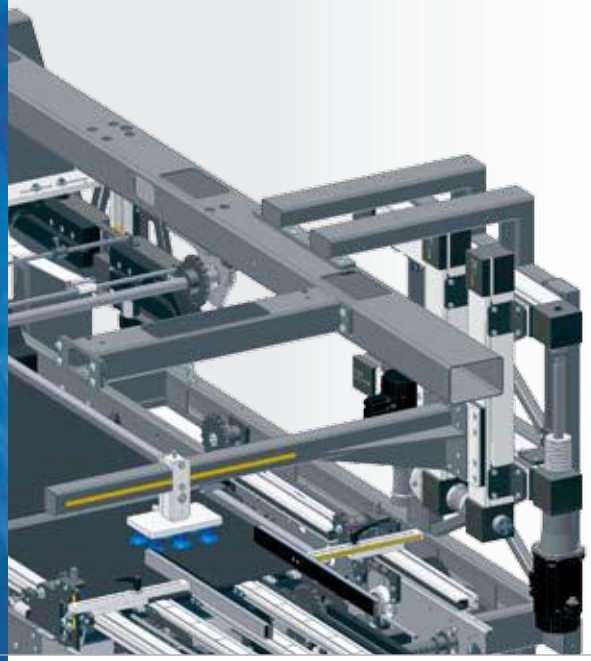
- Reduction of the packaging material cost, thanks to the possibility to pack products in film only (neutral or printed), without in-between cardboard partitions.
- Easy storage (pack compactness) and great portability (possibility to apply a handle).
- Wide range of packing solutions, thanks to the TLESPACK®'s high flexibility.

» Operation

Thanks to a thin transfer plate, cans carried by the upper conveyor smoothly gets upon those running on the lower conveyor, forming a double-layered cluster. In the packaging machine, the stacked cans are grouped in the required collation and then packed in the following ways: film only; film only with cardboard pad or tray under the base of the pack; cardboard sleeve; fully closed cardboard case.



NEW TS Tray Stacker



Tray Stacker

The NEW TS (Tray Stacker) stacks on two or more layers clusters of plastic, metal or glass containers either clustered in cardboard trays or pad or loose (this latter solution available only for fit-in type cans).

This device can be installed on SK shrinkwrappers, on WP casepackers and on CM combined packers.

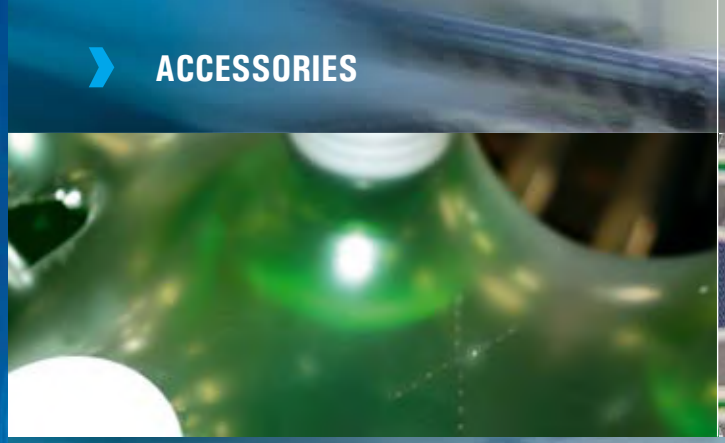
It consists of an electronic stacking device operating in continuous motion, which achieves an output rate up to 60 packs per minute according to the machine model and to the product handled.

Pack collations can vary according to the container shape, capacity and size; in general, the most requested collations are: 4x3 and 6x4.

It is available both for single and for double lane production.

Operation

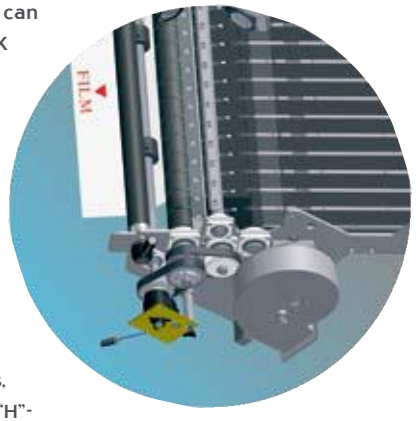
After coming out of the trayforming unit of the packaging machine, two or more layers of containers are stacked by a Cartesian coordinate system. Before the pack enters the shrinking tunnel, the film is wrapped around the products and overlapped at the base of the pack.



