

CartonPro™

TRACK & TRACE SYSTEM WITH TAMPER EVIDENT (TE)
AND CHECKWEIGHTER (CW)



 **OPTEL™**
Traceability technologies for a better world

OPTEL's CartonPro™ system is a sophisticated addition to the pharmaceutical packaging industry, delivering high precision and operational efficiency.

This system seamlessly integrates into existing production lines, enhancing their efficiency with accurate weight measurements, reliable serialization, and secure tamper-evident sealing. The conveyor that ensures smooth and precise product transport, making it ideal for handling a wide range of product shapes and sizes. With the capability to process up to 400 products per minute, this system is not only fast but also adheres to the most stringent quality control standards, ensuring each package is validated for weight accuracy before it moves on to the subsequent stages of packaging.

Thanks to powerful vision systems, serialization and verification are performed meeting international standards requirements.

The tamper-evident feature strengthens the product's safety, safeguarding its integrity.

OPTEL's solution is user-friendly due to a touchscreen interface and the sturdy stainless steel construction offers consistent reliability.



KEY FEATURES

- Servo-driven, four-lane conveyor for precise handling.
- Modular design supports diverse product specifications.
- High-resolution vision for accurate serialization and verification.
- Built-in tamper-evident seal application for package security.
- High-speed weighing with up to 400 ppm capability.
- Intuitive 18,5" color touchscreen interface.
- Durable stainless steel construction for consistent accuracy.



BENEFITS

- Combines critical packaging processes into a single streamlined operation, reducing the need for multiple machines.
- Enhances packaging integrity and consumer safety with tamper-evident seals.
- Increases productivity with fast, accurate weighing and minimizes the risk of product giveaway or recalls.
- Easy to operate and maintain, with tool-free belt and conveyor exchanges and a simple, menu-directed control system.
- Offers comprehensive product tracking and tracing to meet global regulatory requirements.

©Optel Vision inc. d.b.a. "OPTEL Group", 2024-2025. All rights reserved.

optelgroup.com

| PERFORMANCE | |
|-----------------|--------------------------------|
| Designed for | Pharmaceutical packaging lines |
| Production Rate | Up to 400 ppm* |

* Depends on product dimension

UTILITIES

| Carton Station Module | |
|-----------------------|-----------------------------|
| Blocker | Pneumatic |
| Power Requirements | 110-240 VAC, 50/60 Hz |
| Compressed Air | 6 bar (90 psi) |
| Conveyor Belt Speed | Up to 70 m/min |
| Table Height | from 750 mm to 1000 mm |
| Rejection | Pneumatic driven air blower |

| Tamper Evident Module | | |
|--------------------------------------|---------------|--------|
| Two Tamper Evident Seal Applicator | Bluhm | |
| Placement and Turn-Over Verification | Glare sensors | |
| Position Accuracy | ± 2mm | |
| Label | min. | max. |
| Width & Length | 20 mm | 32 mm |
| Roll Diameter | – | 300 mm |
| Roll Core Diameter | 76.2 mm | |
| Gap | 3 mm | – |

| VISION SPECIFICATIONS* | |
|--|-----------------|
| Field of View with Item Expert software | 60 mm x 40 mm |
| Field of View with InspectProof software | < 85 mm x 53 mm |
| Decoding Capability | 1D, 2D |

*We comply with all common printing and inspection-specific regulations.

| Checkweigher System* | |
|----------------------|-----------------------|
| Power Requirements | 110-240 VAC, 50/60 Hz |
| Compressed Air | 6 bar (90 psi) |
| Gross Weight Range | 750 g |

| Length x Width | |
|--------------------------------|---------------------------|
| Acceleration Pressing Conveyor | 600 x 120/32 mm NT17 |
| Weighing Conveyor | 200 x 200 mm NT17 *KE *FB |
| Outfeed Conveyor | 300 x 200 mm NT17 *KE |

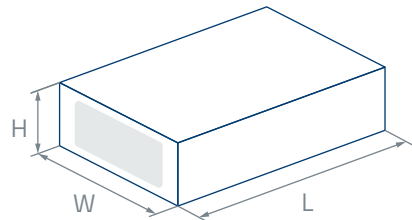
Rejection Pneumatic (pneumatic pusher available for product weigh >300 g)

Note: Products must be supplied with a minimum distance of 220 mm between the leading edge of one product and the next.

