

Print & Verification System

CSPL 800
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 800 "Print & Verification System" is a fast and reliable system to fulfil all requirements for global serialization and track & trace. Not only a compact modular but also 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 key 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.

Technical Specification

Compliance to	: CE directives. 21 CFR part 11
Conveyor unit dimensions	: Length 860 mm Width 690 mm Height 1550 ± 50 mm
Working height	: 800 mm ± 50 mm
Weight	: 138 kg. (approx.)
Belt speed	: 5-30 m/min (Optional up to 50 m/min)
Running direction	: Left to right
Cabinet	: Stainless steel with key locked space for Controller and reject bin
Top cover	: Transparent acrylic cover equipped with safeguard switch to stop the machine if opened during Production
Reject bin	: Stainless steel / acrylic rejection bin secured with key lock
Reject system	: Air pressure box blow-out for boxes up to 250 g. Pneumatic push out device available for >250 g products
Mountings	: Integrated mounting bracket for print head and camera positioning
Rejection marker	: TIJ 2.5 printer for rejection marking on rejected box
Emergency operation	: Switch on front panel. Hardware controlled emergency stop function

Connection / Input & Output

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

Printing System

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

Vision System

Camera & lenses resolution	: Camera - 1.3 megapixel and Lens - 1.3 megapixel with 8 mm focal length (varies on application demand)
Inspection area	: 45 (H) x 60 (W) mm (Depend on selection of camera and lens)
Light	: Integrated light Shielding
Verification	: Printed text, Image Comparison, 1D & 2D codes EAN13, Code128, PHARMACODE, Data Matrix, QR Code, PDF 417, AZTEC, CODE 39 & many more...
Grading	: 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
Qualification	: In accordance with industrial standards, printed items ISO/IEC 15415 and 15416
Data matrix standard	: According to GS1 and ISO/IEC 16022
Text standard	: OCR-B font (possible to use other fonts)

Production

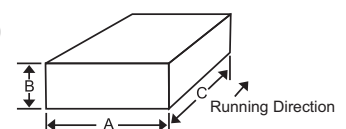
Print position : Print on back & print on front (optional)

Carton size (min. - max.)

A: 45-190 mm (leading edge)

B: 18-160 mm (height)

C: 50-210 mm (printed side)



- Throughput** : Up to 300 cartons per minute
- Conveying mechanism** : Synchronized top and bottom belts
- Precise position** : "Q" Management for cartons
- Display** : 17" Touch monitor
- Software** : CSPL 800 GUI to control all parameters and to comply 21 CFR Part 11

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

Report Output

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

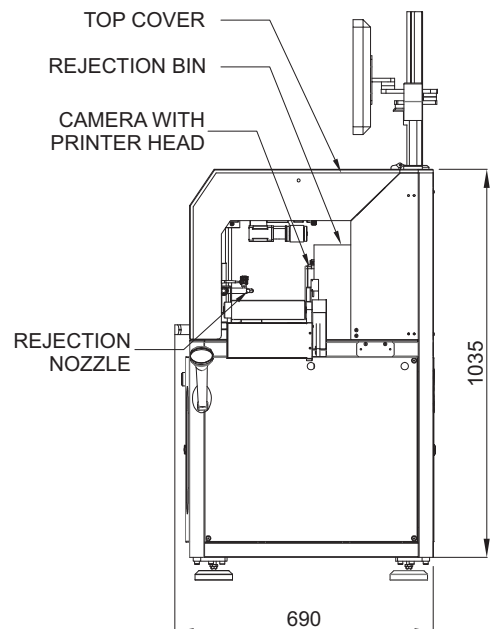
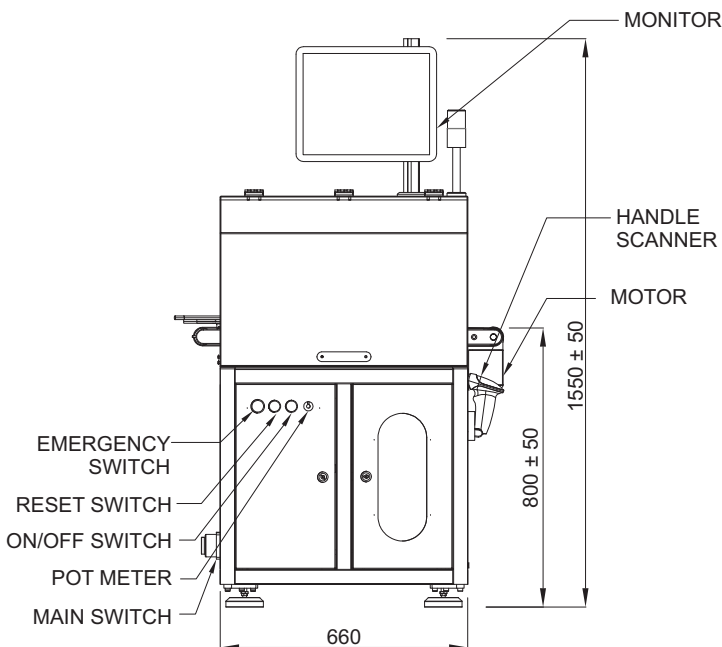
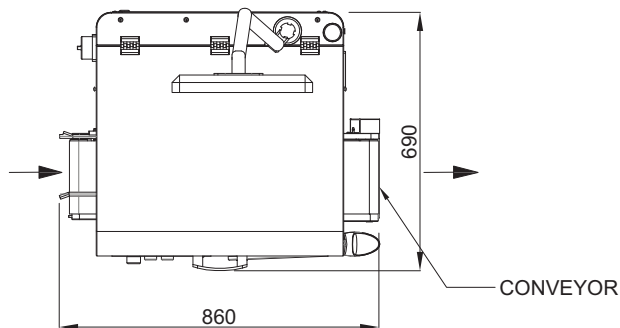
USP of the System

