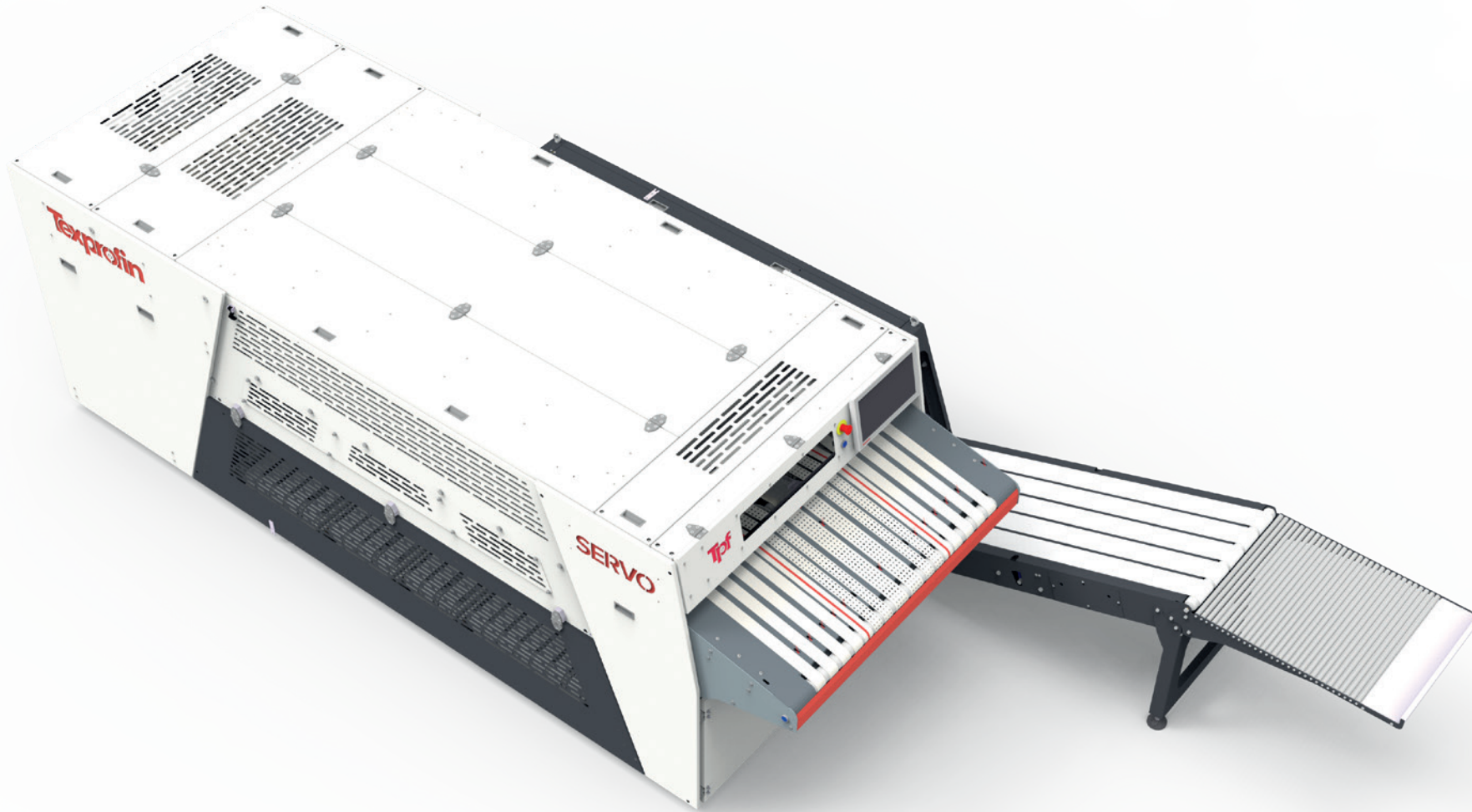


Texprofin[®]
High performance solutions

SMART FROM THE START



Servo
Towel
Folder



TEXPROFIN

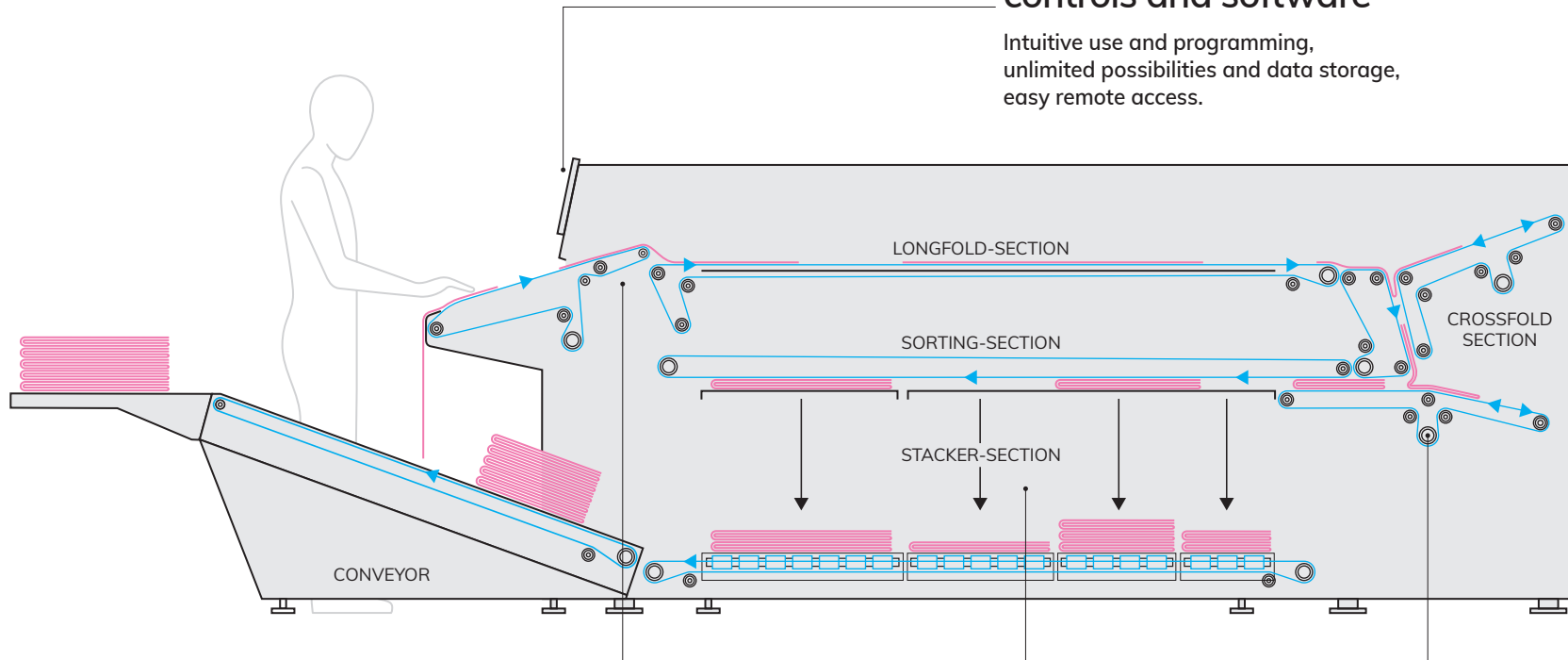
the folder that combines high production with high quality without compromise

Innovations



controls and software

Intuitive use and programming, unlimited possibilities and data storage, easy remote access.



mechanical design

Ingenious mechanical design ensures optimal grip, no slip, precise position control of items in all conditions.



ease of maintenance and safety

Low maintenance requirements, easy maintenance operations, focus on safety at all times.



servo motors

High precision folding process at all speeds and for all article types.



