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Operation Manual for Automatic Label Shrinking Machine (SL-100)

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Chapter 1 Preamble

Thank you for choosing automatic shrinkable label inserting machine from our company. In order to fully exert the performance of various parts of this machine, and for proper and safe operation by operators, please make sure to read this manual carefully before operation. We believe that this manual will assist to acquaint you with this machine soon and you will be more and more satisfied with the operation.

The body of this label inserting machine adopts a great deal of aluminium alloy, combined with anode treatment and 304 stainless steel, enabling the overall structure of the machine to be more robust and durable. As for mechanical performance, its modular and human-oriented design ensures easier operation with high speed and more convenient style change. Human-machine interface is adopted for the control circuit and it is easy to learn. The excellent circuit design further ensures the label inserting speed of this machine to be in the leading position internationally. Due to its completely new design concept, not only lots of mechanical adjustment has been eliminated, but also the accuracy of label cutting and production speed has been further enhanced. The followings will be the detailed description on mechanical operation of this machine.

Chapter 2 Safety criterion and regulations

2-1 Safety requirement on installation

Upon arrival at the site and before installation and operation, check the machine to see if there is any damage. Check if the frame is distorted, if the electric cabinet is affected with damp; particularly check if there is any damage mark (for example collision mark) on any parts of the machine. In case of being unable to determine, please verify it with the manufacturer. In case of any damage, please inform the carrier immediately.

Before complete positioning of the machine, do not remove the package. Forklift can be used for handling this machine. Insert the fork from the bottom of the front side of the machine. Do not use wire rope for lifting and handling. Strict compliance with the above requirement is the precondition of safety installation, otherwise it may result in personal injury and damage to the machine.

Do not cover or block the ventilation fan motor in the electric cabinet with anything to ensure proper heat dispersion. Otherwise overheating of electric elements may result in damage to or unstable operation of the machine.



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Make sure the power supply complies with the working power of this machine, and inconsistent voltage may damage the electric elements.

2-2 Safety measures on maintenance and repair

- ◆ The operator handling operation of the electric and mechanical assemblies shall be subject to training and authorization.
- ◆ Only trained and authorized personnel can carry out maintenance of the electric and mechanical assemblies of the machine, who shall be professional familiar with mechanical installation and electric repair with certain level of experience.
- ◆ Carry out overhaul and maintenance of the machine regularly to find possible safety hidden trouble and remove it immediately to avoid possible big losses.
- ◆ Maintenance and repair operation on the machine with power on is absolutely forbidden.
- ◆ Maintenance and repair operation of the electric elements can only be carried out after switching off the breaker for overall circuit in the cabinet and turning off the power supply of the machine.

*** Attention:**

- Even though the power of the machine is turned off, there are some electric elements in the circuit charged with electricity.
- Check all assemblies and transmission system of the machine at least once a year. In case of operation in serious rusty environment, the check frequency shall be increased.

-- Safety measures on repair

All installed parts shall be maintained by dedicated persons to avoid damage to the machine and personal injury. In case of any defect, the machine shall be repaired immediately and the authorized technician shall remove the defect in time. After each repair, check the safety protection device of the machine before start of running.

Do not use welding or flame to cut any parts of the machine, unless under the condition that the cutting will not lead to fire and it will not damage any other parts.



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Relevant protection measures shall be taken for the machine. In case of fire situation, fire extinguisher shall be available.

- Do not climb on the machine, and safe platform or scaffold shall be used.
- During lifting or handling of the parts with mechanical equipment (crane etc.), make sure to be careful even for very light components because there still exists risk of slipping down or losing balance.
- In case a damaged component cannot be repaired, it shall be collected from the manufacturer upon request (only within the guarantee period). Do not measure and manufacture it by yourself because this may damage other components due to mismatch with one another.

2-3 Pre-inspection

Inspection upon arrival of the machine at the site

Check if the machine is in good condition. In case of damage or incomplete package, please inform the carrier immediately.

Please check if the received machine is the same as you purchased, and check if the model indicated in the nameplate is the same as purchased.

Please check if all accessories for site installation have been received, and if they are complete and free from damage.

For handling, please **consider 3 dimensions** and installation clearance to make sure that there will be sufficient space for all connections and maintenance operations.

- Handle the machine with forklift from specified location, and lifting off is not allowed.
- There shall be enough carrying capacity at the site for installation of the machine, or at least there shall be proper tightening measures.
- Proper space shall be left at the left and right sides of the machine to ensure air flow and ventilation of electric units.
- There shall be enough support points at the right installation locations.



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- Pushing, pressing, and prizing the cabinet of the machine are not allowed. The bottom frame of the machine is the only part carrying the load.

2-4 Notice on electric parts

The standard environment to operate label inserting machine shall be as followings:

- Ambient temperature: -10°C to +40°C
- Installation location: Indoors
- Frequency of power supply: 50±5 HZ
- Voltage: 1Ø210-230VAC
- Power: 1.5KW

- Safety requirement on electric parts

Only professional persons can operate the electric units. Particularly, before any handling in the control cabinet, all power supple to the machine shall be disconnected. The main power supply may be switched off by disconnecting the main circuit breaker.

- Electric shock risk: Even though the main power of the machine is turned off, or the main circuit breaker is disconnected, there are some electric elements in the circuit charged with electricity.
- Burning risk: The current may lead the electric elements to be temporary or long period hot, be careful when touching power line cable, control cable, power supply cable, junction box cover and motor casing.
- Even the machine is turned off, as long as the breaker of the power supply circuit is closed, the power line cable is still charged with electricity. For details refer to the electric principle diagram.
- Dust collector shall be used for cleaning the control cabinet. Direct cleaning with unfiltered compressed air is not allowed because water and oil content in the compressed water may lead to short circuit and reduction of insulation resistance.



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Chapter 3 Preparation before operation

3-1 Operation precautions

Before turning on, check the bolts of each mechanism to see if there is any loose situation.

3-1-1 Upon turning on, try to run each mechanism with Manual key to see if there is any abnormal situation, Automatic running can be carried out only under no abnormal situation.