EASY OPEN

» Device for the easy opening of shrinkfilm packs

The Easy Open system can be installed both on SK shrinkwrappers and on CM combined packers.
It consists of a device piercing the film during the cutting operation, in order to create the required mark.



It can pierce two types of marks, "X"-shaped and "H"-shaped imprint, and is available both for single and for double lane production.

» Advantages

Thanks to the Easy Open system, the customer's level of satisfaction can be remarkably improved, because of the pack's easier opening. Moreover, this application does not require any specific packaging material and, therefore, it is possible to make eye-catching packs without additional costs.
The pack can be opened easily and safely by finger pressure onto a pre-scored opening.

PID SBP®
Partitions inserting device

Stretched board pre-assembled partition inserting device

The PID SBP® inserts stretched board pre-assembled partitions into cardboard cases, in order to protect fragile products (such as glass containers) and save their labels from abrasions.

This device can be installed on the WP series' wrap-around casepackers and on the CM series' combined packers.

The PID SBP® and the partition magazine are situated at the machine infeed, above the pack formation unit.
The maximum output is 45 packs per minute.

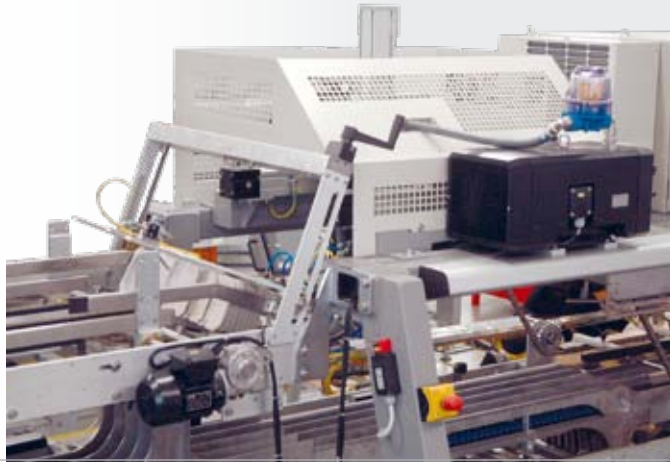
Advantages

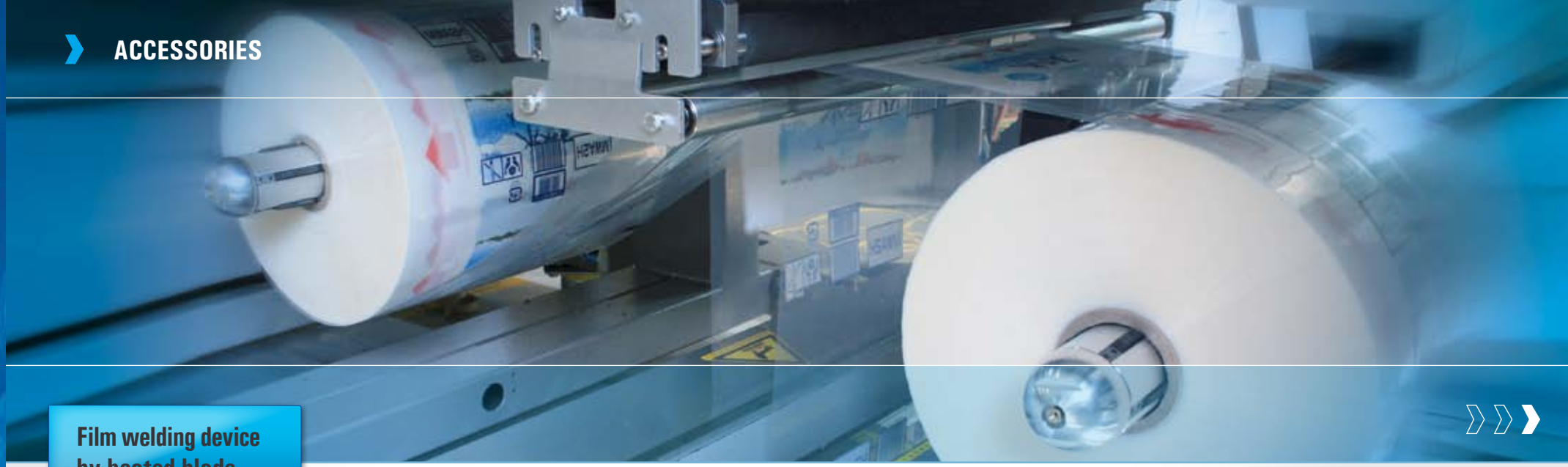
Compared to the traditional inserting systems of cardboard non-preassembled partitions, the PID SBP® allows to:

- reduce the partition purchasing cost by about 20% and the partition storage volume by at least 60%;
- have a more compact machine, since both the partition magazine and the Partition Inserting Device are mounted on the top of the machine; therefore, the machine dimensions are the same as those of a conventional casepacker;
- speed up the partition inserting operation and the magazine loading time, since the partitions are already pre-assembled;
- reduce the effects on the partitions of humidity and climate changes.

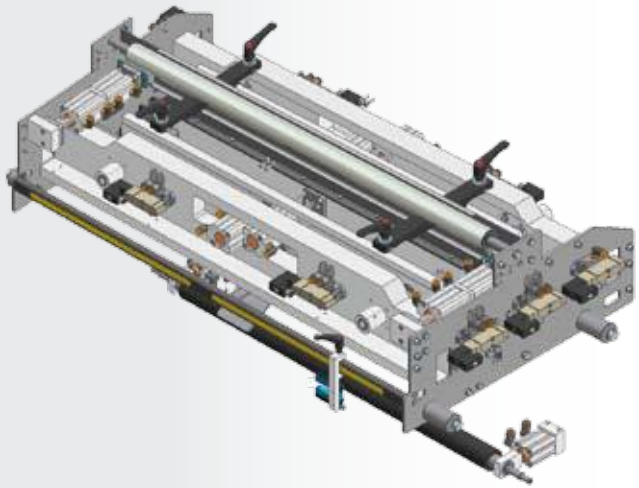
Operation

A mechanical arm equipped with vacuum suckers picks a stretched board pre-assembled partition from the partition magazine, opens it and lowers it between the products which have just been grouped in the required pack collation.
Finally, a cardboard blank is wrapped around the products by means of special guides, thus forming a case.





Film welding device by heated blade



» Smiflexi customers can now upgrade their SK and CM packers with an innovative film welding device.

The “film welding device by heated blade” joins the edge of the film reel about to end with the beginning of the new reel while the machine is running, with no need to stop production.

The machine slows down and the film (printed or neutral with reference mark) is automatically joined; the machine is immediately back to running at full pace.

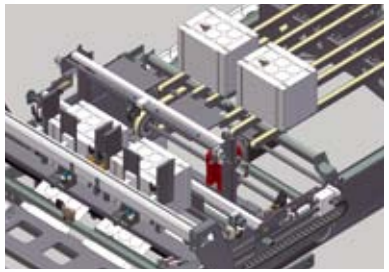
The new system allows dramatic cuts on energy and maintenance costs compared to traditional hot sealing method, as there are no more sealing rollers to be kept at a consistent temperature.

The sealing precision of printed film or neutral film with reference mark is higher, with +/-10mm margin from the reference mark.

The "film welding device by heated blade" can handle also no-collant film.