The ingenious mechanical design of the feeding table, longfold section and crossfold section are some of the major innovations of Texprofin's towel folders. The design avoids slip phenomena and allows us to get the highest performance out of the servo motors.

Mechanical design

longfold with template

Photocells part of the feeding table provide length and/or width information of goods before they enter the longfold section. Ski templates, servo motor driven, will quickly position themselves based on dimensions so the next step of the folding process can be carried out.

longfold by blades

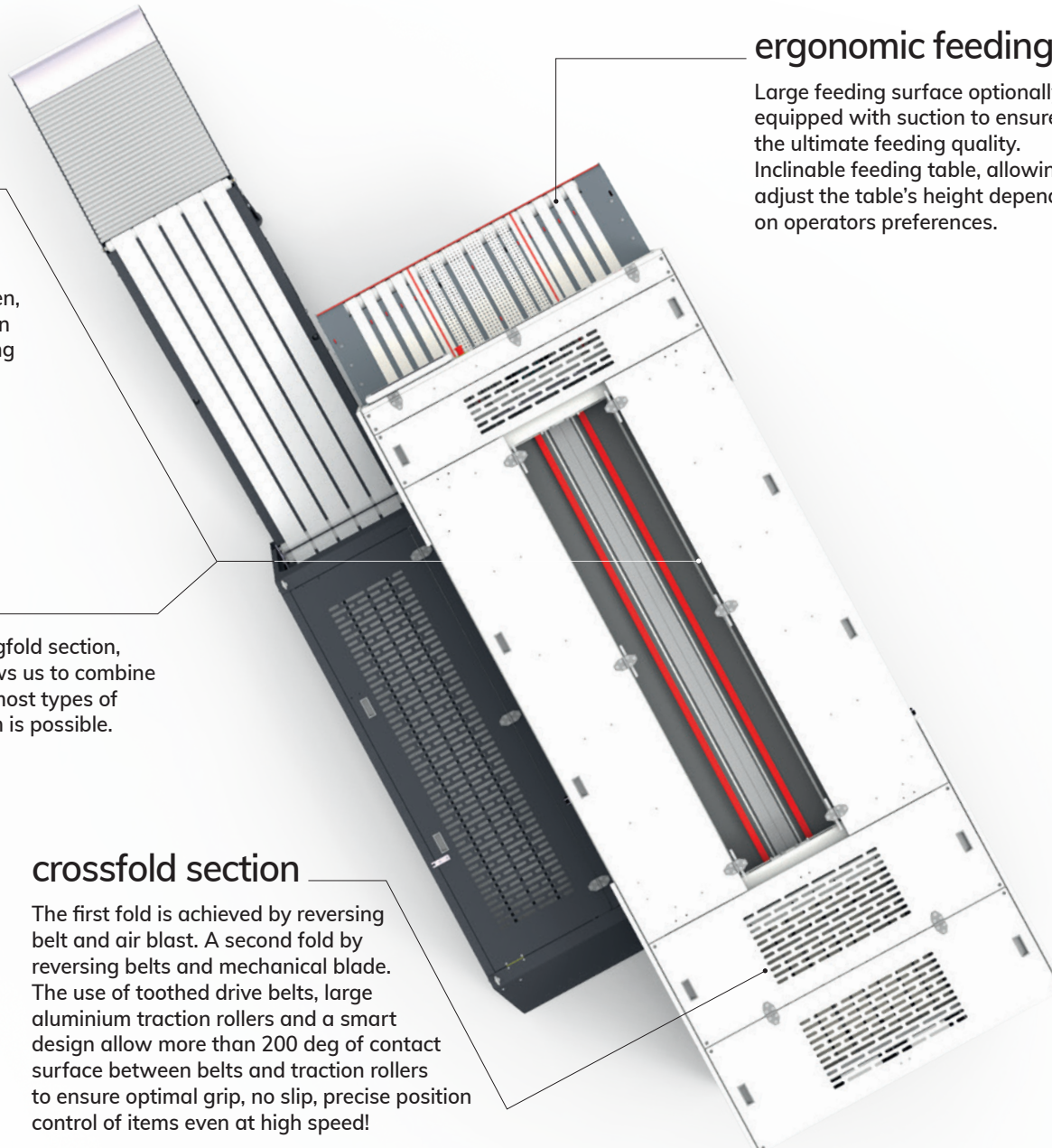
The smart mechanical design of the longfold section, based on light servo driven blades, allows us to combine speed and accuracy in the longfold for most types of goods. By-pass of articles up to 600 mm is possible.

crossfold section

The first fold is achieved by reversing belt and air blast. A second fold by reversing belts and mechanical blade. The use of toothed drive belts, large aluminium traction rollers and a smart design allow more than 200 deg of contact surface between belts and traction rollers to ensure optimal grip, no slip, precise position control of items even at high speed!

ergonomic feeding table

Large feeding surface optionally equipped with suction to ensure the ultimate feeding quality. Inclinable feeding table, allowing to adjust the table's height depending on operators preferences.



the folder that combines high production with high quality without compromise

Feeding table

Safety

No moving parts are accessible for operators.

The feeding table's height can be adjusted depending on the operators preferences for an ergonomic and convenient feeding process.

10 cm

□ A suction area, located in the middle of the table can be added as an option to ensure perfect feeding of heavy items.

The feeding table allows the operator to feed the system in automatic or manual mode.

● In auto mode

The feeding process will automatically be triggered when an item is positioned on the table.

● Width measurement photocells

Additional photocells can be used to differentiate items based on their length and width for further folding requirements.

