

High Speed Cardboard Cutting Machine BZX-3500



Find more: www.nichomachines.com



3-year warranty*
ensuring no hassle
and unforeseen costs



Quick return on
investment



Low Total Cost of
Ownership



Ensuring low price
by sourcing cleverly
in large quantities

Highlights

(1) High-Intensity Performance:

Capable of high load, high efficiency, and high stability production under intense 24-hour all-weather conditions (the entire machine frame undergoes heat treatment to remove stress and then high-precision CNC processing to ensure the machine body is durable and does not deform).

(2) Super Wear-Resistant Performance of Consumables and Spare Parts:

Improved durability of cutting tools: (cutting tools are specially made for corrugated paper, imported from Japan);
High cutting resistance of cutting rollers: (cutting rollers are specially modified for cutting resistance, originally produced in Japan, ensuring long-lasting cutting without wear or cracking);

(3) Cost Saving:

Equipped with a maximum of 12 paper libraries, in addition to intelligent optimization of paper skin, the system has developed AI functions to maximize the use of paper skin intelligently, and the system can intelligently achieve intelligent utilization;

(4) Highest Production Efficiency:

The entire machine is driven by 13 sets of servos, using a unique control algorithm to achieve customized production of 8 pieces per minute, with a finished product output of 8-13 PCS/min;

(5) Comprehensive/Convenient and User-Friendly Functional Applications:

1. Customers can freely add box types;
2. Different corner protection logic can be set;
3. Multiple box type intelligent switching production logic can be set;
4. Mirror production function is available;
5. Production function without left-right benchmarking is available;
6. Diversified communication functions;
7. One-click cleaning command;
8. One-click repeat cutting command;
9. One-click quick cutting command;
10. Autonomous maintenance reminder function;
11. Multi-brand packaging cutting mode;

Comprehensive anti-jamming paper function (comprehensive multi-directional settings for deceleration, guidance and flow guidance devices, achieving perfect zero-paper-jamming application)

1. Add anti-Bet flow plate device on the output;
2. Add paper side flow guidance device;
3. Add paper transition guidance roller device;
4. Add Leifur wheel deceleration flow guidance device;
5. Add telescopic rod flow deceleration device;
6. Add unlimited position feed flow guidance device;

2.Operating System:

High-performance industrial-grade motion controller, combined with a dedicated control system and independently developed box cutting CP software.

CP software features high-speed operation, paper usage optimization, and high paper utilization rate, making the operation simple, convenient, and fast.

It is the only one in China equipped with mainstream communication interface technologies (ModbusTCP/IP, CSV, Server database, MySQL database) that can connect with any MES system in the country.

Control System:

- III. Uses professional-grade motion controllers, servo drives, servo motors, German Sick sensors, and other imported electrical components to ensure stable and reliable system operation.

3. Equipment Features:

<ul style="list-style-type: none"> (1) Frame heat treatment to remove stress followed by high-precision gantry CNC machining; (2) Industrial-grade operation interface; (3) Convenient flip cover for maintenance; (4) Built-in water-resistant socket; (5) Built-in air pressure stabilizer with air cushion; 	
<ul style="list-style-type: none"> (6) 8 independently servo-driven cutting tools; (7) All servo drivers are one level higher, making the machine response faster and more stable; (8) The outlet uses an electric wooden plate to ensure smooth and paper jam-free paper output; 	
<ul style="list-style-type: none"> (9) Solid PU press wheels are more durable than hollow ones in the industry; (10) Symmetrically designed cutting tools, dual working stations for paper cutting without distinguishing left and right hands; 	
<ul style="list-style-type: none"> (11) Magnetic material suction device for positioning, high-speed and precise adjustment without paper jam; (12) The equipment is equipped with six heavy-duty anti-blocking devices to ensure smooth operation and eliminate all paper jams. 	

4. Main Component List

No.	Name	Model/Power/Brand	Quantity
1	Numerical motion controller	EthetCAT-RG-12A/GR	*1
2	Numerical Control Shaft	MS1H2-50C30CD-T331 Z/5KW	*1
3	Numerical Control Shaft	MS1H2-30C30CD-T334 Z-S4 /3KW	*1
4	Numerical Control Shaft	MS1H2-30C30CD-T331 Z/3KW	*1
5	Numerical Control Shaft	MS1H1-70B30CB-T331 Z /0.75KW	*2
6	Numerical Control Shaft	MS1H1-40B30CB-T331 Z /0.4KW	*8
7	Gear Reducer	KB115-10-P2/STON	*1
8	Gear Reducer	KB115-004-P2/ STON	*1
9	Gear Reducer	KNM1102-30-V6-TSF	*1
10	Gear Reducer	PRF60-L1-5-P1/REN GONG	*8
11	Paper Feeding Motor Belt	(Customized by Jizhi Intelligence)	*1
12	Cutting Blade	1 horizontal cut, 8 vertical cuts	*9

