



# USER MANUAL

## CE12



For Serial Numbers:  
TS8131 XX X XXX



# OPERATION MANUAL

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# 1 SERVICE INSTRUCTIONS

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## **1.1 Service**

This is the Intertape Model CE-12P Case Erector Sealing Machine you ordered. It has been set up and tested in our factory with Intertape brand tapes. If any problems occur when setting up or operating this equipment, please contact the authorized distributor from where you purchased this item.

If contact with the authorized distributor is not possible, **Interpack Technical Support** is available. Should the need to contact **Interpack Technical Support** arise, please have the Case Sealer **model number and serial number** on hand. This information can be found on the nameplate of the side panel of the machine. Interpack Technical Support is available during normal business hours (Eastern Time).

### **PHONE 800-474-8273 Option 3**

If you have a technical question that does not require an immediate response, you may contact Interpack by fax.

### **FAX 800-462-1293**

Technical support may also be contacted via email at the address below:

### **EMAIL [Machsupp@itape.com](mailto:Machsupp@itape.com)**

## **1.2 Replacement Parts**

Order parts by item number, part description and quantity required. Replacement parts are available from your Authorized Interpack Distributor exclusively.

Should you require assistance selecting the correct part, you may call:

Intertape Polymer Group  
Interpack Machinery

Tel: 1-800-474-8273 Option 3  
Fax: 1-800-462-1293

MODEL: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DISTRIBUTOR PURCHASED FROM: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

## 2 WARRANTY

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**EQUIPMENT WARRANTY AND LIMITED REMEDY:** The following warranty is made in lieu of all other warranties, express or implied, including, but not limited to, the implied warranty of merchantability, the implied warranty of fitness for a particular purpose, and any implied warranty arising out of a course of dealing, a custom or usage of trade:

Intertape sells its Interpack Tape Heads, Case Tapers and Case Erectors with the following warranties:

1. The HSD® 2000 Tape Heads' knife blades, springs and wipe down rollers will be free from all defects for a period of ninety (90) days.
2. All other HSD® 2000 Tape Head parts will be free from all defects for one (1) year after delivery.
3. Water Activated Tape Heads' blades will be free from defects for ninety (90) days after delivery.
4. Drive Belts will be free from defects for ninety (90) days after delivery.
5. The Gear Motors will be free from defects for one (1) year after delivery.
6. All other components for Case Tapers and Case Erectors will be free from defects for one (1) year after delivery.

If any part is proven defective within its warranty period, then the exclusive remedy and Intertape's and the seller's sole obligation shall be, at Intertape's option, to repair or replace the part, provided the defective part is returned immediately to Intertape's factory or an authorized service station designated by Intertape.

A part will be presumed to have become defective after its warranty period unless the part is received or Intertape is notified of the problem no later than five (5) calendar days after the warranty period.

If Intertape is unable to repair or replace the part within a reasonable time, then Intertape, at its option, will replace the equipment or refund the purchase price. Intertape shall have no obligation to install the repaired or replacement part.

Intertape shall have no obligation to provide or pay for the labor required to install the repaired or replacement part. Intertape shall have no obligation to repair or replace (1) those parts failing due to: operator misuse, carelessness, or due to any accidental cause other than equipment failure, or (2) parts

1. Failure or damage is due to misapplication, lack of proper maintenance, abuse, improper installation or abnormal conditions such as temperature, moisture, dirt or corrosive matter, etc.
2. Failure due to inadequate cleaning, improper operating environment, improper utilities or operator error.
3. Failure due to operations above the rated capacities, or in any other improper manner, either intentional or otherwise.
4. Failure is due to equipment, which has been altered by anyone other than an authorized representative of Intertape Polymer Group.
5. Failure is due to an attempt by the purchaser to correct alleged defective equipment. In this event the purchaser is responsible for all expenses incurred.

**LIMITATION OF LIABILITY:** Intertape and seller shall not be liable for direct, indirect, special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability or any other legal theory.

The foregoing Equipment Warranty and Limited Remedy and Limitation of Liability may be changed only by written agreement signed by authorized officers of Intertape and seller.

### **3 SAFETY ISSUES**

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Please read the labels on the machine and the following safety precautions before using the machine.

- ✓ **Read and understand the entire instruction manual before operating the machine. Know its limitations, as well as the specific potential hazards peculiar to it.**
- ✓ **Only trained personnel are to operate and service machine.**
- ✓ **Before operating the machine, remove ties, rings, watches other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do not wear gloves.**
- ✓ **Keep the floor around the machine clean.**
- ✓ **Keep machine guards in place at all times when the machine is in use.**
- ✓ **Do not overreach. Maintain a balanced stance at all times so that you do not fall or lean against blades or other moving parts.**
- ✓ **Make all machine adjustments or maintenance with the machine unplugged from the power source.**
- ✓ **Replace warning labels if they become obscured or removed.**
- ✓ **Made sure the power source switch is in the OFF position before connecting the machine to the power source.**
- ✓ **Make a habit of checking to see that the keys and adjusting wrenches are removed before turning on the machine.**
- ✓ **Keep belt guard and blade guards in place and in working order.**
- ✓ **Failure to comply with all of these warnings could lead to serious injury.**
- ✓ **Follow Lock-out Tag-Out procedure before servicing the equipment.**
- ✓ **Stay clear of moving parts which can shear and cut.**

## 4 MACHINE INSTALLATION

Open the package and unpack the machine carefully for the installation. Please check if the machine has any visible damage occurred during shipping, If any damages have occurred during shipping, be sure to advise the shipping carrier and your distributor.

Remove the fixed items inside the machine related to shipping (Ex: wooden block, plastic band). Install the CE12P to the desire location where 110 AC power and



Figure 4.1

compressed air is available within reach of the machine. Connect power, compressed air and adjust pressure to 80 psi, and then open manual valve located near the exit of the CE-12P (Figure 4.1).

After installation, adjust the height of working table to parallel with the height of your production line or conveyor. To test the machine for proper functioning switch on the main breaker switch located below the Control Panel. On the selector switch select manual mode and clear any fault conditions. Press the “Function ON” button on the control panel to activate each manual function

step (see table 4.1 for manual function codes; also located on the machine control panel).

As you go through the manual function codes you should experience some activity associated with each manual cycle step. When fault message display’s 01, side belts should turn on. Next, manual code 02 activates vacuum, code 03 movea vacuum cups forward, code 04 moves vacuum cups back to the original home position, and code 05 turns on the guide cylinder.

Consequently, code 06 moves the front minor flap folding up, code 07 moves rear minor flap folding up, code 08 left major flap folding as code 09 right major flap folding move up. Finally, code 10 releases vacuum and last code 11 pushing cylinder activates.

The “Function OFF” button turns off each code in reverse order or just turn on a particular function code and turn off to observed the on and off cycle. Once the machine manual steps function properly, follow section 5 “Operating Instructions” for the proper operation and set-up of your CE-12P Case Erector.

Manual Function Codes	
01	Side Belt On
02	Vacuum Activated
03	Vacuum Cup Forward
04	Vacuum Cup Backward
05	Guide Cylinder
06	Front Minor Flap Folding Up
07	Rear Minor Flap Folding Up
08	Left Major Flap Folding Up
09	Right Major Flap Folding Up
10	Vacuum Released
11	Pushing Cylinder

Table 4.1

## 5 OPERATING INSTRUCTIONS

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The automate vertical CE-12P Case Erector with powered hopper is suitable for processing a wide range of RSC (Regular Slotted Container) style case sizes without intervention of an operator to form and bottom seal cases. Its use of pneumatics allows the machine to extract a single case using 4 or 6 vacuum cups and to fold all four bottom flaps and seal the bottom center seam with pressure sensitive carton sealing tape. This section will describe the various components and feature of your Case Erector.

Once the CE12P is properly installed with the hopper setup and loaded with boxes the machine is ready for operation (see section 5.6 for set-up procedure). The CE12P has two operating modes: automatic and manual. The operator selects these modes by using a 2-position selector switch located on the main control panel of the machine (Figure 5.2). The CE-12P has installed standard two emergency stops and a control box for the rise and descent of the powered hopper table.

### **5.1 Automatic Mode**

This is the standard operating mode of the machine. In the automatic mode the machine will dispense formed and bottom sealed cases when there are no detected cases on the exit side of the machine. In this mode your CE-12P machine will operate without operator assistance and warn you if it is out of cartons and tape or if low of tape. The CE12-P machine has two options when automatic mode is selected: single cycle and continuous cycle.

<p>Note: When “Power On,” “Manual Reset” buttons are lit solid, and “Single Cycle”, “Continuous Cycle,” “Stop Cycle” buttons are flashing the machine is in automatic mode and is an indication that is ready to operate either single cycle or continuous cycle motion.</p>
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### **5.2 Manual Mode**

The manual mode is used for as a troubleshooting tool and for setting up the machine when changing over to a different case size; see section 5.6 for properly setting up your CE-12P Case Erector machine.

In this mode your CE-12P machine is capable of single stepping through to complete one cycle for easy and fast set-up for changing over different case sizes.

### 5.3 Button Functions

Below table 5.1 shows all the buttons and switch functionality of your CE-12P Case Erector control panel (Figure 5.2).

Control Panel Button Functions	
Power Lamp Indicator	Machine is energized when lamp is on
Power On Button	Reset machine to the state of operation
Single Cycle Button	Cycles one Case when in Automatic mode
Emergency Stop Button	Immediate stop machine operation
Continuous Cycle Button	Continuously Run when in Automatic mode
Cycle Stop Button	Stop machine on cycle and reset fault
Auto-Manual Switch	Selector switch for operating modes
Manual Reset Button	Reset machine position
Function On Button	Turns ON each of the manual functions (Table 4.1)
Function Off Button	Turns OFF each of the manual functions (Table 4.1)
Fault Message Display	Display fault messages and manual functions codes
Alarm Buzzer	Audible alarm for fault conditions
Alarm Reset	Resets fault and mute Alarm Buzzer

**Table 5.1**

Note: When the main power switch is turned ON the Power Lamp will indicate that the machine is energized. By pressing the Power ON button the amber light will flash and the fault message will display 00 if there is no fault conditions. Otherwise if there is a fault condition alarm buzzer will sound and a fault code will display.



**Figure 5.2**



## 5.4 Stack Light Status

Your CE-12P Case Erector is supplied with a status indicator stack light. Table 5.3 shows the legend of each light color machine status. CE-12P will flash **RED** as an indication of a fault. The **AMBER** light without the RED light flashing is an indication of “Low Tape” or “No Tape.” The **GREEN** light shows the operating status of processing boxes in automatic mode.

<b>Stack Light Status Legend</b>	
<b>Red</b>	Fault
<b>Amber</b>	Warning
<b>Green</b>	Ready

**Table 5.3**

Solid Amber – exit sensor is blocked.  
Flashing Amber – Low Tape

Note: Breaker CP3 if tripped “No Tape” and “Low Tape” warning will not work. Machine will continue to run as normal.

Note: Amber light, Red light and “Cycle Stop” button will flash due to a fault condition, once the fault is cleared press and hold “Cycle Stop” button for 3 seconds to clear fault.

## 5.5 Sequence of Operations

1. Vacuum cups approach the hopper and secure to the case.
2. Vacuum cups withdraw a case from the hopper while the top finger retains the trailing major panel thereby breaking the vertical score lines.
3. As the case is withdrawn, a pneumatic squaring arm activates to form the case into a sleeve.
4. With the case in the stationary position, pneumatic tuckers activate to close the minor flaps followed by pneumatic tuckers to fold the major flaps.
5. Upon a signal from the PLC, a pneumatic pushing assembly squares the case and diverts it into the side belt drives.
6. The side drives transport the case past a bottom taping head for bottom sealing and discharge onto a take-away conveyor supplied by the customer.

Note: When “Continuous Cycle” is pressed machine will run continuously. If for some reason the exit sensor is blocked, the machine will form a case and then stops until the blockage is cleared.

## 5.6 Set-up

The set-up process for your CE-12P is simple and does not require any tools or changeover parts to accomplish. The Case Erector is fitted with hand wheels for ease of moving side belts, and upper table to conform to your desired size of cases. Also, it has a powered hopper with an Up-Down control buttons to make adjustments effortlessly.

For the initial set-up of your CE-12P for a particular size of case the Case Erector should be in manual mode and tape roll loaded. Follow the preceding steps below to set-up your CE-12P machine.

