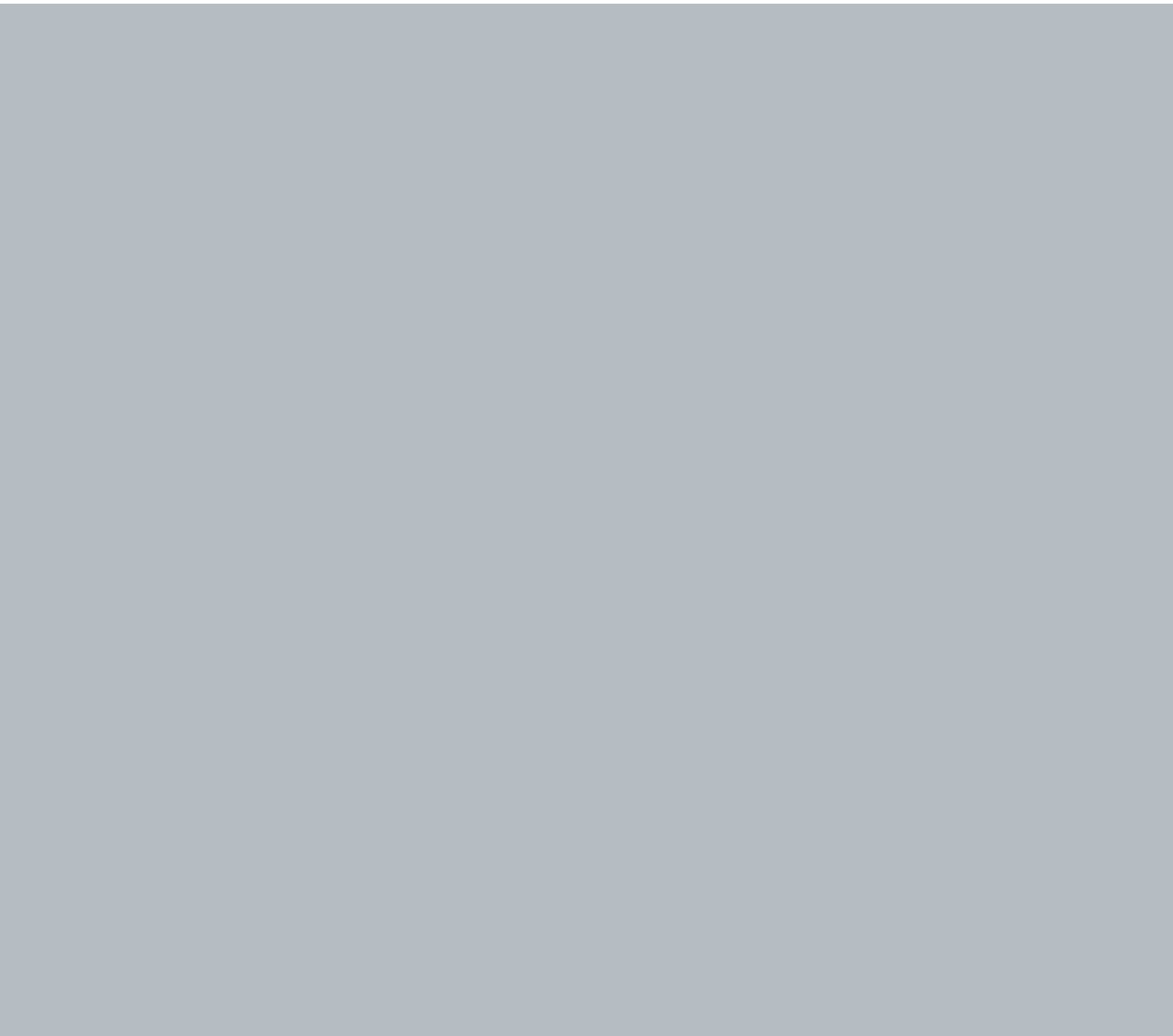


AUTOMATED PACKAGING

solutions for E-Commerce





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INNOVATING E-COMMERCE

E-CO FLEX is the most innovative, flexible and effective solution in packaging process.

THE IMA APPROACH TO THE E-COMMERCE AUTOMATED PACKAGING

With the booming global E-Commerce sector and steadily growing sales in recent years, E-tailers are seeking smart solutions to adapt their supply chains to this continuously evolving landscape. Minimizing **time-to-delivery** is paramount for any successful business. While E-tailers have diverse and specific requests, they also face common challenges, such as keeping up with demand and controlling labor costs amid ongoing recruitment and retention issues.

Moreover, the E-Commerce industry is facing increasing scrutiny from international legislators focused on **reducing the environmental impact** of the substantial movement of goods. Consequently, the sustainability of this business must evolve in tandem with the environmental standards of its operations, while also complying with current and future legislation designed to lessen the ecological footprint of E-Commerce activities.

