2-GPCS-133SD OPERATION MANUAL SEMI-AUTOMATIC CARTON SEALING MACHINE





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1. GENERAL SAFETY INSTRUCTIONS

1.1 Basic Operation

- The manual and the safety remarks are to be read before use. The operator manual should be kept with the machine at all times. Intervals for maintenance and inspections are to be adhered to.
- This machine was built with state of the art technology and rigid adherence to safety standards.
- Unless used properly, it can cause injury to operators or persons in close proximity to the machine. In addition, improper use can cause damage to the machine or property around the machine.

1.2 Basic Safety Precautions

- The user is to be instructed in all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection in addition to the operating instructions.
- For safety reasons, long hair must be tied back or otherwise secured, garments must be close fitting and no jewelry may be worn.
- Use protective equipment whenever required by circumstances or by law.
- Carefully observe all safety instructions and warnings attached to the machine and make sure that they are always complete and perfectly legible.
- Always make certain that persons being trained and instructed in working on or with the machine are permanently supervised by an experienced person.
- Work on the electrical system and equipment of the machine is only to be carried out by a skilled electrician or by persons under the supervision and guidance of a skilled electrician and in accordance with the rules and regulations of electrical engineering.

1.3 Safety Instructions Governing Specific Operational Phases

- Avoid any operation mode that might be unsafe.
- All necessary precautions to ensure that the machine is only used being in a safe and reliable state are to be taken. The machine is only to be operated if all protective and safety devices, including removable safety devices, emergency shut-off equipment, noise-protection elements and exhaust systems are in right place and fully functional.
- The machine is to be checked for damage and defects at least once per work shift. Any changes including the working behavior of the machine are to be reported to competent persons immediately. If necessary, the machine is to be stopped and locked immediately.
- In case of any malfunction the machine must be stopped and locked until the defect has been eliminated.
- Generally make sure that nobody is at risk before starting up the machine.
- All personnel that will be operating this machine should be thoroughly trained in all phases of operation and safety.
- Always tighten unscrewed connections after maintenance and repair.
- After completing maintenance and repair all safety devices removed for setting up or repairing the machine must be reinstalled and checked for functionality prior to putting the machine back into service.
- To minimize the environmental impact all consumables and replaced parts must be disposed of safely.
- Before starting the machine check that the accessories have been stowed away safely.
- Do not attempt any operation that may be a risk to the stability of the machine.



1.4 Warning of Electrical Dangers

- Immediately remove power to the machine in case of trouble in the electrical system.
- Replace a fuse with one with the same style and ratings; pay particular attention to matching the specified current.
- Any electrical work performed on the equipment must be conducted by a skilled electrician or under the supervision of a skilled electrician. All work must be observed good electrical engineering practice and follow safety rules and local wiring standards.
- Inspect the electrical equipment of the machine at regular intervals. Tighten any loose connections. Check wiring for scorch marks; replace scorched wiring and determine and correct the reason for the overheating.
- When working on live equipment, ensure that a second person is available to cut power in case of an emergency. When appropriate, secure the working area with safety tape and a warning sign. Use insulated tools for electrical work.
- Before working on high-voltage assemblies, turn off the power supply. Carefully discharge the supply cable and short-circuit any energy-storage components such as capacitors.
- If the equipment was moved, carefully refit and refasten all parts removed for transport before reapplying power.
- Before moving the machine, remember to disconnect the power cable.

1.5 Grounding Instructions Shall Include the Following

- This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock. This product is equipped with a cord that has a grounding wire and an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- If repair or replacement of the cord or plug is necessary, connect the ground wire to the ground terminal of the plug. The wire with green insulation (with or without yellow stripes) is the grounding wire.
- Check with a qualified electrician or service person if the grounding instructions are not clear or if in doubt about the proper grounding of the machine. Do not modify the plug provided; if it will not fit the power outlet, have the proper outlet installed by a qualified electrician.
- This product is designed for use on a nominal AC circuit and has a grounding plug.