1. Obtain a box or case sample you need to process and fold the bottom minor and major flaps of the selected case to set-up the machine. Figure 5.4 shows an example of a bottom folded case.
2. Put the box with the bottom flaps folded under the exit side of the machine (side belts) make sure your side belts are wide enough and the upper table high enough to fit the case (Figure 5.5).
3. Lower the upper table until approximately  $\frac{1}{4}$ " inch of space is between the top of the case and the upper table (Figure 5.5).
4. Adjust the side belts to fit the width of the case.



Figure 5.4

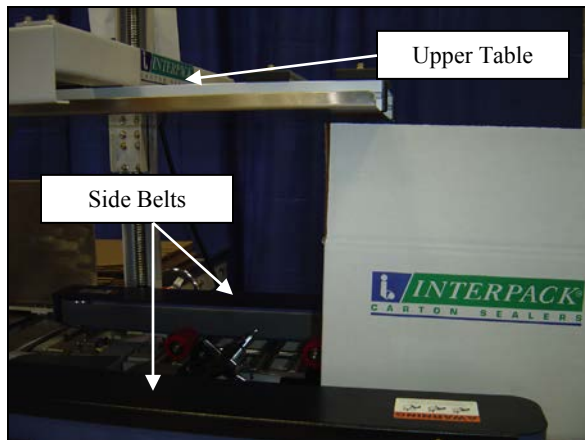


Figure 5.5

5. Place a case—without being folded—vertically in the proper orientation (RH facing Vacuum Cups) in the powered hopper and adjust the hopper table to the upper stopper mechanism or fingers approximately  $\frac{1}{4}$ " of the case separating plate on the case (Figure 5.6, 5.7, 5.8, 5.12).
6. Move the stopper with the pin to the center of the slot of the case (Figure 5.9).
7. While CE-12P is ready to operate in manual mode, press the “Function On” button until vacuum cup mechanism moves forward (Manual function code 03).

8. Press the “E-Stop” button and adjust the vacuum cups so that all four are in place within the length side of the case if the size permits it (Figure 5.7 and 5.11).
9. Move Carton Pushing Mechanism far enough back for case to enter without jamming (Figure 5.10).
10. Reset machine, again make sure is in manual mode; continue pressing “Function On” button until case is in the folding section of the machine; manual code 05 (Figure 5.10).



Figure 5.7

Once the CE-12P is set-up to the desired case size, the operator can now proceed to process cases automatically in automatic mode by switching the selector to “Auto.” The operator has the choice of single cycle a case through to confirm set-up or by pressing “Continuous Cycle” to run the machine automatically to form and bottom sealed cases continuously.

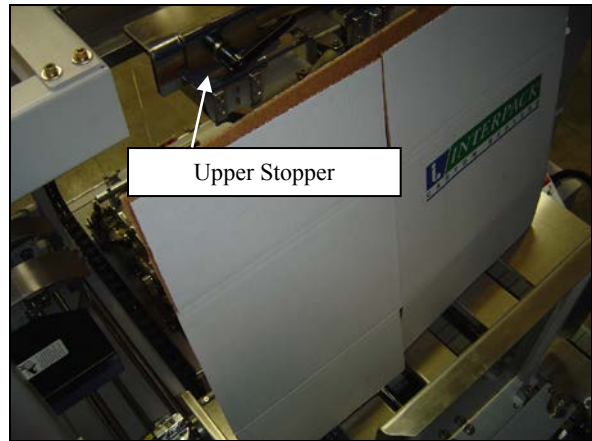


Figure 5.6

11. Adjust the Carton Pushing Mechanism until it squares the case (Figure 5.10).
12. Continue pressing “Function On” button until case is pushed to the side belts—Fault Message display should be manual function code 11 end of set-up.
13. The case should travel through the side belts without any hesitation and sealed on the bottom.

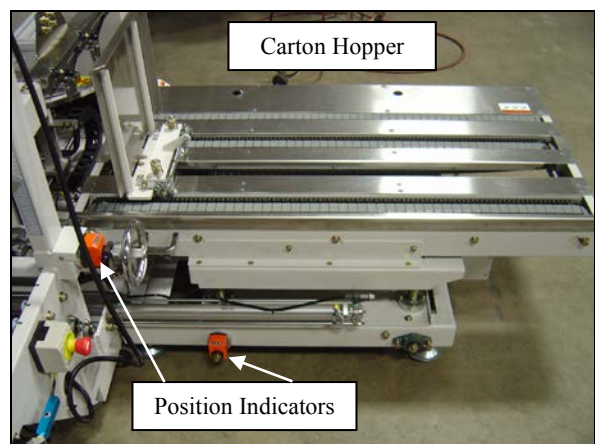


Figure 5.8

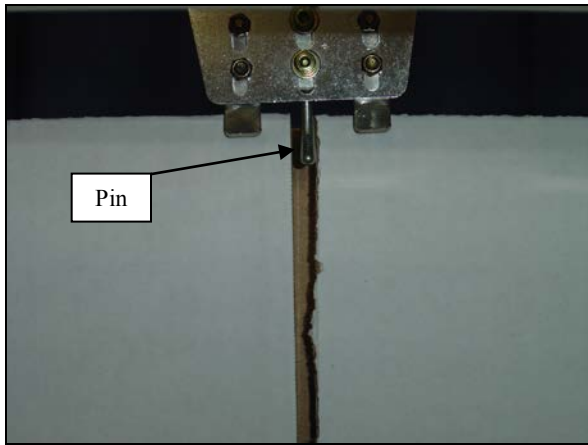


Figure 5.9

Figure 5.9 shows the upper stopper mechanism with two fingers and pin to facilitate the separation of blank cases from each other to process each one individually.

Figure 5.10 show the Carton Pushing Mechanism that squares the case formed already into a sleeve and then bottom flaps folded.

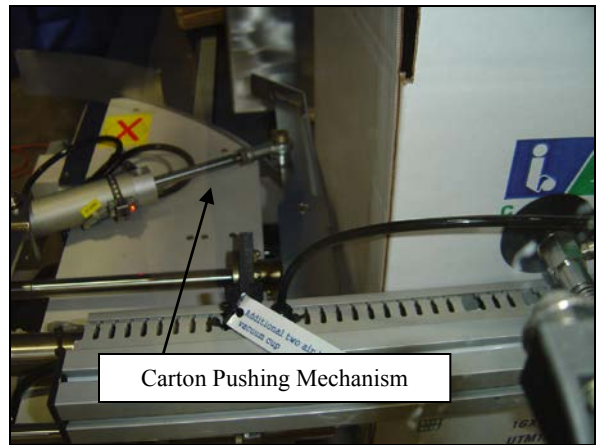


Figure 5.10

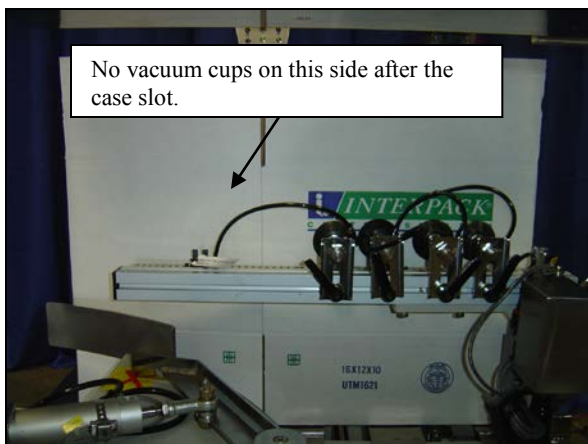


Figure 5.11

Figure 5.11 is the vacuum cup mechanism, it secures the blank case to be pulled away from the hopper into the folding section.

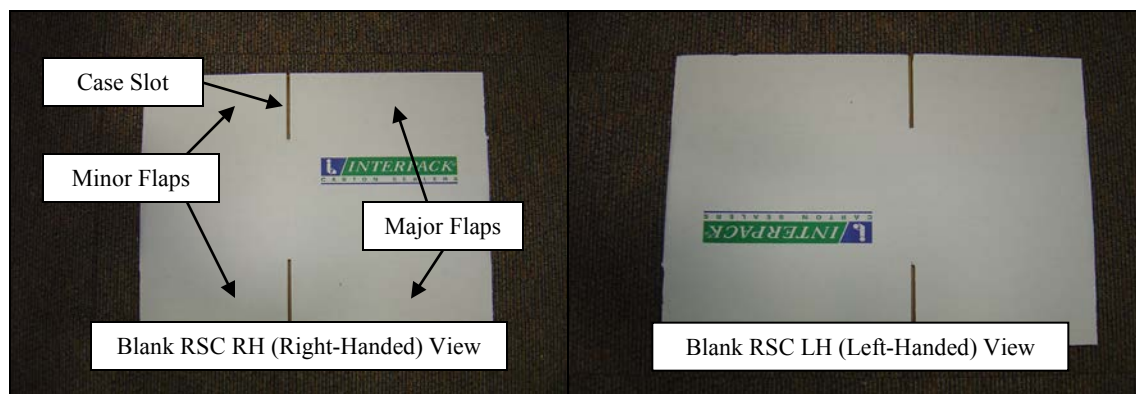


Figure 5.12A

Figure 5.12B

Above figure 5.12 is a RSC blank case oriented right-handed and left handed as shown.

Note: After each set-up of different case sizes it is recommended to write down or create a reference sheet of all four settings of the position indicators for each case size. This will accelerate and reduce your set-up time when going back to the same case size, therefore, eliminating the set-up exercise (Figure 5.13).



Figure 5.13

Figure 5.13 shows the position indicator of one of the hand wheels. There are a total of three hand wheels and four position indicators.

Figure 5.14 is the “No Tape” and “Low Tape” sensors.

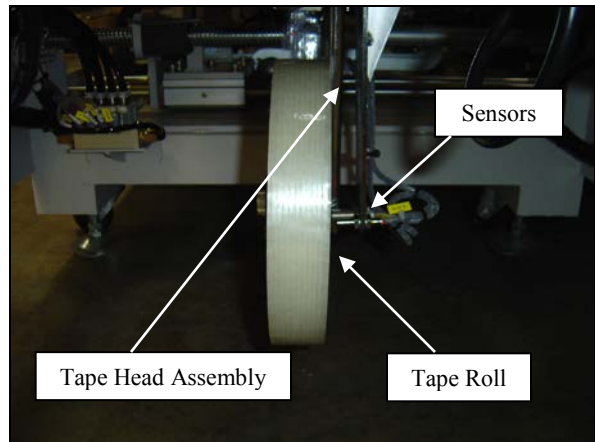


Figure 5.14

## **6 MACHINE SPECIFICATIONS**

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### **6.1 Power Requirements**

#### **Electrical:**

115VAC, 60HZ, 1ph, 5.0A

Standard Electrical equipment:

- Two (2) 1/4 HP gear motors.
- One ½ HP motor
- A neoprene power cord.
- A grounded plug.

#### **Pneumatic:**

10 CFM @ 90 PSI

Contact your distributor for power requirements or other information not listed above.

### **6.2 Specifications**

Throughput Speed - Up to 12 CPM.

Hopper Capacity - Up to 75 cases (2000 lb. test)

Machine Weight - 1,675 lbs.

