User manual
Quatro Pack

CE-Mark
This machine displays the CE-Mark. This means that it conforms with all European directives relating to health and safety. A summary of these directives is included in the Declaration of Conformity supplied.

Liability
JASA packaging systems is not liable for any hazardous situations, accidents or damage resulting from:

- The warnings or regulations shown on the machine or in the documentation being ignored.
- Use of other applications or under conditions other than those described in this documentation.
- Modifications to the machine. This also includes the use of any replacement parts other than the original and alterations to the control program.
- Inadequate maintenance.

JASA packaging systems cannot be held responsible for any damage resulting from faults in the machinery (e.g. damage to products, operational delays).

Conditions - All descriptions, diagrams, illustrations and specifications apply to the machinery at the moment of delivery. Pannekeet Machinetechniek bv reserves the right to carry out modifications at any time without having to adapt this documentation.

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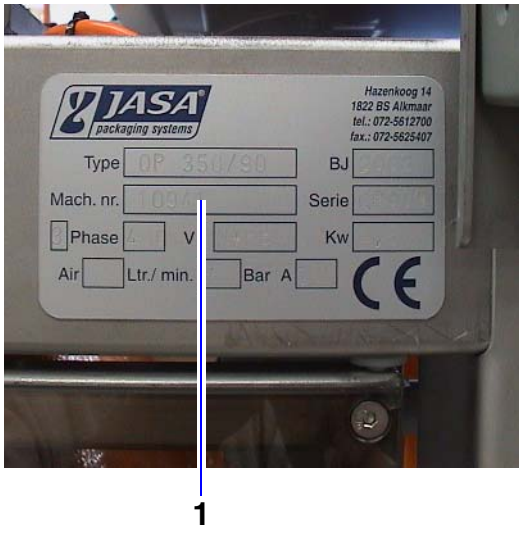
1 Foreword

1.1 Aim

This manual explains important procedures and gives practical tips for enabling safe, efficient and reliable use of the packaging machine.

Should this manual fail to offer a solution for any technical faults, please do not hesitate to contact the service department of Pannekeet Machinetechniek bv. When doing so, please mention the machine number (**1**) and the number shown on this manual.



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Work that must be carried out by JASA packaging systems personnel is not included in this manual.

Keep this documetation in a safe place.

Pannekeet Machinetechniek bv will be referred to as JASA packaging systems hereafter.

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1.2 Machine documentation and user

The machine documentation comprises:

- User manual for the user. Information is also given on the procedures to follow in the event of faults.
- Spare parts catalogue with diagrams for the maintenance technician and the purchasing department.

Subjects can be located using the table of contents or by referring to the word index which gives the subjects in alphabetical order.

2 Safety

2.1 Introduction

This machine has been designed and built in such a way as to allow its safe operation and maintenance. This applies to the application, conditions and regulations as described in this documentation.

It is therefore essential for any individual working on the machinery to read this documentation.

Any works not addressed in these instructions should only be carried out by the appropriate expert personnel.

2.1.1 Warning symbol

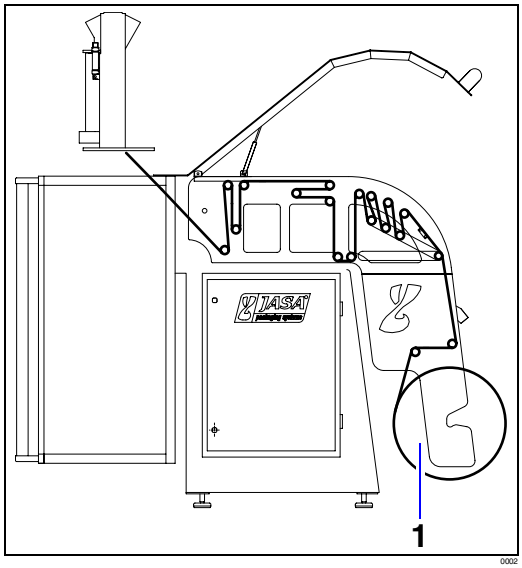
⚠ **WARNING!!!**

When the above warning symbol is displayed together with an accompanying text, it indicates that the information is vital for the health and safety of personnel.

Ignoring these warnings may result in serious injury or even have fatal consequences.

2.2 Intended purpose of machine

The Quatro Pack has been designed for the packaging of products in a square packaging bag.
This bag is made by the machine using a roll of film (**1**).



Alongside this application it is also possible, with adjustments, to package foodstuffs in a pressed film of polypropene or laminate. There is also the possibility of allowing fumigation so that the oxygen can be expelled from the bag using nitrogen.

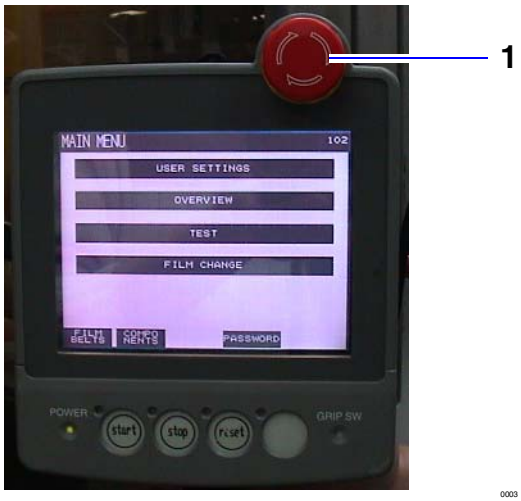
This machine is not intended for any other use.

WARNING!!!
When the machine is in operation, the whole film supply regulator can move independently from the machine.

2.3 Safety provisions

2.3.1 Emergency stop button

An emergency stop button (**1**) has been fitted so that the machine can be isolated as quickly as possible in the event of an emergency. The button is easily identified by its red colour.



When the button is pressed the machine stops immediately. The button remains mechanically blocked and the machine cannot be restarted.

Assistance can now be given immediately to personnel in the event of an accident. Other urgent actions should also be carried out forthwith.

Once the hazard has been removed, the emergency stop button can be unblocked. Depending on the model, this is done either by turning the button in the direction of the arrow, or pressing it once more, or pulling on it. The machine will still not start immediately, but can now be started in the normal manner.

The emergency button can also be used in the event of any hazardous threats, e.g. faulty operation or the jamming of material.

Recommendations

- New operatives should be given the opportunity to practice using the emergency stop button.
- Do not use the emergency stop button as an alternative to turning the machine off normally.
- Test the emergency stop button regularly.
- Do not reset the emergency stop button until it has been established who has pressed it and why.

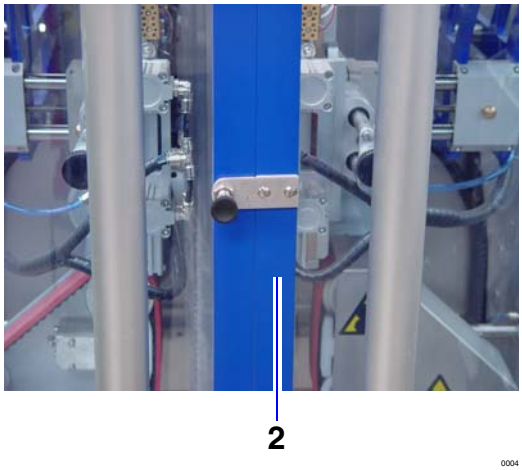
2.3.2 Door

The door (**2**) is fitted with protective break contacts. The seal bars remain active when the door is open.