3-1-2 When the emergency stop switch is turned on the cutting mechanism will search the original point automatically. Before turning on, make sure that the central column has been tightened in the right position, otherwise the central column and the cutter may be damaged.

3-1-3 After replacing the cutter blade, check and see if the blade is too long. Too long blade may damage the cutter.

3-1-4 During standby or normal running situation, do not put hands into the working area of the cutter.

3-1-5 Manual label feeding will not work in case the clean-down unit is not turned on.

3-2 Installation and cleaning

The main machine, conveyor and shrinking oven etc. shall be adjusted to be in one straight line. The centre of the conveyor and the cutter head centre of the main machine shall be aligned with each other and the reference plane shall be adjusted to be level. The foundation bolts of the main machine shall enter the support ground without any clearance. Check and confirm the voltage of the power supply. Enough space shall be left for positioning of the main machine for the convenience of future spot check and repair. The ambient temperature shall be not higher than 45°C to avoid defects of bought out components. The placed location of the main machine shall be free from direct blow of fan or cold air, and flowing air may impact label inserting.



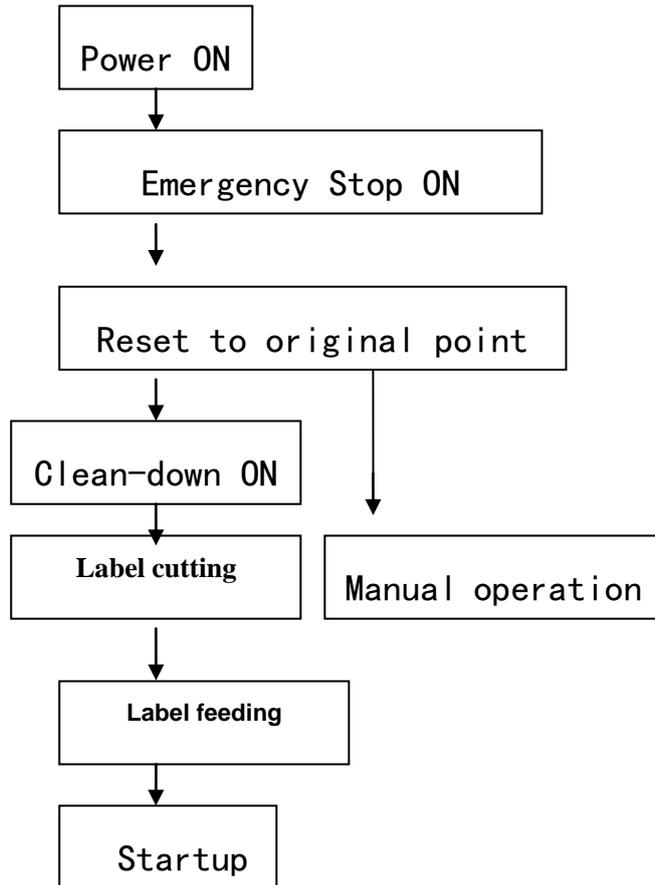
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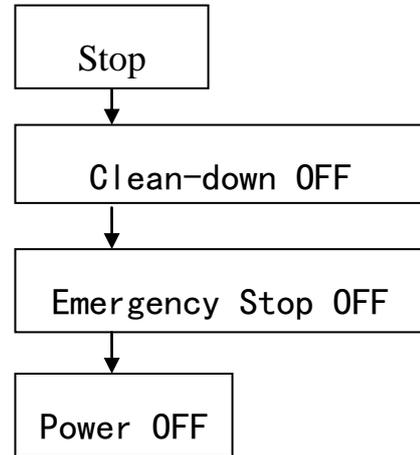
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• Turn on procedure



• Turn off procedure

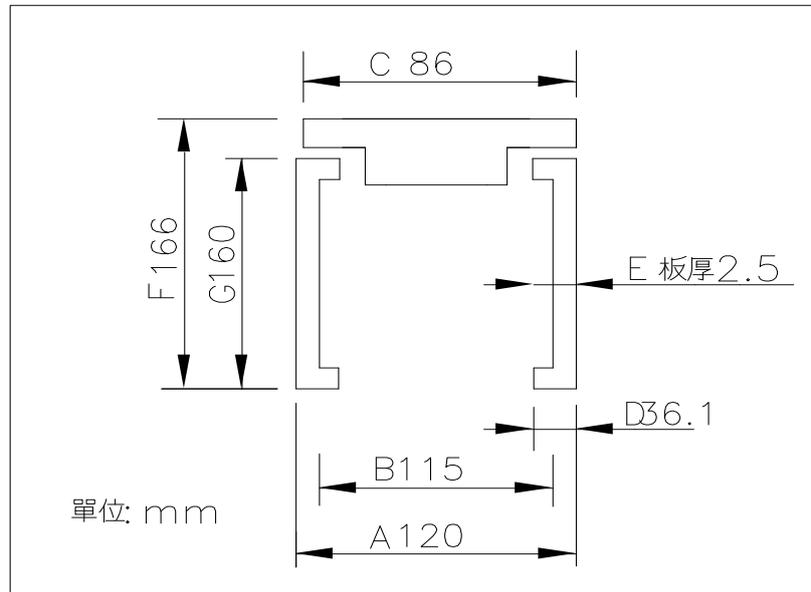


■ Cleaning

Wipe off foreign substance like dust and oil stain etc. left on the machine during transportation and installation. Wipe with clean cloth the sliding surface of transmission parts of the machine such as guide bar, guide way, screw and gear slide rest etc., and apply lubricating oil again. Pay attention that no oil shall be applied on belt pulley, belt and rubber wheel and electric parts like motor etc.