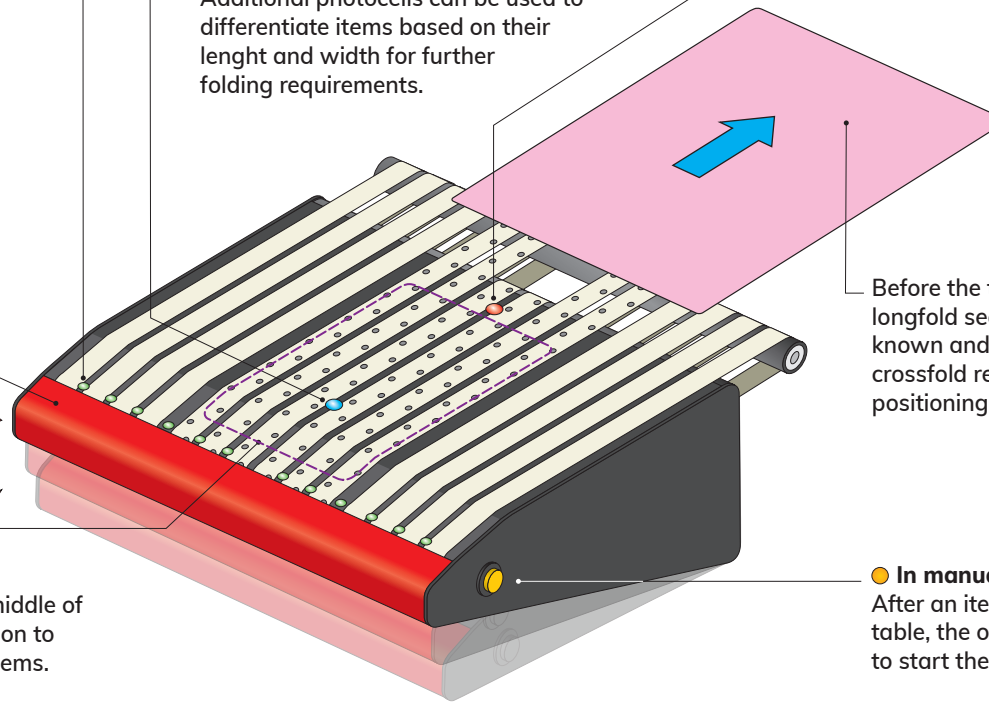
● Length measurement photocell

While the towel is moving from the feeding table to the longfold section, its length will be defined by a sensor.

Before the towel is completely in the longfold section, its length will be known and consequently its long- and crossfold requirements and stacker positioning as well.

● In manual mode

After an item is positioned on the feeding table, the operator has to push the button to start the feeding process.



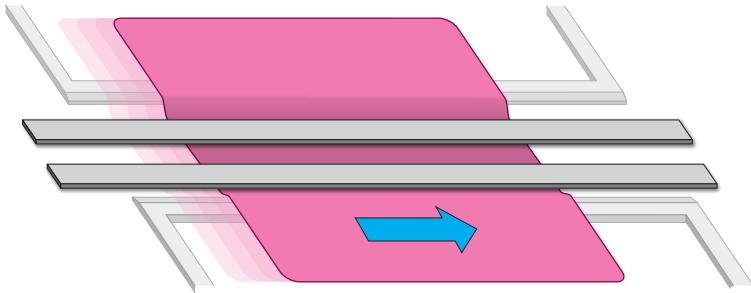


The mechanical folding is the most accurate and consistent way to fold items. Whatever the item's weight, thickness and dimensions, the blades will perform a fast and accurate longfold. The use of servo motors in the longfold section allows us to adjust folding speed of the blades and the belt depending on the folding requirements.

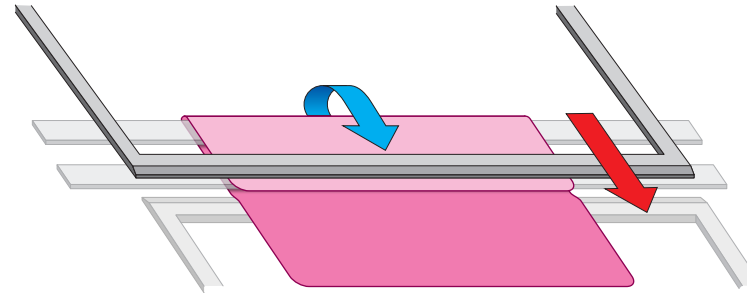
Folding process

longfold section equipped with blades

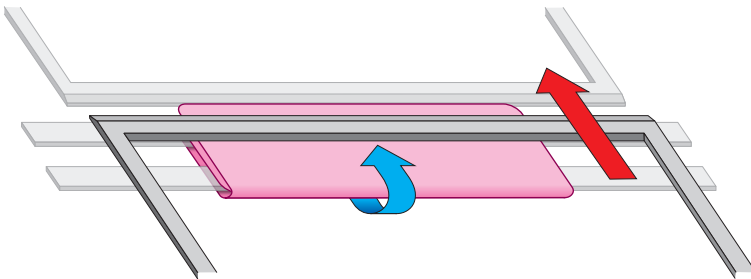
1. Loading of a towel into the longfold section, the skis or width templates and blades are positioned according to folding requirements of the item.



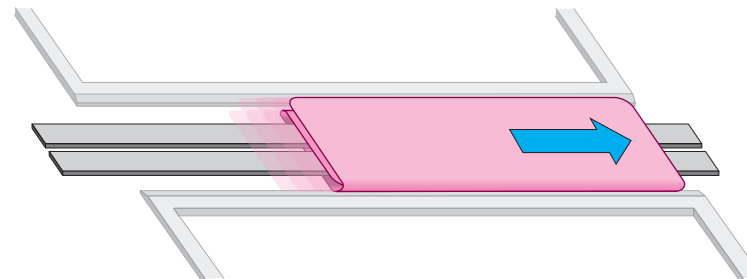
2. First folding action performed by the left blade.



3. Second folding action performed by the right blade. This is achieved simultaneously with the retracting movement of the left blade.



4. Movement of the folded towel towards the crossfold section.



Note: Folding action performed by air blast is available for laundries processing goods that do not necessarily require mechanical folding.

