

Roll Die Cutting Machine SM DC 970-1200



Introduction:

SM DC 970-1200 series roll die cutting machine based on international advanced technology, has a high stability, high safety performance, high precision of the finished product, it's widely used in printing, packaging and paper products industries. It adopts micro-computer, human-computer control interface, servo positioning, alternating current frequency converter, automatic counting, manual pneumatic, block plate, photoelectric correcting deviation system, electromagnetic clutch, centralized oil lubrication, overload protection and distinctive gearing. So it guarantees smooth operations of returning paper and feeding paper, precise positioning and orderly withdrawing. All the key parts and controls of the machine are imported. Such installation can realize the machine in steady pressure, precise positioning, smooth moving, safety and reliability.

Main Technical Parameters

Type	970*550	970*640	1200*640
Cutting Precision	±0.1mm (White Paper)	±0.1 mm (white paper)	±0.1 mm (white paper)
Cutting Rate Speed	120-180 times/min	120-180 times/min	120-180 times/min
Max Cutting Pressure	320T	320T	320T
Max. Cutting Paper Size (W×L)	950mm*510mm(W×L)	950mm*610mm(W×L)	1150mm*640mm (W×L)
Min. Cutting Paper Size (W×L)	400mm*350mm (G×U)	400mm*350mm (G×U)	400mm*350mm (W×L)
Suitable Paper Weight	100g-650g	100g-650g	100g-650g
Total Power Rate	16Kw	16Kw	17Kw
Overall Dimensions	4.6m*2.5m*2.3m (L×W×H)	4.6m*2.5m*2.3m (L×W×H)	4.8m*2.8m*2.3m (L×W×H)
Total Weight	7.6T	7.8T	8.6T

Structure Device List

No.	COMMODIT	DESCRIPTION
1	Handpiece5 Components, Casting Parts	Crossbeam, Lifting Table, The movement Base, Left and Right Wallboard
2	Inter-Machine Transmission Device	Worm Gear, Worm
3	Chopping Board	NO.65 Manganese Steel
4	Automatic rewinding	
5	Fixing Core Loading Paper	

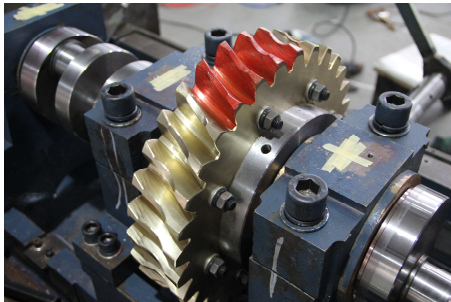
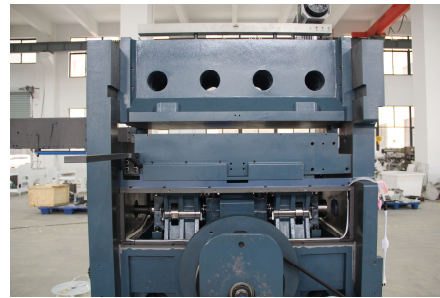
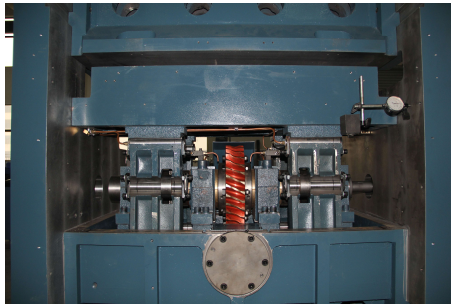
Electric Configuration List

No.	Type	MANUFACTURERS
1	Main Motor	Shanghai Kuali
2	Servo Motor	Delta
3	Smart Sensor	Sick Germany
4	Touch Screen	Delta
5	PLC	Delta
6	Traction Motor	Zhibao Taiwan
7	Frequency Converter	Delta
8	Pressure adjustment motor	UVS, Shanghai
9	Step motor for clapping	Buke, Hangzhou
10	Switch	Delixi
11	Main bearing	NSK
12	Main air cylinder	AirTac
13	Solenoid valve and other parts	AirTac
14	Proportional Valve	SMC

1. Worm Gear Structure

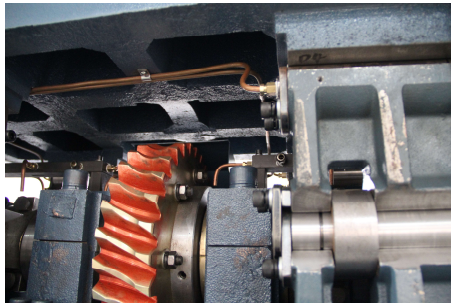
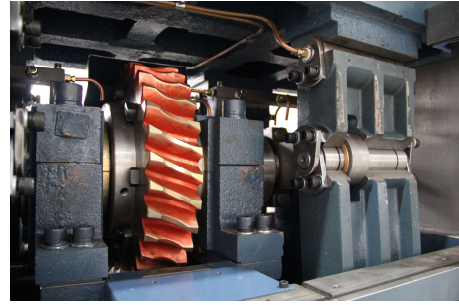
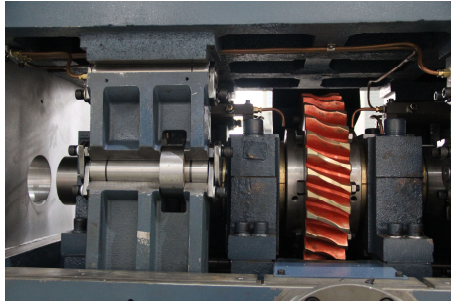
Perfect worm wheel and worm transmission system ensures the powerful and steady pressure and makes the cutting accurately while the machine runs with high speed, has features of low noise, smooth running and high cutting pressure.

