

OPTIMA

# HORIZONTAL CARTONING MACHINES

Member of

PACKAGING VALLEY  
Germany

EN



### Stacking, grouping or storing nonwovens products

The French company Sierem joined Optima in 2004. Sierem is specialised in stacking, grouping or storing nonwovens products, integration and automation of production and packaging processes. At the end of the production process, Sierem machines receive flat, lumpy or pre-packaged products or edible goods and feeds them to downstream packaging processes as required. Automation and buffering accelerate the packaging process.

At identified areas which tend to cause technical problems or delay, Sierem machines are the solution. For some products, counting and stacking functions form the interface between production and packaging processes. A packaging machine will not function without a structured infeed. Due to the international presence and service network of the Optima, Sierem is a reliable and accessible business partner for customers all over the world.

### OPTIMA packaging group GmbH

<p><b>&gt; 2400</b> Employees worldwide</p>	<p><b>&gt; 300</b> Service-Employees worldwide</p>	<p><b>85%</b> Export</p>	<p>Family-owned <b>Third generation</b></p>
<p><b>&gt;100</b> Patents worldwide</p>	<p><b>19</b> national &amp; international Locations</p>	<p><b>&gt; 400 Mio. €</b> Turnover (in 2018)</p>	



# CARTONING MACHINES FOR PAPER HYGIENE PRODUCTS

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## Sierem Basic Machine

SIEREM cartoners are equipped with a stable screw-fitted basic frame with height adjustment (running height 870mm +/-25mm). The transparent safety guard doors with locks provide an excellent visual access to the operation side and enable optimum accessibility. According to the requested speed, cartoners can have continuous or intermittent cycle of operation. They can run from left to right (Left Hand) or from right to left (Right Hand) thanks to the mirror based design work.

The box transport is adjustable from front to rear side (front side fixed, and rear side adjustable). Operation staff is supported by a fast and easy size change over. Size parts and product-touching guides are provided in stainless steel material or treated surface finishes. With its low vibration, wear-resistant movements and the transmission of all drives with toothed belts, cardan shafts and self-lubricated chains the system runs very smooth and efficient.

Cartoning  
Machines for  
Paper Hygiene  
Products



# Machine Process - Continuous Mode



- 2 | Box Magazine**
- Pneumatically driven box magazine including minimum queue, length approx. 1500mm
  - Adjustable box transport with carrying belts
  - Option: Longer box magazine for longer running time, length approx. 2500mm

- 3 | Box Erecting**
- Box pick-up by rotary suction arms
  - Pre-opening station for easier erection of the box
  - Box pusher module to place the erected boxes into the box transport belts



- 8 | Outfeed**
- Outfeed belts including non-striking soft switching reject function
  - Rejected boxes are listed, recorded and localized into the HMI
    - Folded box cross-check, missing boxes
    - Product cross-check, missing products
    - Product inserting mistake / overload at product feeding
  - Serial faults are localized into the HMI, can be adjusted individually, and can stop the machine if it is required

- 5 | Box Transport**
- Boxes are carried between belts, to avoid friction and scratches

- 7 | HMI**
- Panel View HMI
  - Includes Nordson interface when Liberty and ATS options are required.

- 4 | Continuous Product Pusher**
- Continuous pushers transfer the product rows from the pockets to the boxes
  - Pockets are positive-opening the boxes by sliding onto a cam profil