Chapter 4 Structure and function of each mechanism

4-1 Interface diagram of feeding line of the main machine



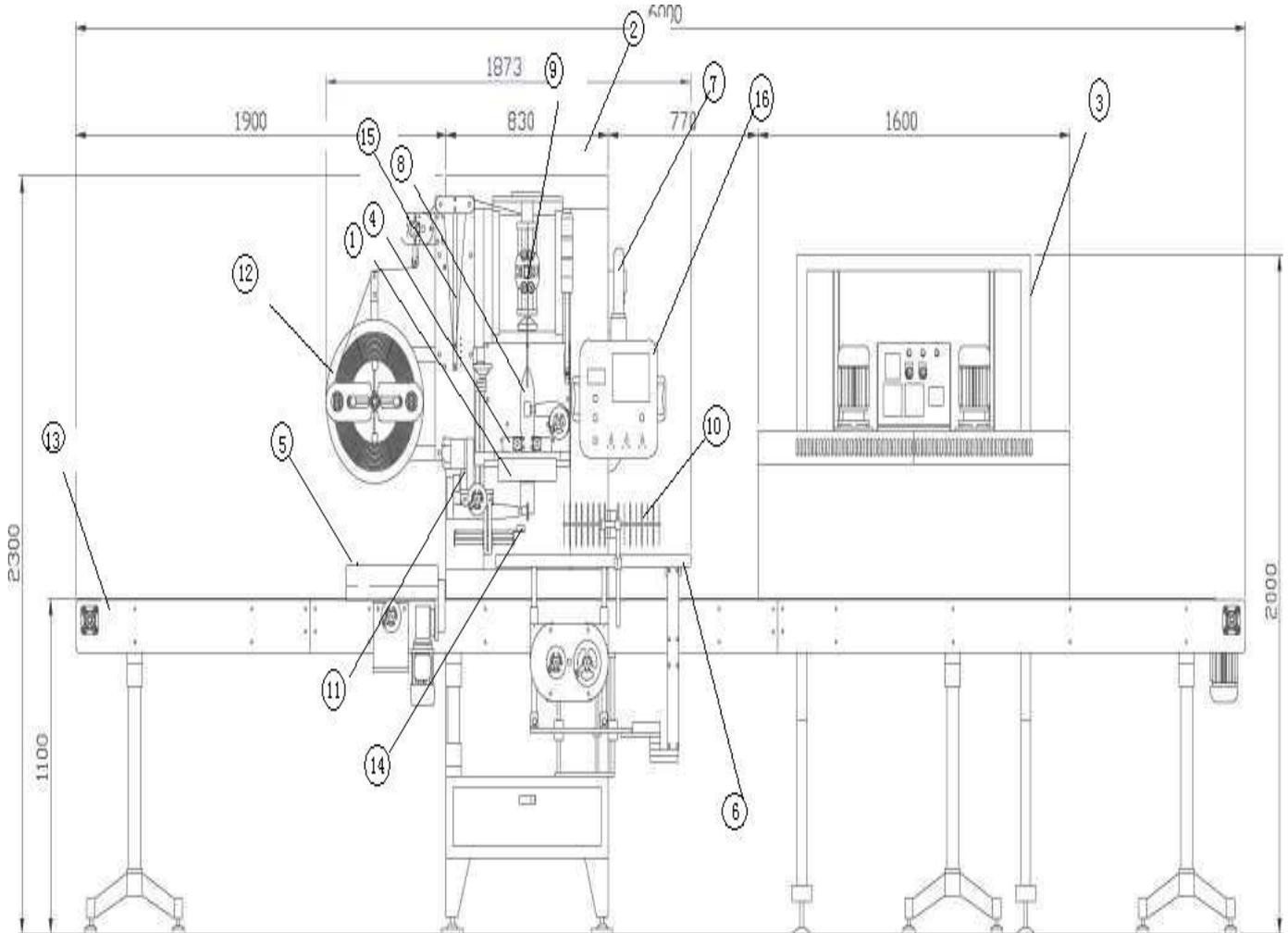
E plate thickness 2.5

unit: mm

4-2 Identification of drawings and functions of each part

--Parts description

- | | |
|--------------------------------|-----------------------------|
| 1. Cutter head unit | 2. Machine frame unit |
| 3. Shrinking oven | 4. Driving unit |
| 5. Screw for bottle separation | 6. Bottle carrying unit |
| 7. Three-color caution light | 8. Central column |
| 9. Electric eye unit | 10. Hairbrush unit |
| 11. Clean-down unit | 12. Material rack unit |
| 13. Conveyor belt | 14. Driven unit |
| 15. Material feeding rack | 16. Human machine interface |



--Functions of each part

- Cutter head unit

Built-in blade to conduct cutting operation to the shrinking film with planet matching type and deflection crankshaft steel structure.

- Machine frame

The whole machine adopts aluminium alloy, combined with anode treatment and 304 stainless steel, for supporting the main machine and fixed conveyor belt.

- Shrinking oven (electric heating or steam type)



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Take advantage of heat from electric heating or steam to shrink and paste inserted labels on the bottles.

- Driving unit

Single unit or double units synchronized servomotor is adopted for control to convey shrinking film at fixed dimension.

- Screw for bottle separation

Put inserted material on the bottles and convey them at fixed clearance through the screw so that the bottles separate with equal distance and it is easier for label inserting.

- Bottle carrying unit

Synchronized running at both sides, use only on hand wheel to adjust the height and bottle positioning, the purpose of which is to ensure no shaken of bottle during conveying and to be easier for setting of label inserted height.

- Three-color caution light

During normal running, the green light is on; in case of lacking label film material, the yellow light is on; and during abnormal situation, the red light is flashing.

- Central column

To insert and pull of the label film material so that the film material can be conveyed and cut.

- Electric eye unit

Use electric eye to transfer signal and provide control system for fixed dimension conveying. Adjust location and height of the electric eye to determine cutting position of blade in the cutter head

- Hairbrush unit

Use rubber to brush the inserted label to the fixed position.

- Clean-down unit



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Synchronized adjustment mechanism adjust two transmission wheels of clean-down unit to slightly contact the roller at the bottom of the central column, and insert the label into the bottle with quite high rotating speed while labels pass through.

- Material rack unit

The fixed paper ring of label film material can be set after adjustment from 5" to 10", and the output of material is carried out by a transmission roller reduction motor.

- Conveyor belt

The frequency converter is used to adjust the speed of conveyor belt so that it matches with the capacity of the machine.

- Electric eye for bottle monitor

Monitor bottles to the suitable location, output signal to automatically insert volume label.