To address these needs, IMA, with its 60 years of packaging expertise, has established a new division specifically dedicated to serving this sector and automating the packaging process.

For this purpose, the **IMA E-COMMERCE** division has introduced a range of innovative packaging solutions, aimed at streamlining the packing process, all designed according to five simple principles:

- **Small footprint**
- **Modular and future-proof**
- **Easy to operate**
- **Higher output respecting operator's pace**
- **Fit-to-size cases to reduce environmental impact**

Following all these drivers, along with switching **from manual to automated operations**, enables E-tailers to improve both throughput and cost efficiency. Sustainability innovations are enclosed into IMA E-COMMERCE technologies.



The E-CO Flex platform is composed of two modules:



E-CO FLEX FORMING
Multi-size case erector



E-CO FLEX CLOSING
Height-reduction case closer

These two modules can be combined in an infinite number of configurations, offering adaptive solutions in a rapidly evolving market.

E-CO Flex is designed to accommodate the **same box suite** that customers are currently using. Thus, with no need to change their existing boxes, ensuring a seamless transition.

Thanks to the partnership with Intertape Polymer Group, market leader for water-activated sealing tape, E-CO Flex integrates a Water-Activated Tape (WAT) head, which applies recyclable reinforced paper packaging tape used by top e-commerce retailers. It generates an immediate destructive bond, resulting in a tamper evident package.

Exclusive distributor for North America



E-CO Flex Packing Station Configuration



When the case forming and closing modules are combined in a **packing station**, a dedicated workstation seamlessly connects the processes. The formed and bottom-taped cases are dispensed to this workstation where the operator, guided by the HMI, inserts items for shipping and secures them with dunnage. Once packing is done, the operator activates the motorized belt with an LED button, smoothly transferring the packed box to the closing module for final sealing and shipping preparation.





MAIN FEATURES

- Easy to operate
- Up to 10 cases per minute with a single operator
- Able to erect up to **12 different box footprints** in full random mode
- 100% recyclable boxes thanks to Water Activated Tape technology
- Void fill materials reduced up to 50%
- Capable to erect multi-size **FEFCO 201** and **FEFCO 200** cases

E-CO Flex Forming

Standalone case erector and forming module



The E-CO Flex Forming module features the market's broadest case magazine, accommodating **up to 12 box sizes**. The machine is capable to erect multi-size **FEFCO 201** and **FEFCO 200** cases. Its intelligent system selects the most suitable box size for each order volume efficiently.

To prevent downtimes, if a cassette runs out of cases, the equipment seamlessly switches to the next best-fit size until replenished, with an LCD alert indicating low supply.

The formed case is securely sealed with **Water-Activated Tape (WAT)**, and a barcode is assigned either by label or direct printing on the corrugated surface.



E-CO Flex Closing

Standalone closing module



The **E-CO Flex Closing** module completes the packing process. Upon inserting the open-faced case, ultrasonic sensors measure remaining void. If the case height is ideal, the system lowers flaps and applies WAT. If optimization is possible, the system automatically centers the case, cuts corners to indicated depth, and adjusts flaps folding and taping head accordingly.