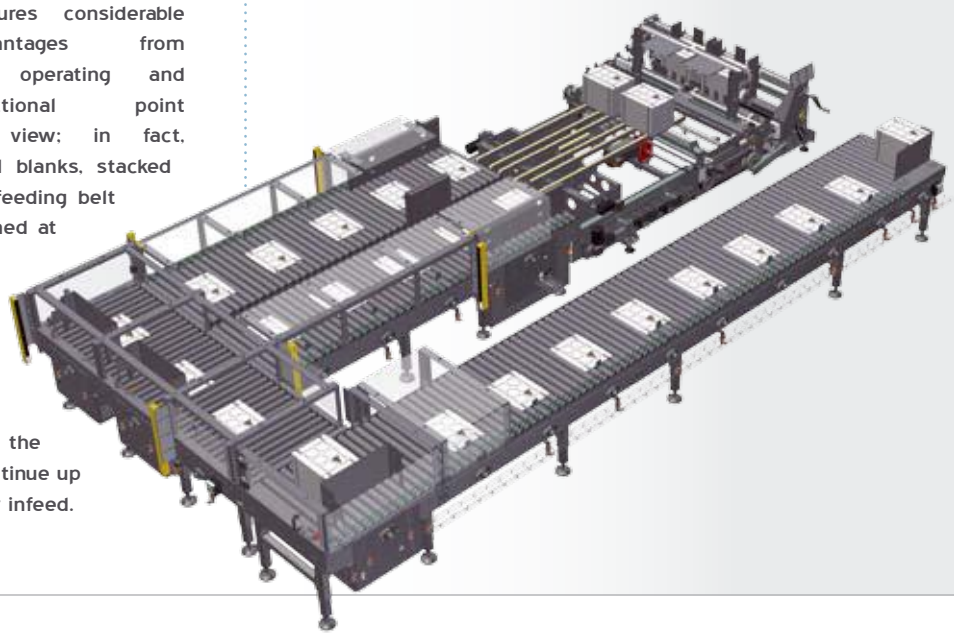
EASY LOAD

Automatic loading of the cardboard blanks magazine



The innovative "Easy-Load" system allows the automatic loading of the cardboard blanks magazine and features considerable advantages from an operating and functional point of view; in fact, the operator can easily load the cardboard blanks, stacked horizontally in uniform groups, because the feeding belt of the cardboard blanks magazine is positioned at the same working height as the packer's infeed belt, rather than under it. In more detail, the new system patented by SMI is made up of a series of conveyor belts, fitted with motorized rollers, which feed the packer's cardboard blanks magazine; the cardboard blank stacks are carried on these belts up to the area in which they are translated and then continue up to the collection system at case/shrink packer infeed.

Thanks to specific sensors, both the disposition and feed of the cardboard blanks on the conveyor belts fitted with motorized rollers and their loading into the packer's magazine is, in fact, fully automated.



Changeover

» Smiflexi packers are the ideal solution for the packaging of a wide range of products in several pack collations.
Thanks to a very quick change-over procedure, it is really easy to change the pack format and immediately re-start the production.
The operating parameters of each pack are stored in the POSYC's memory; the operator can select the required format directly from the touch-screen display.
The mechanical adjustment of the machine components might require the operator's manual intervention, depending on the packer model and on the product to be packaged.
On machine models with the manual change-over system, the operator can easily arrange the machine for the new product collation packaging, by means of counting devices and hand-cranks for the guides' adjustment.
On machine models with automatic change-over system, the machine is electronically arranged for the packaging of the new format by means of brushless motors; in most cases, no tool or operator's intervention are needed.
The change-over operation simply consists in the selection of the new format from the POSYC's touch-screen display.

In order to further simplify the shift from a small pack to a large pack or vice versa, Smiflexi packers are set to control up to three different machine pitches, identified by coloured position indicators installed on the chains.

» Automatic changeover of inlet guides

Smiflexi packers can be equipped with an automatic adjustment device for product inlet guides, which improves and optimises changeover operations.

The system features DC motors driven by the control PC, which ensure high precision of movement and shorter changeover times for adjusting infeed guides according to the product parameters.

Thanks to the application of this optional device, combined with the automatic adjustment system featured as a standard by the dividing/grouping module, the operator can easily switch formats from the control panel touch-screen display with virtually no manual intervention.

Thermo-shrinking tunnel

» Smiflexi shrinking tunnels stand out for their innovative design and state-of-the-art manufacturing concept: they are indeed produced employing energy-saving solutions and eco-friendly technologies.

Smiflexi shrink tunnels are cutting-edge systems that feature a state-of-the-art technology and allow for a reduction in energy consumption, environmentally friendly processes and a top-level quality of the final pack.

Thanks to the accurate analysis of the thermodynamic phenomena typical of the shrinking process, Smiflexi tunnels can handle the distribution of hot air flows in an efficient and homogeneous way all over the pack during shaping procedure.

Furthermore, before leaving the shrink chamber, the pack is submitted to a cooling process which, by means of fans, fixes the shape, the features and stiffness in order to avoid deformations during the following packaging steps.