DANGER!

Improper installation of the grounding can result in electrocution.

1.6 Before Operating

- Verify that the power line voltage is correct.
- The machine must be properly grounded to avoid a shock hazard. All wiring must be in accordance with local wiring standards.
- The Carton Sealing machine can only be operated with OPP tape.

1.7 During Operation

- The size of the package should be under dimension in specification list.
- While running, check the unit for any unusual sounds or smoke emissions.
- Keep away from the moving part like belt and blade of tape head. Do not put your hands or body around belt or blade of tape head when the machine is running.

1.8 After operating

- Remove dust and dirt from the unit
- Turn off the power when the machine is not in use.

1.9 Signs

A	Caution! Electric Shock Hazard.
<u>SSS</u>	Caution! Hot Surface.
	Caution! Moving Parts Can Crush Hand.
701	Caution! Pinch Point Entanglement
	Caution! Blade. Cutting of Fingers or Hand
	Wear Eye Protection
	Refer to Operator Manual



2. MACHINE INFORMATION

2.1 Areas of Application

Packaging Limitation

It's not possible to pack:

- Products larger or heavier than that allowed.
- Wet Products
- Flammable products
- Explosive products
- Agri-foodstuffs
- Pharmaceuticals
- Hazardous products

2.2 Environmental Information

The strapping machine shall be installed in the following conditions:

- Supply voltage: +-10% nominal supply voltage
- Source frequency: +-10% nominal frequency
- Ambient temperature: $5^{\circ}C 40^{\circ}C (41^{\circ}F 104^{\circ}F)$.
- Relative humidity: not exceed 35~85%RH
- Please provide a suitable illumination around the machine for safety operation.

Conditions For Use

Make sure there is room for easy application and maintenance

The machine must be installed in a closed, well-ventilated area where there are no explosions or fire hazards Position the machine in a place free of humidity, flammable materials, gas or explosives. Make sure that it is level.

Please do not spray water or wet wipe machine body.

Noise - characteristic values

The noise emission values determined according to EN ISO 3746 for the sound power level or EN ISO 11202 for the sound pressure level at the workplace on the basis of the working conditions are as below:

A measurement uncertainty allowance of K = 4 dB(A) applies to the stated emission values.

Sound power level $L_{WA} = 88.7 \text{ dB}(A)$

Emission sound pressure level at the workplace L_{PA} = 75.3 dB(A)

To minimize the emission sound pressure level, machine is equipped with a timer standby mode that can be adjusted by technician.

Demolition and Waste Disposal

The machine does not contain dangerous components or substances which require special disposal procedure. For that which concerns material elimination, comply with the Standards in the country where the machine has been disassembled.

2.3 Machine Description

This machine is manually operated to sealing OPP tape onto carton boxes. The box will be driven into the machine by the transit belt system, and the tape head unit will tap tape onto box and then do sealing & cutting. It is suitable for single box with tape sealing to ensure the box is sealed well to avoid product falling off from the box.

2.4 Safety Devices

DANGER!

Operate the machine only when all safety devices are at their place and are functioning <u>correctly.</u>

The machine has been constructed in accordance with the applicable legal regulations.

The machine is reliable in operation. Nevertheless the machine may constitute a danger if it is operated in improper or undue condition.

Danger points that cannot be avoided due to equipment design are equipped with safety devices. If necessary, these points are marked on the machine with warning signs, and in the manual under working safety instructions.

The machine is equipped with safety devices as:

- Warning labels
- Live parts are covered

The belt system operates at a very high speed (23 meters/min) to transit boxes into machine to offer good efficiency of box taping performance.

The tape head unit operates with high efficiency with tape tapping, sealing and cutting. The blade is sharp to be able to reach good cutting behavior.