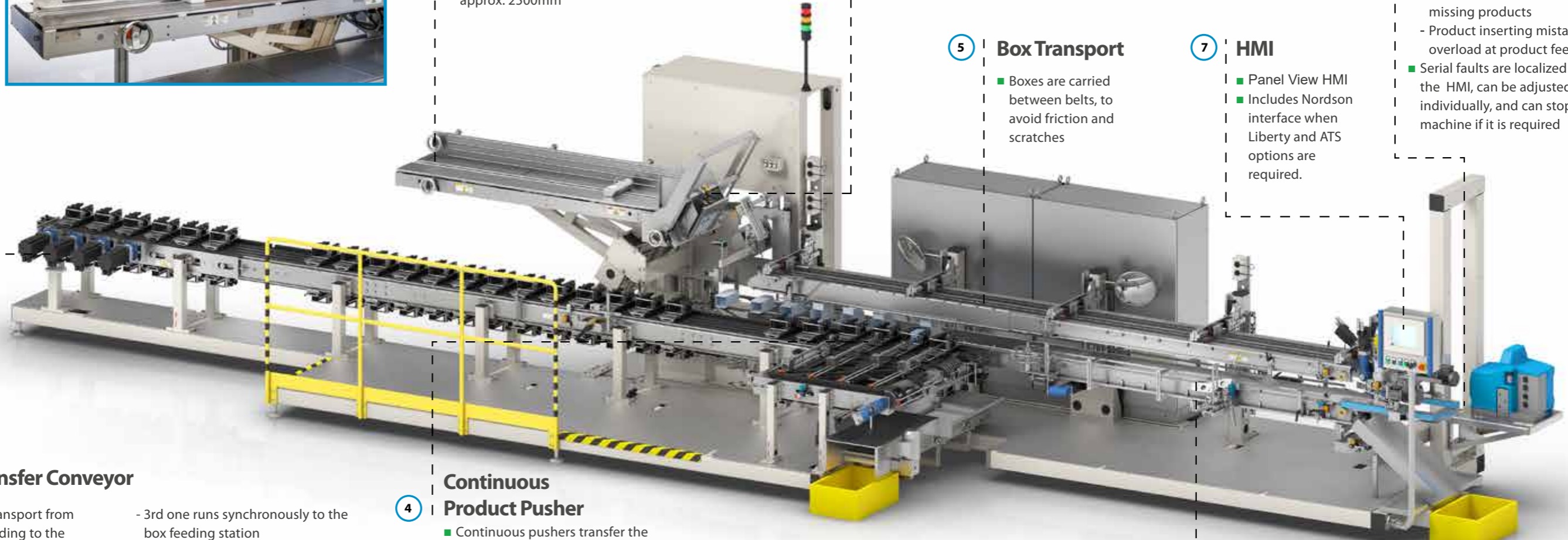


- 6 | Box Closure**
- Servo driven closing fingers for dust flaps, including fine phasing of the fingers to the box
  - Tuck-in closing module
  - Hot-melt closing with 2 glue guns
  - Option:
    - Nordson Problue Liberty 7 glue melter
    - Nordson Adhesive Tracking System
  - Cartoner can run with Tuck-in or Glued closure or can be prepared for both



**1 | Product Transfer Conveyor**

- Product rows transport from intermittent feeding to the continuously running cartoner
- 4 independent servo driven carrying trains:
  - First train is in the loading station
  - 2nd one is transferring the products from intermittent motion to continuous motion
  - 3rd one runs synchronously to the box feeding station
  - The last one is coming back to the loading station
- Carrying pockets are quick to change
- Each size may require separate carrying pockets as a format part. One format included



# Machine Process - Intermittent Mode



- 2 | Box Magazine**
- Pneumatically driven box magazine including minimum queue, length approx. 1500mm
  - Adjustable box transport with carrying belts
  - Option: Longer box magazine for longer running time, length approx. 2500mm

- 3 | Box Erecting**
- Box pick-up by rotary suction arms
  - Pre-opening station for easier erection of the box
  - Box pusher module to place the erected boxes into the box transport belts



## Machine Process - Intermittent mode

- 8 | Outfeed**
- Outfeed belts including non-striking soft switching reject function
  - Rejected boxes are listed, recorded and localized into the HMI
    - Folded box cross-check, missing boxes
    - Product cross-check, missing products
    - Product inserting mistake / overload at product feeding
  - Serial faults are localized into the HMI, can be adjusted individually, and can stop the machine if it is required

- 5 | Box Transport**
- Boxes are carried between belts, to avoid friction and scratches

- 7 | HMI**
- Panel View HMI
  - Includes Nordson interface when Liberty and ATS options are required.

**1 | Product Transfer Conveyor**

- Product rows transport into intermittent motion to the cartoner
- 2 independent groups of pockets:
  - One group for fix side
  - 2nd one for adjustable side



**4 | Intermittent Product Pusher**

- Intermittent pusher transfers the product rows from the pockets to the boxes
- Box positive-opening tunnel with pneumatically driven fingers



**6 | Box Closure**

- Servo driven closing fingers for dust flaps, including fine phasing of the fingers to the box
- Tuck-in closing module
- Hot-melt closing with 2 glue guns
- Option:
  - Nordson Problue Liberty 7 glue melter
  - Nordson Adhesive Tracking System
- Cartoner can run with Tuck-in or Glued closure or can be prepared for both



## SIEREM CARTONER CM180/10

The CM180/10 cartoner is running in continuous mode, with a pitch of 10 inches

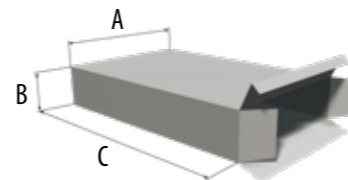


### Carton Dimensions:

- A: from 35 mm to 215 mm
- B: from 20 mm to 150 mm
- C: from 100 mm to 300 mm

### Speed:

- Up to 100 cpm



## SIEREM CARTONER CM120/15

The CM120/15 cartoner is running in intermittent mode, with a pitch of 15 inches. Therefore it can accept bigger cartons than the CM120/10

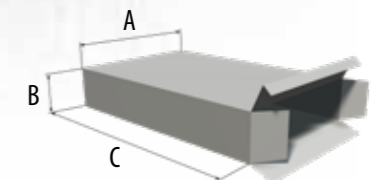


### Carton Dimensions:

- A: from 35 mm to 340 mm
- B: from 20 mm to 150 mm
- C: from 100 mm to 300 mm

### Speed:

- Up to 35 cpm



## SIEREM CARTONER CM120/10

The CM120/10 cartoner is running in intermittent mode, with a pitch of 10 inches

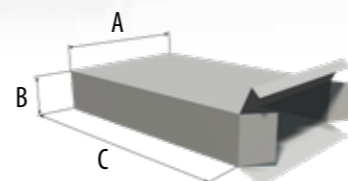


### Carton Dimensions:

- A: from 35 mm to 215 mm
- B: from 20 mm to 150 mm
- C: from 100 mm to 300 mm

### Speed:

- Up to 50 cpm



## Size Changeover

- Format data memory for storing machine parameters and production data
- Wheels and cranks digital position displays
- Settings marked with scales
- Easy Poka-Yoke based size parts changes, without tools
- Change over time approx. 30 minutes



## Sensors and Control Units

Rejected product is listed, recorded, and localized in the operator panel:

- Product cross-check, missing product
- Folding box cross-check, missing folding box
- Product inserting mistake / overload at product slide-in Serial faults are localized on the operating terminal and can be adjusted individually.

More information:  
[www.optima-packaging.fr](http://www.optima-packaging.fr)