* Optionally, the checkweigher can be delivered as a calibrated system. The industrial weigh cell operates on the principle of electromagnetic force compensation, with a cable bridge at the weigh cell free from derivation. Different infeed belt options are available to cater to different requirements. A variety of checkweigher supplies are available. Optionally, a reject can be installed between checkweigher-outfeed and carton-infeed. The system is flexible and can be tailored to customer requirements. For more information, please contact your Account Director.

CartonPro™

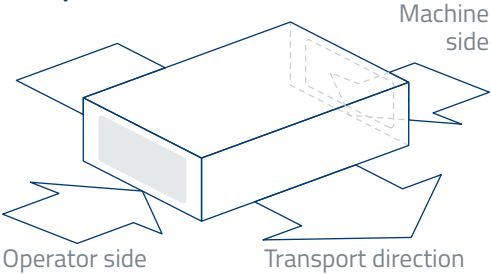
CartonPro™



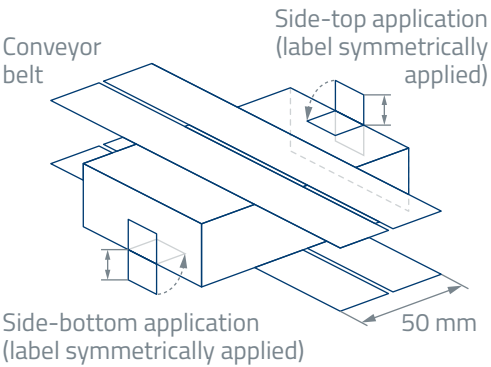
PRODUCT DIMENSIONS

| | min. | max. |
|---------------------------|----------------|--------|
| Width (W) | 15 mm | 180 mm |
| Height (H) | 15 mm | 125 mm |
| Length (L) | 55 mm | 260 mm |
| Weight | 30 g | 300 g |
| Label Reel Outer Diameter | approx. 300 mm | |

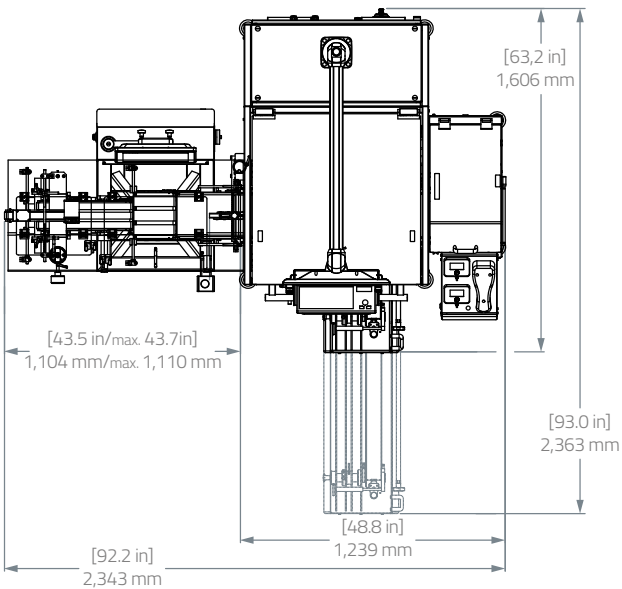
Print positions



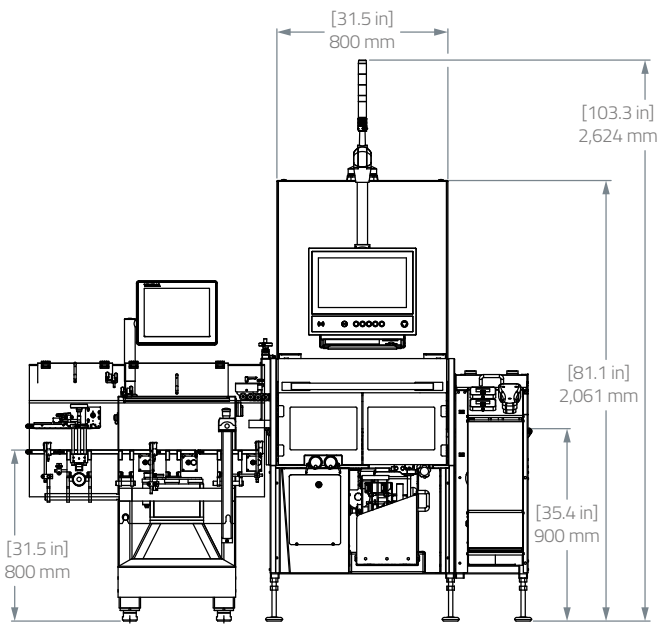
Tamper evident label position



TOP VIEW



FRONT VIEW



©Optel Vision inc. d.b.a. "OPTEL Group". 2024-2025. All rights reserved.

