

# Print & Verification System

**CSPL 1070**  
PRINT & VERIFY



Specific requirements for Global Serialisation as per GS1 in the Pharmaceutical Industry, require a Variable Data Printing solution. CSPL culture has been shown in our solutions, built with the standards of GMP. Data security is our prime focus, where we follow the guidelines of 21 CFR Part 11 and Barcode Reading Tools follow the ISO Standards of 15415 & 15416.

CSPL 1070 PV "Print & Verification System" is a fast and reliable system to fulfil all international requirements for serialization of track and trace. Modular construction combines all necessary functions in a small footprint and seamlessly integrates into a new or existing production environment. Also a comprehensive system solution that gives you the flexibility to adapt necessary work flow.

Powerful front-end (GUI) software gives access control for Operator, Supervisor, Manager and Admin level to ensure the security and functionality. Edge over advantages are eye opening to think beyond with key benefits like, CSPL 1070 PV is the only system that bring the benefits like rejection marking, Invisible marking, 2 colour prints, which is very difficult to detour and also achieve the goal of keeping spurious out of supply chain. The system is specially designed to take care of aggregated show boxes of 3 ply which is bigger in size hence to accommodate the big size boxes.

## Technical Specification

<b>Compliance to</b>	: CE directives. 21 CFR part 11
<b>Conveyor unit dimensions</b>	: Length 1110 mm Width 970 mm Height 1750 ± 50 mm
<b>Working height</b>	: 800 mm ± 50 mm
<b>Weight</b>	: 150 kg. (approx.)
<b>Belt speed</b>	: 5-30 m/min (Optional up to 50 m/min)
<b>Running direction</b>	: Left to right
<b>Cabinet</b>	: Acrylic with key locked space for controller and rejection bin
<b>Top cover</b>	: Acrylic cover equipped with safeguard switch to stop the machine if opened during production
<b>Reject bin</b>	: Transparent acrylic specially curved design to slide rejection big boxes and locked with key
<b>Reject system</b>	: Pneumatic push out device
<b>Mountings</b>	: Integrated mounting bracket for print head and camera positioning
<b>Rejection marker</b>	: TIJ 2.5 printer for rejection marking on rejected box
<b>Emergency operation</b>	: Switch on front panel. Hardware controlled emergency stop function

### Connection / Input & Output

<b>External connections</b>	: Main power, air pressure, upstream downstream machine control signals, LAN
<b>Electrical connection</b>	: Voltage: 230 VAC (± 10%)
<b>Frequency</b>	: 50 / 60 Hz
<b>Air pressure</b>	: 5 to 7 bar main supply
<b>Product position:</b>	Through sensor & encoder tracking
<b>Machine controller</b>	: PLC
<b>Input / Output</b>	: 18 Input & 12 Output

### Printing System

<b>Technology</b>	: Print heads TIJ 2.5 technology
<b>Print height</b>	: 12.7-25.4 mm / ½"-1" / 1 or 2 pens
<b>Resolution</b>	: Up to 600 dpi
<b>Print distance</b>	: 0.5-5.0 mm dependent on ink and speed, typically 0.5-2.0 mm (nozzle to print surface)
<b>Ink supply</b>	: Aqueous or solvent based ink cartridges
<b>Print head features</b>	: Switch for cartridge detection

### Vision System

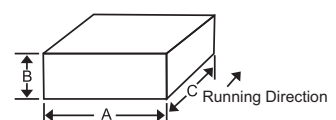
<b>Camera &amp; lenses resolution</b>	: Camera - 1.3 megapixel and Lens - 1.3 megapixel with 8 mm focal length (varies on application demand)
<b>Inspection area</b>	: 40 (H) x 60(W) mm (Depend on selection of camera and lens)
<b>Light</b>	: Integrated light shielding
<b>Verification</b>	: Printed text, Image comparison, 1D & 2D codes EAN13, Code128, PHARMACODE, Data Matrix, QR Code, PDF 417, AZTEC, CODE 39 & many more...
<b>Grading</b>	: Quality of 2D code is determined grade level between F and A (0-4). With a font-based reference scheme grade level between 0 and 100
<b>Qualification</b>	: In accordance with industrial standards, printed items ISO/IEC 15415 and 15416
<b>Data matrix standard</b>	: According to GS1 and ISO/IEC 16022
<b>Text standard</b>	: OCR-B font (possible to use other fonts)

### Production

<b>Print position</b>	: Print on back optionally print from front or top
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### Carton size (min. - max.)