To prevent danger, avoid to touch the belt (1) and tape head (2) when machine is running. To remove jammed box or tape, avoid to directly reach your hand into blade area though there is cover already cover around the blade area.

To move the machine, the four lockable casters (3) must be unlocked. Relock the four casters when the machine is in its new position.

In certain condition, you could press the emergency stop (4) with safety.



The machine is turned on when it is connected to AC power. Press START (1) to start machine, and press STOP (2) to stop machine. When the machine is running, the indicator light (3) will be ON, vice versa.



in cold temperature condition, it might take 2-3 minutes for motor to warm up for full speed. €



2.5 Technical Specification

2.5.1 Electrical Specification

System		3-Phase+PE (GROUND):220V	
Configuration	L1+N+PE (GROUND)	3-Phase+N+PE (GROUND):380-415V	
Nominal Power	0.45kW	0.45kW	
Rated Current	4.1/2.0/1.9 A	1.2A/0.7A/0.6A	
	110V/220-230V/240V	220V/60Hz,	
Rated Voltage		380V/50, 60Hz	
		400V,415V/50Hz	
Rated Frequency	50 /60Hz	50 /60Hz	
Type of Current	AC- single phase	AC- Three phase	

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2.5.2 Technical information







50 mm (2") as standard
36 mm (1.5") as option
75 mm (3") as option
50 mm tape : 50 \pm 5 mm
75mm tape : 60 \pm 5 mm
76.2 mm
356 mm (14")
23 meter/min
(MAX) L: unlimited W: 500mm H: 500mm
(MIN) L: 120mm W: 110mm H: 120mm
0.5 Кg ~ 30 Кg
450 W
60 dB
5°C - 40°C
600~ 800mm (adjustable)
OPTION WITH FLEXIBLE CONVEYOR
L: 1389mm (with outfeed roller table)
W: 941mm (with hand crank)
H: 1303mm (with hand crank)
151 Kg

2.6 Identification Data of the Machine

Each model is provided with a plate where it is easy to recover data which must be communicated to the manufacturer in case of problem or when requesting spare parts etc. (ref. 1-2-3-4) This plate also carries electrical technical data for installation of the machine. (ref. a-b-c-d-e-f-g).

20F, No. 309, Sec. 2, Taiwan Blvd., Taichung, Taiwan, R.O.C.				
CARTO	N SEALING MACHINE			
MODEL:	EXC-133SD			
SERIAL:	C16101419			
YEAR:	2016			
Volt 230V Ampere 2.0A	HertzPhaseWatt50Hz1~0.45kWShort Circuit RatingWeight20A160kg			

3. BEFORE OPERATING THE MACHINE

3.1 Shipping

The machine is delivered as a transport unit. The machine is loaded onto a wooden pallet with Polyester strap secured. Outside with carbon box also with Polyester strap secured.

3.2 Unload Machine from Pallet & Installation

Cut Polyester strap and then move the carbon box upward.



Remove polyester strap on machine, then assemble the casters onto EXC-133SD. Fix caster thread (A) onto legs, then adjust two screws (B) to adjust table height.

- ※ Noted: Please ensure to lock the caster before assembling next caster
- X Noted: Please ensure to lock two screws (B) to avoid table sliding down



Assemble the out-feed roller table onto machine, there are three screws for easy mount.



3.3 Operation Space



Keep the area (A) or (B) free for the operator.

The area (A) is necessary for operating control system. (control box can change to both sides of machine)

The area (B) is necessary for feeding box into machine.



3.5 Control Panel



The control panel is able to be switch between left and right sides of machine. Remove two screws of panel fix plate, and then switch to the other side.



a. Start Button: Press start button to start the motors and belts.



b. Stop button: Press stop button to stop the motors and belts.



c. Indicator light: Light will be ON when machine is running, vice versa.



d. Emergency stop:

Circuit breaker with

- When overload, circuit breaker will be activated
- Press the Start button to reset the machine
- Or it will reset automatically after 60 seconds





3.6 Tape Threading



4. Adjustments

4.1 Change tape – upper

Release the screw



Move the upper tape head forward, until it's out of the mounting block, then you are able to lift the upper tape head off from the machine.