- Material feeding unit

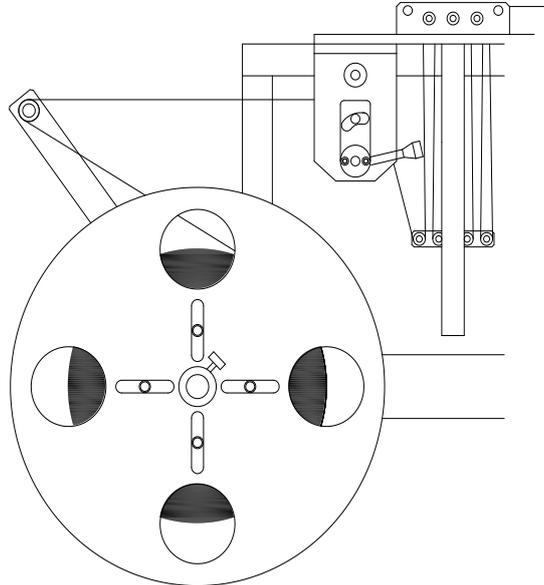
It is composed of material feeding box controlling label feeding tension and material feeding rack located above the electric eye rack unit for label turning and fixing, the purpose of which is for conveying of label film material.

- Human machine interface

It is the control backbone of the machine. The operation display pages include manual, automatic, setting, abnormal display etc., and there are several knobs and press buttons for the operation of the inserting volume label.

Chapter 5 Installation of label film material

5-1 Diagrammatic representation



5-1-1 As showed in above figure, put the label film material on the material rack, insert film material pressing plate and slightly apply pressure before tighten the rack screw.

5-1-2 The material comes out along the direction as showed in the figure, and the material feeding roller opens clockwise so that the film material will pass through the rollers.

5-1-3 Pull the label film material through various rollers as per the figure and then pull it into the tailplane of the central column.

5-1-4 Open the driving wheel before pulling the film material into the central column, and then hold the bottom of the central column with left hand and lift it up so that the roller of the central column disengaged slightly from the main driving wheel. Pull the film material through the cutting position with right hand and then pull back the central column with right hand and secure it.

5-1-5 After the central column returns to the original position, pull back the upper driving wheel and secure it with slight contact. Then the label installation has completed.

5-2 Testing of cutting operation

At the home page of human machine interface, press Label Cutting button to select label feeding for



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cutting operation. Repeat the trial cutting for at least five times to remove nonstandard label film material.

Note that you have to finally press Start button before entering the page of automatic mode.

Chapter 6 Adjustment and setting of electric eye rack location

6-1 Location adjustment of electric eye rack during volume label cutting

6-1-1 The location of slide rest of electric eye rack can be adjusted up and down.

6-1-2 In case the higher part of label is too long, adjust slide rest of electric eye rack upward.

6-1-3 In case the lower part of label is too long, adjust slide rest of electric eye rack downward. Carry out the

above adjustment until cutting to the right position.

6-2 Setting of sensitivity of the electric eye

6-1-1 Since the color, shade and thickness are different for different labels, sensitivity of the electric eye may influence label inserting when replacing different label film material even though we have adjusted and set up the machine before dispatch and during installation. Too high or too low sensitivity will result in abnormal insertion of clean-down label during operation. Normally too high sensitivity may lead to shorter label length, while too low sensitivity may lead to the situation that a series of label film material has been pulled down. In case of the above situations, sensitivity of the electric eye has to be adjusted so as to meet the condition of the related label film material.

6-1-2 Before adjustment of sensitivity, pull the label to be near the electric eye and confirm that the printing transparent point is at this position. Check if the red lamp and green lamp on the electric eye sensor are off. If moving the label up and down cannot make the red lamp off, it means the transparent sensitivity is weak. Align the transparent section of the label with the electric eye and adjust the sensitivity button on electric eye until the red and green lamps are just off, and then adjust backward until the red lamp is on.

6-1-3 In principle both red and green lamp shall be adjusted to lighting. Sometimes too strong transparency of printings etc. on the label film material may lead to misjudgment of detected position of electric eye, resulting in abnormal insertion of label.

6-1-4 In case it remains abnormal after adjustment, repeat the above steps and

adjust the sensitivity knob on the sensor a little bit more or less in order to detect the proper position of the sensitivity knob.

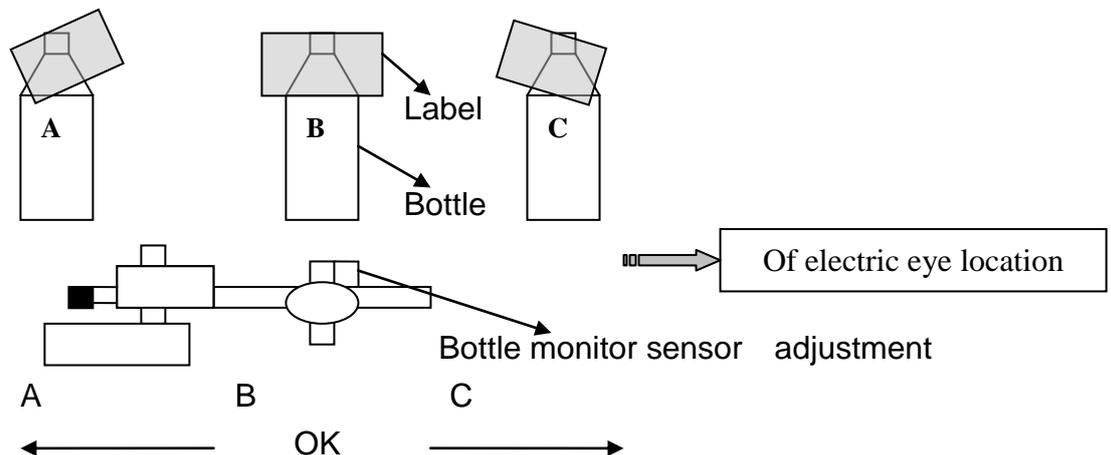
Chapter 7 Positioning detection of label insertion

7-1 Principle of label insertion

When there are bottles on the conveyor belt passing the electric eye for bottle detection, the driving unit under servo control will automatically feed one piece of label, at the same time the clean-down material roller unit will clean down one piece of long label, which will be inserted on the bottle. In case the positioning detection electric eye does not in the proper position at this time, the label cannot be successfully inserted to the bottle.