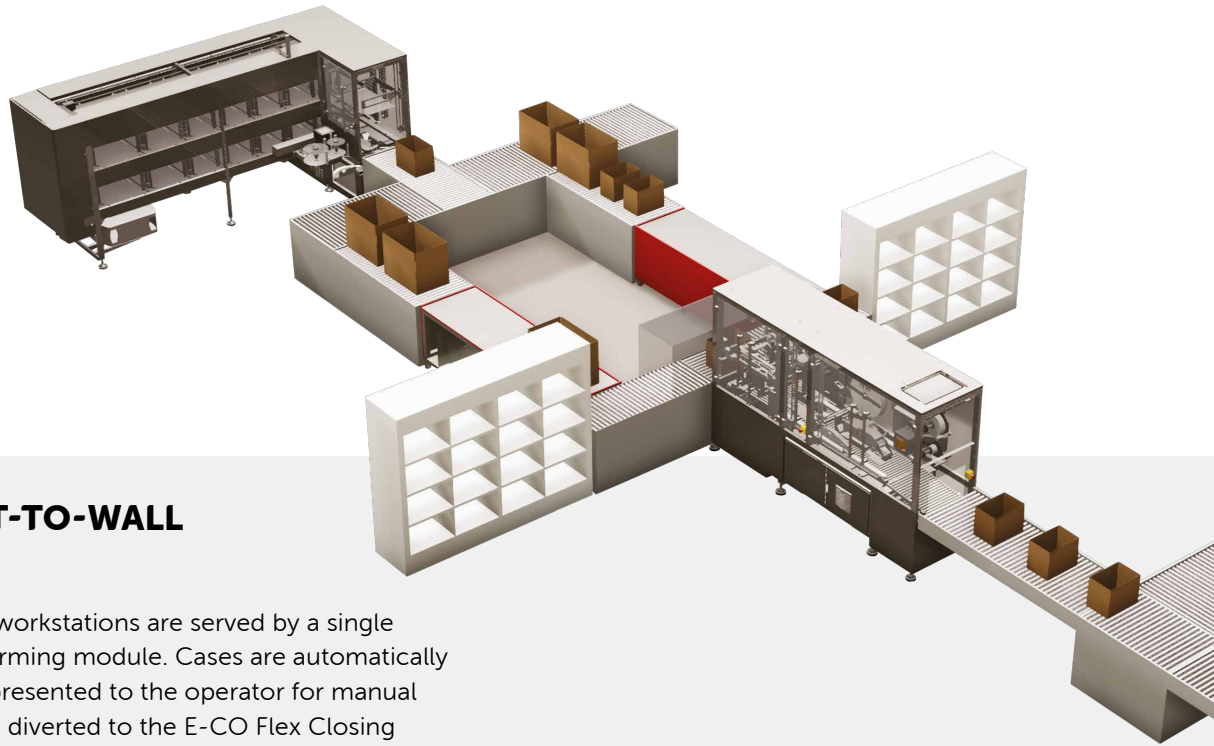
NOT TO BE MISSED MACHINE OPTIONS

- **Print & Apply** unit for shipping label application, checked by a Vision System.
- **Check-weighing** station to verify the weight of the box, thus print that information on the shipping label if required.
- Artificial-Intelligence-based **Vision System** to check the correct flaps closing and taping integrity.
- Capable to erect multi-size **FEFCO 201** and **FEFCO 200** cases.

Two Modules, one Machine:

Endless configurations

Each logistics plant has specific needs, depending on how the supply chain is organized. The E-CO Flex platform is perfect for integration in both greenfields and brownfields, thanks to the adaptability of the Forming and Closing modules operating as standalone equipment.



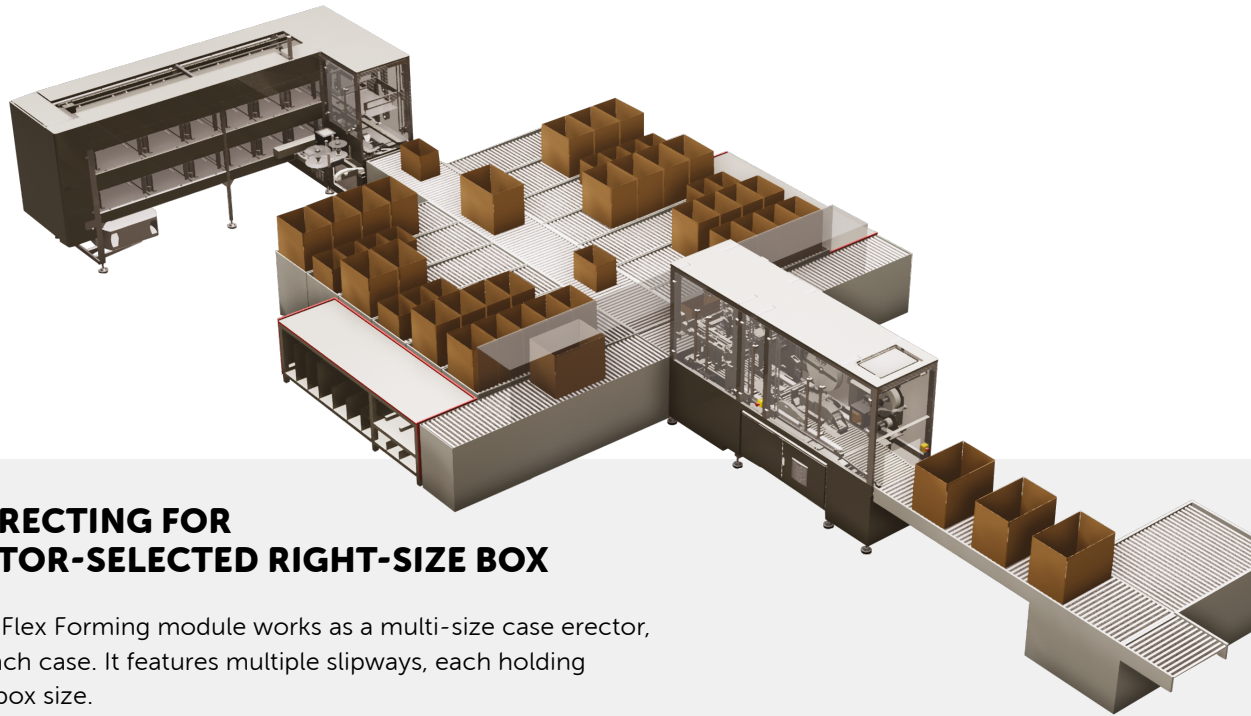
■ WMS PUT-TO-WALL LAYOUT

Two manual workstations are served by a single E-CO Flex Forming module. Cases are automatically formed and presented to the operator for manual packing, then diverted to the E-CO Flex Closing module for downsizing and final closure.