optelgroup.com



TRACKING PROCESS OVERVIEW

Tracking is used to ensure that products can be located at any time on the production line in order to prevent defective products from reaching the next step of the production process.

The illustration below depicts the CartonPro™ and other usual peripherals used within a typical tracking process.

- 1

INFEED CONVEYOR (CW)

Products are transferred from an upstream system to the CartonPro™.
- 2

CHECKWEIGHER CONTROL

Products are weighed by a high-precision checkweigher cell.
- 3

EJECTION (OPTIONAL)

Ejection of the products before they enter the print/inspection area. The ejection is verified by a sensor.
- 4

INFEED CONVEYOR (P/I)

Products are transferred from the checkweighing area into the print/inspection area. The product is tracked by a PLC-shift register.
- 5

PRINTING

Variable data are printed on the product. Different printing options and technologies are available.
- 6

INSPECTION

The printed data is inspected and verified against reference data.
- 7

TAMPER EVIDENT

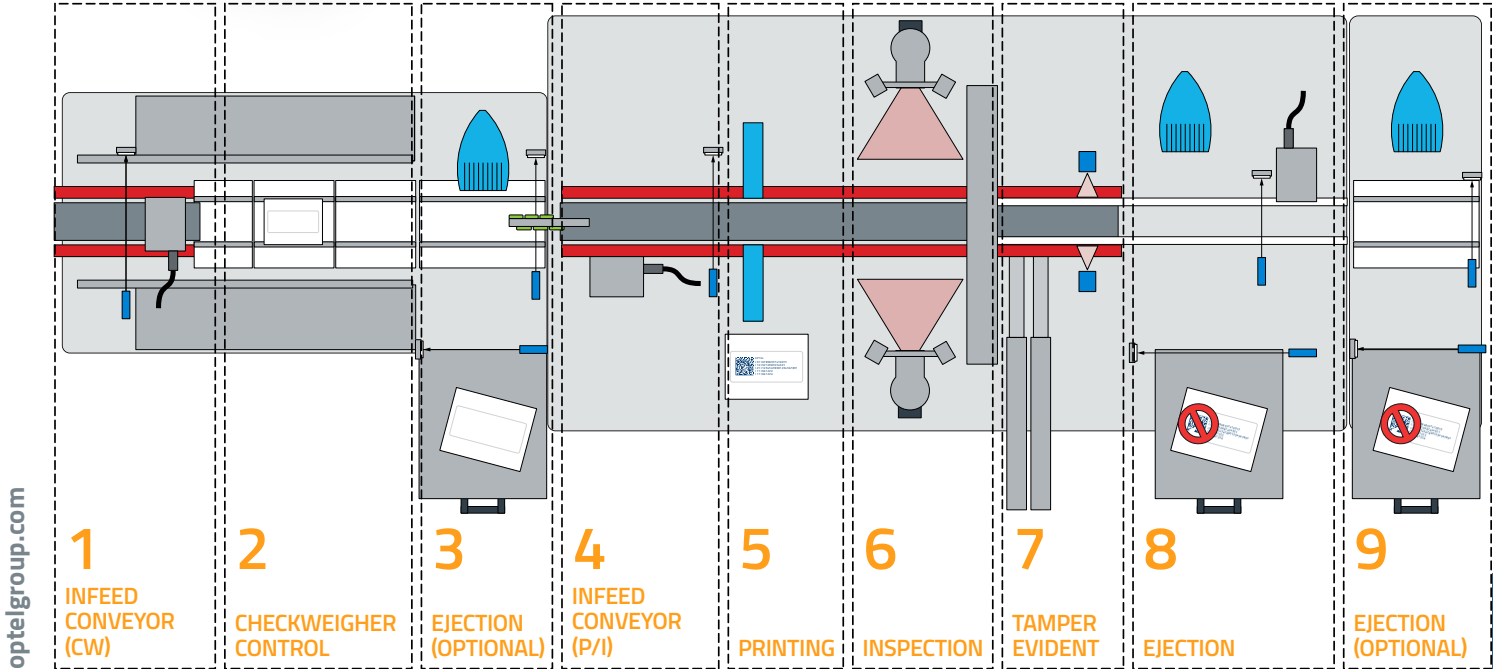
Tamper Evident application on both sides of the folding box (position configurable). Application evaluation by gloss sensor.
- 8