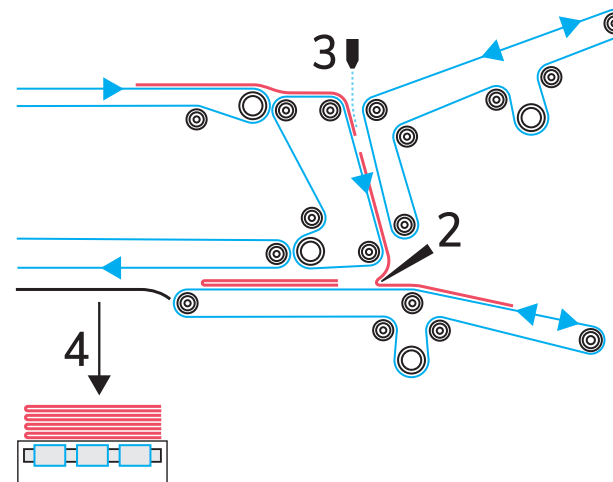
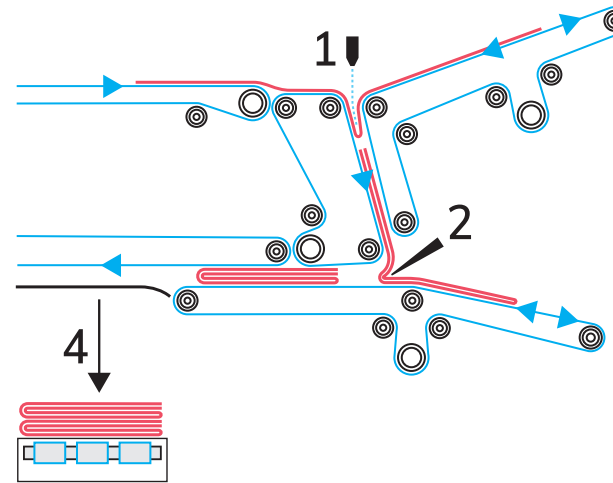


In the crossfold section an item can be either folded once, twice or bypassed.

Folding process

crossfold section

1. The first crossfold is achieved by reversing belts and an airstblast to help the folding process.
2. The second fold is achieved by reversing belts and a knife action. The knife ensures that every item, even the thickest fluffy terry towels are folded neatly during the reversing and folding process. Depending on the items to be folded, the knife could be replaced by an airstblast pipe.
3. Illustrating the bypass of the first (3) crossfold, followed by a second (2) crossfold.
4. After folding the item is transported to the two flaps system located above the stackers.



fast, accurate and continuous operations
in all circumstances

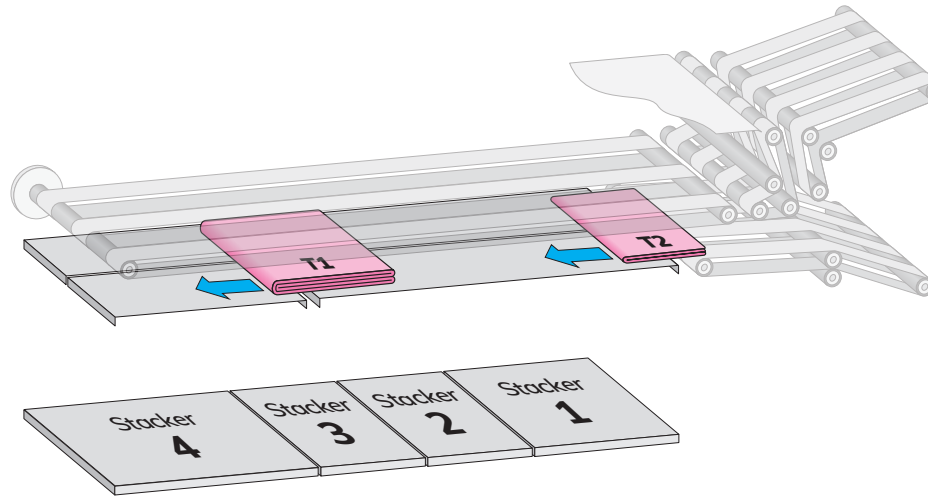
Sorting and stacking

double pair of unload flaps and up
to four stackers for sorting and stacking

The servo folders are all equipped with a double pair of unloading flaps. This allows a smooth and continuous production flow.

After folding in the crossfold section, a towel will be transported between the belts and flaps before being unloaded onto the correct stacker.

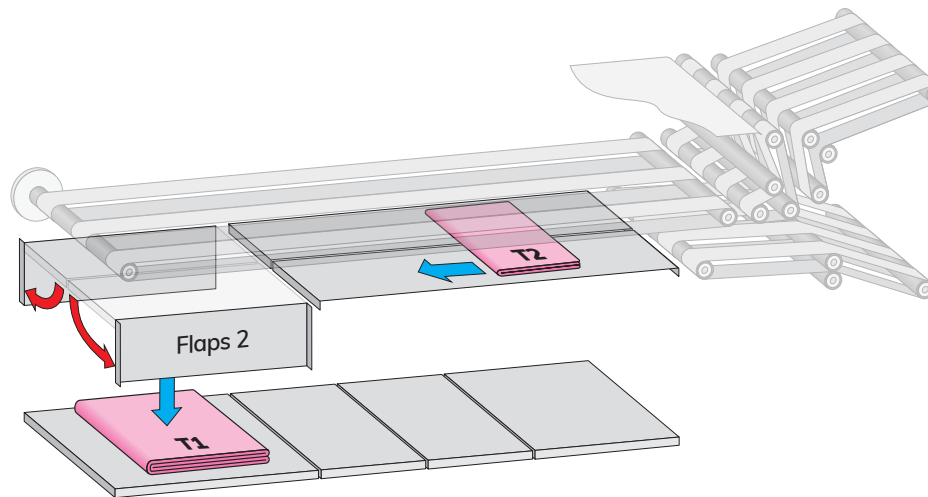
The servo towel folder is equipped with a minimum of three stackers. Optionally a fourth stacker can be added depending on the customer's needs.



flaps system and stacker
simultaneous operations

This allows us to transport and unload 2 towels
in a very efficient sequence.

This would be the case when long items (double fold
in the cross section) are followed by shorter items
(only 1 fold needed in the cross fold).