WARNING!!!
The machine's seal bars are hot.

Mandatory instructions!!!

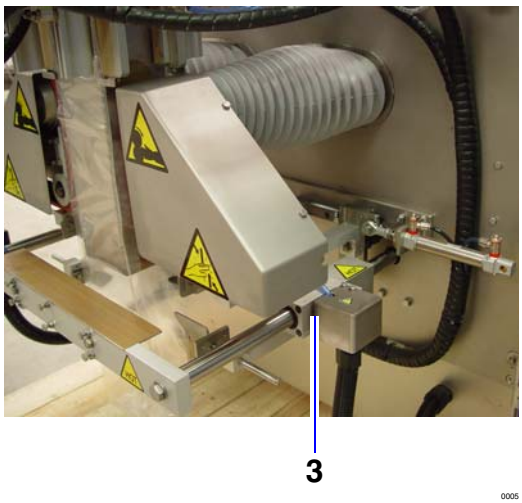
- Never bypass the door contacts. This also applies during service and maintenance work.
- The correct functioning of the door contacts must be tested at frequent.



2.3.3 Transverse seal unit

The cylinder on the transverse seal unit (**3**) has protective break contacts. If the transverse seal unit develops a fault, the break contacts will open the transverse seal unit.

WARNING!!!
The transverse seal unit is fitted with a knife and closes very positively. These form an extreme hazard of serious and permanent injury.



2.3.4 Electrical motors

The electrical motors are protected against overloading. The electrical motor switches off automatically when overloaded.

2.3.5 Warning stickers

A variety of warning stickers are displayed on the machine. These warning stickers may not be removed. Any sticker that becomes loose or illegible should be replaced immediately.

Caution: Rotating or moving machine parts.

Stay clear of these parts. It is strictly prohibited to remove bags manually when the machine is running.

Caution: High voltage.

The electricity supply should be switched off and locked before any maintenance or repair work is carried out.

The control box may only be opened after the main switch has been turned off and locked.

Caution: Personal injury!

Never place any parts of the body between moving machine parts.

Caution: Hot parts.

Never touch the seal bars.

2.4 Safety regulations

2.4.1 Technical condition

- The machine has been built using the latest technology and it conforms to safety regulations.
  The use of this machine can still, however, be hazardous for the user, third parties or to material objects. This packaging machine should therefore only be used for its intended purpose when observing all relevant guidelines and when it is in perfect technical condition.
- Faults identified automatically by the control system should be rectified immediately.
- It is not permitted to make modifications to the packaging machine without first obtaining written permission from JASA packaging systems.
- Ensure there is adequate light in the work area (approx. 80 lux).

Residual hazard

Despite all stated safety measures, this machine is dangerous to operate. Failure to heed the recommendations for safe operation will lead to situations that result in serious and permanent injury. This applies to the transverse seal in particular. For this reason, the placement of a discharge conveyor is mandatory. When placing a discharge conveyor, it is vital that the customer takes account of the dangers inherent in the transverse seal. A proper safety shield should be incorporated in the system (see adjacent photo).

Waterfood Packing

2.4.2 Management

- The management is obliged to properly train the personnel who will be operating the machine, based on this manual.
- Any work to be carried out on the packaging machine should only be carried out by authorised personnel.
- Temporary personnel and trainees may only operate the packaging machine while under the supervision and responsibility of authorised personnel.
- Functions, authorisations and responsibilities of the personnel should be clearly defined.
- Regular checks should be made to ensure that work is being carried out in accordance with the regulations.

2.4.3 Operation and maintenance

- Operate and maintain the machine in accordance with the machine documentation supplied.
  This manual should be clearly visible at the packaging machine site.
- Observe all JASA packaging systems' safety regulations when working with the packaging machine. All local regulations should also be observed.
- Safety provisions may not be removed or rendered inactive.
- Always wear protective clothing and industrial shoes.
- Always wear protective gloves when replacing the knives of the transverse seal.
- Do not wear any rings, watches or loosely fitting articles of clothing. These may become entangled in moving machine parts.
- Never carry loose objects in clothing pockets.
- Long hair should be tied back.
- Use products, such as cleaning solution, according to the manufacturer's instructions.
- Before turning the machine on:
  - Make sure all unauthorised personnel are well away from the machine.
  - Inform authorised personnel in the vicinity of the machine, and ensure that all personnel are well away from any moving parts.
  - Make sure all safety provisions are present and working.
- Production should remain within the confines described in the technical specifications.
- Maintenance work should only be carried out after the work area has been clearly marked.
  Maintenance should only be carried out on a machine that is:
  - Switched off, with the main switch locked.
  - Disconnected from the compressed air supply and depressurised.
- Never use defective tools.
  Tools should be used only for their intended purpose.
- Wear safety glasses and take extra care when working with compressed air.
- Caution is required for lifting work: only use reliable and approved lifting apparatus and fittings.
- On completion of lifting activities, check that all tools, cloths, etc. have been removed from the machine and the work area.

2.5 Emission of hazardous substances

The machine itself does not contain any materials that could be hazardous to individuals.

The products to be processed do not emit hazardous substances either.

The machine is not designed to limit risks presented by the emission of hazardous substances. If products are used that may contain hazardous substances, additional measures should be taken.

2.6 Disasters

There are no special guidelines for disasters.

The usual extinguishing systems can be used.

2.7 End of lifespan

If the machine is to be dismantled at the end of its lifespan, the regulations that apply to waste disposal at the time of dismantling should be observed.

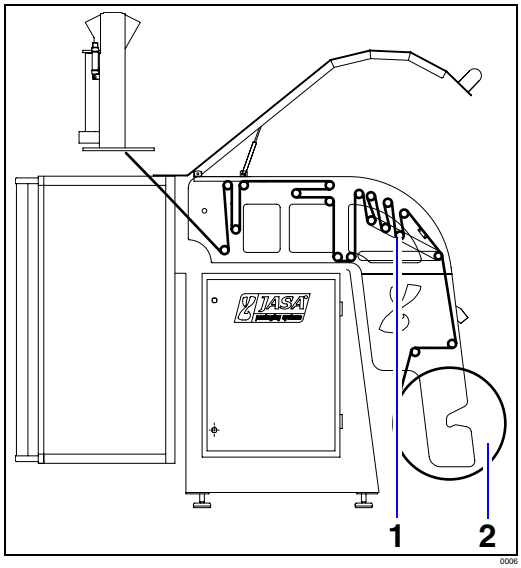
Only common materials have been used in the machine's manufacture.

At the time of manufacture there were waste processing options in place and there were no recognised risks to any personnel involved in the dismantling work.