■ WMS INTEGRATED TOTE-BASED LAYOUT

Two manual workstations share the same E-CO Flex Forming and Closing modules. Cases are formed based on the information received from the customer's WMS, then directed to the appropriate packing station, which receives products from a tote-based system. The cases are then downsized and sealed by the E-CO Flex Closing module.



■ **CASE ERECTING FOR OPERATOR-SELECTED RIGHT-SIZE BOX**

The E-CO Flex Forming module works as a multi-size case erector, labeling each case. It features multiple slipways, each holding a specific box size.

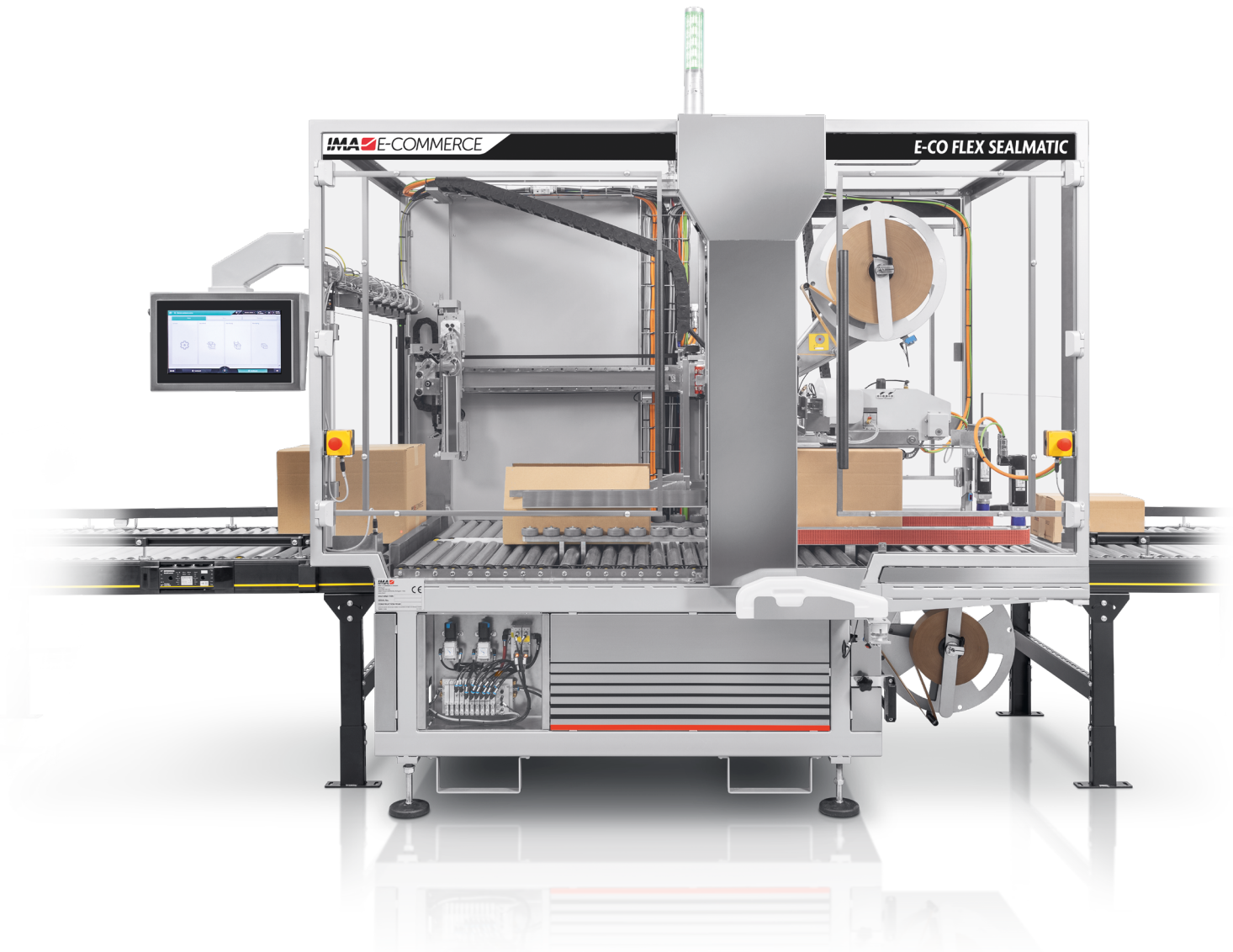
This layout allows for one slipway per box size, giving the packer access to all the box sizes the customer needs.