4.2 Change tape – lower

☆This machine has patented design as drawer table for easy and fast change of lower tape head.

Pull out the front roller table, then you are able to lift the lower tape head out



4.3 Table height adjustments

Loose screws then adjust the table height



- <u>Please adjust legs one by one each time, be sure to tight the screw before</u> <u>moving forward to next leg adjustment.</u>
- <u>Be sure to hold the machine before loose the screw, or the machine could have</u> <u>risk to drop down in height then causing danger.</u>

4.4 Box height adjustments

Adjust the height hand crank to make sure top seat is higher than box about 1-2mm



4.5 Box width adjustments

After adjust the height, open the side belts then place the box inside machine, then rotate width hand crank to close the side belts until the box can pass through smoothly.



4.6 Squeezer roller adjustments

Before feeding box into the machine, release the knob and leave apart two squeezers.

Feed the box into machine and stop the machine when the box is in the squeezer roller position.

Move two squeezer come closer and touch with box with a little bit extra pressure, then tight the knob.



5. TROUBLE SHOOTING

Belt tension adjustment:

Remove belt cover, then loose screw (A), adjust the belt tension through screw (B)



Regarding to belt tension, make sure it's around 3Kg with 25mm gap pulled in the middle of belt



6. MAINTENANCE

Noted: Before doing any maintenance or service, please do switch off the main power on the machine, make sure there's no parts moving.

Warning:

- a. Wear safety glasses with side shields which conform to ANS Standard Z87.1
- b. Failure to wear safety glasses could result in severe personal injury or blindness.
- c. Wear Ear Protection.
- d. Only trained personnel should service machine.
- e. Unless specified, shut off and disconnect all electrical power.
- f. Follow all service instructions.
- g. Caution for moving parts can crush.
- h. Caution for pinch point entanglement.
- i. Caution for cutting of finger or hand from straight blade.
- j. Use the correct tools.

Cleaning & Lubricate

- A weekly cleaning with dry rags or diluted detergents is necessary. Cardboard boxes produce a significant quantity of dust and paper chips when processed or handled in case sealing equipment. If this dust is allowed to build up on machine components, it can cause component wear and over-heating of drive motors. The dust buildup is best removed from the machine with a vacuum cleaner. Depending on the number of cartons processed, this cleaning should be done weekly. Excessive buildup that cannot be removed by vacuuming should be removed with a damp cloth.
- Should tape adhesive buildup occur, carefully wipe clean with oily cloth or brush. Oil prevents the buildup of tape adhesive
- Worm or damaged cutter blades much be replaced promptly in order to guarantee a perfect cut of the tape.

Most of the machine bearings, including the drive motor, are permanently lubricated and sealed and do not require additional lubricant.

For *height adjustment hand crank*, *width adjustment hand crank* and the *thread rods* should be lubricated every 250 hours of operation. A small amount of silicone should be applied to the end of each spring where the loop is secured to an eyelet.



Wipe off excess silicone. It will attract dust which can cause premature equipment wear and jamming. Take care that silicone is not left on the surface of rollers around which tape is threaded, as it can contaminate the tape's adhesive