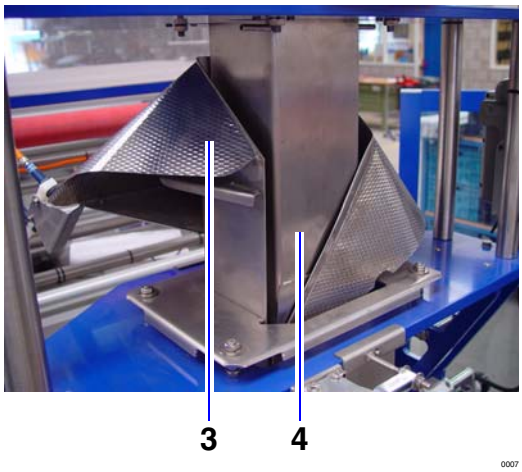
3 General description

3.1 Machine description

The machine packages products in bags that are formed from lengths of film. The film is supplied from a roll (**2**) to the film accumulator (**1**). The film accumulator (**1**) ensures that the unrolling of the film (**2**) is controlled and is supplied at a constant tension to the form shoulder (**3**).

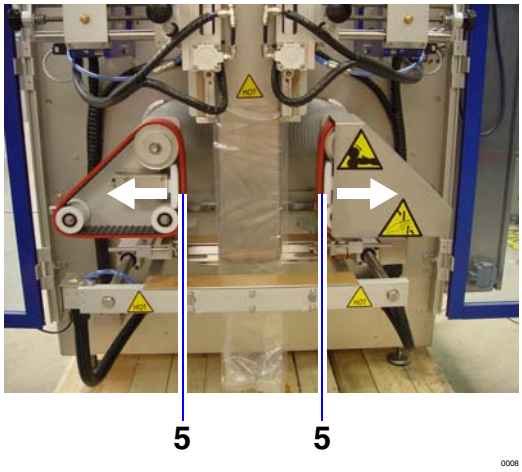


The form shoulder (**3**) surrounds the product infeed (**4**), which supplies the product to be packaged. The form shoulder (**3**) and product infeed (**4**) together form one module. The shape and size of the module depends on the product to be packaged and the bags to be produced.

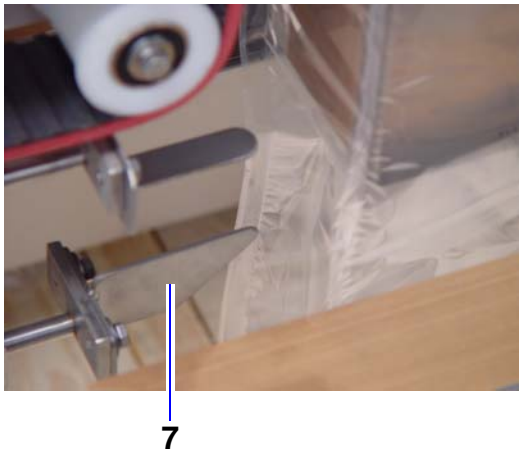


The film is transported by two film drive belts (**5**).

The film is so wide that the during the folding at the product infeed there are four corners in the film. This overlap is sealed with four adjoining vertical seal bars so that a square bag is made.



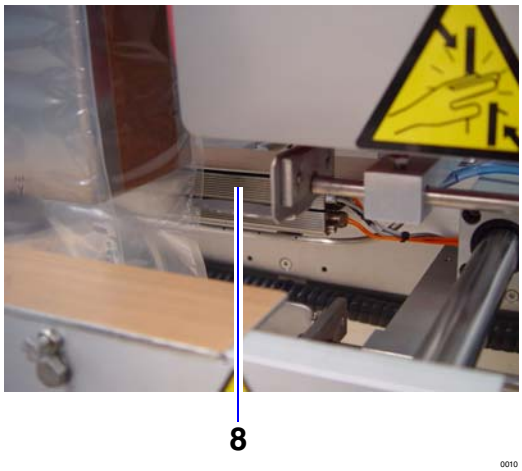
After the product has been deposited, the side folding mechanism folds (**7**) the sides of the bag inwards.



The seal bars (**8**) seal the top and bottom of the bag. The lower seal bar is fitted with a cutting edge that cuts the film.

The size and shape of the seal bar depends on the bags to be processed.

The machine is operated and monitored by a digital control system.



3.2 Options

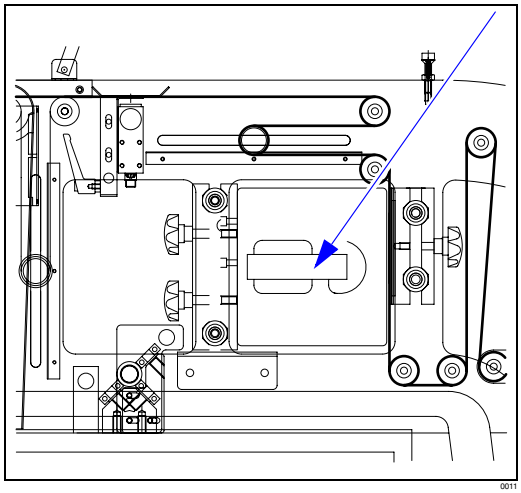
This machine can be extended with a number of options.

3.2.1 Standby

To increase the lifetime of seal bars in a cold and/or wet environment, a program can be run on a machine which keeps the temperature of the seal bars at 15-20 °C when the machine is switched off. This means the seal bars are not exposed to drastic changes in temperature.

3.2.2 Printer

The printer is used for printing information onto the packaging (such as "use by" dates and barcodes). The printer is fitted into a holder that can be adjusted in two directions. The holder is symmetrical and is fitted above the film.



3.2.3 Perforator

Holes in the film are made by the perforator. For a bag made of PE material, a cold perforator is used. For a bag made of PP or Laminate, a heated perforator is used to prevent the bag from tearing.

3.2.4 Plunger

When the bag is being filled, a profile moves up and down the tube once to prevent products being left in the product infeed.

3.2.5 Fumigation

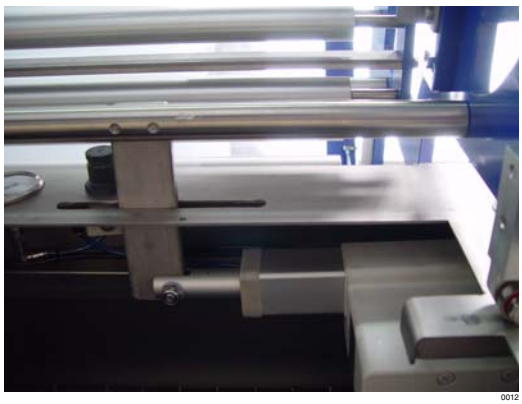
To package products oxygen-free, a fumigation system can be used on the machine. Oxygen can be expelled from the bag by using nitrogen as the products are deposited.

3.2.6 Film control

Irregularly developed film that is automatically sent to the machine is fed in using the film control.

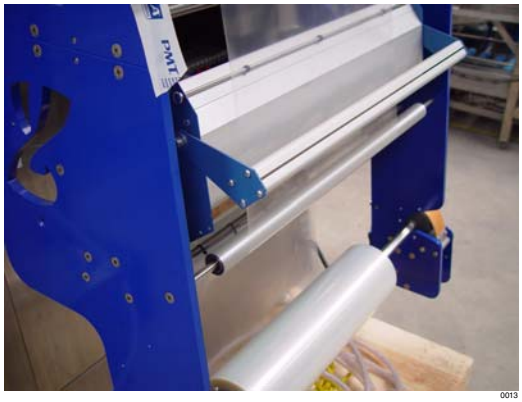
WARNING!!!

When the film control is applied, the machine moves the whole film guide.