■ **CASE ERECTING FOR PICK-TO-BOX**

The E-CO Flex Forming module enables easy access to boxes on slipways for pick-to-box operations using trolleys or AMRs (Autonomous Mobile Robots). The E-CO Flex Closing module can be placed in a different area of the distribution center, where trolleys or AMRs unload finished boxes for closing, downsizing, and other tasks.

E-CO Flex SealMatic



E-CO Flex SealMatic is a fully automated case sealer to process **FEFCO 201 boxes**, automatically adjusting its mechanical movements according to the case size. It is equipped with sustainable water-activated tape technology to seal cases on top and bottom at high speed, **up to 20 boxes per minute**, without the need for operator intervention.

The machine is capable to process an extensive range of case sizes, allowing the equipment to seamlessly adjust the closing of the case flaps. In case a **SIOC** (Ships In Own Container) case is recognized, the machine can bypass it without taping.

NOT TO BE MISSED MACHINE OPTIONS

- Automated hazmat labels and/or shipping label application.
- Artificial-Intelligence-based **Vision System** to check the correct flaps closing and taping integrity.
- Full integration with SLAM station to be installed directly down-stream to SealMatic.

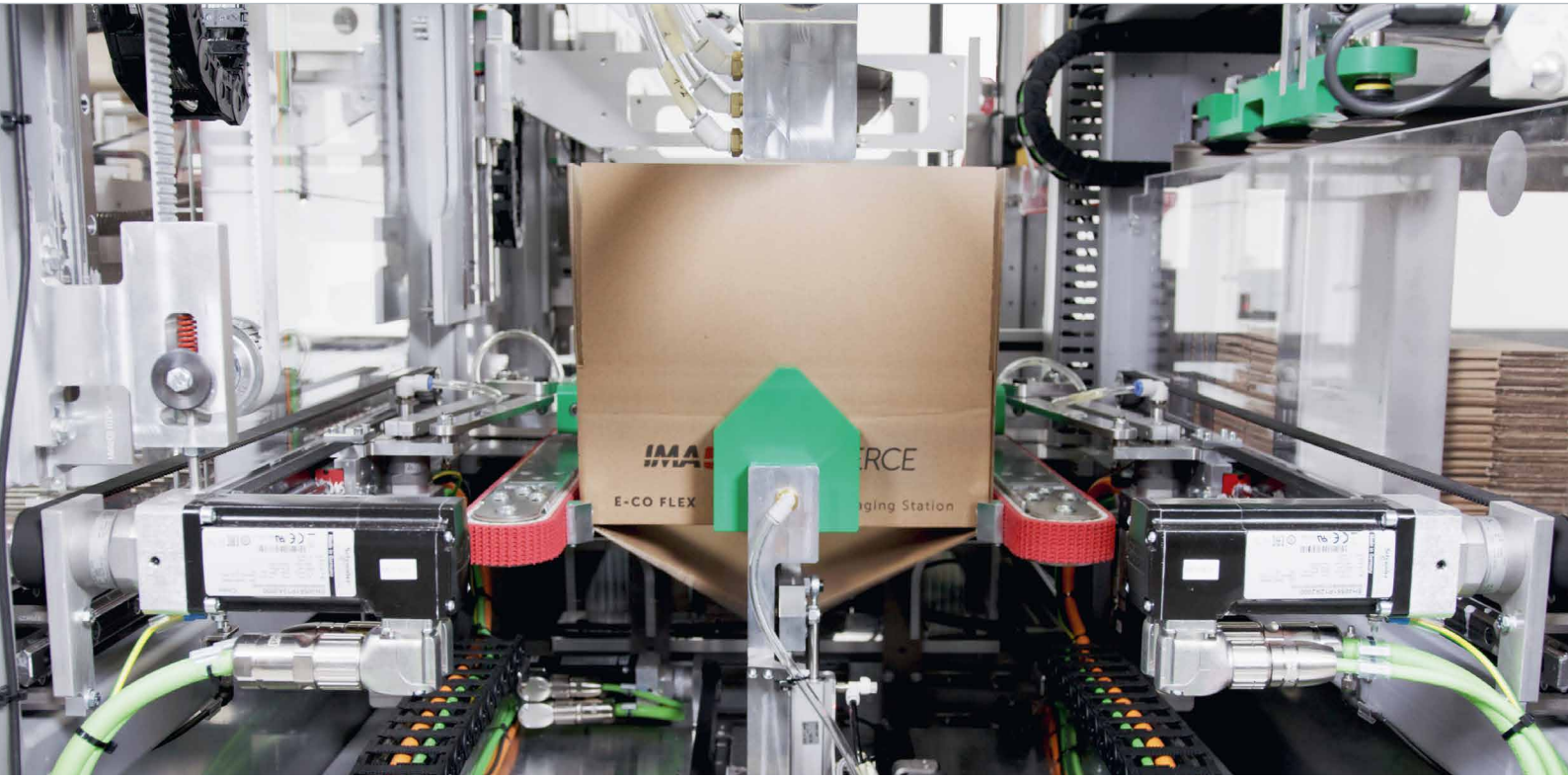
MAIN FEATURES

- Up to 20 cases per minute
- Bypass function for SIOC cases
- Wide range of case sizes available
- Sustainable water-activated tape technology
- Compact footprint