Discharge Height - 24" – 28"

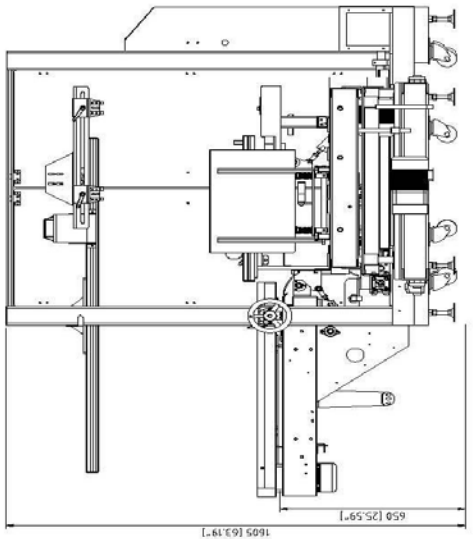
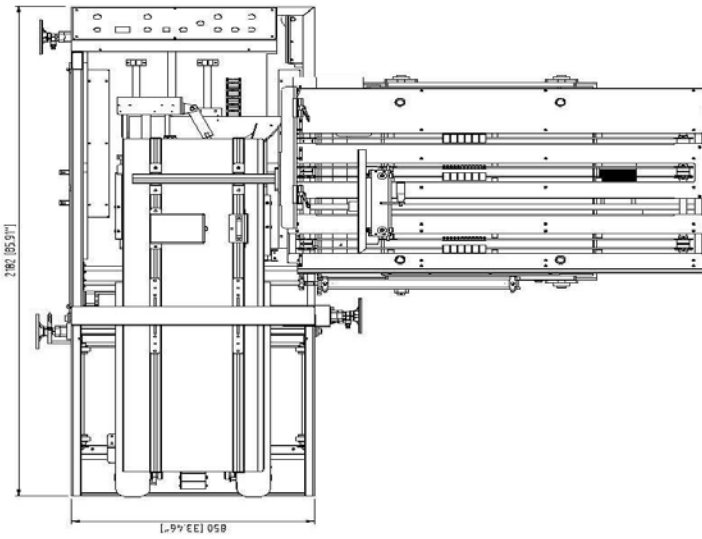
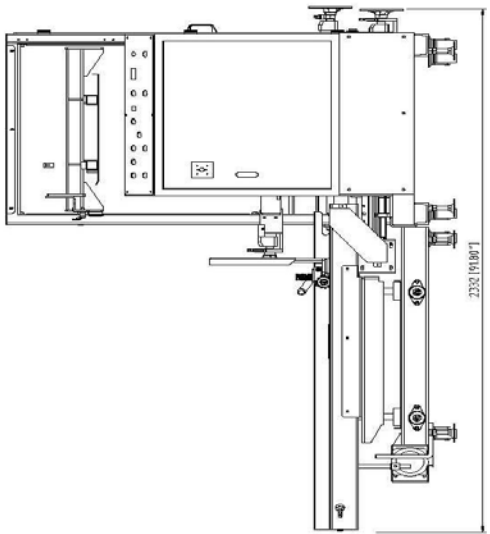
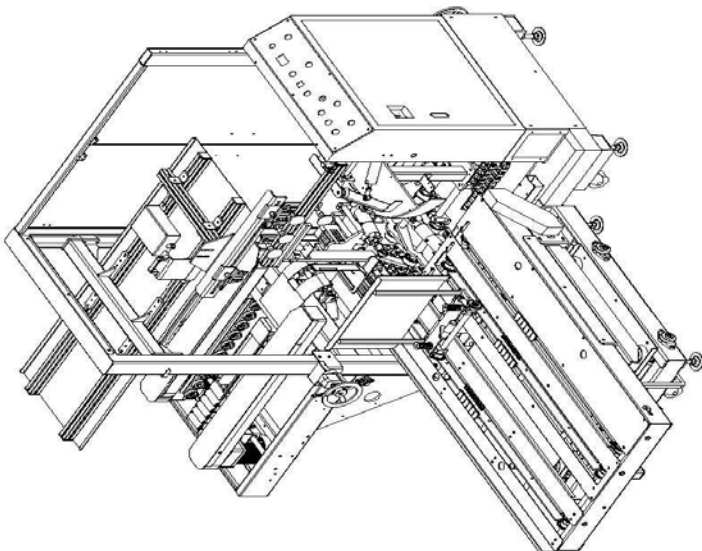
Operating Conditions – Use in a dry, relatively clean environment at 40° to 105° F (5° to 40° C) with clean dry cartons.

Operating Range – 23" x 16" x 22" Max  
10" x 7" x 4" Min

Changeover Information – 7 Operations (5-10 minutes max) No tools, no change parts

# 7 MACHINE LAYOUT

## 7.1 CE-12P LAYOUT





## 8 TROUBLESHOOTING

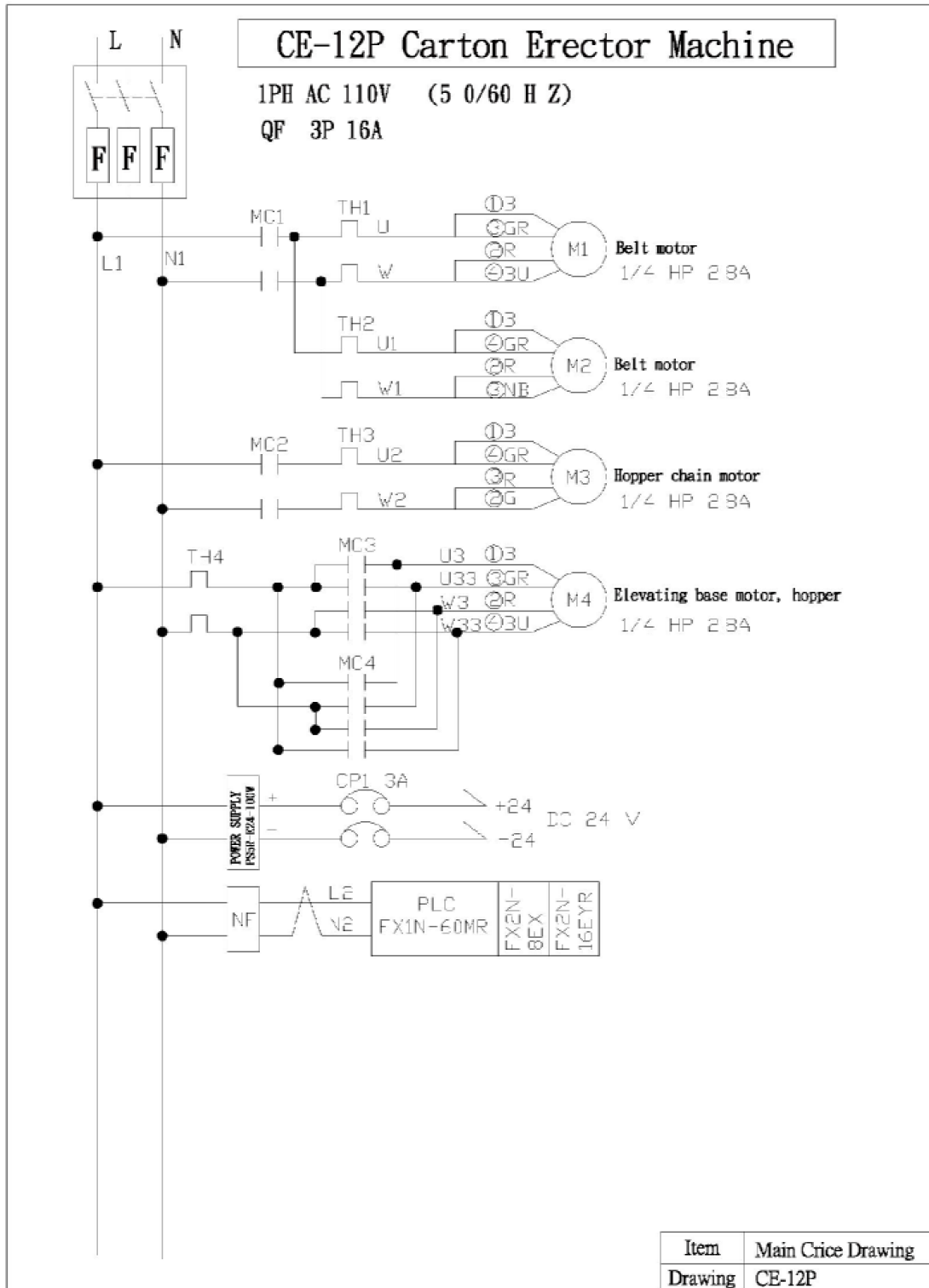
Interpack Carton Sealers are fabricated with high quality components that provide trouble-free operation for a long period. However, should a problem occur, we recommend that you consult the following table before calling for service. If the problem you encounter is not discussed in this table, call Intertape Customer Service Department (see section 1.1 of this document).

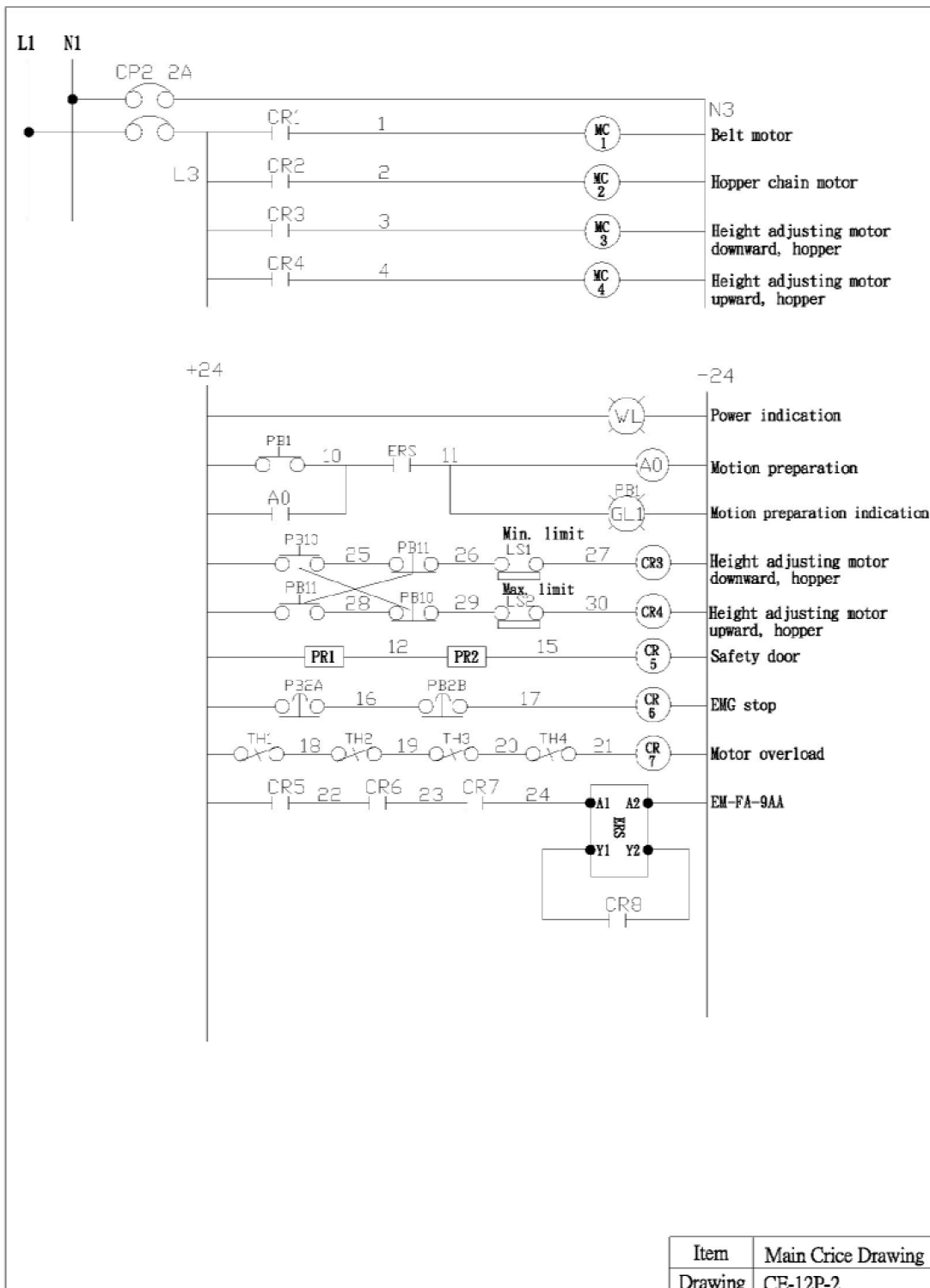
FAULT	TROUBLE	POSSIBLE CAUSES	SOLUTIONS
01	Low Air Pressure	The air is not connected to pressure source or no compression air. Air pressure is no enough. Manual valve is not open.	Connect to compressed air. Set air to 80 psi minimum. Open air valve.
02	Not in Initial Position	Door was opened during machine cycle or emergency stop button was depressed.	Close doors or clear emergency stop buttons, press "Cycle On" button and "Manual Reset" button.
03	Vacuum not detected	The inner filter of Vacuum Inspection needs to be clean. Vacuum Cup is sucking on the folding line.	Clean vacuum assembly. Adjust vacuum cup positions.
04	Hopper Empty	No carton.	Stop and supply carton.
05	Carton withdraw failure	Wrong Cup position. The motion of front / rear / left / right flap folding is not precise.	Adjust Vacuum Cup and Up/down stopper to adequate position. Adjust front / rear / left / right flap folding mechanism.
06	Carton Jam	Left / right belt is too wide or too narrow. Upper working table is too low. Carton Pushing Arm Jammed	Adjust Left / right belt. Adjust upper table. Clear Jam