3.2.7 Film seal unit

The start of a new film strip is sealed to the end of the strip in the machine using the film seal unit.



3.2.8 Import buffer belt - export belt

Import buffer belt

The import buffer belt collects the product and introduces it horizontally into the product infeed.

Export belt

Both belts are driven by the packaging machine.

WARNING!!!

Beware of moving parts. These can cause serious injury.

4 Controls

4.1 Controls

Main switch with locking option

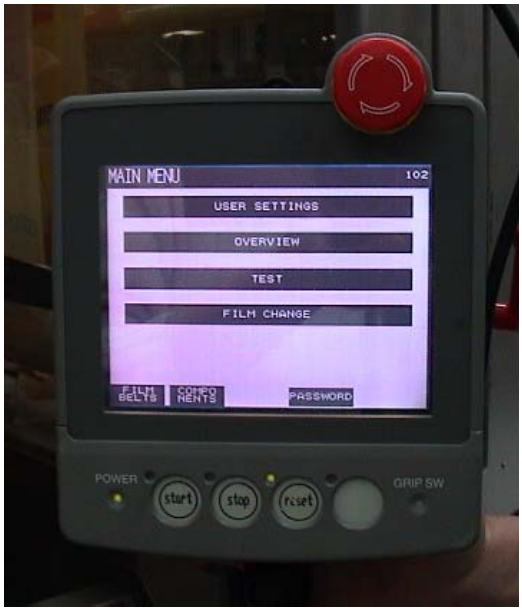
Control module with emergency stop button

The emergency stop button interrupts an electrical circuit when it is pressed. This will also cause an emergency stop relay if there is a break in the circuit.

During the activation of an emergency stop circuit:

- The compressed air system is decompressed on the brake cylinders and the pressure vessel.
- All voltages in excess of 24VDC are switched off.

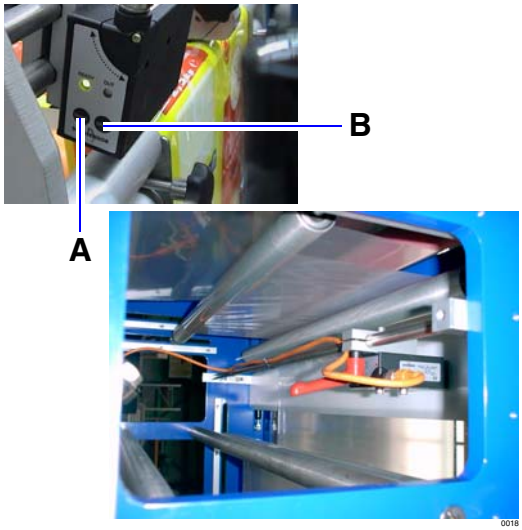
After pressing the emergency stop button, reset it (depending on the model) either by turning the button in the direction of the arrow, or pressing it once more, or pulling on it.



Mark scanner

A MARK is determined using the contrast value of the mark.

B BKGD is determined using the contrast value of the background.

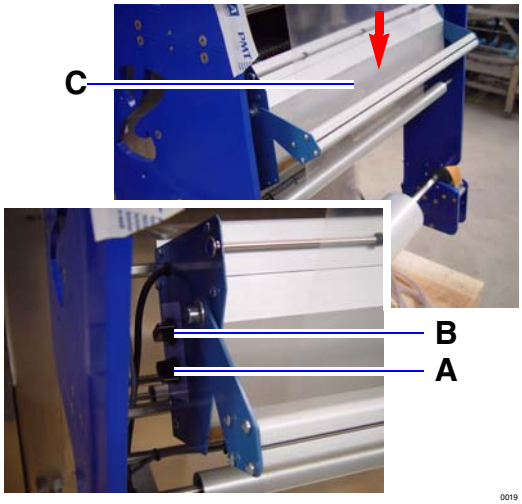


Film seal unit (option)

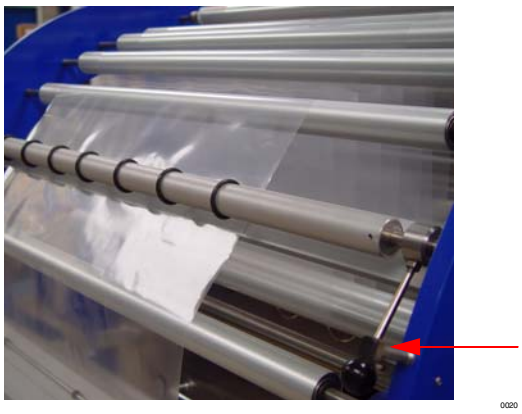
A Sealing time.

B Cooling time.

C Starting: after preparation, push down the seal bar.

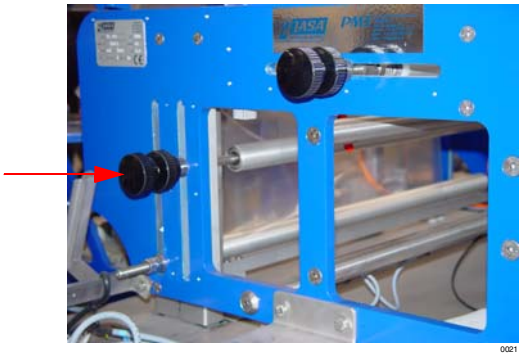


Label film catch

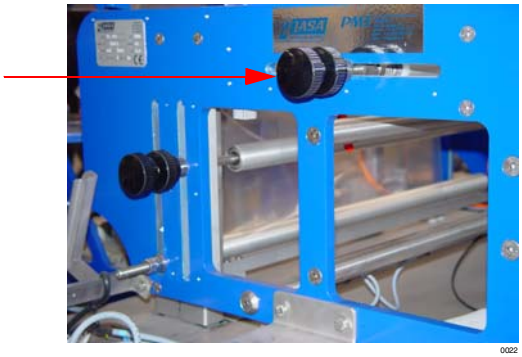


The readings are used for setting the:

Loop length of the film strip for cutting on the mark.



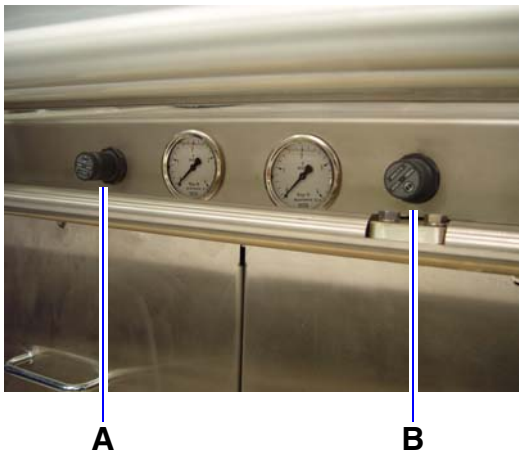
Printer height.



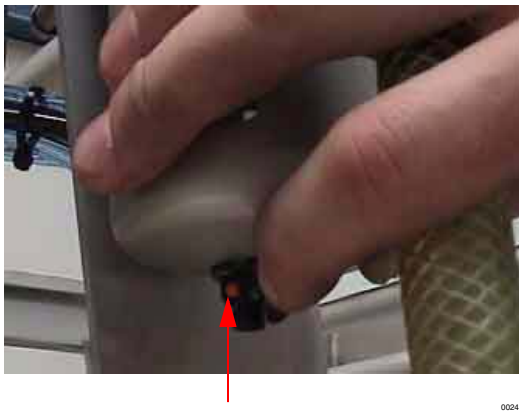
Pneumatic:

A Film strip tension.