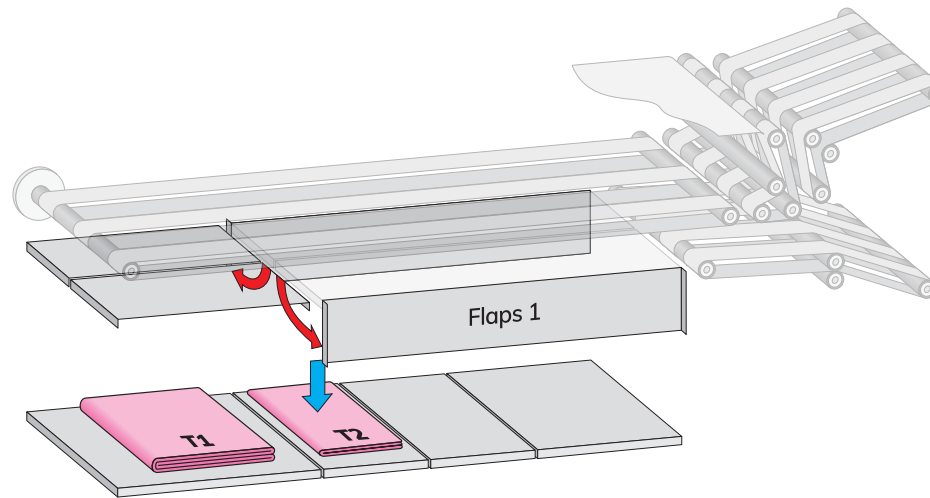


fast, accurate and continuous operations
in all circumstances

Sorting and stacking

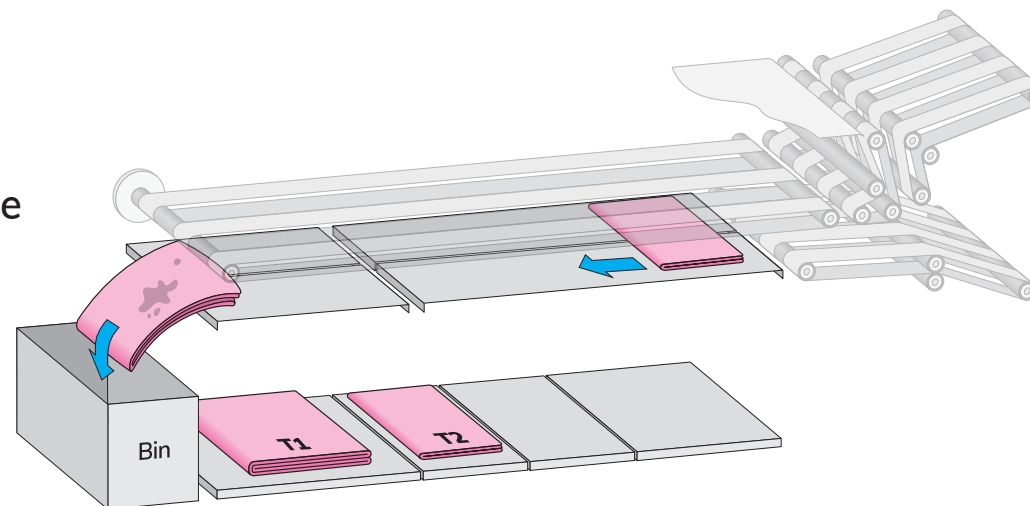
flaps system and stacker
simultaneous operations

This allows a smooth and continuous production flow.
No interruption or machine stops are needed.



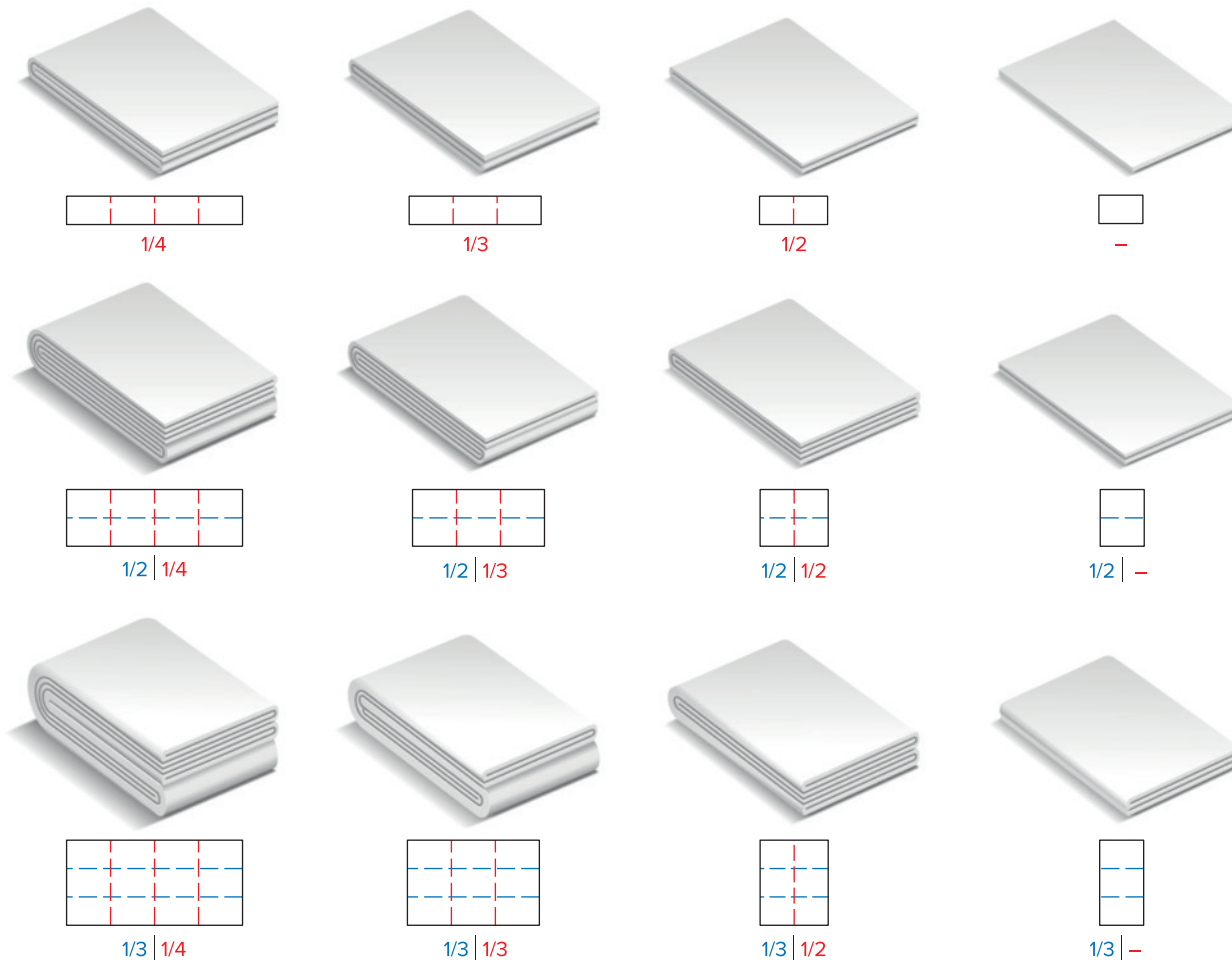
bin for rejected items included in the
front frame underneath feed table

Whenever stains or damages are detected by an operator during the feeding of items, simply by pushing a button on the left hand side of the feeding table, a towel will be transported into the rejected items bin located in the frame of the machine underneath the feeding table.



Below an overview of the folding patterns that can be carried out depending on your longfold and crossfold requirements.

Folding patterns



A by-pass or no longfold is possible for items with a maximum width of 600 mm. Texprofin's standard folder is able to fold rectangular items with maximum dimensions of 1200 x 2000 mm and minimum dimensions of 200 x 200 mm. Fitted sheets, different type of garments and other items can be folded as well.



