

In-line digital finishing for quick turn, short run laser finishing of cartons.

Think outside the box. Literally. The innovative LasX CartonsInMinutes (CIM) system streamlines the processing of cartons and related products with high-speed laser converting, robotic part handling and in-line folder/gluer in a continuous digital workflow. Now digitally-printed materials can be converted to finished cartons in less than a minute versus traditional processes taking days or weeks to complete. Because laser processing eliminates the need for costly mechanical dies and set-up time, finished cartons can be available for shipping literally within minutes of final customer design approval.



CIM systems use patented laser control software and advanced vision technology to assure precise, repeatable cut-to-print registration. Instant job change at production speed is accomplished through programming or reading printed bar codes. The integrated robotic material handling system removes scrap and feeds trimmed printed material to the proprietary folding and gluing system specially designed by Kluge to accommodate job changeovers.

CIM systems are scalable to meet the needs of any digital production environment. Systems can be configured with up to two 1000W lasers to perform mixed converting operations while achieving throughput speeds as high as 15,000 cartons per hour with instant order change capabilities in continuous production runs.

Features

- Sheet-fed laser processing with in-line folder/gluer.
- Complete digital workflow streamlines operations.
- Instant job change at production speed.
- Advanced vision technology for precision cut-to-print registration.
- Robotic material handling (automated stripping).
- Scalable – add another laser for greater functionality and/or throughput.
- Processes intricate designs with no die and setup charges.
- Reverse-side sheet registration for processing back side of sheet.
- Production class laser engineered for 24/7 operation.
- Patented 3rd-generation “Proton” laser control software and LightGuide® software Interface.

Laser Processing Benefits

- Eliminates traditional die-cutting to reduce cost and production lead times.
- Achieves intricate patterns unobtainable with mechanical dies.
- “On demand” capabilities for cost-effective short runs or high volume production.
- Precise print-to-cut registration ($\pm 125 \mu\text{m}$).
- Reduces time to market.
- Eliminates make-ready waste.
- Ultra-complex processing at remarkable production speeds.
- Product personalization – ideal for custom orders.



SPECIFICATIONS & OPTIONS

Laser Technology

Laser Module Type:	Sealed CO ₂
Output Power:	250W/400W/1000W
Power Range:	10% of max – 250W/400W/1000W
Processing Area:	350mm (13.75in) and 500mm (19.7in) widths
Laser Life:	Rated output for minimum 20,000 operating hours before refurbishing
Number of Modules:	1-3 (option to add laser(s) in the future)

Material

Material Handling:	Patented LasX vacuum conveyor; high-speed robot
Material Type:	Paper, paperboard, PET, acrylics
Maximum Width/Length:	20in/no limit

Physical Specifications (400W)

Size (L x W x H):	2600mm x 2070mm x 2037mm (101in x 82in x 80in)
Weight:	1220kg (2700lbs)

Typical System Requirements

400W:	208 to 240VAC, 3-phase, 50/60Hz, 55 FLA
1000W:	480VAC, 3-phase, 50/60Hz, 90 FLA
Chiller:	460VAC, 3-phase, 60Hz, 15 FLA. Chiller provided by LasX.
Compressed Air Flow:	85L/min (3.0 ft ³ /min) at 550kPa
Exhaust Airflow:	40m ³ /min (1400 ft ³ /min) at 12 millibars (5in H ₂ O). 200mm (8in) diameter connection.

Safety

Class I Safety Enclosure:	Per 21 CFR 1040.10; meets federal safety requirements
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Options

- Roll-fed integration for roll-to-part processing
- Sheet feeder and roll unwind
- Custom conveyor output configurations per customer request
- Add up to 2 lasers for greater functionality and/or throughput
- Secondary camera for automated skew correction
- In-line configuration for direct digital printing
- Robotic integration for automated sorting and stacking of finished parts
- “Vision Trax” registration for print-to-cut accuracy and easy setup
- Barcode reader communicates job information
- Sheet chute or conveyor to remove material
- Reverse-side sheet registration for processing opposite side of sheet
- LRE (LasX Ripping Engine) prepares artwork for automated workflow