B Film movement (speed of film roll unrolling).



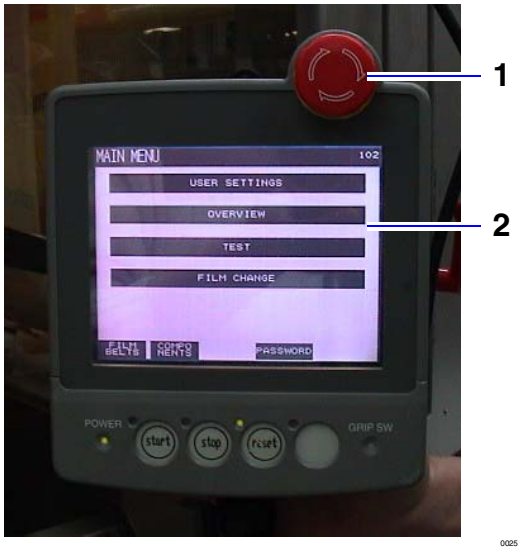
Button to clean filter.

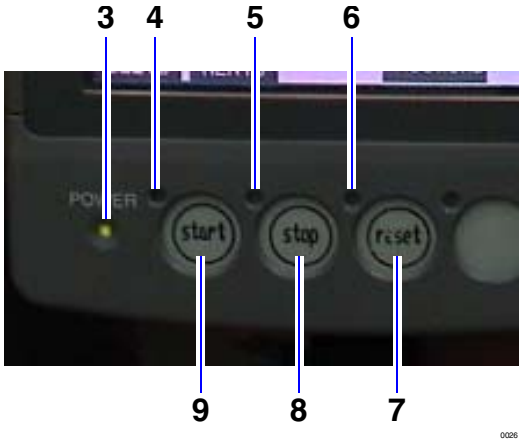


4.2 Control module

The control module comprises:

- An emergency stop button (**1**)
- A touch screen display (**2**)
- Four control indicators (**3 - 6**)
- Three buttons (**7 - 9**)





4.2.1 Control indicators

Power indicator (3)
Main switch activated.

Start indicator (4)
Production. When flashing: start indicator waiting for weighing machine.

Stop indicator (5)
Machine stops at the end of the cycle.

Reset indicator (6)
Alarm alert.

4.2.2 Buttons

Reset button (7)
Resets the controls.

Stop button (8)
Stops the selected function.

Start button (9)
Starts the selected function.

4.3 Main menu screen

After starting the machine, the main menu is displayed on the screen.

From the main menu, a choice can be made from the following sub-menus by touching the appropriate text on the screen.

The main menu consists of 7 sub-menus.

These are:

- USER SETTINGS (see paragraph 4.5 on page 17).
- OVERVIEW (see paragraph 4.6 on page 21).
- TEST (see paragraph 4.7 on page 22).
- FILM BELTS (see paragraph 4.8 on page 23)
- COMPONENTS (see paragraph 4.9 on page 24).
- PASSWORD (see paragraph 4.10 on page 24).

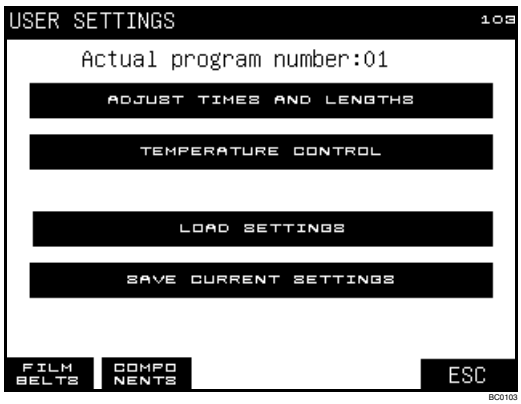
The composition of the sub-menus is described below.

4.4 Sub-menu-screens

Touch the word "CHANGE" to change the settings on the user menu. If the word "CHANGE" is not displayed, touch the value itself to remove it. On the numeric screen that opens, type in the new desired value and activate this value with "ENT". The selected value appears in the display bar. Close the menu using the square in the top left-hand corner of the numeric screen.

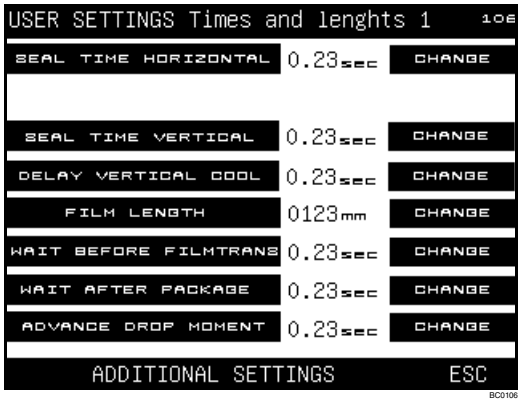
The previous menu can be selected by pressing "ESC".

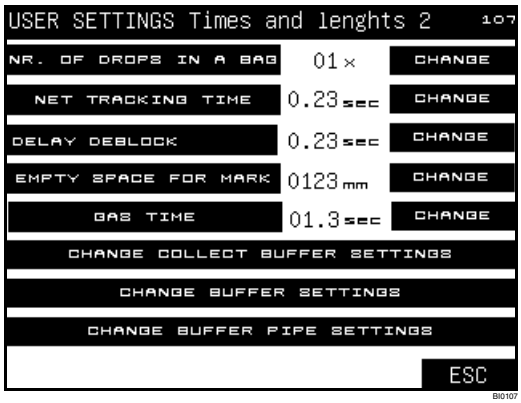
4.5 User menu screen



4.5.1 TIMES AND LENGTHS MENU

Changing the time of the different processes performed by the packaging machine.





SEALING TIME HORIZONTAL
The time for the horizontal seal jaws to close.

SEALING TIME VERTICAL
The time the vertical seal bars are pressed against the film.

This time display stops when the horizontal seal jaws are opened. The vertical seal bar is opened.

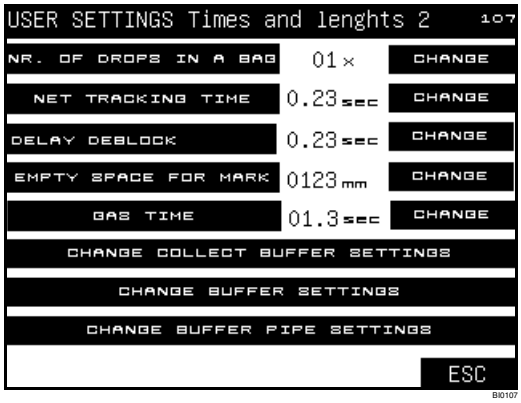
DELAY COOLING TIME VERTICAL
When the vertical seal jaws are opened, cool air is blown on.

FILM LENGTH
Length of the film. This value is determined by the machine set-up.

WAITING TIME FOR FILM TRANSPORT
Waiting time from the opening of the horizontal seal jaws until the start of the film transport.

