

# SMARTCODE 1100

AUTOMATIC CARTON LASER CODING MACHINE



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## AUTOMATIC CARTON LASER CODING MACHINE

# CONCENTRATED ADVANCED TECHNOLOGY

## FOR PACKAGING CODING SOLUTION

I. This equipment is mainly suitable for two-sides laser printing dual codes after printing a box of two-code corrugated cardboard boxes. The printed two-dimensional codes are used in the production line collect and verify the application. This equipment includes manual feeding, three-channel auxiliary laser double-sided printing, double-sides code collection verification, and three channels after collection. The main line, after feeding, is fed to the strapping machine.

### II . Technical data

1. Size max:	mm	1450*1100
2. Size min:	mm	600*400
3. linear speed	m/min	160
4. coding efficiency:	s/min	600
5. single channel coding efficiency s/min		200
6. Accuracy of coding position:		±1.5mm
7. Functional requirements:		<ul style="list-style-type: none"><li>- Manual feeding</li><li>- Paging-correction</li><li>- Visual inspection</li><li>- Rejection of unqualified products</li><li>- Regular delivery of qualified products</li></ul>
6. Machine size:	(L×W×H):	8×2.1×2.6m

## IV- COMPONENTS



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### Feeder section

- . Coordinated by 8 belts of 30 mm
- . Each feeder carrier is adjustable laterally
- . side guide left and right to ensure perfect output belt;
- . 2 adjustable front feed knives,
- . Vibration motor for pile adjustment
- . Independent motor to adjust the feed distance
- . belt air function



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### Side register

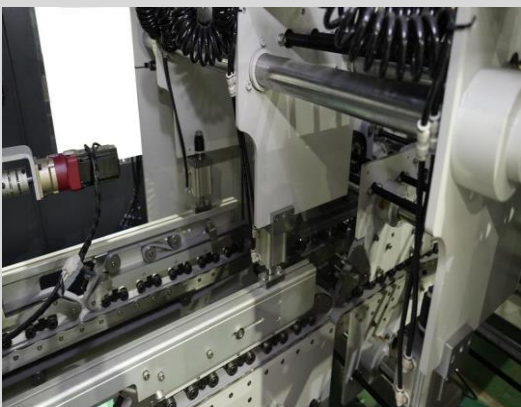
- . 2 groups of guides
- . Each set of guides is equipped with an adjustable tilt
- . Inclined belt
- . There is a row of adjustable pressure shafts on the belt
- . Can corrects the parallel error of the carton
- . Make sure the paper goes parallel to the next part



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### Laser coding section

- . 3 groups of guides, each group of guides can move left and right
- . Each group of guides can be electrically adjusted and configured with memory function
- . Each set of guides is designed with 50MM width at the bottom and 34mm width at the top
- . The upper guide plate of each group adopts the upper and lower structure design of the cylinder
- . The upper and lower lasers can be installed, and the mounting bracket of the upper and lower lasers can be detached from the main body of the device to prevent the vibration of the device from affecting the coding of the laser machine.
- . Upper laser X and Y direction electric adjustment, Z direction manual adjustment, stroke: 1000 (X)\*300(Y)\*200(Z)mm
- . Lower laser X, Y and Z direction manual adjustment, travel: 500 (X)\*300(Y)\*200(Z)mm, it is convenient to pull out the laser for Maintenance Servo motor drive, linear speed  $\geq 160\text{m/min}$ , linear speed fluctuation  $\pm 1\%$