E-CO Flex XL

Standalone case forming and closing modules



E-CO Flex XL has been designed to meet the needs of the intralogistics world, where box sizes are **significantly larger** compared to those used in E-commerce fulfillment.

The goal is providing users with a much broader box size range while keeping the characteristics of E-CO Flex unchanged.

CASE RANGE (INTERNAL DIMENSIONS)

Min:

178 mm x 152 mm x 76 mm
(7" x 6" x 3")

Max:

800 mm x 600 mm x 460 mm
(31.5" x 23.6" x 18.1")

E-CO Flex XL Forming MAIN FEATURES

- Capable to erect multi-size **FEFCO 201** and **FEFCO 200** cases.
- Ability to process single-waved or **double-waved** cardboard.
- Higher operational autonomy of the case magazine.
- Customizable distribution of magazine's cassettes.
- ID label application.

E-CO Flex XL Closing MAIN FEATURES

- For FEFCO 201 cases.
- Max downsizing up to 270 mm.
- Packed product maximum weight 35 kg.
- Ability to bypass SIOC cases.
- Automatic detection of box format at the infeed.

E-CO Flex Lidding

Case closer with height reduction and right-size top lid application

E-CO Flex Lidding is a patent-pending new development among the E-CO Flex Series of machines. It is specifically designed to automatically close incoming cases with the **best-fit-to-size lid**.

The process begins with the automatic detection of case dimensions, identifying the void space inside.

If possible, the machine automatically proceeds with **height reduction** of the case and flaps folding.

The lid magazine accommodates up to **6 different case sizes**, managing **various printed artworks**. The correct-sized lids are automatically picked, glued, and finally sealed onto the case.