- Rejection marker
- 2 Colour printing
- Invisible printing

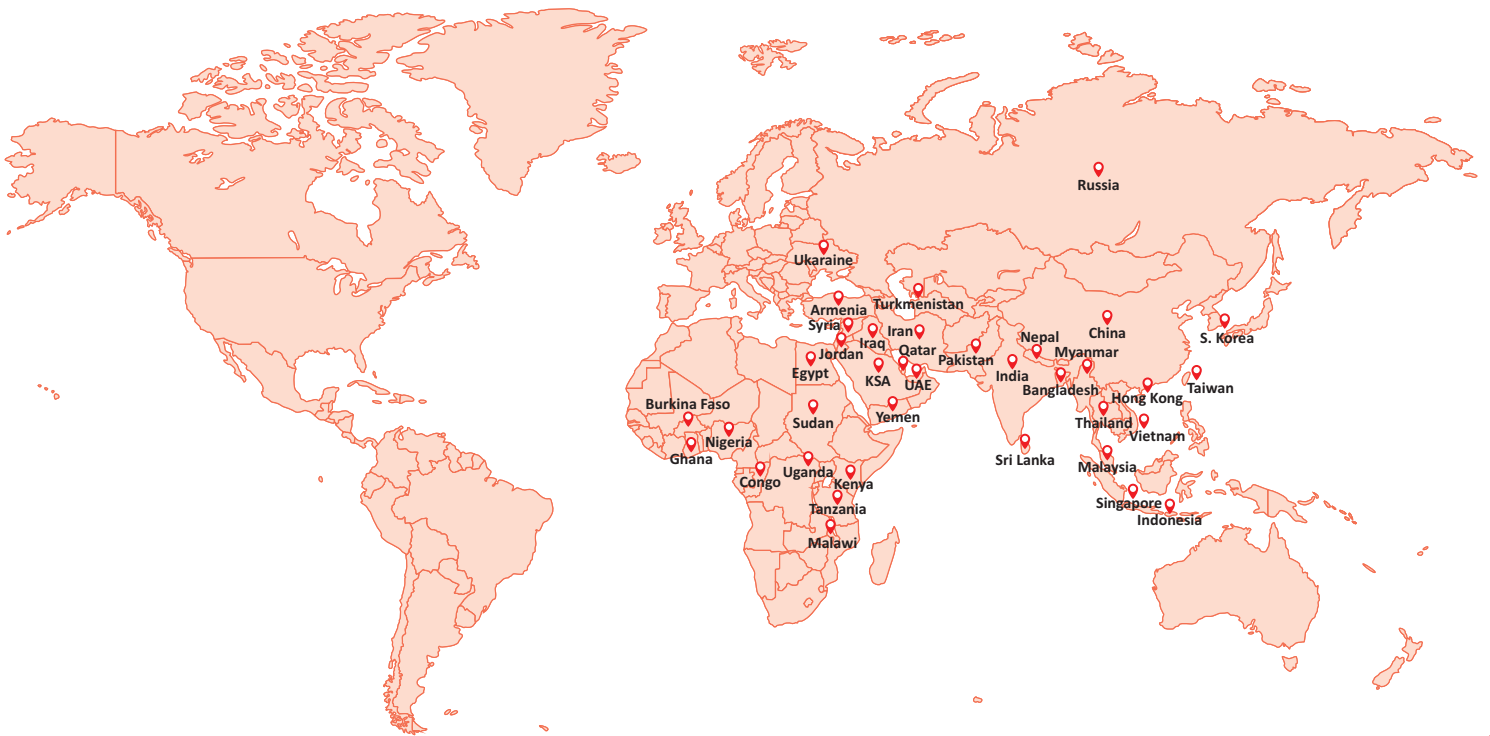
Convincing Highlights

- Can occupy small floor space
- Printer camera can be mounted from both side
- System support to All application identifier as per GS1 standard
- ISO standard verification of barcode
- In single pass, it can verify OCR, 1D, 2D, Pharmacode
- Elaborate and precise transport belt gives reproducible quality even at high speed up to 400 units/min
- Format change takes less than 5 minute
- Assurance, no rejected carton can go further in production line
- Consecutive rejection control
- Joint carton identification and rejection control (Upto 5 carton)
- Queue 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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