5. Main Component Brand Configuration

1	Pneumatic	German FESTO and Taiwan AirTAC	*16
2	Terminal Block	German PHOENIX CONTACT	**
3	Photoelectric	German Pepperl+Fuchs	**
4	Reducer	German FASTON	*11
5	Low Voltage Electrical	French Schneider	**

6. Main Wearable Parts List

1	Cutting Tools	/	*9
2	Wear-resistant Roller	/	*1
3	Feeding Sun Wheel	/	*8
4	Horizontal Cutting Synchronous Belt	/	*1
5	Cutting Platform	/	*1

7. Production Efficiency

- (1) Cutting 6-13 sheets of cardboard per minute (depending on the following factors):
- (2) Selected processing mode: Speed mode/Paper-saving mode/Universal mode/Multi-box type multi-rule custom mode/High-quality cutting mode;
- (3) Selected production method: CSV import production/Scanning mode production/Database connection mode production/Automatic measurement mode production/Automatic production/Semi-automatic production/Informational MES interface production;
- (4) Continuous corrugated paperboard thickness: 350-2500 mm;
- (5) Stacking height, including 120 mm pallet, maximum: 1500 mm;
- (6) Stacking width, maximum: 1300 mm;
- (7) Length of corrugated paperboard at the unloading point: minimum 300 mm;
- (8) Fixed-length cutting longitudinal tolerance: maximum 0.5%;
- (9) Fixed-length cutting transverse tolerance: maximum +/-20 mm.

8. Quality Requirements for Corrugated Paperboard

- (1) Corrugated paper thickness: 2.5-6.5 mm, +/-0.2 mm (can replace cross-cutting knife to improve transverse indentation to ensure no surface cracks);
- (2) Raw material quality up to 2.30BC (according to DIN55468 standard);
- (3) The quality of the paperboard complies with DIN55468 standard 4;
- (4) Single corrugated, maximum thickness of 4 mm (quality: 1.10-1.40);
- (5) Double corrugated, thickness approximately 6.5 mm (quality: 2.10-2.30);
- (6) The height of the paperboard stack shall not exceed 1300mm.

9. Paper Warehouse

- (1) Independent 6 paper warehouses (6+6) up to 12 paper warehouses;
- (2) Quick paper changing device.

10. Foundation Requirements

- (1) Concrete quality requirements: C25/30 XC1;
- (2) Capable of withstanding certain pressure and tension;
- (3) Concrete thickness should not be less than 180 mm.

11. Electrical and Gas Requirements

- (1) For the air compressor used in the cooling and drying machine to remove oil and clean the compressed air, a supply air hose with a diameter of $\varnothing 25\text{mm}$ and a distance of less than 3 meters from the equipment is required;
- (2) The installed power is approximately 15KW, and the actual power usage is about 4KW (it is recommended to use a 6 square millimeter copper core cable under a three-phase 380V 50HZ power supply).

12. Machine Color: Computer white RAL9003

13. Main Technical Parameters

No.	Item	Parameter
1	Equipment Dimensions	15600*3500*3000
2	Cutting Capacity	6-13 packs/min
3	Connected Load	15KW
4	Rated Current	6.5A
5	Rated Air Pressure	0.6Mpa, Flow 20-100L/min
6	Cutting Tolerance	< 5%
7	Control Voltage	24VDC, DC power complies with VDE
8	Operating Voltage	380V/50Hz/Three-phase
9	Quantity of silos	6-12 Storage Places
10	Warehouse width	1500mm
11	Fixed Cutting Longitudinal Tolerance	Max 0.5%
12	Fixed Cutting Transverse Tolerance	Max $\pm 2.0\text{mm}$
13	Cardboard Box Length	250~2800mm
14	Cardboard Box Width	150~2300mm
15	Cardboard Box Height	18~2500mm
16	Main Frame	Large Gantry CNC Processing
17	Corrugated Paper Thickness	2.5~6.5mm
18	Corrugated Paper Width	350~2500mm
19	Maximum Cardboard Stack Height	1500mm (including 120mm pallet)
20	Paper Utilization Rate	Single brand 95%
21	Auxiliary Frame	Q235A
22	Support Feet	Tempered M30 Bolts + Base Plate
23	Aluminum Profile	6063 Super Hard Aluminum Profile
24	Equipment Weight	Appr. 3000kg