Smiflexi shrink tunnels are designed to ensure an easy and safe access for the operator to the inside parts during maintenance and cleaning operations which are reduced compared to traditional systems.

Thermo-shrinking tunnel for bundles of cans

» Smiflexi SK packers can be equipped with a special shrinking tunnel, specifically designed for handling aluminium cans to be packed in film only.

Specially designed for this type of container, the new tunnel is fitted with a warm air distribution system which includes added air flows for the side shrinking of the packets in transit; in this way, the shrink film wrapping occurs in a more homogeneous and uniform way at all areas of the pack, allowing for the creation of flawless packages (no wrinkles and folds) even at high speeds.

The temperature inside the tunnel, controlled electronically, is maintained, during the entire working cycle, at the optimal levels established in the production programme, thanks to newly-devised technical solutions which dramatically reduce heat loss.

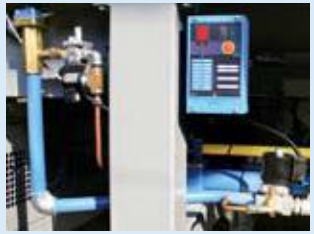
The amount of time each of the packs spends inside the tunnel is also regulated automatically by the machine control system, which keeps it constant for all processed formats.

If the speed of the shrinkwrapper must vary depending on the selected pack configuration, an appropriate device automatically compensates the difference of shrinkwrapper speed/oven by adjusting the belt between the two modules; this allows for high quality shrinkwrapped packs to be obtained, regardless of the format.

The thermo-shrinking tunnel for bundles of cans is available for packaging operations in single, double or triple lane variants.

» Methan-heated shrinking tunnel

Smiflexi LSK, SK, LCM and CM packers can be equipped with a methan-heated shrinking tunnel, as an alternative to the traditional oven, heated by means of electrical resistances.



Natural gas offers several benefits, if compared to traditional fossil fuels:

- its combustion is smogless and pollution-free;
- it complies with current regulations on environmental protection;
- it allows consistent cutbacks on energy bills in countries where gas is cheaper than electricity.

According to accurate tests performed by Smiflexi engineers, in those countries where gas is available at convenient prices – such as in Italy – the methan heated tunnel provides up to 70% saving on energy bills, if compared to traditional electrically-heated tunnels.

Furthermore, the time necessary to reach the operating temperature is 75% lower if compared to the use of electrical resistances (5 minutes with gas vs 20 minutes with electricity).

Modular structure

Smiflexi machines are designed according to advanced principles of module-based assembly and feature interchangeable mechanical and electronic components, which ensure down-time reduction during technical interventions or planned maintenance, as well as the optimization of spare parts on stock use.

Operating flexibility

Smiflexi machines can package a wide range of products in several pack collations, so as to meet the end user's requirements.
Each machine can be equipped with additional devices, which increase its basic functions and ensure a high level of customization of the final package.

Multi-pitch configuration

Smiflexi machines are pre-arranged to control up to three different machine pitches, without replacing the mechanical components.

Thanks to this arrangement, the dimension range of the products handled is one of the widest on market.

The working parameters of each pitch are memorized in the POSYC pc; the operator can select the required machine pitch directly from the touch-screen display.

The mechanical setting of the product divider, of the cardboard climb, of the tray/case former and of the film wrapper is very easy, thanks to the coloured position indicators installed on the chains.

"User-friendly" man-machine interface

The POSYC control panel, which slides on a track running the whole length the machine, enables even low-experienced operators to easily and efficiently run the packing machine.
This is possible thanks to an intuitive interface, the touch screen display and the diagnosis functions and real-time technical support available on the POSYC.
Moreover, it is possible to install two control panels, one for each machine side, so as to make the operator's work even easier.

Continuous motion pack formation

The continuous motion packaging system ensures a fluid production process and protects the containers from strokes, thus guaranteeing higher reliability, improved pack quality and mechanical wear reduction.

Thermoplastic dividing fingers

In the pack formation section, the use of dividing fingers made of thermoplastic material, which last longer than those made of metal, reduces the machine noise and protects fragile containers (such as glass containers) and their labels from damages.