7-2 Diagrammatic representation of electric eye adjustment way

7-2-1 Adjust as per the following figure, in case the label inserts to the bottle as showed in figure A, move the electric eye toward B direction. In case of figure C, move the electric eye from C towards B direction, until the label inserts to the bottle like showed in figure B.



7-3 Detection description on electric eye for bottle monitor

7-3-1 This electric eye is reflection type with removable structure as the main body installed on the guide way. The main body reflects the projected light on the object with label inserted and then it is reflected to the main body for receipt as the signal transmission of label insertion.

7-3-2 When there is no object for inserting, the lamp on the main body sensor

shall be OFF. If under this situation the lamp is still ON, use small screwdriver to adjust this sensitivity knob until the lamp is OFF.

7-3-3 When there are objects for inserting, the projected light is reflected by the bottle and the lamp on the sensor shall be ON. If the lamp is still OFF, it means that the projected light of the main body is too weak to reflect, and the sensitivity knob shall be adjusted until the lamp is ON.

7-3-4 Repeat the above adjustment until proper sensitivity of the sensor is confirmed.

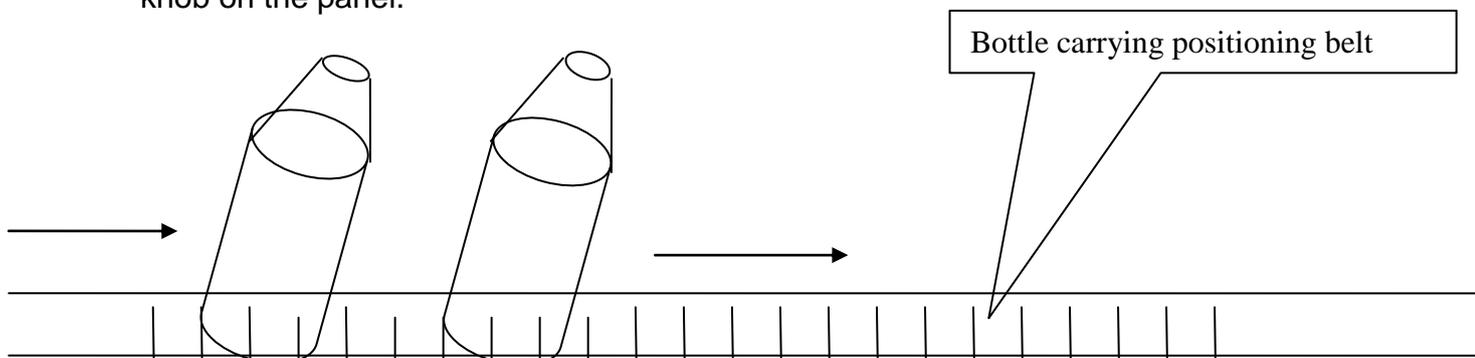
7-4 Main point on adjustment

7-4-1 Inconsistent linear speeds of three units: conveyor line, screw of bottle separation and bottle carrying positioning belt, may result in impossible insertion or unstable insertion of label.

7-4-2 The following shows forward inclination of bottle: reasons: 1. too fast running of bottle carrying belt; 2. too slow running of conveyor line.

7-4-3 In case the bottle inclines backwards, the situation will be the other way round.

The following phenomenon can be adjusted to be consistent through the knob on the panel.



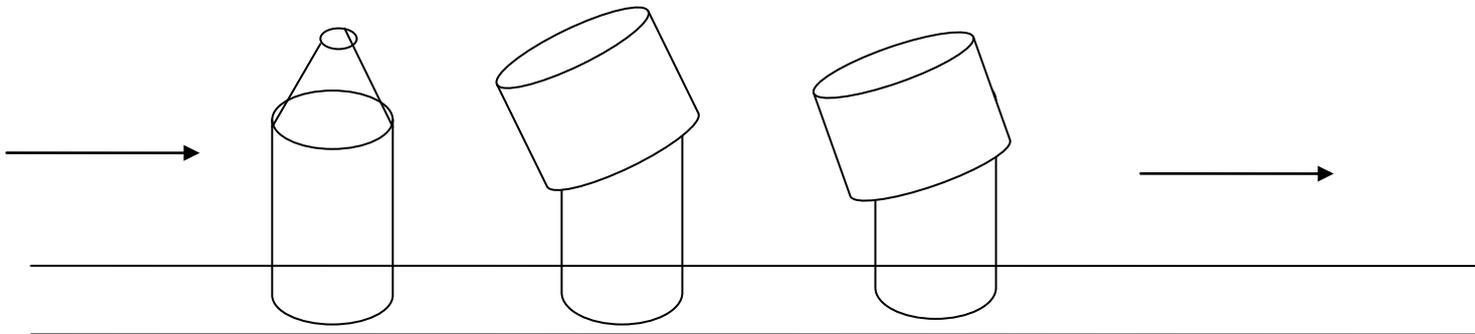
7-4-4 The label cannot be inserted to the right position

- Reasons: 1. The hairbrush does not touch the label;
2. The bottle carrying belt is too high;
3. The lower part of the label is not in proper position;
4. 7.1.1 and 7.1.2 may also result in it.