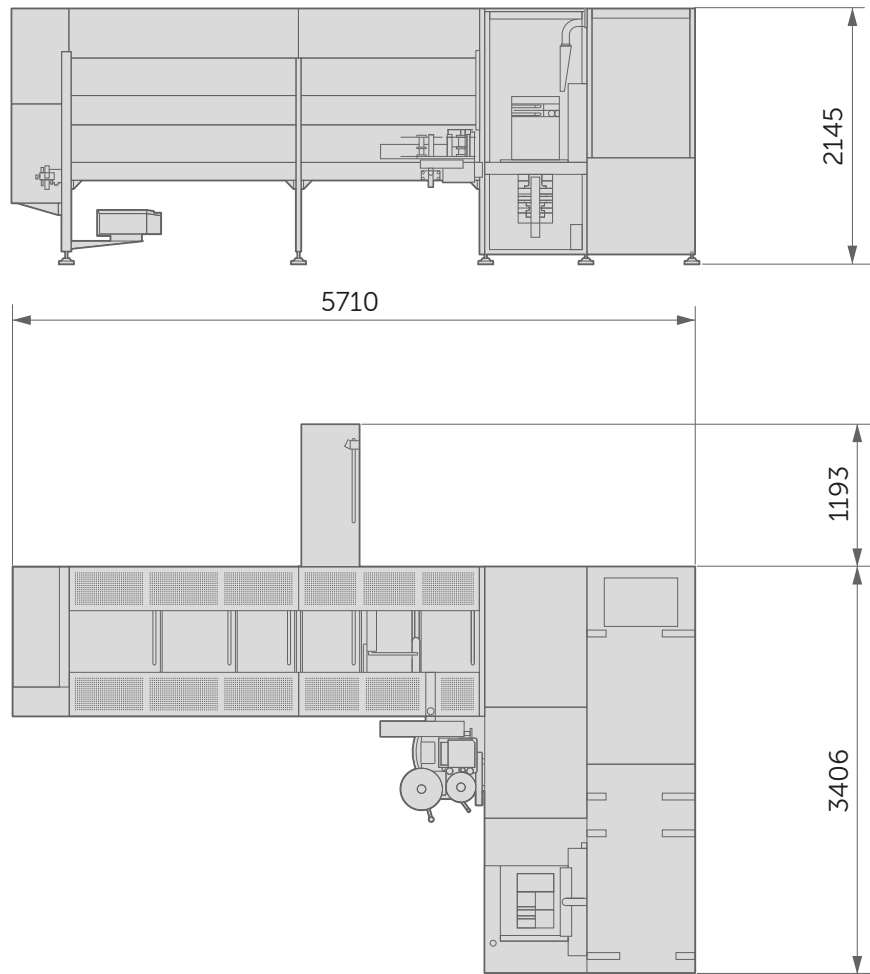


MAIN FEATURES

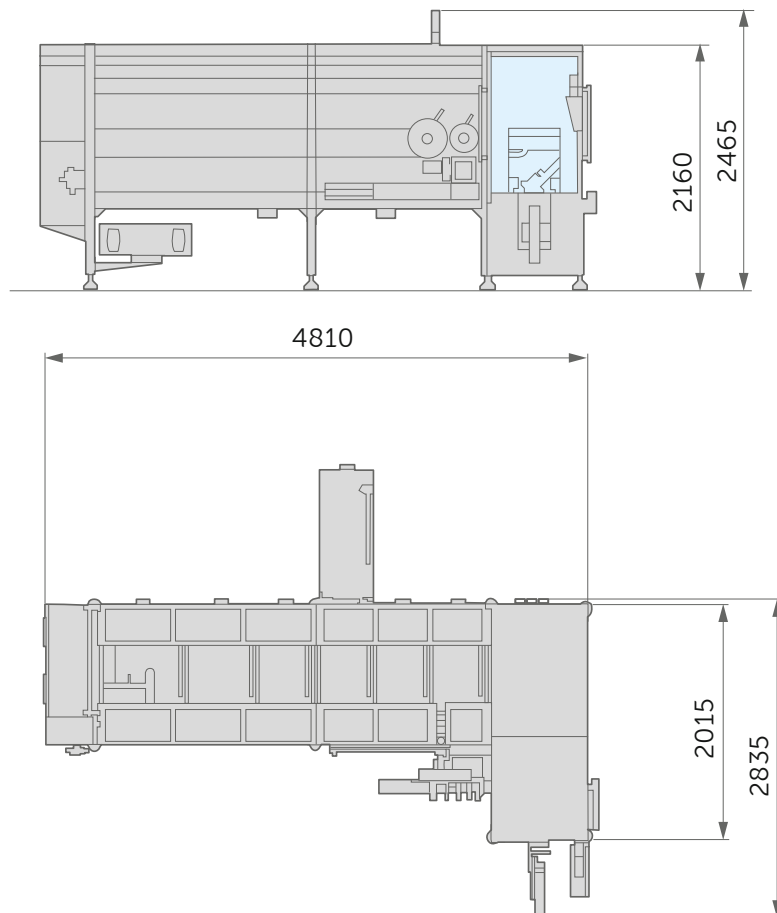
- Ability to handle **multiple footprint FEFCO 200 cases** with automated detection of box size at the infeed.
- Max height-reduction up to 40 mm.
- **Up to 6 lid formats** (different dimensions or artworks).
- Lid application on box with hotmelt glue.
- (Optional) Application of shipping label after lidding.

TECHNICAL DATA

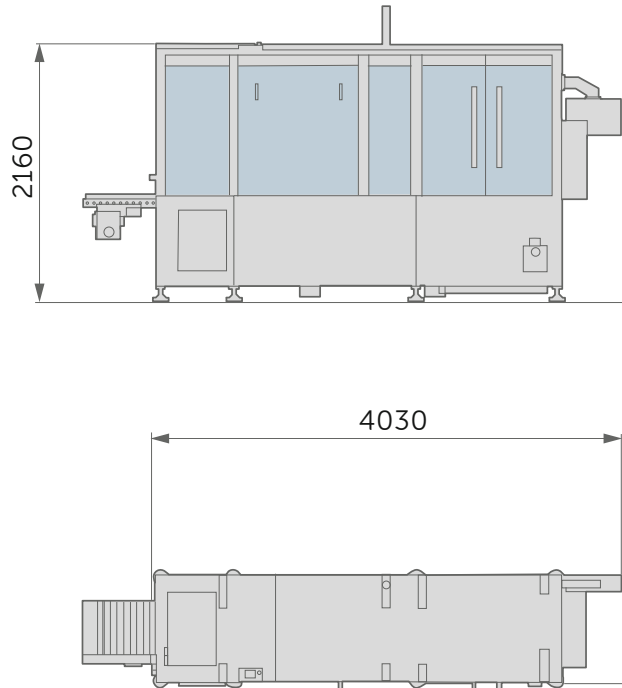
E-CO Flex



E-CO Flex Forming



E-CO Flex Closing



E-CO FLEX	
Throughput speed (cases per minute)	Up to 10 CPM
Electric*	480V ($\pm 10\%$), 3 Phase + 1 ground, 60 Hz, 10A
Air	Pressure 6 bar (87 psi)
Bench height	33.5" (85 cm)
Machine dimensions	224" x 134" x 84" (5.7m x 3.4m x 2.1m)