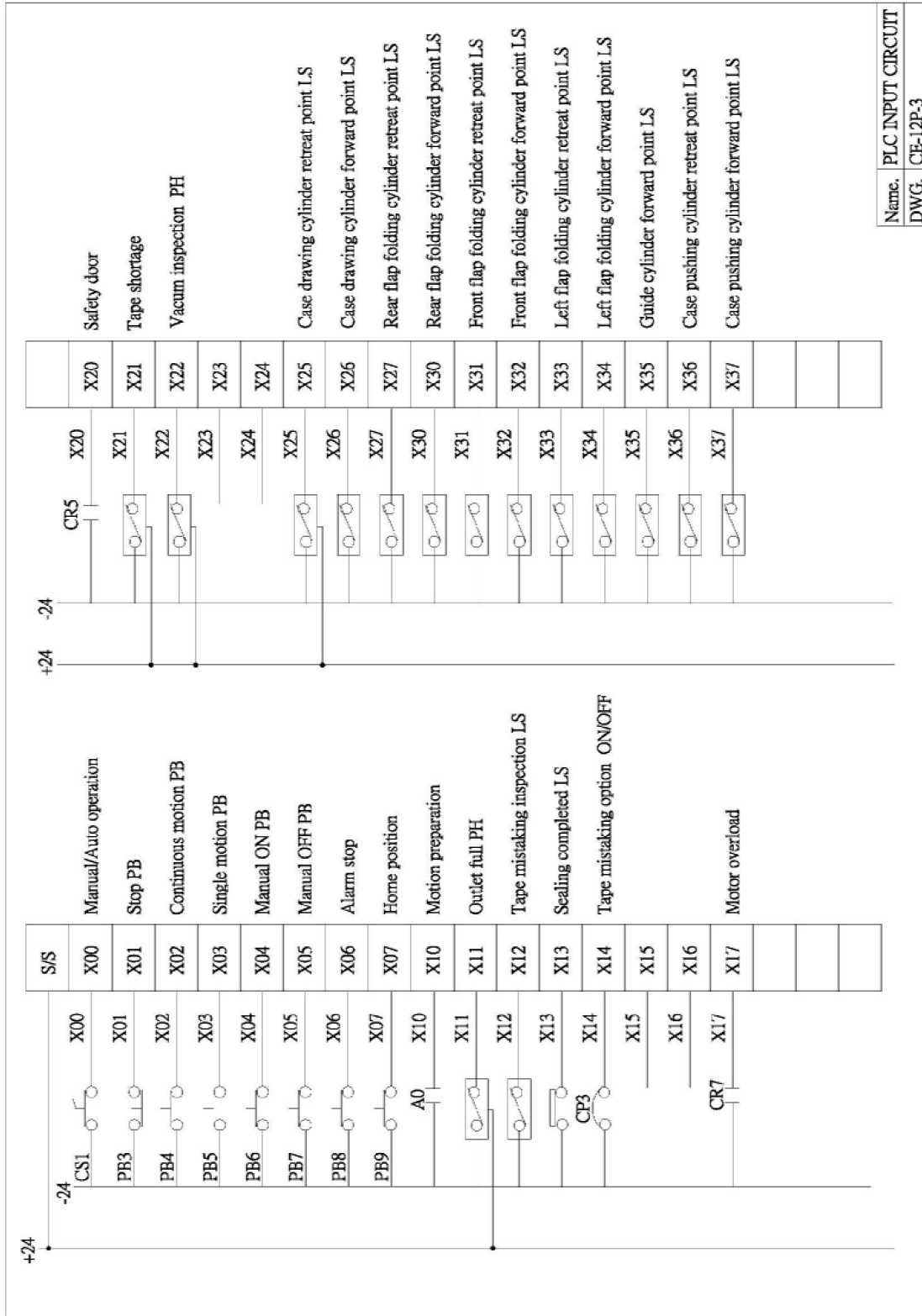
07	Tape Application Problem	No tape. Low Tape	Replenish roll of tape. Roll of tape jam or stuck.
07	Tape Application Problem	No tape. Low Tape	Replenish roll of tape. Roll of tape jam or stuck.
08	Motor Problem	Motor has no power or motor is out of order.	Reset motor overload.
09	Safety Door Open	Active safety door have not been closed.	Close doors.
10	Emergency Stop Not Reset	Emergency Stop button is depressed.	Release emergency stop buttons.
11	Front Flap Folder Cylinder Not in Position	Jam occurred.	Clear jam.
12	Rear Flap Folder Cylinder Not in Position	Jam occurred.	Clear jam.

Note: When Alarm Sounds; press “Alarm Reset” to stop alarm, and press and hold “Cycle Stop” button for 3 seconds to clear Troubleshoot Fault code.