Industrial hardware combined to a software offering full flexibility and integration into a larger production chain.

Controls and software

▶ intuitive controls and programming

Easy programming after installation or for new articles is another major benefit of Texpofin's folder. Once a folding program is configured on one folder it can easily be copied to all other folders without any machine specific parameter changes.



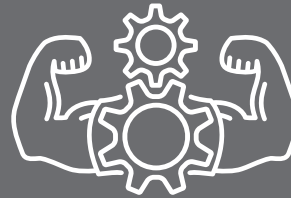
▶ large touchpanel



All types of manuals (user manual, general maintenance manual, electrical schematics, spare parts manuals, etc ...) are stored on the IPC. Operators or technicians can easily access them and view them on a 10" or 15" touch panel.

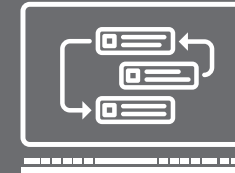
Videos illustrating some problem solving actions or other maintenance procedures are also available.

▶ robust industrial hardware and flexible software



The choice for Beckhoff controls was a straight forward choice given the unlimited possibilities for the actual range of towel folder and the potential development and integration in a fully automated system.

Combined with the 10" touch panel, it daily operations for operators or servicing the machine for any technician is greatly simplified.



▶ data storage and remote access



Unlimited data storage is one of the major benefits of this choice. Operational data and production data can be stored without limits on the IPC of the folder. Remote access can be easily implemented without additional hardware.

Data can easily be retrieved to feed laundry performance systems.

▶ camera and quality controls

A camera located inside the machine with a view on the stackers allows the operator to check the folding quality of items on the stackers without having to leave his working position in front of the feeding table.



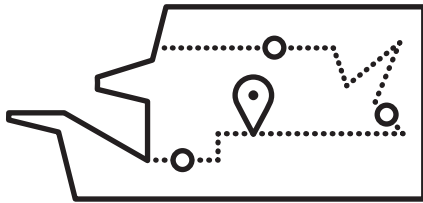


The servo motors with encoders allow the measurement of pulses (as opposed to time with fixed speed machines).

This allows us to determine instantly the length and position of items precisely during the folding process.

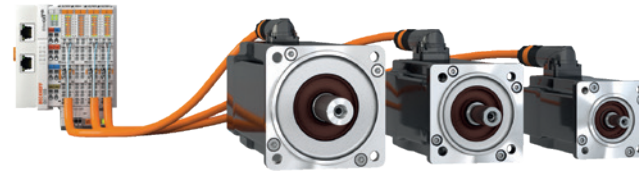
Folding moments can accurately be defined with variable speed settings and different type of goods.

Servo motors



precise positioning

The feeding table, longfold section and crossfold sections are all equipped with servo motors, to ensure precise folding sequences and provide articles length - and positioning information to the system. Jams will be detected and the machine will stop immediately.

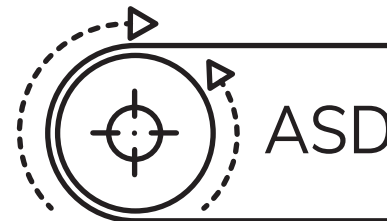


preventive maintenance & monitoring system

Servo motors and encoders allow us to keep track of the real wear and tear of moving parts and some consumables accurately. The folder will inform the operator whenever maintenance is needed or lubrication of linear guideways should be performed.

anti slip detection system

Slip between traction rollers and belts or between belts and terry towels are contributing to incorrect folding actions. Servo motors and encoders can deliver very useful data to determine whether slip is occurring in the system or not. This allows the folder to take the necessary corrective action or inform the operator that belts should be tightened or replaced in a specific section of the towel folder.





Special attention has been given during the development of Texprofin's towel folder to safety for operators and service technicians. The optimal balance between high safety standards and operational ease of use has been chosen. All mechanical components of the longfold section and crossfold section are easily accessible always, taking safety of operators and technicians into consideration.

Ease of maintenance and safety

accessibility of electric components

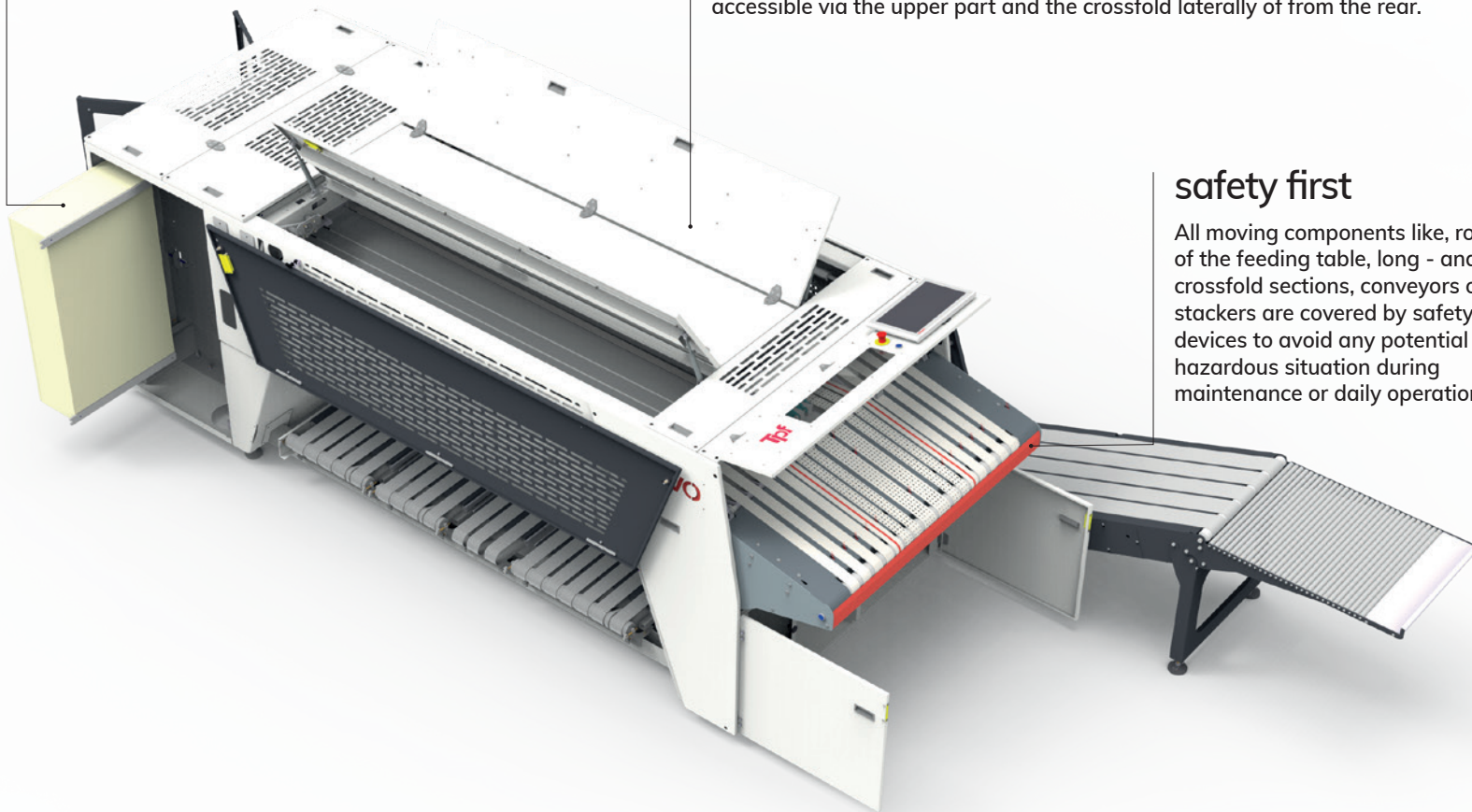
All electrical cabinets are located on either side of rear part of towel folder. All servo motors are identical to limit the spare parts stock. The use of as much as possible identical mechanical and electronic parts reduces the need for spare parts and makes maintenance operations easy.