Main base frame, moving frame and top frame are all adopts high strength Ductile Cast Iron QT500-7, which has features of high tensile strength, anti-deformation and anti-fatigable.



2. Lubrication system:

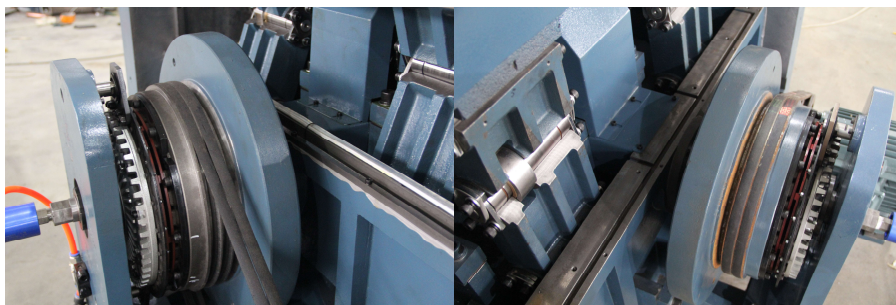
Adopts forced lubrication system to ensure main driving oil supply regularly and reduce friction and prolong the machine life, machine will shut down for protection if oil pressure is low. The oil circuit adds a filter to clear the oil and a flow switch to monitor lacking oil.



3. The main part

The die-cutting force is provided by a 7.5KW inverter motor driver. It is not only power-saving, but also can realize the stepless speed adjustment, especially when coordinate with the extra large flywheel, which make the die-cutting force strong and steady, and the electricity can be further reduced.

Pneumatic clutch brake: through adjust the air pressure to control the driving torque, low noise and high brake performance. The machine will shut down automatically if overload happened, response sensitive and fast.

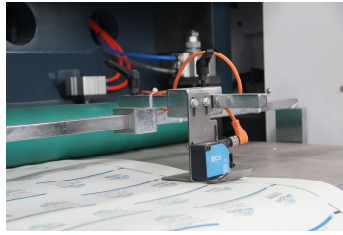


4. Electrical control pressure:

accurate and fast to achieve die-cutting pressure adjustment. The pressure is automatic adjusted through the motor to control the four feet by HMI. It is very convenient and accurate.

5. Tracing

It can die-cut according to the printed words and figures or simply die-cut without them. The coordination between stepping and photoelectric eye which can identify colors assures the perfectly fit of the die-cutting position and figures. Simply set the feed length through the micro-computer controller to die-cut the products without words and figures.



6. Motor:

Frequency converter controls the main motor, with features of low energy and high efficiency.

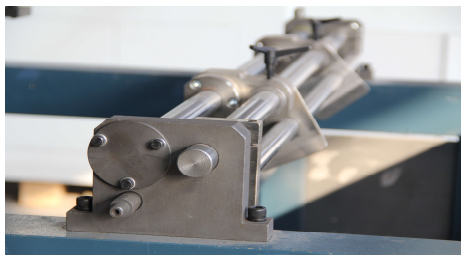
PLC and HMI: screen display the running data and status, all of the parameter can be set through the screen.

Electrical control system: adopts micro computer control, encoder angle detect and control, photoelectric chase and detect, achieving from paper feeding, convey, die-cutting and delivering process automatic control and detect.



7. Correction

This device is controlled by motor, which can fix and adjust the paper in a correct position (left or right),



8. Die cutting part:

Die cutting department adopts pneumatic lock version of the device to avoid come off from the machine.

Die cutting plate: 65 Mn steel plate heating treatment, high hardness and flatness.

Die cutting knife plate and plate frame can be taken out so that it can save plate-changing time.

Note: Only one set of plate frame and steel plate is supplied for one machine.



9. Paper blocked alarm:

The alarm system makes the machine stop when paper feeding blocked.



10. Unwinding part:

Adopts chain type pneumatic roller unwind, tension controls unwind speed, and that is hydraulic, it could support at least 1.5T, Max. roll paper diameter is 1.6m.



11. Load material:

Electric roll material loading, which is easy and fast. The two rubber covered rollers are controlled by traction motor, so it is very easy to make paper go forward automatically.



12. Paper flattening:

Automatically fold and flatten the cornering materials at the paper core. It realized the multistage adjustment of the folding degree. No matter how bent the product is ,it can be flattened or refolded towards other directions.



13. Feed material:

the photoelectric eye tracking system assures the synchronization of material feeding and die cutting speed



14. Paper collecting:

By the action of the entity induction switch, finished product will be automatically lowered down to remain the height of the pilling paper unchanged, during the whole die-cutting process, manual paper-taking is not needed



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