Easy and low-cost maintenance

The interchangeability of mechanical and electronic components and the diagnosis functions through the control panel make technical interventions and programmed maintenance quicker and easier; moreover, these features optimize the employment of the resources available, in order to preserve the machine's efficiency over time.

Motors directly connected to the drive shafts

Smiflexi machines do not have reducers, since motors are directly connected to the drive shafts.
The great advantage of this choice is the reduction of maintenance operations, energy consumptions and noise levels.

Film cut by motorised blade

Smiflexi shrink-wrappers knife unit features a motorised blade for film cutting operated by brushless motor.

This solution ensures high film-cutting precision, improved operating efficiency, shorter operating times and consistent savings on packaging material and energy consumption.

The knife unit can be accessed and inspected from above, allowing the operator to carry out maintenance operations both easily and safely.

Energy saving and eco-friendly solutions

All Smiflexi packers are designed employing state-of-the-art solutions, with the aim of combining operating efficiency, energy saving and eco-sustainability.

- No geared motors: the machine and the infeed conveyor belt feature high-efficiency brushless motors, which provide huge cutbacks on maintenance costs, on energy consumption and on noise-level.
- The shrinking tunnel belt and the cooling conveyor at the machine outlet are equipped with inverters for speed and load control. The combination of inverters and asynchronous motors provides improved operating efficiency, remarkable energy savings and low plant management costs.
- Plastic components are replaced by steel components recovered from waste material.
- Recovery of the hot air generated by the tunnel of the shrinkwrappers and/or other machines in the production line, reused in the pack-shrink process.
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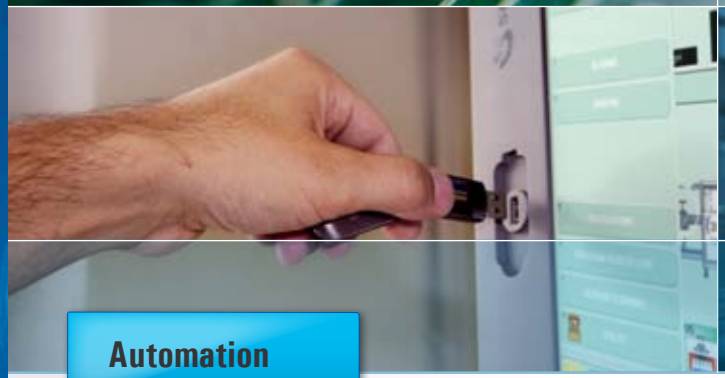

Automation

» SMI exclusively manufactures hi-tech packaging machines, featuring modular design, operating flexibility and high energy efficiency, thanks to fully automatic processes, electronically controlled drive shafts and field bus wiring.

The hardware and software components are open and modular, complying with the EC regulations and relying upon proven standards of the industrial field and of the packaging sector: OMAC guidelines, SERCOS, PROFIBUS, IEC61131, OPC, Industrial PC, Linux.

As a result, referring to guide lines of OMAC (Open Modular Architecture Controls) and to the relevant work group for the packaging sector (OPW= Omac Packaging Controls), SMI machines can guarantee an easy integration with the other machines in the line, a user-friendly technology and the safeguard over time of the capital invested.

The automation and control of the machine are managed by the MotorNet System® which, as far as the hardware is concerned, is composed of the following devices: MARTS (process controller), POSYC (man-machine interface), COSMOS (digital servodriver for brushless motors), dGATE and aGATE (remote IP65 I/O digital/analogic modules).

The MARTS is a PAC (Programmable Automation Controller), based on an industrial PC, which can be programmed in IEC61131 languages.

The COSMOS servodrivers and the dGATE/aGATE I/O modules are connected to the PAC via SERCOS.

The POSYC is a control PC with IP 65 touch screen, based on a fanless PC with solid state drives.