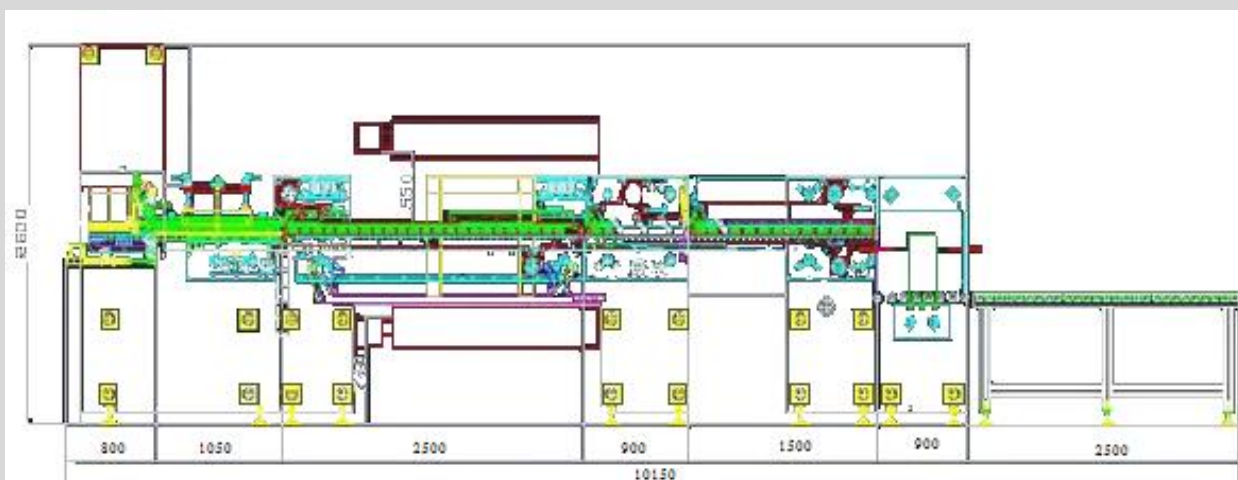
4

- . Pneumatic two-way neat structure
- . Stacking paper without stopping points, stacking specifications 30, 40, 50 sheets optional
- . There is an exhaust nozzle before the stack of paper to assist Receiving
- . It consists of multiple powered rollers and unpowered rollers
- . Cartridges and transport cartons to bales
- . Binder (Binder is provided by Party A)

## V- Technical parameters Laser section

	Technical index	CO2 laser printer
Laser parameters number	Laser	Imported CO2 laser
	Laser wavelength	9.3-10.6um
	Pulse repetition frequency	20KHz ≤ F ≤ 100kHz
	Average power stability	<3%rms
Galvanometer parameter	Sweep speed	≤7000mm/s
	Position speed	≤10000mm/s
	repeatability	<24 μ rad
	Time laps drift	<0.6 μ rad, constant ambient C° +15° - +35° 8 hours in operation
Optical output characteristic	mark range	F=580 mm
	standard line width	400mm ×400 mm
	standard line width	0.06mm (depend on material)
	Min. character	0.2mm
	cooling system	water
Operation environment	Power supply	4.5KW/AC220V ±5%/50Hz the fluctuation of Voltage±5%, if it's beyond the fluctuation range, a voltage stabilizer shall be installed.
	Ground	D type (Grounding resistance 100Ω or lower)
	temperature	5-45°C
	humidity	≤90%
	Vibration	0.98m/s <sup>2</sup> {0.1G} or less, 10~60Hz。 Transportation:4.9 m/s <sup>2</sup> {0.5G} or less
	dust	less than 0.20mg/m <sup>3</sup>
	oil mist	no
	condensation	no
compressed air	0.6-0.8Mpa compressed air, not too much moisture, oil and grease.	

## III. Equipment scheme and composition



## VI - Spare parts list

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Name	Model	Brand	Remarks
constant speed reducer		Vemte, Cheeming/China	
reducer		Vemte/China	
inverter		korea LS	
PLC		korea LS	
touch screen		Fanyi	
servo motor		Wuxi	
servo motor drive		LS	
linear bearing		TSC	
linear guide		TSC	
cylinder		REXROTH	
solenoid valve		MAC、airtac、SML	
sensors		SUNX	
bearings		NTN、NACHI、VECCI	
relays		omron	
terminals		XALISL/ABB	
feeder belts		NITTA	
poly-v belts		France hutchinson	
timing belts		Gates	
transfer belts		Raplon	
machine structure	welding steel, thickness greater than 30mm	Ansteel	
out looking	closed sheet metal appearance	no more than 3 colors	

## VII Equipment acceptance standard

### Acceptance items and standards

- A- Production speed and efficiency , min. code printing linear speed $\geq$ 160m/min Speed accuracy $\pm$ 1% Laser double-side code printing speed 200 box/min
- B- 99.99% Running in production no less than 10 hours without stopping, ejection accuracy 99.99%
- C- printing position accuracy $\pm$ 1.5mm precision 99.99%
- D- All optionals are equipped based on contract
- E- In operation for 24 hours continuously, among them, there are 6 jobs change-over. 2 jobs memory recall time no more than 10 min.
- F- 70dba 1 meter away $\leq$ 70dba
- G- Deformation code ratio: 1/1000 running in production no less than 10 hours without stopping.