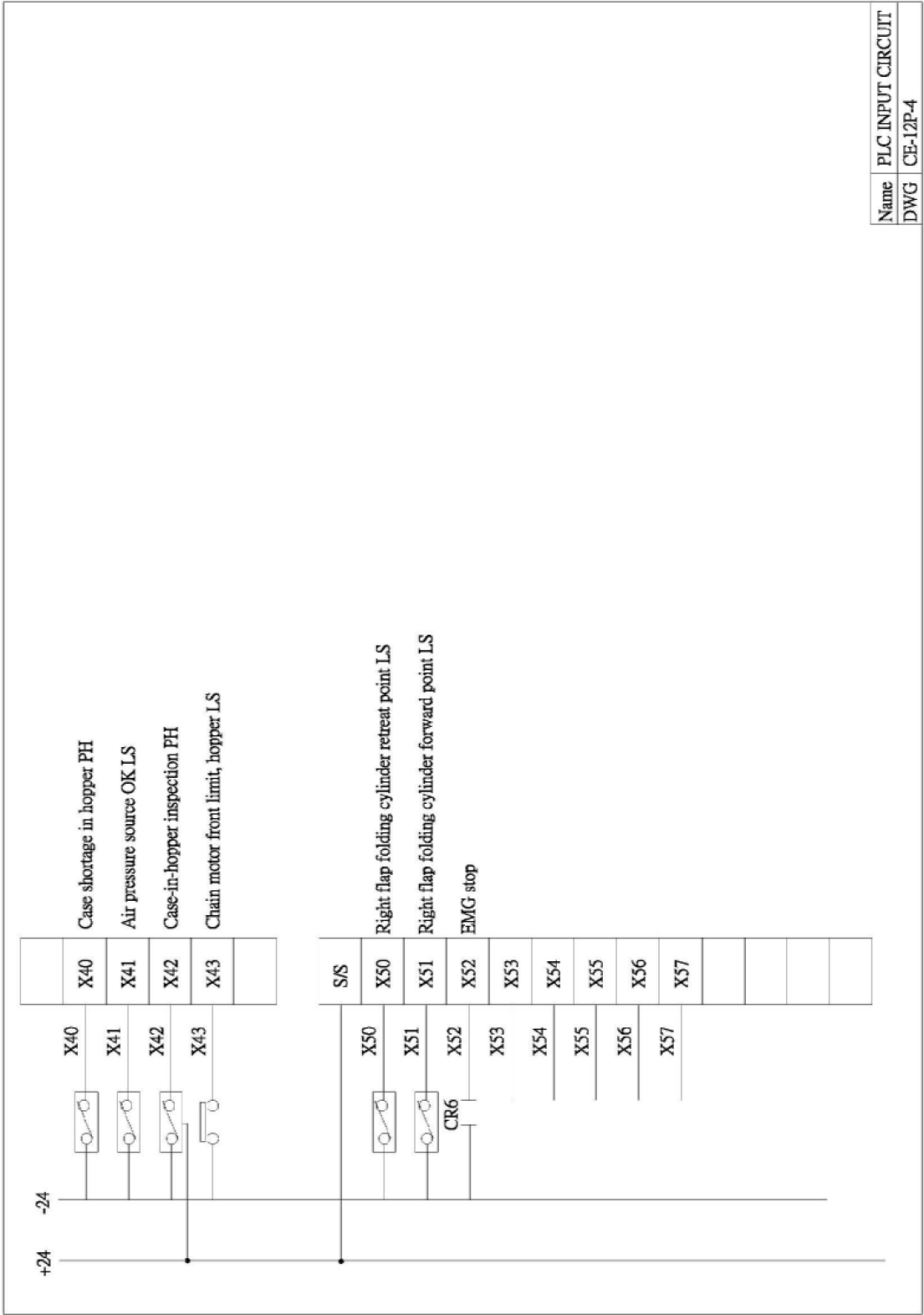
# ELECTRIC CIRCUIT



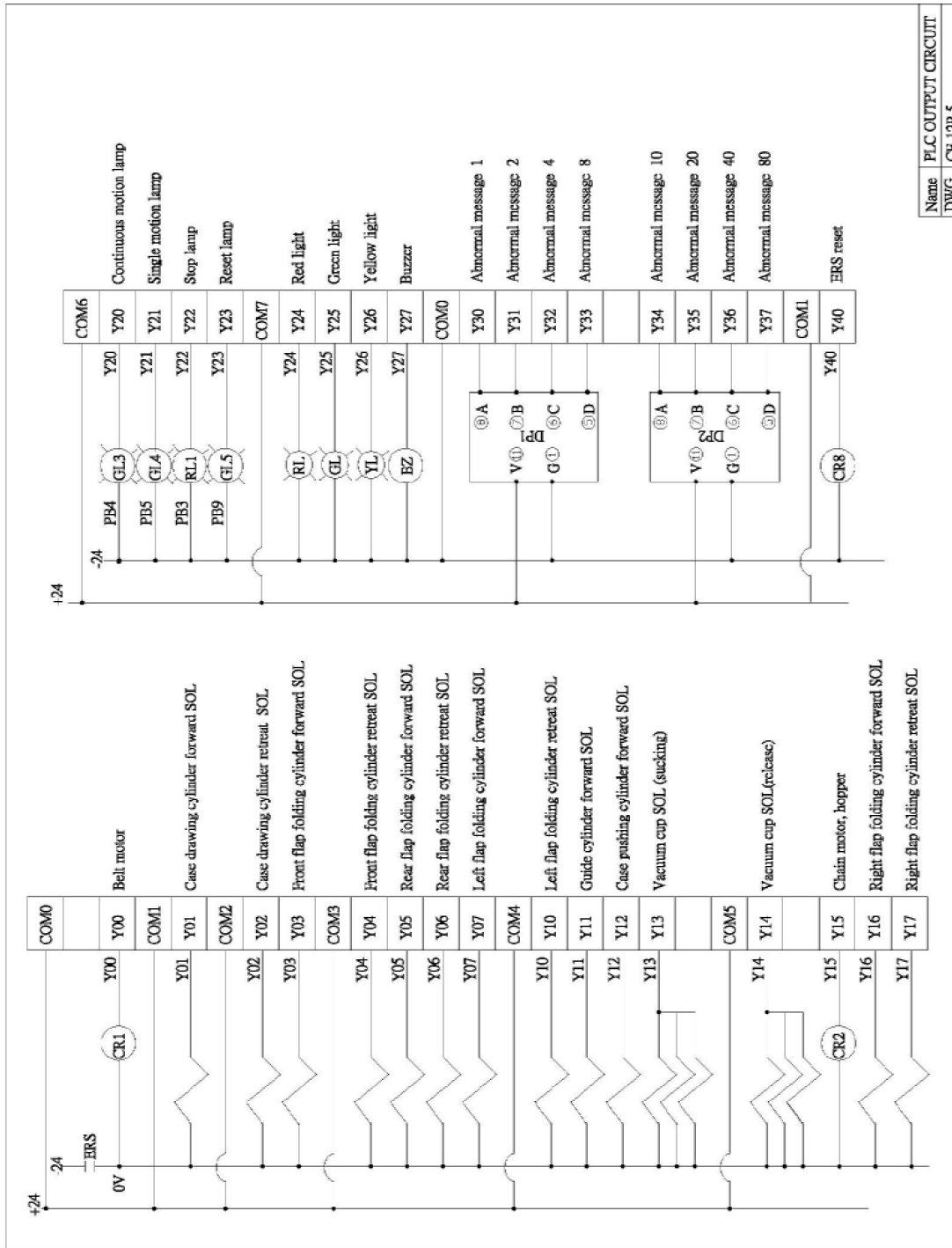




Name.	PLC INPUT CIRCUIT
DWG.	CE-12P-3



Name	PLC INPUT CIRCUIT
DWG	CE-12P-4



Name	PLC OUTPUT CIRCUIT
DWG	CE-12P-5

Item No.	Description	Specification	Brand
QF	Main circuit breaker	XF163B	BREMAS
	Fuse	440016 aM 16A (10. 3*38)	df
NF	Wave filter	YC10T1 125/250 V 10A	YUNPEN
CP1	Circuit protector	MY203 C3	IIAGER
CP1	Circuit protector	MY202 C2	IIAGER
MC1--MC4	Magnetic contactor	LC1D097T AC110V	TE
TH1--TH4	Overload relay	LR3D08 2.5-4A	TE
	Overload reday bracket	LD7B106	TE
POWER SUPPLY	Power supply	PSSR-E24 100W	idec
PLC	PLC	FX1N-60MR	mitsubishi
	PLC extension	FX2N-8EX	mitsubishi
	PLC extension	FX2N-16EYR	mitsubishi
CF3	Circuit protector	MY101 C1	IIAGER
A0	RELAY	MY2NJ AC110V	OMRON
CR1--CR8	RELAY	G5B-4BND DC24V	OMRON
ERS	RELAY	ES-FA-6G	BANNER
CR9	RELAY	MY2NJ DC24V	OMRON
TB	Terminal block (w/ cover)	319109 PIK 4H	Klemsan
	Earth terminal block	334120 AVK 2.5/4T	Klemsan

Parts Legend	
Name	DWG
	CE-12P-5

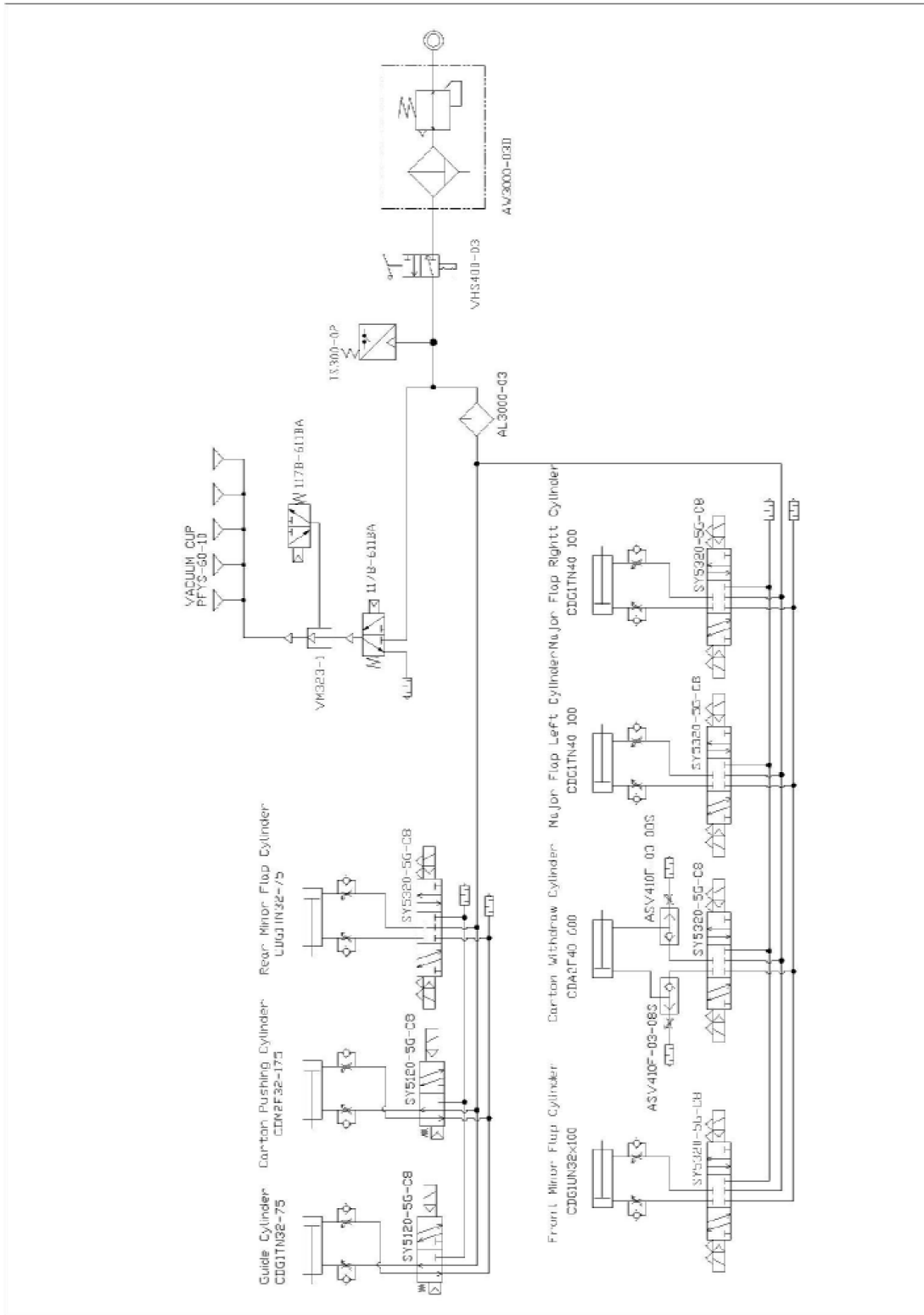


Item No.	Description	Specification	Brand
WL	Power lamp	800EP-PM9D0	AB
PR1-PR2	Safety door switch	GLS-1	OMRON
PB1	Button switch	800EP-LF3,800E-A3L(3*10-NO)	AB
PB1A-PB1B	EMG sop button switch	800EP-MT4,800E-3DL0(3*01-NC)	AB
	Switch box	TB-22	TEND
CS1	Selected switch	800EP-SM22,800E-3DL0(3*10-NO)	AB
PB3	Button switch	800EP-LF4,800E-A3L(3*01-NC)	AB
PB4,PB5,PB9	Button switch	800EP-LF3,800E-A3L(3*10-NO)	AB
PB6	Button switch	800EP-F3,800E-3DL0(3*10-NO)	AB
PB7	Button switch	800EP-F4,800E-3DL0(3*10-NO)	AB
PB8	Button switch	800EP-F2,800E-3DL0(3*10-NO)	AB
PB10	Button switch	800EP-F3,800E-3DL0(3*10-NO)	AB
		(3*01-NC)	
PB11	Button switch	800EP-F2,800E-3DL0(3*10-NO)	AB
		(3*01-NC)	
X11	Sensor switch	E3JM-DS70M4G	OMRON
X12,X25	Proximated switch	E2E-X3D1-N	OMRON
X13,X42	Limit switch	TZ-8108	TEND
X21,X22	Sensor switch	E3HT-DS3E1	OMRON
X26--X37,X50--X51	Cylinder matnetic switch	CS1-U-2M	Air TAC
X40,X42	Sensor switch	E3S-AD12	OMRON
X41	Air pressure switch	IS3000-02	SMC
Y01-Y10	Solenoid valve	SY5320-5G-C8 DC24V	SMC
Y11-Y12	Solenoid valve	SY5120-5G-C8 DC24V	SMC
Y13-Y14	Solenoid valve	ZM101H-K5G-E15 DC24V	SMC
Y24-Y26	Three colors lamp	TPTL-24 LED DC24V	TEND
Y27	Buzzer	DR22B5-EB AC/DC 12/24V	idec
Y30-Y37	Monitor	M71-01DRN2	OMRON
	Left & right covers	M7E-L,M7E-R	OMRON
	Base	NRT-C	OMRON

Name Part List

DWG CE-12P-6

# AIR PRESSURE CIRCUIT



## PNEUMATIC PART LIST

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N9310-700

No.	Part No.	Description	Q'ty
1.	VM323-1	Vacuum pump	1
2.	AW3000-03D	Air filter	1
3.	VHS400-03	Manual valve	1
4.	IS300-02	Pressure inspecting switch	1
5.	AL3000-03	Oil filter	1
6.	SS5Y5-20-04	Solenoid valve w/ base	1
7.	SS5Y5-20-03	Solenoid valve w/ base	1
8.	SY5320-5G-C8	Solenoid valve	5
9.	SY5120-5G-C8	Solenoid valve	2
10.	117B-611BA	Solenoid valve	2
11.	101327601002	Pressure gauge	1
12.	BVLC6-01	Closing valve	1
13.	33060806	Joint	1
14.	31260800	Adapt	1
15.	31260600	Adapt	2

## FRONT FLAP FOLDING ASSEMBLY

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M3303-20B

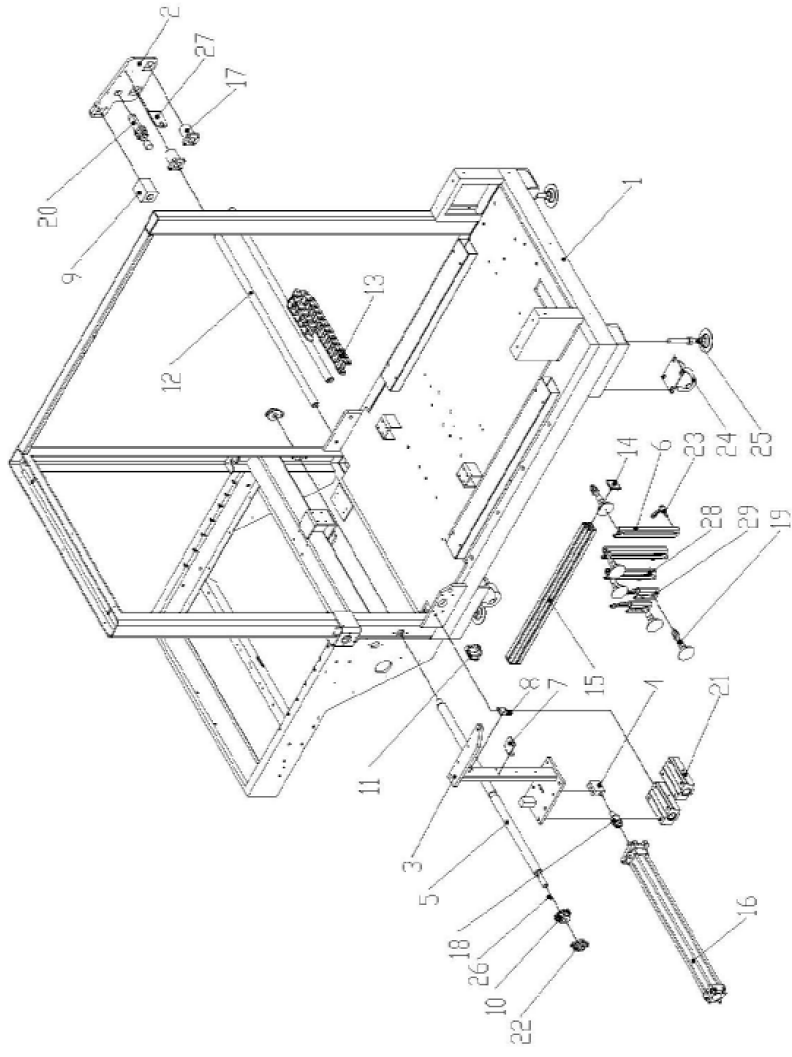
No.	Part No.	Description	Q'ty
1.	M3303-B01	Front flap folder	1
2.	M3303-B02	Front flap folder mounting	1
3.	M3303-B03	Bearing bushing	2
4.	M3303-B04	Outfeed guide plate	1
5.	Q1-201203	Washer	1
6.	81-3210	Cylinder	1
7.	81-3224	Cylinder	1
8.	PHS10×1.25P	Bearing	1
9.	E00-2110	Ball bearing	2

