

Paper Cutting Machine DM160



Highlights

(1) High Intensity Performance:

Meets the demands of high-intensity 24-hour all-weather conditions with high load, high efficiency, and high stability in production.

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

Cutting tools are highly wear-resistant (cutting tools - special Japanese imported knife for corrugated cardboard);

Cutting rollers are highly wear-resistant (cutting rollers - special Japanese imported wear-resistant and cutting-improving rollers, ensuring long-term wear resistance without damage or cracking);

(3) Cost Saving:

Equipped with 4 paper feeders, in addition to intelligent optimization of paper feeding, the system has developed AI functions to maximize the use of large paper rolls, and the system can intelligently utilize the remaining paper rolls;

(4) Maximum Production Efficiency:

The entire machine is equipped with 3 sets of controls, using unique control algorithms to achieve customized production at 3-5 pieces per minute, and mass production at 5-8 pieces per minute;

(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. Diversified communication functions;
5. One-click cleaning command;
6. One-click repeat cutting command;
7. One-click quick cutting command;
8. Autonomous maintenance reminder function;

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 unlimited position feed flow guidance device.

1. 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.

2. Control System:

The control system 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:

- (1) The machine frame is processed with cold rolling plate, high precision, high strength;
- (2) Industrial-grade operation interface;
- (3) Convenient flip cover for maintenance;
- (4) Built-in air pressure stabilizer with air cushion;







- (5) Single servo cutting control, achieving high synchronization;
- (6) All servo drivers are one level higher, making the machine response faster and more stable;
- (7) The outlet uses an electric wooden plate to ensure smooth and paper jam-free paper output;



- (8) Solid PU press wheels are more durable than hollow ones in the industry;



<p>(9) The material suction device is positioned, allowing for high-speed and precise adjustment without paper jams;</p> <p>(10) The equipment is equipped with comprehensive flow reduction devices to ensure smooth operation and eliminate all paper jams.</p>	
<p>(11) Japanese cutting tools are guaranteed for 2 years with 24-hour use;</p> <p>(12) Japan-exclusive wear-resistant polyurethane rollers;</p>	
<p>(13) Integrated valve island;</p> <p>(14) All cables and air hoses are standardized for identification and testing;</p>	
<p>(15) One paper cutter, 3 motion control axes (fully servo-driven paper cutter);</p> <p>(16) Diversified working modes;</p> <p>(17) Diversified data interface methods;</p> <p>(18) Multiple logic settings for production mode can easily achieve triple-super paper cutting;</p> <p>(19) Under automatic production mode, order insertion and urgent cutting;</p> <p>(20) Can add any box type to meet different needs;</p> <p>(21) User-friendly maintenance management;</p>	

4. Main Component List

No.	Name	Model/Power/Brand	Quantity
1	Numerical motion controller	EthetCAT-RG-12A/GR	*1
2	Numerical Control Shaft	MS1H3-13C15CD-T334Z /1.3KW	*1
3	Numerical Control Shaft	MS1H2-15C30CD-T331R /1.5KW	*1
4	Numerical Control Shaft	MS1H3-18C15CD-T331R /1.8KW	*1
5	Gear Reducer	JGH115-L1 24-95-115-M6	*1
6	Gear Reducer	FKB115-L1-22-110-145-M8	*1
7	Gear Reducer	TKM0753/49.18/B3/ST130	*1
8	Paper Feeding Motor Belt	Customized by JiZhi Intelligence	*1
9	Cutting Blade	1 horizontal cut, 6 vertical cuts	*7

5. Main Component Brand Configuration

1	Pneumatic	Yatai EMC+Taiwan AirTAC	*
2	Terminal Block	German Phoenix CONTACT	**
3	Photoelectric	German Sick	**
4	Low Voltage Electrical	Zhengtai	**

6 Main Wearable Parts List

1	Cutting Tools	/	*7
2	Wear-resistant Roller	/	*1
3	Feeding Sun Wheel	/	*4
4	Horizontal Cutting Synchronous Belt	/	*1

7. Production Efficiency

- (1) Cutting 3-5 sheets of cardboard per minute (depending on various 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 paper width: 110-1600 mm;
- (5) Stacking height, including 120 mm pallet, maximum: 1300 mm;
- (6) Stacking width, maximum: 1300 mm;
- (7) Length of corrugated paper at the unloading point: minimum 150 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) The maximum raw material quality is 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 4 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) The concrete thickness should not be less than 180 mm.

11. Electrical and Gas Requirements

(1) The air compressor used for dehumidification and oil removal requires a supply air hose with a diameter of $\varnothing 5\text{mm}$ and a distance of less than 3 meters from the equipment;

(2) The installed power is about 5KW, and the actual power usage is about 2.5KW (it is recommended to use a 4 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	9000*2330*2350 mm
2	Cutting Speed	3-5 packs/min
3	Connected Load	5KW
4	Rated Current	3.5A
5	Rated Air Pressure	0.6Mpa, Flow rate 20-100L/min
6	Cutting Tolerance	<5%
7	Control Voltage	24VDC, Direct current complies with VDE
8	Operating Voltage	415V/50Hz/Three-phase
9	Number of Material Bins	4 bins
10	Material Bin Width	1500mm
11	Fixed Cutting Longitudinal Tolerance	Max 0.5%
12	Fixed Cutting Transverse Tolerance	Max $\pm 2.0\text{mm}$
13	Paper Box Length	$\geq 110\text{mm}$
14	Paper Box Width	180~1220mm
15	Paper Box Height	18~1600mm
16	Main Frame	Carbon steel cold rolling plate processing
17	Corrugated Paper Thickness	2.5~6.5mm
18	Corrugated Paper Width	110~1600mm
19	Maximum Paper Stacking Height	1300mm (including 120mm pallet)
20	Paper Utilization Rate	95%
21	Auxiliary Frame	Q235A
22	Support Feet	Tempered M30 Bolt + Base Plate
23	Aluminum Profile	6061 type ultra-hard aluminum profile
24	Equipment Weight	Approximately 1200kg



**Thanks for your attention!*

The company continuous to improve the product specifications and design details, the specifications are subject to change without notice.250408