- A: 50-300 mm (leading edge)
- B: 18-250 mm (height)
- C: 50-300 mm (printed side)



- Throughput** : Up to 150 cartons per minute (Depend on carton size)
- Precise position** : "Q" Management for cartons
- Display** : 17" Touch monitor
- Software** : CSPL 1070 GUI to control all parameters and to comply 21 CFR Part 11

**USP of the System**

- Rejection marker
- 2 Colour printing
- Invisible printing

**Interlocking**

Queue control management for accepted carton & Rejected carton. Up-stream/down-stream verification (Like cartonator and bundler). Errors & Warning alarm log with time stamp for :

- |                         |                              |
|-------------------------|------------------------------|
| • Emergency stop        | • Drive failure              |
| • Consecutive rejection | • No downstream signal       |
| • No upstream signal    | • Rejection failed           |
| • No encoder pulse      | • Safety door open           |
| • Product sensor block  | • Queue missing              |
| • Accepted sensor block | • Rejection bin sensor block |
| • Printer low ink       | • Low air pressure           |

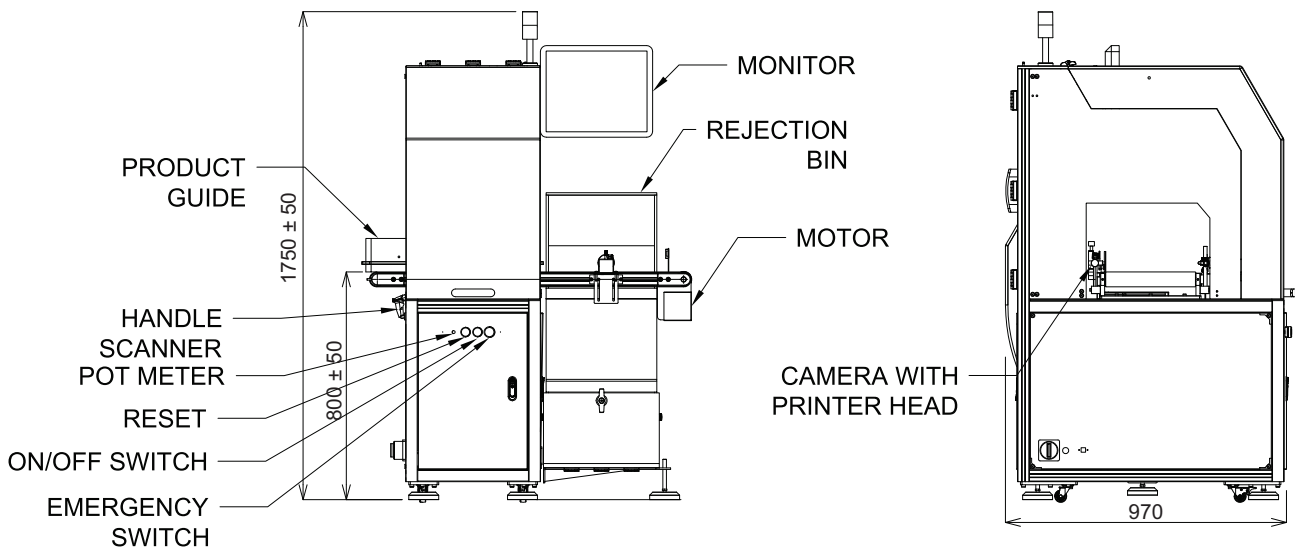
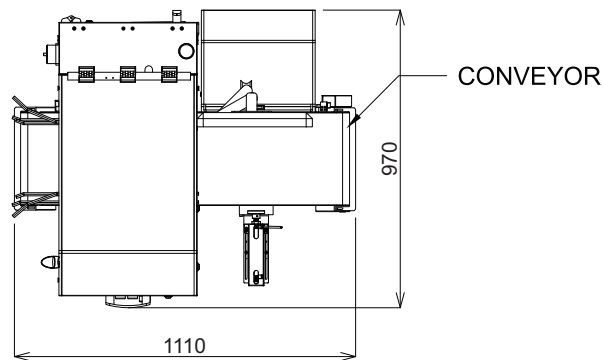
**Report Output**

Batch summary report, Batch detail report, Audit trail report, Alarm log report, Sample report