# CASE DRAWING ASSEMBLY

N9310-20A

No.	Part No.	Description	Q'ty
1.	N9310-201	Base frame	1
2.	M3303-A01B	Case drawing cylinder stopper	1
3.	N9310-A02	Case drawing vacuum cup holder	1
4.	M3303-A12	Cylinder pushing base	1
5.	M3303-A05A	Case drawing adjusting screw	1
6.	N9310-A14	Vacuum cup base	2
7.	M3303-A07A	Case drawing wire bracket	1
8.	M3303-A09	Case inspecting base	1
9.	81N-A020	Nut (right thread)	1
10.	RS141317	Chain sprocket	1
11.	E6-017	Sensor guard	1
12.	SF25x824L	Linear shaft	2
13.	NCF2419-22	Flexible wire pipe	1
14.	DEC-4040ABS	Guard	2
15.	81N-4040640L	Aluminum extrusion	1
16.	CDA2F40-600	Cylinder	1
17.	LMK-25UU	Flanged linear bearing	2
18.	FC-1014T	Floating joint	1
19.	PFYS-60-10	Vacuum cup	5
20.	RBC2725	Cylinder	1
21.	LMA25LUU	Connecting linear bearing	1
22.	UFL003	Connecting bearing	2
23.	HJ-63B-M8x20-B	Handle	5
24.	MT030C	Pulley	4
25.	5/8"xL150	Leg	4
26.	5x5x20L	Key	1
27.	M3303-A13	Sensor base	1
28.	81N-A110	Vacuum cup base	1
29.	81N-A130	Vacuum cup base	2
30.	N9310-A32	Safety cover	1
31.	Q1-100606	Washer	1
32.	ASV410F-03-08S	Valve	2
33.	LMA25LUU-AJ	Connecting linear bearing	1

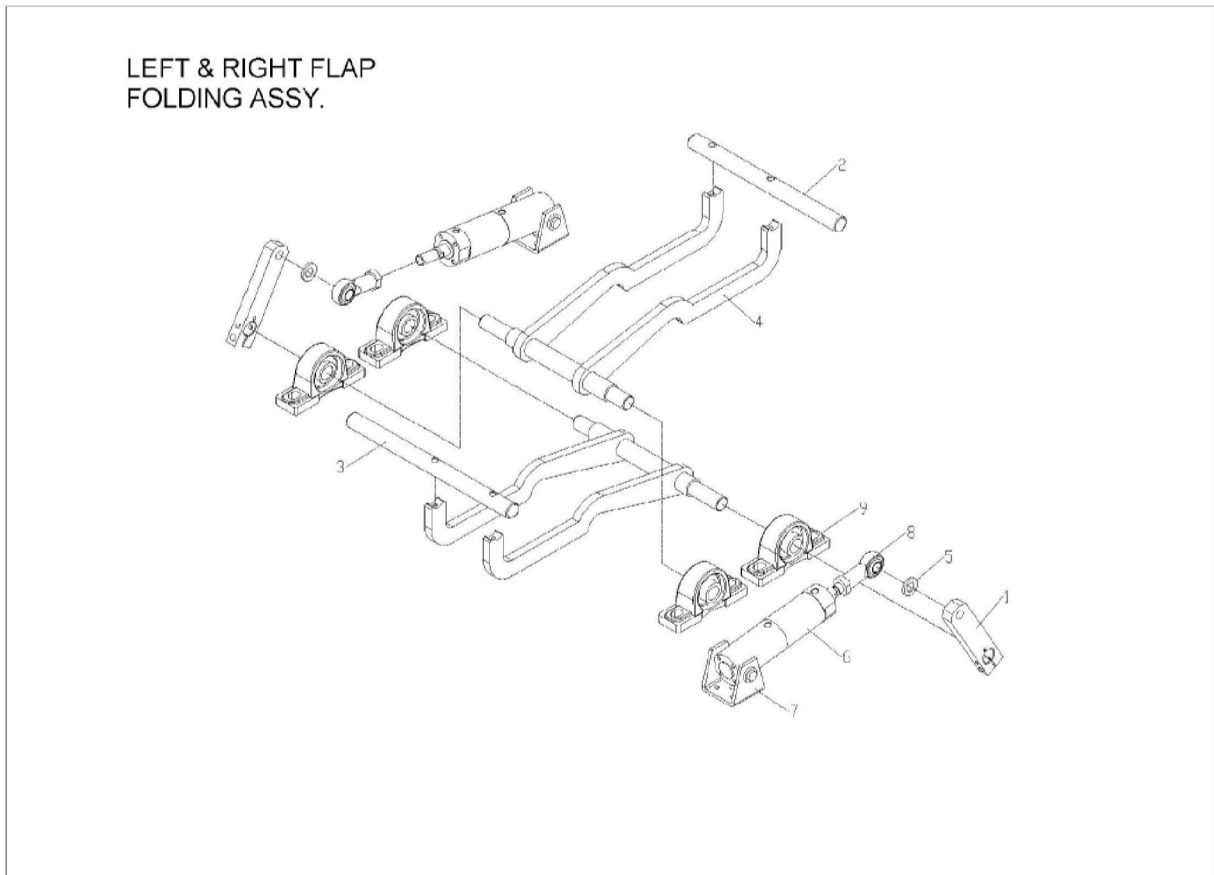
CASE DRAWING ASSY.



# LEFT & RIGHT FLAP FOLDING ASSEMBLY

N9310-20C

No.	Part No.	Description	Q'ty
1.	M3303-C01	Pushing arm	2
2.	M3303-C02	Flap folding rod (1)	1
3.	M3303-C03	Flap folding rod (2)	1
4.	M3303-C04	Flap folding arm	2
5.	Q1-251403	Washer	2
6.	81-4010	Cylinder	2
7.	81-4024	Cylinder base	2
8.	PHS14×1.5P	Rod-eye bearing	2
9.	UCP204	Connecting bearing	4



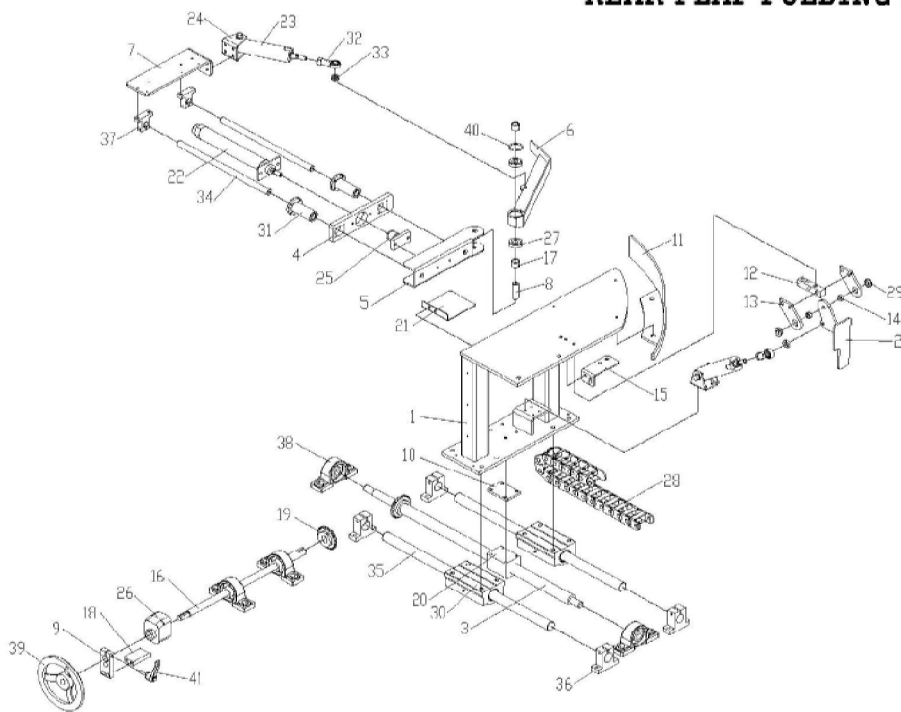
# REAR FLAP FOLDING ASSEMBLY

N9310-20D

No.	Part No.	Description	Q'ty
1.	M3303-D01	Case pushing bracket	1
2.	M3303-D02	Rear flap folder	1
3.	M3303-D03	Case pushing guide screw	1
4.	M3303-D04	Case pushing cylinder base	1
5.	M3303-D05	Case outlet pushing plate	1
6.	M3303-D06	Case pushing assisting plate	1
7.	M3303-D07	Shaft bracket	1
8.	M3303-D08	Pusher shaft	1
9.	818-2062	Lock block, adjusting rod	1
10.	81N-D020	Case pushing washer	1
11.	81N-D040	Erecting guide plate	1
12.	81N-D050	Rear flap folding bracket	1
13.	81N-D060	Rear flap folding bracket	2
14.	81N-D070	Rear flap folding bushing	2
15.	81N-D15A	Supporter	1
16.	81NFA-D09	Adjusting shaft	1
17.	81NFA-D10	Pushing spacer	2
18.	BB81-2G15	Lock block base, adjusting rod	1
19.	BC81-A060	Bevel gear	2
20.	E72-2040	Nut	1
21.	L6303-D19	Solenoid valve guard	1
22.	81N-2F3275	Cylinder	1
23.	81N-TN327	Cylinder	2
24.	CG-032-24A	Cylinder bracket	2
25.	FC-1010F	Floating joint	1
26.	DA0912A-635-I-17-O	Gauge	1
27.	E00-2110	Ball bearing	2
28.	0450-21	Wire guard	1
29.	LF-1910ZZ	Ball bearing	2
30.	LMA25LUU	Connecting linear bearing	2
31.	LMF-16LUU	Flanged linear bearing	2
32.	PHS10×125P	Rod eye bearing	2

No.	Part No.	Description	Q'ty
33.	Q1-201204	Washer	2
34.	SF16×315L	Linear shaft	2
35.	SF25×575L	Linear shaft	2
36.	SH25A	Shaft bracket	4
37.	SH16A	Shaft bracket	2
38.	UCP203	Connecting bearing	2
39.	HO-6"	Hand wheel	1
40.	C-R32	C circlet	1
41.	HJ 45B M6×25 B	Handle	1
42.	45B M6×25	Indicating finger	1

### REAR FLAP FOLDING ASSY.

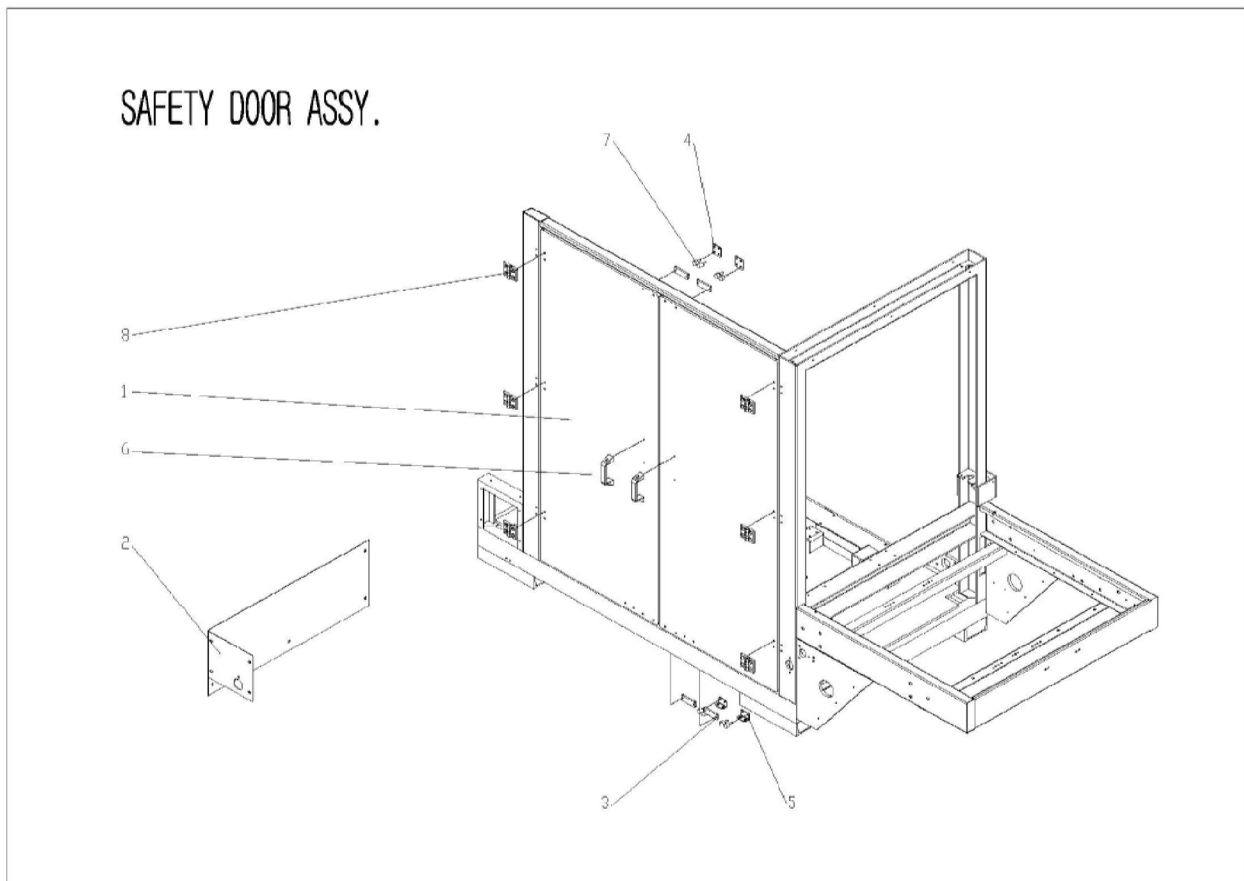




# SAFETY DOOR ASSEMBLY

N9310-20E

No.	Part No.	Description	Q'ty
1.	M3303-E01	Door	2
2.	M3303-E06	Control box cover	1
3.	L6303-E06	Magnet plate	4
4.	L6303-E11	Top magnet base	2
5.	L6303-E12	Bottom magnet base	2
6.	HAND-14121	Handle	2
7.	FDM0640-8A	Magnet	8
8.	FHI0645-B	Hinge	6