EJECTION

Defective products (weight, print) are ejected, with sensor verification. The reject reason is configurable for the ejection bin if a 2nd reject bin is available.
- 9

OPTIONAL EJECTION

Defective products (weight, print) are ejected, with sensor verification. The reject reason is configurable for the ejection bin if a 2nd reject bin is available.



optelgroup.com

CartonPro™

CartonPro™ with Software Package Item Expert

STANDARD SOLUTION SPECIFICATIONS

| SALES ITEM* | SOLUTION | SPECIFICATIONS |
|------------------|--|---|
| SLF001 + TSCR019 | CartonPro™ with Software Package Item Expert | <ul style="list-style-type: none">▪ CartonPro-TE Basic hardware with two reject stations with air blow reject▪ Two Tamper Evidence applicators, adjustable at the operator and machine side<ul style="list-style-type: none">▪ Blow on label application▪ Label placement and turn-over verification by glare sensors▪ 18,5" TFT touchscreen monitor▪ B&R IPC▪ B&R PLC▪ I/O Modules▪ UPS▪ Integration in line-specific emergency stop▪ Thermal Inkjet printer with one print head▪ OPTEL VisionKit▪ Signal light▪ Wireless Handheld Scanner▪ Wipotec checkweighing inspection system▪ Air blast or pusher mounted at outfeed conveyor▪ Open flap detection <p>For serialization coding and verification with blow-on tamper-evident seal application Software Package Item Expert</p> <ul style="list-style-type: none">▪ Line Controller LC – Base License▪ Serialization Licence for Line Controller▪ OPTEL Vision Licence for one camera▪ OPTEL Item Expert Licence▪ Remote Access Line Controller▪ Werum Interface License <p>NOTES:</p> <ul style="list-style-type: none">▪ Refer to the limitations table▪ Refer to machine dimensions table▪ Refer to printing position table▪ Refer to the label specifications table▪ Refer to the label specifications table <p>*IMPORTANT: This is an alternative CartonPro solution utilizing different software. Please be aware that this version is still evolving, and its functionality and details may be modified in the future. For more information, please contact your Account Director.</p> |

©Optel Vision inc. d.b.a. "OPTEL Group". 2024-2025. All rights reserved.

optelgroup.com

| SALES ITEM | OPTIONS | SPECIFICATIONS |
|------------|--|---|
| TSCR020 | Additional camera station | <ul style="list-style-type: none">▪ Additional camera for inspection of bar code and Optical Character Verification (OCV) analyzers on opposite sides of the carton. |
| SLF004 | Conveyor Belt Approx. 200 mm | <ul style="list-style-type: none">▪ Including side guidance▪ To be mounted before/behind the unit |
| SLF005 | Housing for Conveyor Belt | <ul style="list-style-type: none">▪ Housing for conveyor belt 200 mm |
| SLF006 | Conveyor Belt Approx. 500 mm | <ul style="list-style-type: none">▪ Including side guidance▪ To be mounted before/behind the unit <p><i>Standalone conveyor belt should be screwed at the floor.</i></p> |
| SLF007 | Housing for Conveyor Belt 500 mm | <ul style="list-style-type: none">▪ Housing for conveyor belt 500 mm |
| SLF008 | Conveyor belt approx. 1,000 mm | <ul style="list-style-type: none">▪ Including side guidance▪ To be mounted before/behind the unit <p><i>Standalone conveyor belt should be screwed at the floor.</i></p> |
| SLF009 | Housing for Conveyor Belt 1,000 mm | <ul style="list-style-type: none">▪ Housing for conveyor belt 1,000 mm |
| SLF010 | Additional Print Head | <ul style="list-style-type: none">▪ Print height of max. 12.7 mm per print head for Thermal Inkjet printer |
| SLF011 | Mounting for additional print head from the side | <ul style="list-style-type: none">▪ Mounting for additional print head from the side |
| SLF015 | Additional Reject Stations | <ul style="list-style-type: none">▪ Ejector with nozzle or pusher▪ Reject bin▪ Reject verification▪ Fill level sensor for reject bin▪ Locking system for reject bin |
| SLF016 | CO ₂ Laser Printer (60 W) | <ul style="list-style-type: none">▪ 60 watt air cooled laser system▪ Coding speed up to 50 m/min (depends on print content; typical 35 m/min) approx. 90 Nm³/h |