7. ELECTRIC WIRING DIAGRAM & PART

ELECTRIC PARTS LIST

KEY NO	PART NO.	DESCRIPTION	Q'TY
1S8B	P0313-010006300	Emergency. Switch XA2ES542	1
2	P0401-0006000	1/2" CONNECTOR	2
3	7065C062	1/2" PROTECT TUBE	1
4	P0401-0000500	1/2" 90° CONNECTOR	1
5	P0401-0000200	CONNECTOR 1/2",BVOD-P167GT	1
X1	70560601	TERMINAL BLOCKS TB6P	1
1K8	P0306-010000200	CONTACTOR LC1-D09M7 (220V)	1
INO	P0306-010000300	LC1D09F7(110V)	1
		OVERLOAD PROTECTOR	1
1F5	P0306-040000200	LR3-D086(2.5-4A)(220V)	1
	P0306-040000500	LR3D10(4-6A)(110V)	
158	7155AL01	BUTTON	1
150	P0313-020000900	BUTTON SEAT CONTACT NCx1	1
158A	7155AA03	BUTTON	1
1304	7158AZ01	CONTACTS NOX1	1
11.0	P0313-010006600	POWER LAMP XA2EVM1LC(220VAC)	1
1L9	P0313-010006500	POWER LAMP XA2EVF1LC(110VAC)	1
1F4	P0305-030005900	Thermal Circuit Breaker KMB-10I	1
19	P0323-0000400	ON/OFF SWITCH BOX	1





Wiring Diagram



8. PART LIST

MACHINE



MACHINE				
#	PART NUMBER	ITEM	Q'TY	
1		TAPE HEAD	2	
2		TOP SEAT UNIT	1	
3		SQUEEZER UNIT	1	
4		BELT DRIVE UNIT (RIGHT)	1	
5		FRAME UNIT	1	
6		COLUMN UNIT	1	
7		OUTFEED TABLE UNIT	1	
8		BELT DRIVE UNIT (LEFT)	1	

FRAME UNIT



FRAME UNIT				
#	PART NUMBER	ITEM	Q'TY	
1		FRAME	1	
2		LEG SUPPORT	2	
3		LEG SUPPORT	2	
4		ADJUSTABLE LEG	4	
5		LEG BRACKET	4	
6	P1107-0003300	CASTER WITH BRAKE	4	
7	P08-0005100	IDLE ROLLER	8	
8	P02-0302500	GUIDE SHAFT	2	
9	P08-0008400	IDLE ROLLER - SHORT	14	
10	P01-013520A	MOUNTING SEAT	2	
11		TAPE HEAD SEAT	1	
12	P01-013510A	MOUNTING SEAT - SHORT	2	
13		FIX PLATE	2	
14	P02-0088800	BUSHING	4	
15	P1101-0905012AN	SCREW M5*12	4	
16	P02-0304200	RING	2	
17	P02-0302900	SLIDING SEAT	2	
18	P1104-0325200	BUSHING	4	
19	P02-0302700	SHAFT	1	
20	P1112-000060A	HANDLE	1	
21	P02-0088900	EXTENSION SHAFT	1	
22	P02-0288600	RING	2	
23	P02-030800A	ADJUSTABLE SEAT	1	
24	P02-0300000	THREAD ROD	1	
25	P0323-0000400	CONTROL BOX	1	
26		BRACKET	1	
27	P1104-0912020	GUIDE SEAT	2	
28		SUPPORT	2	
29		ELECTRIC BOX	1	
30		ELECTRIC COVER	1	
31	P02-0299400	SHAFT	2	
32		FRONT TABLE	1	

COLUMN UNIT



COLUMN UNIT				
#	PART NUMBER	ITEM	Q'TY	
1		BRACKET	2	
2		COLUMN	2	
3	P1112-000060A	HANDLE	1	
4		SUPPORTER	4	
5	P02-0088800	RING	6	
6	P02-0307600	THREAD ROD - RIGHT	1	
7	P02-030780A	THREAD SEAT - LEFT	1	
8		GEAR COVER	2	
9	P02-029950B	SHAFT	1	
10	P02-0307500	THREAD ROD - LEFT	1	
11	P02-030770A	THREAD SEAT - RIGHT	1	
12	P0701-0004400	GEAR	2	
13	P02-029880A	SUPPOER SEAT	2	
14		BOTTOM SEAT	1	
15	P06-0022500	SUPPORT SEAT	2	
16	P1104-026202ZZ0	BEARING	2	
17	P02-0083500	RING	6	
18	P0701-0003000	GEAR	2	