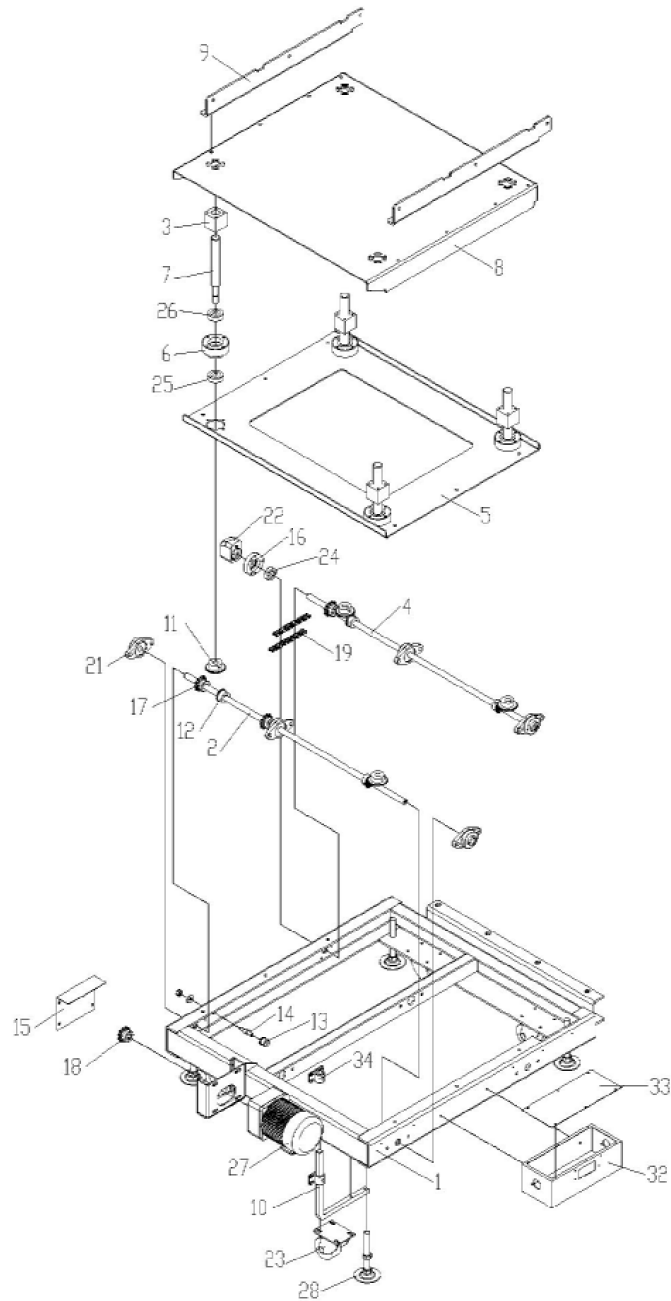


# HOPPER BASE

N9310-100A

No.	Part No.	Description	Q'ty
1.	M3303-114	Base frame	1
2.	M3303-102	Driving shaft	1
3.	M3303-103	Nut (L&R)	4
4.	M3303-104	Driven shaft	1
5.	M1321-135	Elevating fix plate	1
6.	M3303-106	Elevating collar	4
7.	M3303-107	Elevating screw (L&R)	4
8.	M1321-138	Elevating unit	1
9.	M3303-109	Table bracket	2
10.	N9310-110	Limit fix rod	1
11.	M3303-111	Gear (1)	4
12.	M3303-112	Gear (2)	4
13.	E1-026	Idle pulley	1
14.	81-CA140	Idle shaft	1
15.	81NFA-109	Motor chain cover	1
16.	BB81-3050	Bearing base	1
17.	RS141117	Chain sprocket	2
18.	RS141118	Chain sprocket	1
19.	RS40×99	Chain	1
20.	A72-1370	Limit switch	2
21.	UCFL203	Connecting bearing	5
22.	DA0912A-4.23-E-17-O C	Gauge	1
23.	MT030C	Pulley	4
24.	6203ZZ	Ball bearing	1
25.	6303ZZ	Ball bearing	4
26.	7303A ZZ	Ball bearing	4
27.	E00-2080-R60	Motor (1/4HP, 1:60)	1
28.	5/8"×150L	Leg	4
29.	M3303-120	Finger	1
30.	81N-1250	Sticker fix plate	1
31.	RS40×43	Chain	1
32.	N9310-130	Wiring box	1
33.	E6-002	Wiring box cover	1
34.	E3-043A	Bracket	2

# HOPPER BASE

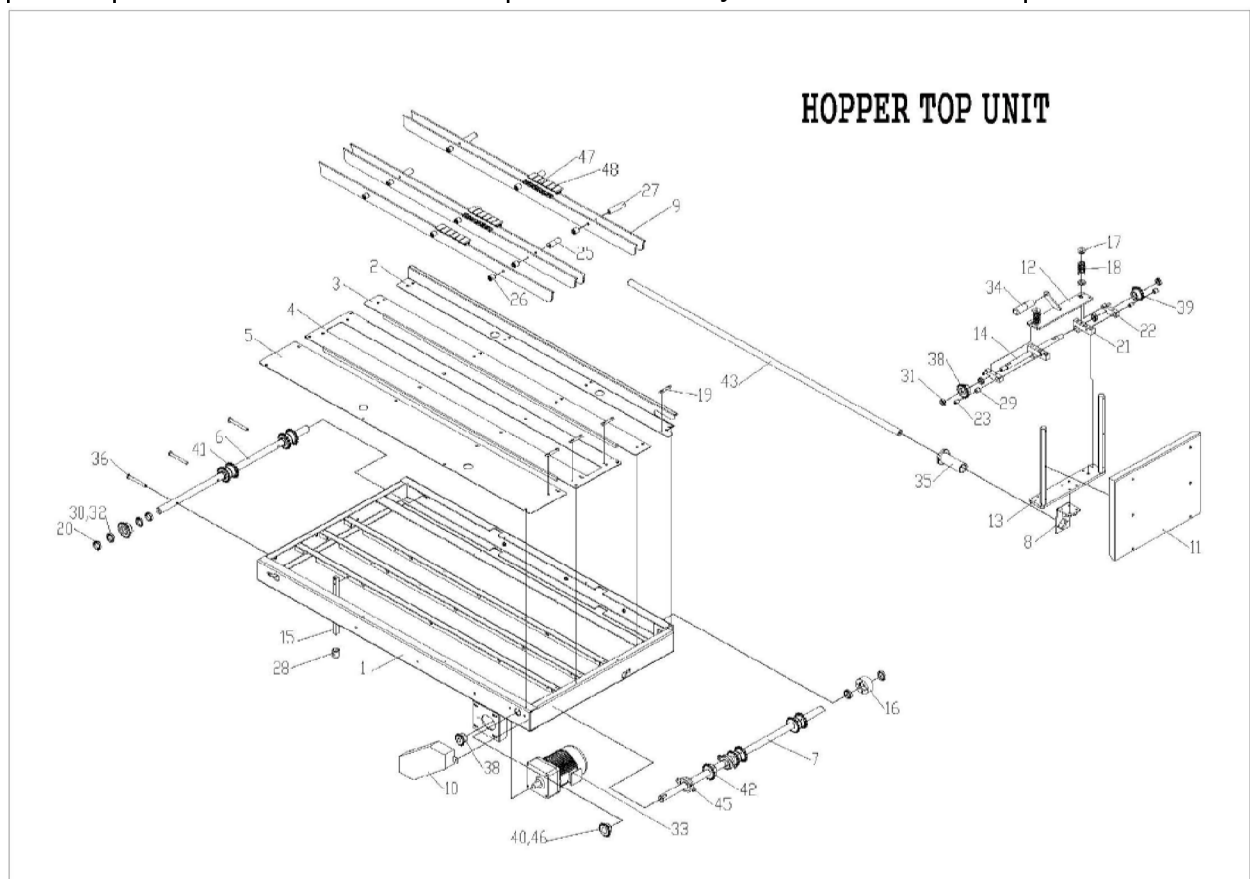


# HOPPER TOP UNIT

N9310-100B

No.	Part No.	Description	Q'ty
1.	M3303-161	Hopper top unit	1
2.	M3303-162	Hopper table (1)	1
3.	M3303-143	Hopper table (2)	1
4.	M3303-144	Hopper table (3)	1
5.	M3303-145	Hopper table (4)	1
6.	M3303-146	Driven shaft	1
7.	M3303-147	Driving shaft	1
8.	M3303-148	Case pushing base	1
9.	M3303-149	Chain guide rail	5
10.	M3303-150	Chain guard	1
11.	M3303-151	Case pushing plate	1
12.	M3303-152	Bracket plate	1
13.	M3303-153	Pusher base	1
14.	M3303-154	Pusher shaft	1
15.	M3303-163	Sensor sliding base	1
16.	M3303-140	Bearing bush	1
17.	81N-3130	Spring fixer	4
18.	81N-3180	Spring	2
19.	K9319-139	Case stopping stick	4
20.	K9319-141A	Collar	6
21.	K9319-163	Shaft bracket	2
22.	K9319-165	Bracket (L&R)	2
23.	K9319-168	Turning shaft	2
24.	818-107A	Washer	4
25.	LA316-118	Holding shaft (1)	3
26.	LA316-152	Holding shaft (1)	9
27.	BA81-1290	Holding shaft (2)	3
28.			
29.	EZ-064	Bushing	2
30.	6805ZZ	Ball bearing	10
31.	6902ZZ	Ball bearing	4
32.	E00-2080-R60	Ball bearing	2
33.	1/4HP, 1:60	Motor	1

No.	Part No.	Description	Q'ty
34.	M10	Handle	1
35.	LMF25LUU	Flanged linear bearing	1
36.			
37.	M10×90L	Hex. socket screw	3
38.	RS141018	Chain sprocket	1
39.	RS141315A	Chain sprocket	2
40.	RS141325	Chain sprocket	1
41.	RS14150E	Chain sprocket	5
42.	RS141525A	Chain sprocket	5
43.	SF25×1442L	Linear shaft	1
44.	A72-1370	Limit switch	1
45.	UFL005	Connecting bearing	2
46.	RS40×43	Chain	1
47.	RS40×222	Chain	2
48.	843-K144	Chain	2
49.	8×7×25L	Round end key	2
50.	8×7×50L	Round end key	2