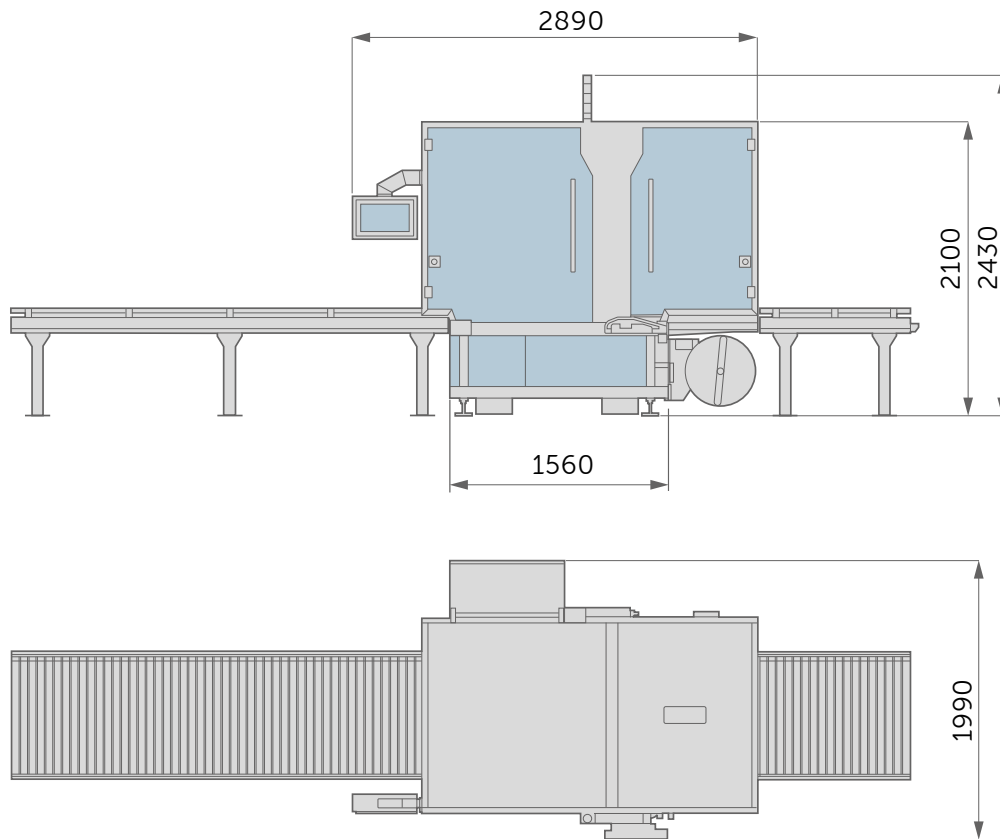
BOX	
Min case - internal dimensions (L x W x H)	7" x 6" x 3" (17.78 cm x 15.24 cm x 7.62 cm)
Max case - internal dimensions (L x W x H)	21" x 15" x 13" (53.34 cm x 38.1 cm x 33.02 cm)
Box type	Standard or multi - depth box - RSC - 0201

TAPE	
Adhesive technology	Water-activated (or gummed) tape
Tape roll specification	3" core width max roll diameter 20"
Tape width	2.75" - 3" (70-76 mm)
Corrugated box layout	Right hand or left hand

*Other input voltages available

TECHNICAL DATA

E-CO Flex SealMatic



E-CO FLEX SEALMATIC	
Machine Dimensions	114" x 78,3"x min. 83" (2890 mm x 1990 mm x min. 2100 mm)**
Machine weight	1360 kg
Throughput in cases/minute	Box: 11-18 box/min Ships In Own Container (SIOC): up to 20 box/min
Box Type	Taping function: preformed box with flaps open in the upper side Bypass function: for SIOC and boxes already taped.
Min Case Size (Internal dimensions)	7" x 6" x 3" (18 cm x 15 cm x 8 cm)
Min Case Size SIOC	7" x 6" x 3" (18 cm x 15 cm x 8 cm)
Max Case Size	40" x 28,5" x 16" (102 cm x 72 cm x 40 cm) (It is possible to process boxes with 16"<H<19" only if (H+W/2) < 30,5")
Max Case Size SIOC	•" x 29,2" x 19" (• cm x 74 cm x 48 cm)
Bypass Feature	Yes
Low Tape/No Tape Monitor	Yes
Low Water Monitor	Yes
Case Weight	Max 35 KG
Tape Width	70 to 75 mm
Operator Free	Yes
Optional Kick Out Feature	Yes

** The machine requires minimum 61,5" (156 cm) as space between the conveyors, while the additional part must be considered as space occupied on top of them; the height is adjustable to the infeed and exit conveyors, which must be the same.



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E-CO FLEX | Automatic Packaging Station

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