7-4-5 The lower part of the label is in proper position (due to the following two reasons)

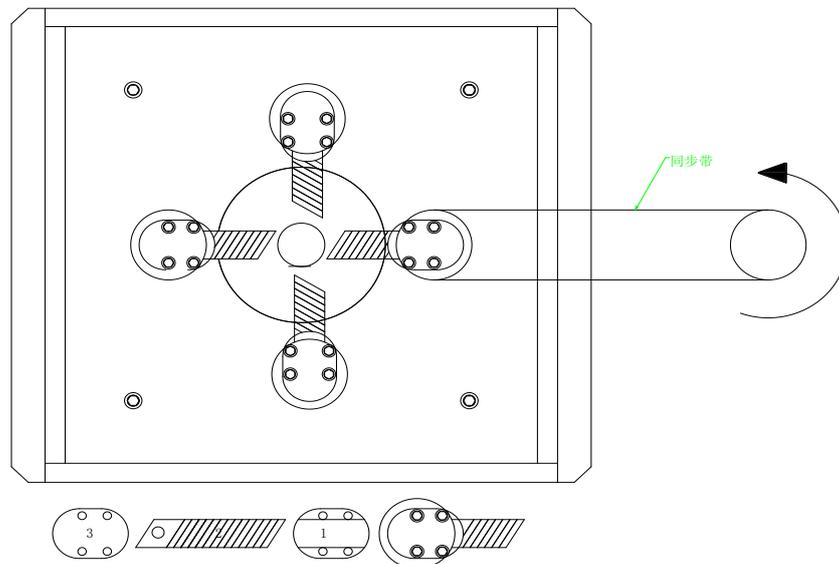
Figure 1: Move the bottle monitoring sensor towards the direction of bottle coming out.

Figure 2: Move the bottle monitoring sensor towards the direction of bottle coming



Chapter 8 Dismantling and assembling of cutter head

8-1 Plane of cutter head unit



8-2 Description of assembly

8-2-1 In case of replacing the blade, dismantle the unit as showed in the above figure.

8-2-2 When replacing the blade, pay attention to number of remaining lattice of the original blade, i.e. the length of the blade. The new blade shall have the same length as the old one, otherwise the film material may not be broken



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when cutting the label, or the label may not be cleaned down.

8-2-3 When assembling the blade, pay attention to the followings: A. Check if there is a blade groove on the blade for inserting to the blade rest; B. After determination of the blade length, do not operate at the blade edge and its sharp end; C. The blade shall be assembled as per the original assembly direction of the cutter head.

8-2-4 After assembly of the blade, pay attention to the marks on the belt and put on the belt properly to avoid blocking of label before normal operation.

8-2-5 Be careful to dismantle the blade and avoid getting hurt by the blade. When dismantling it with tools, the hands shall be away from the blade area. Hold and tighten the belt with the left hand before dismantling blade press plate screw. Pay attention to properly tighten the press plate so as to avoid deformation of the press plate.

8-2-6 In case the blade angle of each unit is abnormal, or there is abnormal noise, please notify this company for troubleshooting.

Chapter 9 Operation and control description of human machine interface

9-1 Operation description

This label inserting machine is mainly controlled with touch screen human machine interface, supplemented with several external auxiliary traditional switches. All function selection and display of this machine can be realized with functions designed at various display pages of this device. It is easy to understand and operate.

9-1-1 Turn on the machine: As per the above Turn on Procedure and Turn off Procedure.

9-1-2 Function descriptions of various pages:

(I) Description of control keys at the operation and control box

1. **Power**: Turn on and off the main **Power**.

2. **Emergency Stop**: Use it under abnormal situation.

3. **Reset to Original Point**: After turning on the machine, operate **Reset to Original Point** before cutting operation.



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4. Abnormal Removed: In case abnormal situation, use this key to remove it. (No need to remove for emergency stop and start to clean down.)

(II) Manual operation:

1. Material feeding motor: control the motion of material feeding roller.
2. Cutting: complete the cutting operation from material feeding until label inserting.
3. Screw for material feeding: automatically control the space between bottles during feeding.
4. Rise/drop of main machine height: The human machine interface controls rise/drop of the main machine so as to reach label insertion height.

(III) Automatic mode: start automatic operation mode.

(IV) Setting of parameters:

1. Counting number of products: The maximum number is: 9999999.
2. Setting the label length: In case fixed length function, set the label length.

9-1-3 Switches for auxiliary functions:

(I) Emergency Stop: In case of abnormal situation, stop the running process urgently.

(II) Speed adjustment knob: Control the speed of feeding bottles of the bottle carrying unit.

(III) Screw for bottle feeding: control the space between bottles.

(IV) Switch of heat shrinking oven: After start-up, use it to complete label shrinking motion.

(V) Alarm Release:

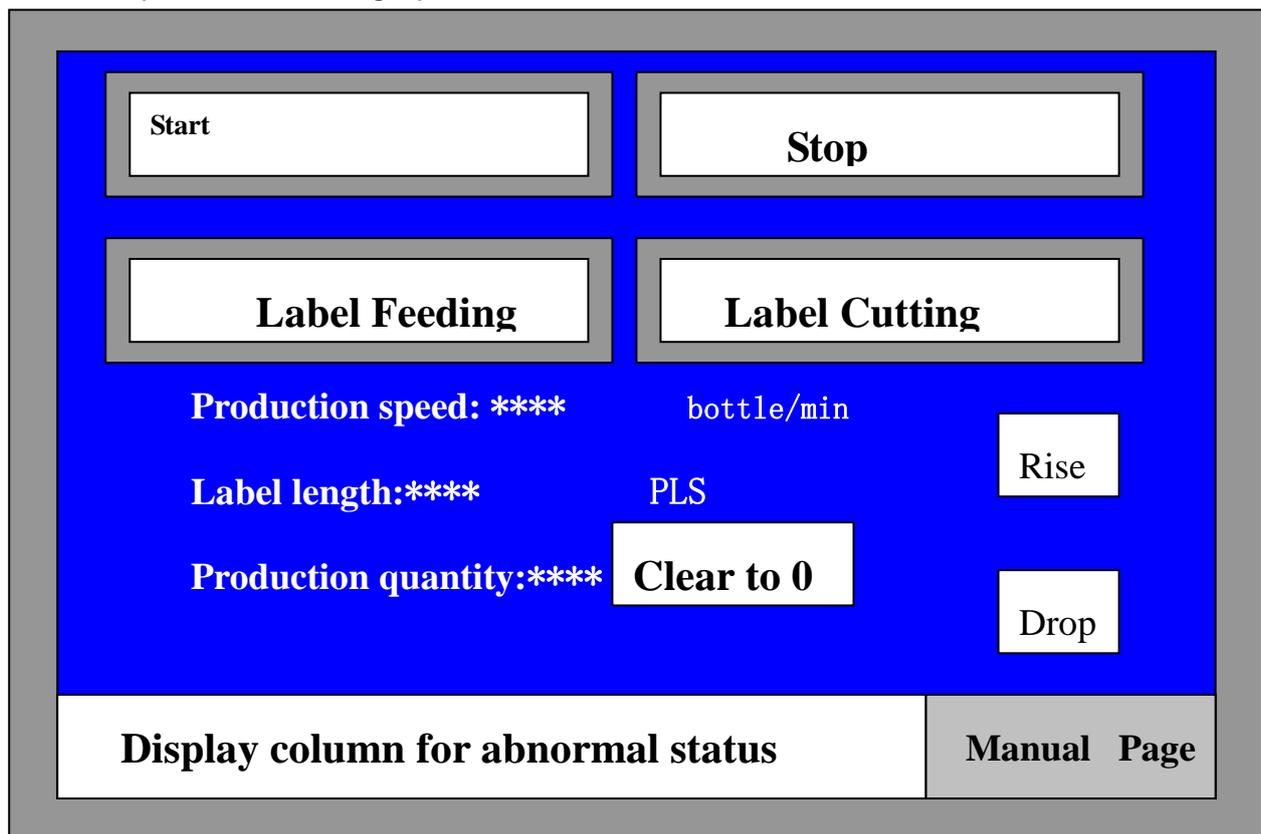
9-1-4 Information on alarm statue:

The control system of this machine shows alarm information with combined ways of three-colour lamps and text on the interface screen.

(VI) Three-colour lamps: Three-colour lamps of red, yellow and green are located from top down at the right rear top position of the main machine, and indicate the following meanings:

1. Red lamp: indicates abnormal situation of the main machine.
2. Yellow lamp: constant lighting indicates manual mode under no abnormal situation; and glittering indicates lack of label.
3. Green lamp: indicate automatic mode, no abnormal situation.

9-2 Explanation of the graphic menu



Start: Start automatic mode

Stop: Stop automatic mode

Label Feeding: Feed the label to the central column waiting for cutting.

Label Cutting: Cut off the label that has been sent to the central column.



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Production speed: Display the number of bottle fed per minute under automatic mode.

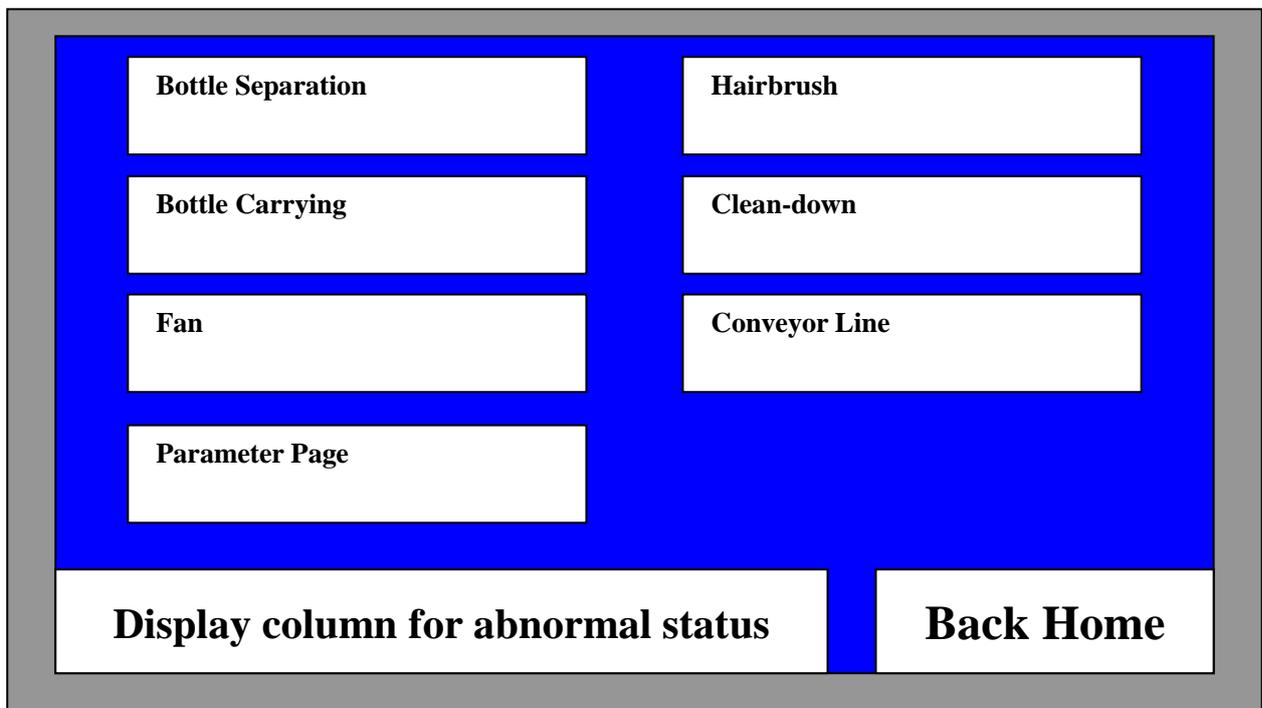
Clear to 0: Clear the production record data.

Label length: Set the label length. (Note: in case of entering numerical value in this field, the main controller will be automatically switched to fixed length mode with unit of mm. In case this value is set to 0 , the main controller will consider it as section mode by default.)

Production quantity: Record the production quantity. (With function of saving in case of power off)

Rise: The machine head rises.

Drop: The machine head drops.



Bottle Separation: start/stop of bottle separation screw motor.



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Hairbrush: Start/stop of hairbrush motor

Bottle Carrying: Start/stop of bottle carrying positioning motor

Clean-down: Start/stop of clean-down motor

Material Supply: Supply for one time by the material motor.

Conveyor Line: Start/stop of conveyor line motor

Back Home: Back to the homepage.