CartonPro™ with Software Package InspectProof

STANDARD SOLUTION SPECIFICATIONS

| SALES ITEM* | SOLUTION | SPECIFICATIONS |
|--------------------|--|---|
| SCR017 + SCR019 | CartonPro™ with Software Package InspectProof | <ul style="list-style-type: none">▪ The CartonPro-TE Basic is an automated carton label serialization unit, with tamper-evidence feature.▪ Inspection with bar code and Optical Character Verification (OCV) analyzers▪ Two Tamper Evidence applicator, adjustable at operator and machine side<ul style="list-style-type: none">▪ Blow on label application▪ Label placement and turn-over verification by glare sensors▪ 18,5" TFT touchscreen monitor▪ Camera for carton inspection (Field of view < 85 mm x 53 mm)▪ Encoder with cables▪ Integration in line specific emergency stop▪ InspectProof software▪ Barcode analyzer▪ Multi-segment LED tower light indicator▪ Wireless Handheld Scanner▪ Thermal InkJet printer with one print head▪ Wipotec checkweighing inspection system▪ Air blast or pusher mounted at outfeed conveyor <p>NOTES:</p> <ul style="list-style-type: none">▪ Refer to the limitations table▪ Refer to machine dimensions table▪ Refer to printing position table▪ Refer to the label specifications table▪ Refer to the label specifications table <p>*IMPORTANT: This is an alternative CartonPro solution utilizing different software. Please be aware that this version is still evolving, and its functionality and details may be modified in the future. For more information, please contact your Account Director.</p> |

| SALES ITEM | OPTIONS | SPECIFICATIONS |
|------------|---|---|
| SCR020 | Additional Camera and Printing Unit for CartonPro-TE Basic | <ul style="list-style-type: none">▪ Additional camera for bar code inspection and Optical Character Verification (OCV) analyzers on opposite side of the carton.▪ Mounting for additional print head from the side <i>Specific vision study may be needed with extra charges</i> |
| SRR012 | Infeed conveyor | <ul style="list-style-type: none">▪ Infeed conveyor, 10-inch width▪ 32-inch or 36-inch heights available▪ Mounting support▪ Pads or casters available▪ 24-inch or 36-inch lengths available▪ Emergency stop |
| SRR013 | Outfeed conveyor | <ul style="list-style-type: none">▪ Outfeed conveyor, 10-inch width▪ 32-inch or 36-inch heights available▪ Mounting support▪ Pads or casters available▪ 24-inch or 36-inch lengths available▪ Emergency stop |
| SCRXXX | Print size higher than 12 mm | <ul style="list-style-type: none">▪ Additional print head (code height < 24 mm) |
| SSO002 | Upgrade to Beckhoff HMI | <ul style="list-style-type: none">▪ Beckoff 24" mounted on standard electrical enclosure only▪ Replacement of OPTEL base Human-Machine Interface (HMI) for Beckhoff HMI |
| SCRXXX | Additional Reject Stations | <ul style="list-style-type: none">▪ Pneumatic ejector with mounting brackets▪ Ejection bin with ejection confirmation sensor▪ "Good product" confirmation sensor |

**ORDERING INFORMATION –
STANDARD SOLUTION CONFIGURATION**

Encompassing all of OPTEL’s expertise and legacy, this standard CartonPro™ configuration is a predesigned hardware and software solution that meets your boxes needs quickly and cost-effectively, while conforming to current industry standards.

To obtain a quote, contact your Account Director, who will work with our quote department to provide you with accurate pricing for your solution. To get a quote, contact your account representative or visit the ‘Contact Us’ section on OPTEL’s website.

ADDITIONAL INFORMATION REQUIRED FOR QUOTE

- Box/label samples
- User Requirements Specifications (URS)
- Product matrix
- Floor layout