WAITING TIME AFTER PACKAGING
Waiting time between the end of one packaging operation and the start of the next packaging operation.

ADVANCE DEPOSIT MOMENT
When the time is 0.00, the product is deposited when the sealing bar is closed. If a time is set here, the product will be deposited earlier.



NUMBER OF DEPOSITS PER BAG
The desired number of deposits in one packaging.

FILM ADJUSTMENT
Used for the film control. When the film transport is started, a check is performed to see whether the film position is set correctly. If not, the film position is corrected.

DELAY PLUNGER
The plunger prevents products from remaining in the product infeed during filling. Some time (adjustable) after the filling of a new bag is started, the plunger will be used.

EMPTY SPACE FOR MARK
This is used if there is an interfering print between the mark stripes on the film. If a value between 35 and 99 mm is set, the mark scanner will only be active from the set distance in front of the mark stripe.

FUMIGATION TIME
Depending on the use of the fumigation installation for the addition of gas, the following times can be set:

- Continuous fumigation time
- Pre-fumigation time
- Pulse-fumigation time

With continuous fumigation, gas is added whenever the machine is started / restarted. During production, gas is added continuously. If the production stops for longer than the set continuous fumigation time, the continuous gasflow will be stopped.

The pre- and pulse-fumigation are used for a double fumigation. The pre-fumigation time is used to build up a column of gas in the product infeed.

The pulse-fumigation time is started whenever the machine starts making a bag and is used to keep the gas column in the product infeed. The means the packagings have as little surplus oxygen as possible. The amount of surplus oxygen can only be checked with a surplus oxygen meter.

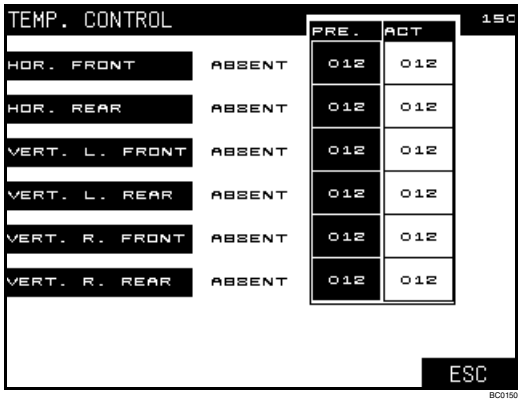
The correct settings must be found experimentally.
More gas usage does not always produce less surplus oxygen.

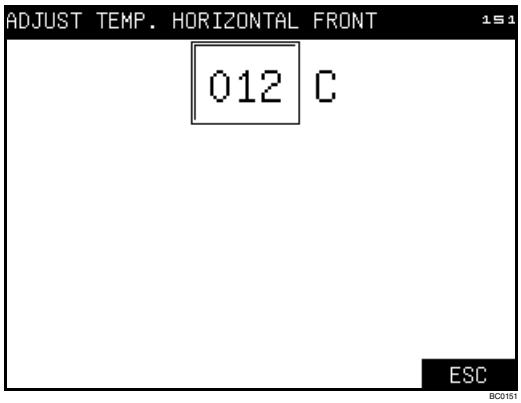
WARNING!!!
Should the gas valve fail to work properly, preservative gas may flow into the production area. Machines with gas flushing may only be placed in a well-ventilated space.

4.5.2 TEMPERATURE CONTROL MENU

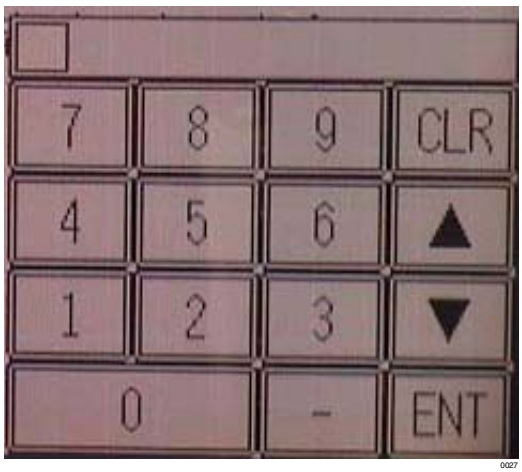
Temperature settings for the various seals.

The temperature can be changed by pressing the temperature value.



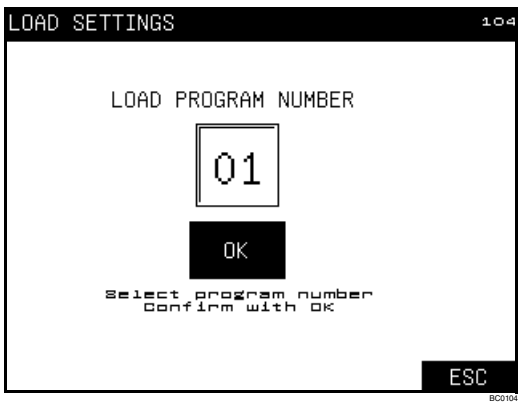


- Type in the temperature on the numeric screen and activate this value with “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.



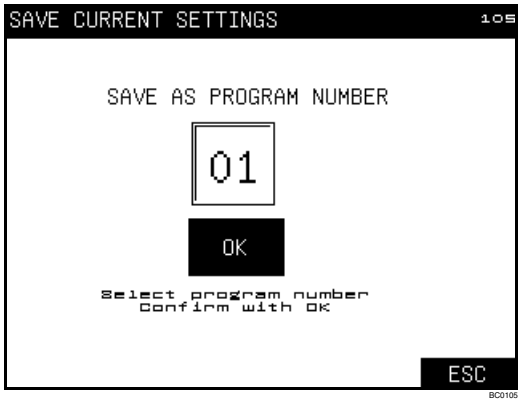
4.5.3 LOAD SETTINGS

Retrieval of saved settings.

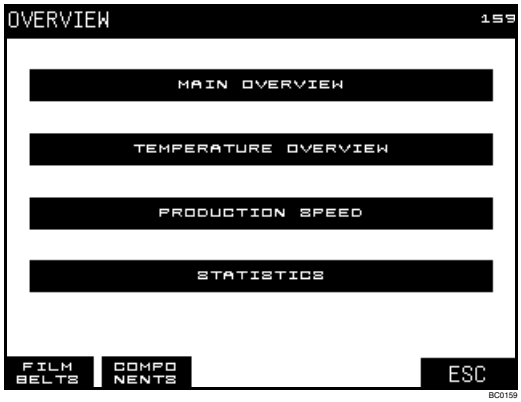


4.5.4 SAVE SETTINGS

Save selected settings.