9-3 Common abnormal situations and troubleshooting:

Display on the touch screen	Related sensor	Reasons	Troubleshooting (1, 2, 3, 4, 6, 7) Abnormal removed key shall be pressed
1. Sending label is abnormal		Label feeding servo is overload or block of label material	After abnormal condition is removed, press Abnormal removed key.
2. Overtime of sending label operation	X1-2	No label at central column, setting error of the sensor	Check (X1-2) sensor, and after abnormal condition is removed, press Abnormal removed key.
3. Abnormal condition of cutter head		Cutter head servo is overload or block of label material.	After abnormal condition is removed, press Abnormal removed key.
4. Overtime of cutting operation	X1-1	Block of label material Abnormal condition of original point sensor (X1-1)	Check (X1-1) sensor, and after abnormal condition is removed, press Abnormal removed key.
5. Clean-down is not open		Clean-down is not open.	Press Clean-down key to open it.
6. Lack of label material	X07	No material roll or the feeding roller is not properly pressed (X07)	Replace material roll, and check feeding roller clamp to see if it is closed. Check sensor (X07), press Abnormal removed key.
7. Abnormal condition of bottle monitoring sensor	X06	Automatic mode sensor ON for over 2 sec (X06)	Remove objects in the projecting area of sensor, press Abnormal removed key.



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8. Emergency stop		Emergency stop press button is OFF	Adjust emergency button to ON
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1. Abnormal condition of material feeding positioning unit: turn off the power.
2. Abnormal condition of cutting positioning unit: same as the above turn off the power.
3. Abnormal condition of cutter original point: press emergency stop to start the operation again.
4. Abnormal condition of material feeding driver: same as the above, press emergency stop to start the operation again.
5. Abnormal condition of cutter driver: same as the above.
6. Abnormal condition of material rack for material feeding: check if the material feeding roller is closed.
7. Abnormal label condition (block of label): Check cutter position, and check if the blade goes beyond the edge of the cutter head.

Chapter 10 Adjustment of other units (optional accessories)

10-1 Specification:

Model	100M	200M	300M	400M
Dimension	2100L*850W*2000H	2100L*850W*2000H	2100L*1100W*2200H	2500L*1200W*2200H
Production speed	100B~200B	250B~300B	350B~400B	400B~500B
Power supply	1ø/220, 3ø/220V	1ø/220V, 3ø/220V	1ø/220V, 3ø/220V	1ø/220V, 3ø/220V
Power	1.5KW	1.5KW	2KW	3KW
Material of main frame	Aluminum alloy	Aluminum alloy	Aluminum alloy	Aluminum alloy



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Label length	30mm~260mm	30mm~260mm	30mm~180mm	30mm~180mm
Label thickness	0.03mm~0.13mm	0.03mm~0.13mm	0.03mm~0.13mm	0.03mm~0.13mm
Bottle diameter	28mm~125mm	28mm~125mm	28mm~125mm	28mm~125mm
Bottle height	50mm~280mm	50mm~280mm	50mm~280mm	50mm~280mm
Bottle shape	Square, circular, ellipse, flat bottles			
Shrinking oven power	13~15KW (or steam)	13~15KW (or steam)	13~15KW (or steam)	13~15KW (or steam)

10-2 Bottle carrying unit, screw for bottle separation, clean-down unit, pre-shrinking oven etc. shall be adjusted for different bottle shape.

10-3 The operators shall get trained and practice during the period of handover of the machine with engineers of this company.

Chapter 11 Lubrication and maintenance

11-1 Daily routine check items

11-1-1 Slide surface of the machine, such as guide bar, guide way, screw, slide rest and bearing etc. shall be applied with lubricants every two weeks. Domestic brand of special grade circulation machine oil R32, or equivalent VG32 lubrication oil can be used.

11-1-2 Apply oil on gear wheel once a week with normal machine grease.

11-1-3 Before applying oil, wipe off the original oil with clean soft cloth.

11-1-4 In case of evident foreign substance pollution, for example: dust, scrap, water etc., it shall be cleaned before applying lubricants.

11-1-5 In case rust is found on other parts during routine spot inspection, immediate rust removing and oil application shall be carried out.

11-1-6 Keep surface cleanness of the machine platform and do not put other



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substance on the platform.

- 11-1-7 Check the belts of transmission parts each week to see if there is any breakage or serious damage. Please purchase spare parts for replacement.
- 11-1-8 Please prepare relative maintenance forms for maintenance on schedule.
- 11-1-9 Remove dust of foreign substance from electric tray each week to ensure normal operation of electric elements.
- 11-1-10 Before turning on the machine, confirm the relative location of blade and central column ring groove, and blade original point.
- 11-1-11 Before turning on the machine, confirm if the position of driving rollers at both sides of central column is correct, if the driving roller is fixed and locked, so as to avoid movement of central column.
- 11-1-12 Confirm if the clean-down wheel is consistent with the central height of roller at bottom part of the central column, and it is slightly pressed on the roller.
- 11-1-13 Confirm if there is any foreign substance left at the conveyor belt.
- 11-1-14 Confirm if the label film material pulling and positioning at the material rack are correct, if the film material is deformed or not.
- 11-1-15 Confirm if the center of shrinking film material at the material rack aligns with the center of the central column, if not, adjust the position of material rack.
- 11-1-16 Confirm if the height and location of cutter head rest are suitable for production of the specific bottle.
- 11-1-17 Confirm the location of positioning belt of bottle carrying unit, and its press holding bottle shall be not so high.
- 11-1-18 Confirm that the holding press of the rotation belt of heat shrinking oven shall be not so high.
- 11-1-19 Confirm if the bottle holding center of the bottle carrying unit is located just in the bottom of the center.
- 11-1-20 Confirm if the moving speed of bottle carrying unit after holding the bottle matches with the speed of the conveyor belt.
- 11-1-21 Confirm if the location of electric eye for bottle monitoring is correct. Please carry out label inserting test before production.



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- 11-1-22 Upon completion of job, turn off the switch for shrinking oven first, and keep cooling fan running for about ten minutes before turn off the fan and the power supply switch.
- 11-1-23 Finally comply with the Turn Off Procedure as explained in the Operation and control description of human machine interface section to turn off the machine. During continuous bottle feeding of bottle separation screw, check if the bottle body is cut-off just at the bottom center of the central column.