OUTFEED TABLE UNIT



OUTFEED TABLE UNIT			
#	PART NUMBER	ITEM	Q'TY
1		TABLE SEAT	1
2	P08-0005100	ROLLER	6

BELT DRIVE UNIT (RIGHT)





BELT DRIVE UNIT (RIGHT)			
#	PART NUMBER	ITEM	Q'TY
1		BELT COVER - RIGHT	1
2	P0902-0008100	BELT	1
3		RING	1
4	P0703-0003400	PULLEY	1
5	P01-047460A	SUPPORT	1
6	P01-0474700	RING	1
7	P1104-0262032RS0	BEARING	1
8	P02-0080400	SPACER	1
9	P1104-026003ZZ0	BEARING	3
10	P02-008020A	MOTOR SHAFT	1
11	P1121-0000100	UNIVERSAL JOINT	1
12	P02-0080300	MOTOR SEAT	1
13	P0503-0012000	MOTOR 220V/50HZ	1
14	P02-0080000	SUPPORT SHAFT	1
15	P02-0079600	ROLLER SHAFT	8
16	P0703-0003300	ROLLER	8
17		SUPPORT	1
18	P01-0466500	GUIDE PLATE	1
19	P0703-0003200	DRIVEN ROLLER	1
20	P02-0079500	SHAFT	1
21		BELT SEAT	1
22	P02-0080100	ADJUSTING BLOCK	1

BELT DRIVE UNIT (LEFT)



BELT DRIVE UNIT (LEFT)			
#	PART NUMBER	ITEM	Q'TY
1		BELT COVER - LEFT	1
2	P0902-0008100	BELT	1
3		RING	1
4	P0703-0003400	PULLEY	1
5		BELT SEAT	1
6	P01-047430A	SUPPORT	1
7	P01-0474700	RING	1
8	P1104-0262032RS0	BEARING	1
9	P02-0080400	SPACER	1
10	P1104-026003ZZ0	BEARING	3
11	P02-008020A	MOTOR SHAFT	1
12	P1121-0000100	UNIVERSAL JOINT	1
13	P02-0080300	MOTOR SEAT	1
14	P0503-0011200	MOTOR 220V/50HZ	1
15	P02-0080000	SUPPORT SHAFT	1
16	P02-0079600	ROLLER SHAFT	8
17	P0703-0003300	ROLLER	8
18		SUPPORT	1
19	P01-0466400	GUIDE PLATE	1
20	P0703-0003200	DRIVEN ROLLER	1
21	P02-0079500	SHAFT	1
22	P02-0080100	ADJUSTING BLOCK	1

TOP SEAT UNIT



TOP SEAT UNIT				
#	PART NUMBER	ITEM	Q'TY	
1	P01-046600A	TOP SEAT	1	
2	P01-0467700	RIGHT BRACKET	2	
3	P06-0053500	TOP COVER	1	
4	P01-0462500	BRACKET	1	
5	P0313-010006300	EMERGENCY STOP	1	
6	P01-0134400	MOUNTING BLOCK-SHORT	2	
7	P01-0134500	MOUNTING BLOCK	2	
8	P1101-1104025AZ	SCREW M4*25L	1	

SQUEEZER UNIT



SQUEEZER UNIT			
#	PART NUMBER	ITEM	Q'TY
1		TUBE	1
2	P1114-010000300	FIX SEAT	2
3	P02-0299900	SHAFT	4
4	P06-0022400	ROLLER	4
5		SUPPORT - RIGHT	1
6	P06-0053900	SEAT	2
7	P06-0016400	PLASTIC CAP	2
8	P1101-0710060AB	THREAD	2
9	P1113-0001500	КNОВ	2
10		SUPPORT - LEFT	1