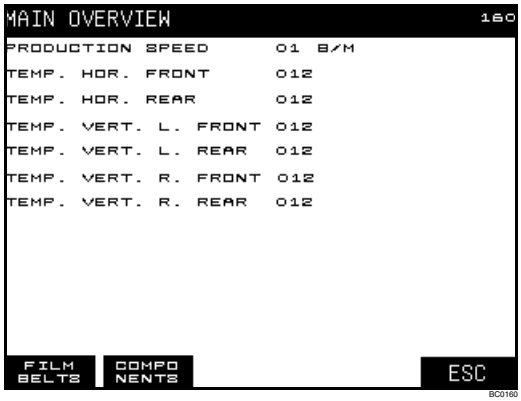


4.6 Overview menu screen



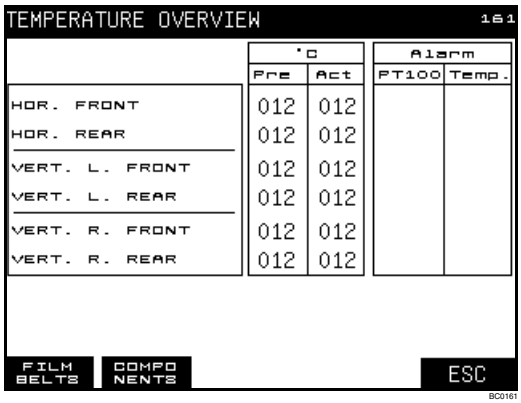
4.6.1 MAIN OVERVIEW

The various values of the machine are shown.



4.6.2 TEMPERATURE OVERVIEW

A list of the temperaures of the various machine components.



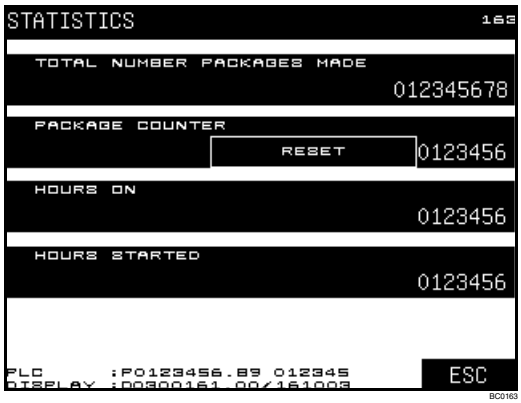
4.6.3 PRODUCTION SPEED

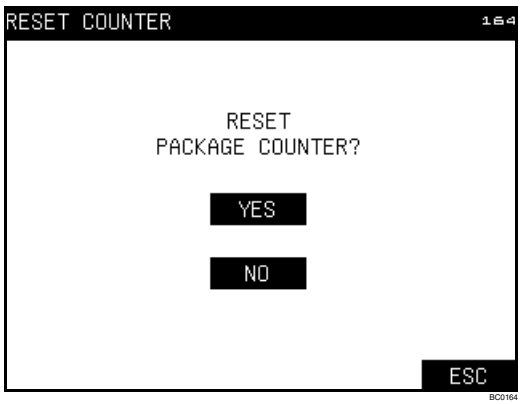
The production time in bags/min is displayed.

4.6.4 STATISTICS

The production values are displayed.

Press "RESET" to reset the day counter on the menu.





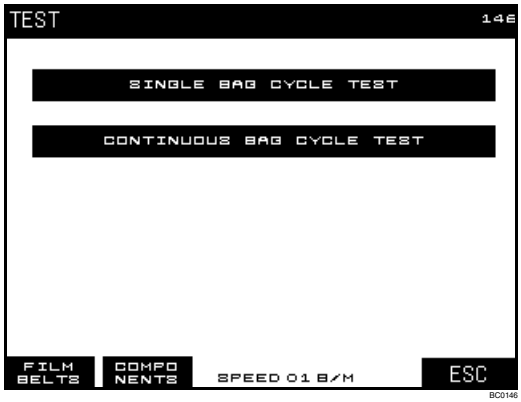
4.7 Test menu screen

4.7.1 SINGLE BAG CYCLE TEST

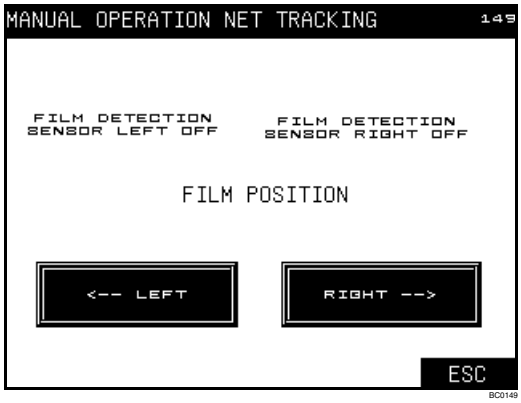
One cycle is activated with the single test cycle.

4.7.2 CONTINUOUS BAG CYCLE TEST

A number of test cycles are performed when continuous test cycle is selected.

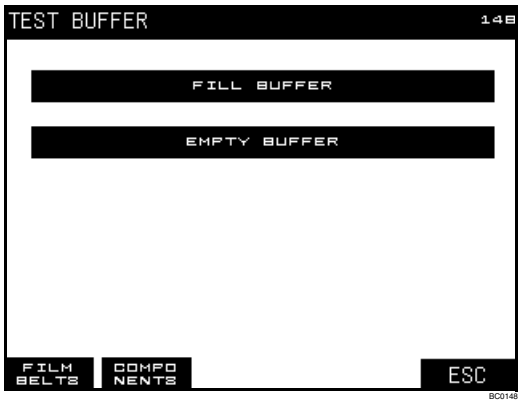


FILM CONTROL TEST
The film roll is moved left or right by hand with the film control test. If its working range is exceeded it will stop and one of two "end sensors" will be illuminated.



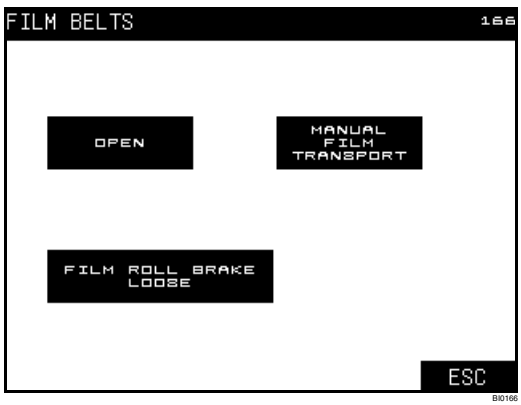
CONNECTION SEAL TEST
The connection seal is operated by hand in the connection seal test.

BUFFER TEST
- FILL BUFFER
- EMPTY BUFFER



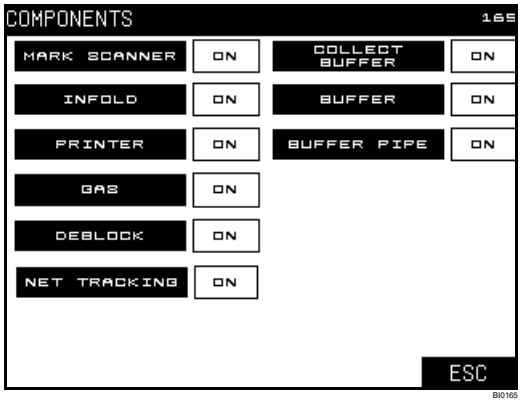
4.8 Film belt menu

FILM BELTS
Selecting "OPEN" from the "FILM BELTS" sub-menu opens the belt and allows manual transport. The "MANUAL FILM TRANSPORT" allows the belt to be operated by hand. "AUTOMATIC FILM ROLL BRAKE" is used when changing the film roll (see paragraph 6.5 on page 49).