accessibility of mechanical components

Special attention has been given during the design of the machine to ensure easy access of mechanical components like motors or bearings or consumables like belts. Service of the feeding table, long - and crossfold section is fairly easy due to easy access to the different components. The longfold section is accessible via the upper part and the crossfold laterally of from the rear.

safety first

All moving components like, rollers of the feeding table, long - and crossfold sections, conveyors or stackers are covered by safety devices to avoid any potential hazardous situation during maintenance or daily operations.

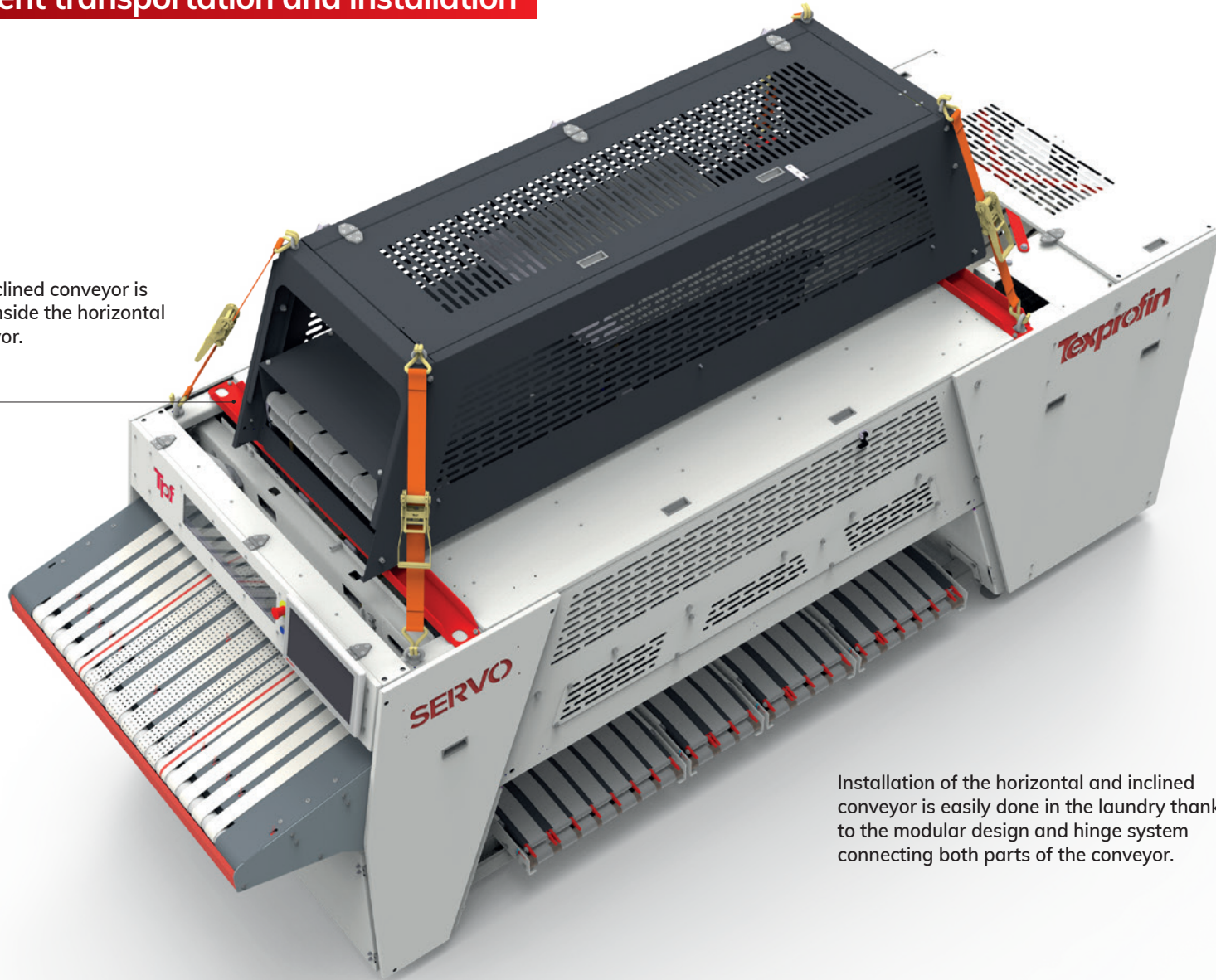




The inclined conveyor fits neatly into the horizontal conveyor with its frame. It will be fixed on top of the folder during transportation. This compact configuration allows us to easily and safely transport a maximum of folders in a container or on a truck.

Efficient transportation and installation

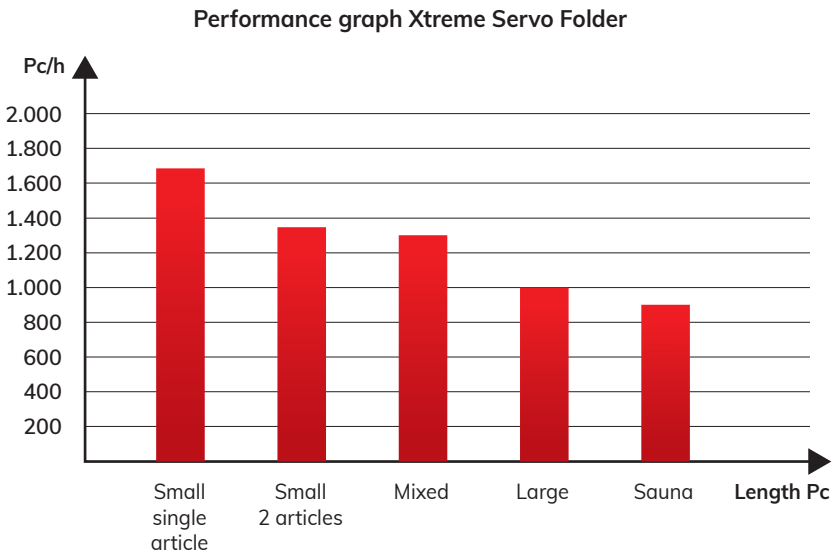
The inclined conveyor is fixed inside the horizontal conveyor.