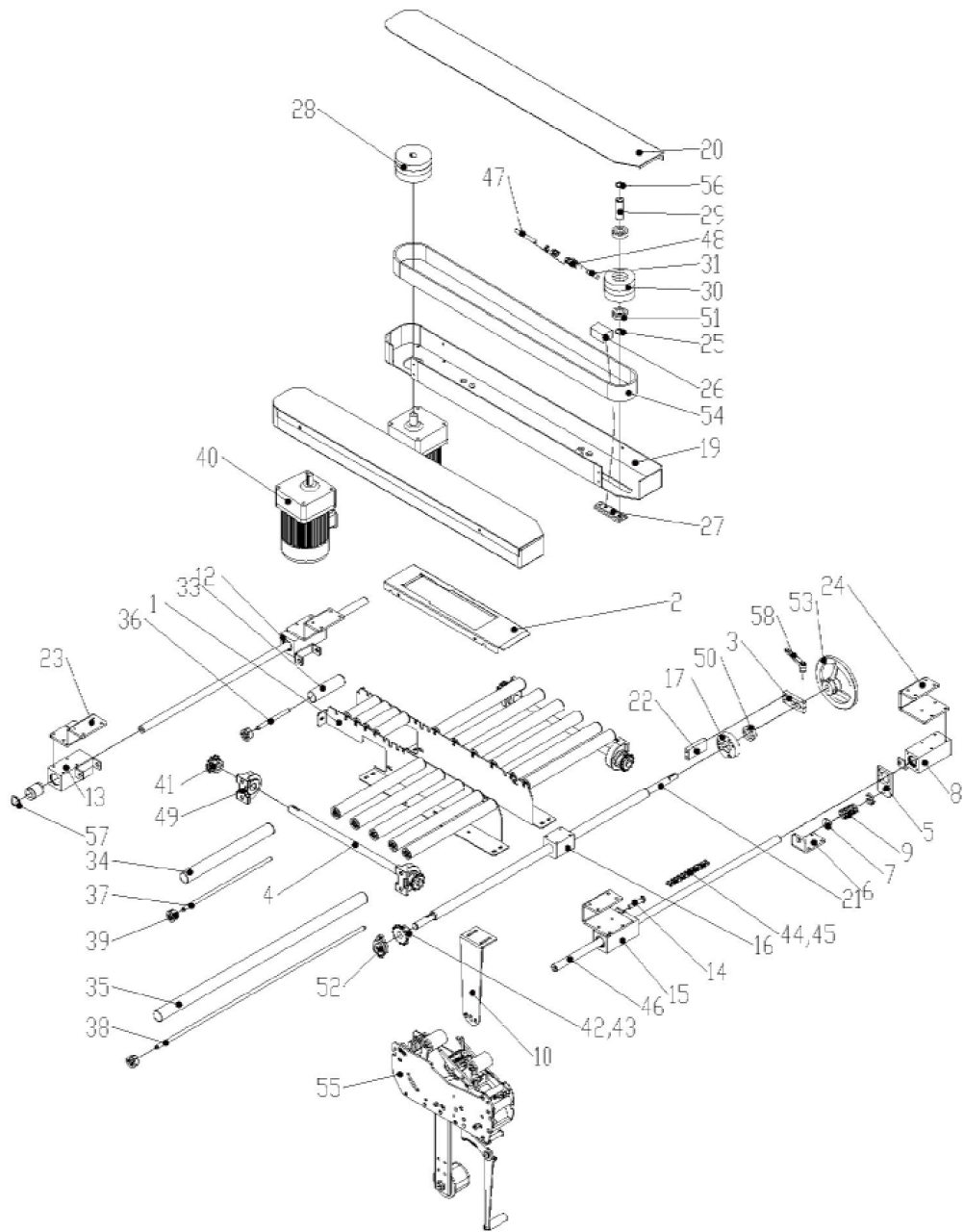
# BOTTOM SEALING ASSEMBLY

N9310-300

No.	Part No.	Description	Q'ty
1.	N9310-302	Tape head holding unit (L&R)	2
2.	N9310-305A	Tape head cover (2")	1
3.	818-2062	Lock block, adjusting rod	1
4.	81N-3070	Driving shaft	2
5.	81N-3100	Spring driving plate	1
6.	81N-3110	Spring fix plate	1
7.	81N-3130	Spring fixer	2
8.	81N-3170	Chain moving base (FR)	1
9.	81N-3180	Spring	1
10.	81N-326C	Tape sensor base	1
11.	81N-328A	Size finger	1
12.	A72-2090	Chain driving base (RR)	1
13.	A72-2100	Chain driving base (RL)	1
14.	A72-2170	Chain adjusting screw	1
15.	A72-2180	Chain driving base (FL)	1
16.	E72-2040	Nut (right thread)	1
17.	BB81-3050	Bearing bushing	1
18.	BB81-310A	Proximate switch base	1
19.	M3303-301	L&R belt base (L&R)	2
20.	M3303-303	Top cover, belt base (L&R)	2
21.	M3303-306	L&R adjusting rod	1
22.	M3303-408	Lock block, adjusting rod	
23.	FA310304	Supporting base (1) (L&R)	2
24.	FA310305	Supporting base (2) (L&R)	2
25.	M2005R00	Spacer ring	2
26.	M2007R01	Die block	2
27.	M2009R01	Tension sliding plate	2
28.	UPM-1029	Driving alu. pulley	2
29.	M2103	Driven alu. pulley	2
30.	111501	Driven pulley	2
31.	113300	Die block shaft	2
32.	DA0912A-6.35-E-17-O	Gauge	1

<b>No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Q'ty</b>
33.	ROL-0109	Roller	5
34.	ROL-0321	Roller	12
35.	ROL-0774	Roller	1
36.	ROS-0124	Roller shaft	5
37.	ROS-0338	Roller shaft	12
38.	ROS-0789	Roller shaft	1
39.	E00-1200	Plastic bush	36
40.	E00-2080	Motor	1
41.	RS141120	Chain sprocket	4
42.	RS141317	Chain sprocket	1
43.	RS40×28	Chain	1
44.	RS40×57	Chain	4
45.	RS40	Key	8
46.	SF20×845L	Linear shaft	2
47.	U73-2070	Hex. screw	2
48.	U73-2080	Die spring	2
49.	UCPA204	Connecting bearing	4
50.	6203ZZ	Ball bearing	1
51.	R12ZZ	Ball bearing	4
52.	UFL003	Connecting bearing	1
53.	HO-6"	Hand wheel	1
54.	81N-3046	PVC belt (1855L×50W)	2
55.	HSD-2000ET-II	Tape head	1
56.	C-S19	C cirlet	2
57.	C-R32	C cirlet	8
58.	HJ-45B-M6×25-B	Handle	1

# BOTTOM SEALING ASSY.



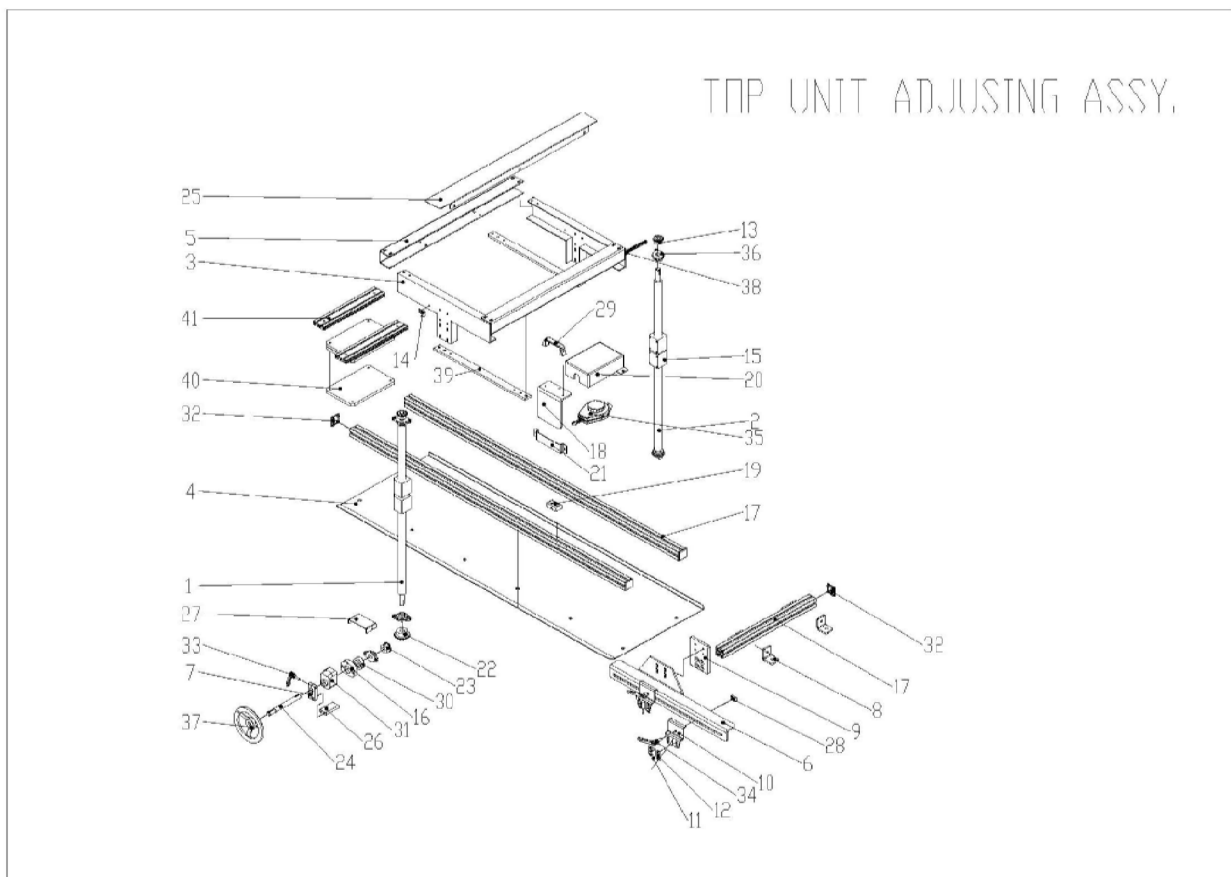


# TOP UNIT ADJUSTING ASSEMBLY

N9310-400

No.	Part No.	Description	Q'ty
1.	N9310-401	Active elevating guide rod	1
2.	N9310-402	Elevating guide rod	1
3.	N9310-403	Top unit side plate (L&R)	2
4.	N9310-404	Top table	1
5.	N9310-406	Top beam (L&R)	2
6.	N9310-411	Top stopping base	1
7.	81N-3241	Lock block, adjusting rod	1
8.	81N-4080	Bracket	4
9.	81N-4090	Top stopping cylinder base	1
10.	81N-413C	Top stopping plate	2
11.	81N-415A	Case separating finger	1
12.	81N-415B	Case separating plate	4
13.	E00-4090	Chain sprocket	2
14.	E00-4350	Indication	1
15.	E72-2040	Nut (right thread)	4
16.	BB81-1D08	Bearing bush	1
17.	BB81-4050	Top table frame	1+2
18.	BB81-4100	Plate	1
19.	BB81-4120	Guide base	1
20.	BB81-4210	Guard	1
21.	BB81-4250	Bracket	1
22.	M3303-111	Gear (1)	1
23.	M3303-112	Gear (2)	1
24.	M3303-405A	Height adjusting shaft	1
25.	M3303-407	Top beam cover	1
26.	M3303-408	Lock block base, adjusting rod	1
27.	M3303-409	Adjusting rod guard	1
28.	60049	T nut	2
29.	HAND-14121	Handle	1
30.	6203ZZ	Ball bearing	1
31.	DA0912A-4.23-I-17-O	Gauge	1
32.	DEC-4040(ABS)	Guard	5

No.	Part No.	Description	Q'ty
33.	HJ-45B-M6-25-B	Handle	1
34.	HJ-63B-M8-20-B	Handle	2
35.	SB-1200	Balancer	1
36.	UFL003	Connecting bearing	5
37.	HO-6"	Handle	1
38.	RS35×176	Chain	1
39.	N9310-412	Top unit adjusting plate	2
40.	M3303-410	Weight balance block	3
41.	15*60*330L	Weight balance compressing plate	2



# ELECTRIC CONTROL BOX

N9310-600

No.	Part No.	Description	Q'ty
1.	M3303-601	Electric control box	1
2.	81NFA-602	Electric control box cover	1
3.	81NFA-603	Wiring plate	1
4.	M3303-604	Electric control box name plate	1