MotorNet System®

Smiflexi automation and control solutions ensure:

- High outputs and high quality packs.
- Constant keeping of control parameters during the whole production cycle.
- Low machine noise.
- Direct control of the machine-serving conveyors, without additional PLC.
- User-friendly technology and easy maintenance.
- Automatic warning on the operator panel's display of programmed maintenance operations to be carried out.
- Quick changeover.
- Possibility of programming machine pitch and drive shafts movement.
- Machine manuals available through the operator panel's memory.
- Machine performance monitoring and down-times analysis (Pareto diagram).
- OPC or MODBUS/TPC connection for production data collection.
- Tele-assistance by phone or by the internet.
- Easy back up of installation parameters.
- Easy updating of the employed solutions.
- POSYC's interchangeability with compatible PC Panels.
- COSMOS' interchangeability with compatible SERCOS PACK PROFILE servodrivers.
- Access to the operator interface by means of password, pre-arranged USB key and/or biometric fingerprint USB key.

Technical features

	LSK	SK	TF	MP	LWP	WP	LCM	CM
Machine bearing frame made of sand-blasted and powder-painted steel	x	x	x	x	x	x	x	x
Safety doors with aluminium frame and transparent protections made of shockproof polycarbonate, which allow an easy access to all parts of the machine and a broad visibility of the packaging process as a whole	x	x	x	x	x	x	x	x
Absence of geared motors on the machine module (except infeed conveyor)		x	x	x		x		x
Lifetime lubricated bearings	x	x	x	x	x	x	x	x
Infeed conveyor belt featuring low-friction thermoplastic material chains	x	x	x	x	x	x	x	x
Cardboard magazine situated beneath the infeed conveyor, adjustable according to the blank size	x	x	x		x	x	x	x
Cardboard magazine situated above the infeed conveyor, adjustable according to the blank size				x				
Alternate motion cardboard blank picker, equipped with suckers	x		x		x		x	
Continuous motion rotary cardboard blank picker, equipped with suckers		x	x	x				
Cardboard blank picker with rubberized chains						x		x
Film reel unwinding electronically controlled by brushless motors		x						x
Film cutting system with motorised blade		x						x
Automatic centring system for printed film provided with marks		x						x
Continuous motion product grouping device, with electronically synchronized fingers made of plastic material		x	x	x		x		x
Brush antistatic bars with carbon fibre	x	x					x	x
Heat-shrinking tunnel with centralized lubrication (except SK 400 and CM 400)		x						x
Tunnel conveyor belt equipped with fibreglass bars	x	x					x	x
Tunnel automatic cleansing system		x						x
Machine electrical cabinet with air conditioner		x	x	x		x		x
Heat-shrinking tunnel with forced air ventilation	x	x					x	x
Control panel running the whole length of the machine		x	x	x		x		x
Power supply: from 380 to 480V (±5% max.) 50/60 Hz 3PH + N + PE	x	x	x	x	x	x	x	x
Power supply equal to 230 or 575V: with autotransformer	x	x	x	x	x	x	x	x

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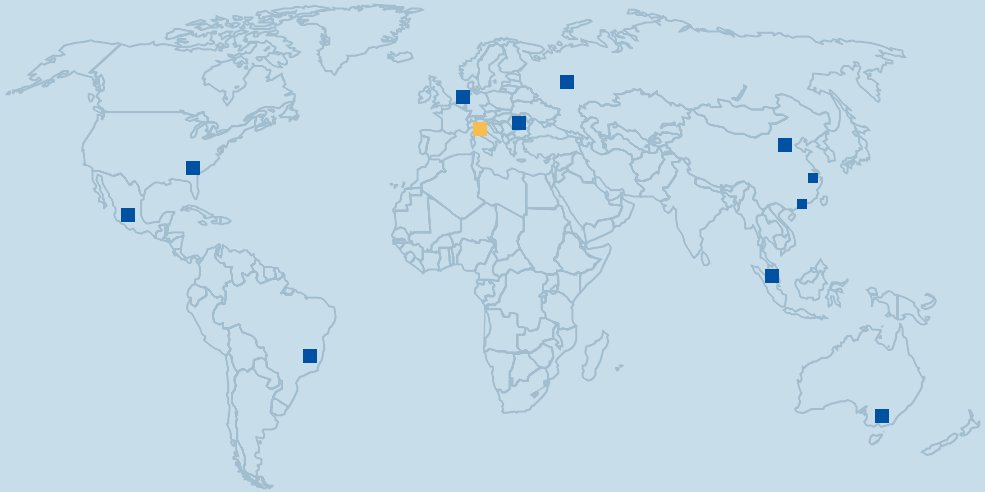

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