Installation of the horizontal and inclined conveyor is easily done in the laundry thanks to the modular design and hinge system connecting both parts of the conveyor.

Production on Texprofin's towel folders is the highest possible. There is no impact on fold quality even when the item's length or weight increases.

Performance analysis



Standard speed 68m/min

	Size towels	Proportion	Long & crossfold	Pc/h
Small single article	50x100		1/3 1/2	1680
Small double articles	50x75 50x100		1/3 1/2 1/3 1/2	1350
Mixed	70x150 50x75 50x100		1/3 1/3 1/3 1/2 1/3 1/2	1300
Large	1000x1500		1/3 1/3	1000
Sauna	1000x2000		1/3 1/3	900

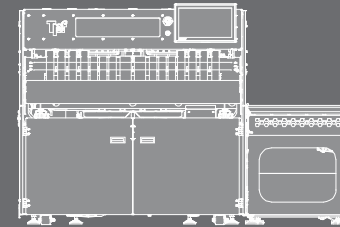
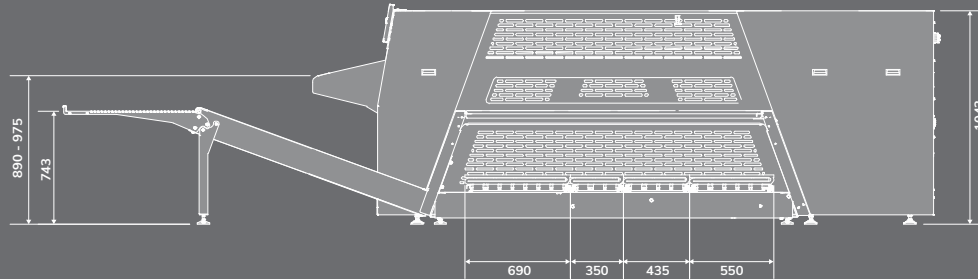
Data in the graph or in the table is extracted from factory testing. Actual operating results may differ depending on circumstances, type of articles and/or operating speed of the folder.

Increased production on Servo Xtreme versus conventional towel folders is due to :

- High speed width templates repositioning
- Optimal longfold folding action. Item's width is taken into consideration for blade travel distance
- Certainty of long fold action when using blades. No jams between long and crossfold section
- Almost no Stops of the longfold section before the fold action. Adaptable machine speed to avoid stop of longfold section
- Longfold quality not affected by the length and weight of items
- Optimal sorting and stacking thanks to the double pair of unload flaps

Below a side and top view with dimensions (**) of a single machine. Different configurations are possible, like side by side or connected to a central transport conveyor connected to a stack packing device.

Technical data



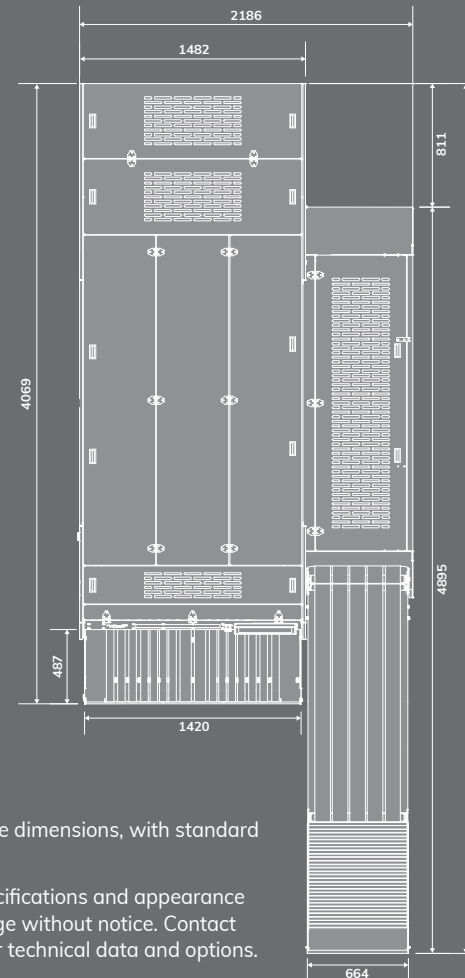
Overview standard features and options (*)

- Maximum width 1200 mm
- Maximum length 2000 mm
- Multiple width photocells
- Advanced 10" interactive color display
- Servo motors feeding, long and crossfold sections
- Longfold action
- First crossfold airblast and reversing belts
- Second crossfold air / blade and reversing belts
- Remote access for diagnostic and data acquisition
- Single or double pair of flaps
- Manuals and technical info on 10" touch panel
- Unlimited production data
- Stackers air piston / motor driven
- Full motion control transport conveyor / buffer
- Inclinable feeding table
- Suction feeding table
- Stacker camera for fold quality control
- 15" touchpanel with camera view
- Airco electric cabinet

SERVO

	Precision	Xtreme
•	•	•
•	•	•
•	•	•
•	•	•
•	•	•
air	blades	
•	•	•
blade	blade	
•	•	•
double	double	
•	•	•
•	•	•
motor	motor	
•	•	•
○	•	•
○	•	•
○	○	○
-	○	○
○	○	○

• standard ○ optional - not available



(**) Approximate dimensions, with standard accessories

(*) Options, specifications and appearance subject to change without notice. Contact factory for other technical data and options.

SERVO

About us

Years of experience in industrial laundry machinery by the managers of Texprofin combined with the strength of a large engineering and manufacturing company in the textile industry creates an excellent foundation to create a large player in technical solutions for industrial laundries.

Our partner Matthys Group supports us with their 50.000 m² large production facility, +100 staff and 50 engineers for mechanical design and software development and state-of-the-art production equipment.

'Made in Belgium' stands for top quality. It is with this strive to perfection, and a passion for technique that we will take a leap forward.

We specialize in towelfolders and bring real innovation without any complexity to your laundry.

Our long term goal is to become the market leader in fully automated towelfolding lines.

We welcome you in our premises.

Curious about our upcoming news ?

You can subscribe to our newsletter at www.texprofin.com/news to be the first to inform you about our latest developments and events.



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