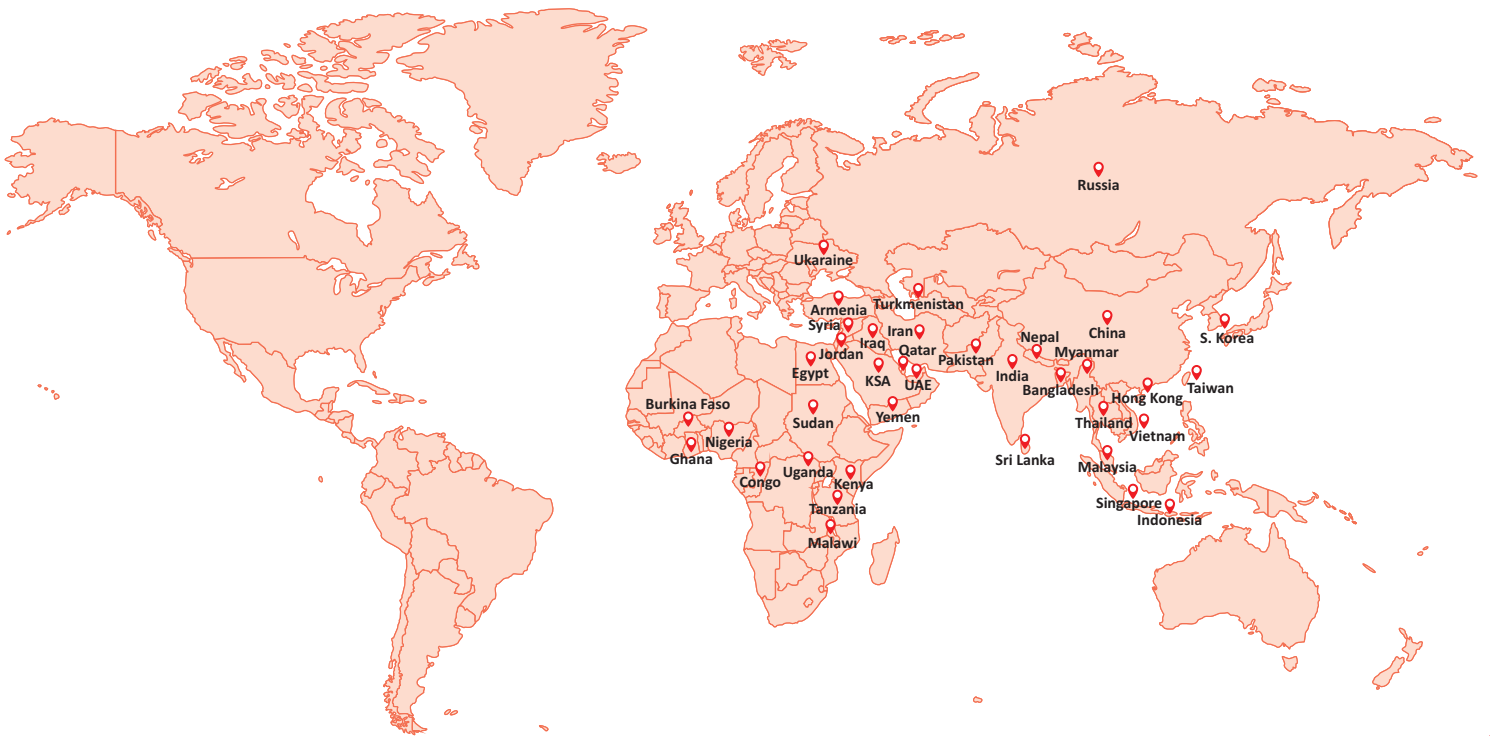
**Convincing Highlights**

- Special design for big size outer secondary carton
- Heavy weight box rejection, mechanism design to take care of rejection impacts from pusher
- Special curvature to slide big size boxes to eliminate the damage during rejection
- Elaborate and precise transport belt gives reproducible quality
- Format change takes less than 5 minute
- Front, back and top print & verification is possible.
- Assurance, no rejected carton can go further in production line
- Consecutive rejection control
- Joint carton identification and rejection control (Upto 5 carton)
- Q' management for every carton enter in the system
- All errors and warning log with time stamp for audit requirements
- EPCIS compatibility
- Exhaustive validation documentation as per GAMP5
- Industry accepted yet customer required design of report generation
- Multiple country compliance
- 21 CFR part 11 compliance

**GA Drawing**



## Global Presence



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