4.9 Components menu

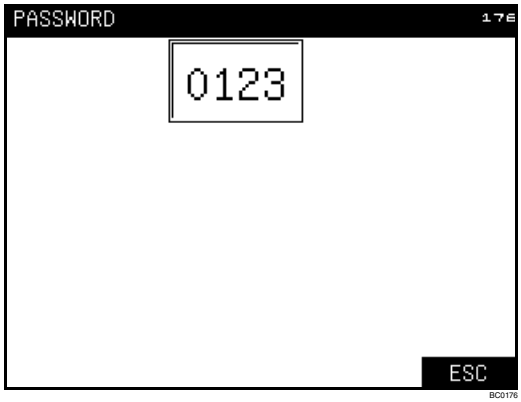
COMPONENTS
Using the "COMPONENTS" sub-menu, the machine components can be turned on and off individually.



4.10 Password menu

PASSWORD
Level 2 of the menu will open on entry of a password in the "PASSWORD" menu.

The password menu is intended for qualified maintenance personnel and is not dealt with further in this manual.



5 Preparation procedures

5.1 Installation and operation

5.1.1 Installation

Condition
The machine packaging is undamaged on delivery.

Procedure

1 Install the machine on a sturdy base, e.g. concrete.

2 Install the machine in accordance with the installation diagram.

Use the lifting eyes or a fork lift truck.

WARNING!!!
Take care when using block and tackle equipment.

Use only suitable and approved lifting gear and attachments.

It is forbidden to stand under a suspended load.


0028

3 Adjust the machine using the adjustable feet:

- Level.
- A machine with liquid waste pipe: sloping towards the waste gulley, maximum 5 mm/m.

4 Connect the compressed air supply in such a manner that the supply can be switched off and the packaging machine can be depressurised, e.g. with a quick-coupler.

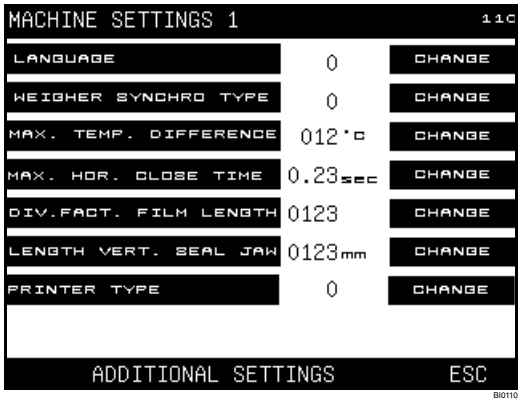
5 Connect the machine in accordance with the electrical diagram.

5.1.2 Operation

6 Check that the phases of the electrical supply are connected correctly. Turn on the film transport and check the direction of rotation.


0029

7 Check that the installed options are operational.



8 Set the Synchro-settings ***(not for users)***:

- Weighing machine ready / Jasa acknowledges, (P7.7 in Newtec loose. Jasa Synchro-setting at 0):

  When the weighing machine has a deposit ready in its weighing trays, it gives a “ready” signal. This signal will continue until Jasa gives an "acknowledgment". The "acknowledgment” is a pulse of 200 msec.

  When the weighing machine receives the “acknowledgment”, it releases its deposit and removes the "ready" signal.

- Jasa Ready to receive / Weighing machine deposited, (P7.7 in Newtec fixed. Jasa Synchro-setting at 1):

  If the Jasa is ready to receive a deposit it gives a "ready to receive" signal. This signal is continuous until the weighing machine gives its "deposited" signal. The “deposited" signal is a pulse of 200 msec. When the weighing machine receives the "ready to receive" signal and it has a deposit in its weighing trays, it deposits its load and gives the "deposited" signal.
  The Jasa removes the "ready to receive" signal on receipt of the "deposited" signal.

  Without advancing the time of deposit, without advancing the seal jaws, and without buffer and collection belts. The Jasa starts a bag cycle by closing the seal jaws as soon as the weighing machine deposits a portion. The weighing machine may resume its deposits when the bag cycle is complete.

9 Go to level 1.

5.2 Select form holder and seal bar

5.2.1 Connection seal bar and vertical seal bars implementations

- PE or laminate - 6 mm.
- Laminate or PP - 8 mm.

5.3 Turning on machine

Tools
Soft cloth.

Procedure

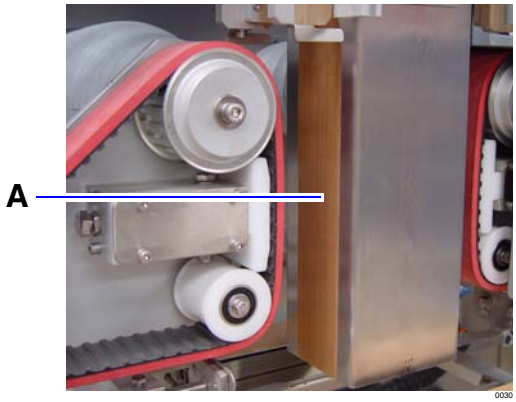
1 Check the following before the machine is used for the first time:

- Is there any damage?
- Are all parts and accessories present?
- Do all controls operate correctly?

2 Check that the seal bars fitted are suitable for the type of film used.

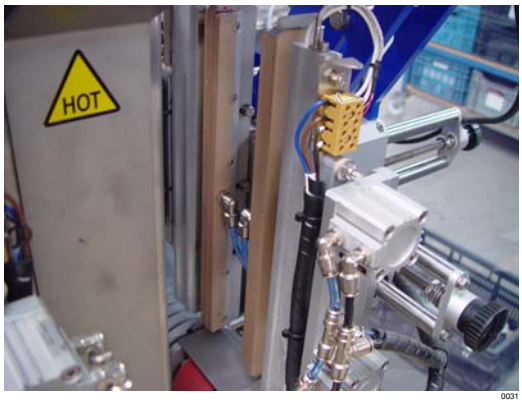
3 Check the teflon (**A**) for damage and wear.

The fibres of the protective layers may not be visible and there should be no evidence of loose teflon particles. Inspect the rubber background for damage and uniformity of thickness.



4 Inspect the teflon layer at the connection seal bar and at the vertical seal bar. Make the necessary adjustments if there are signs of wear.

5 Close the doors.



6 Clean the reflectors of the photocell and product infeed (option) with a soft cloth.

7 Turn on the power.

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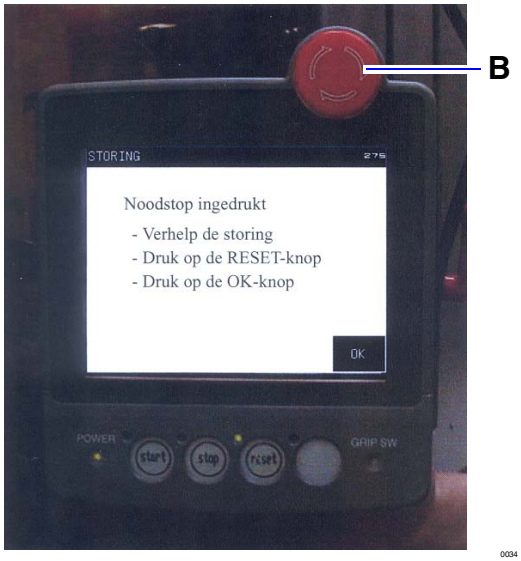
8 Reset the machine: release the emergency stop button (**B**) then press “reset” and “OK” (see paragraph 4.1 on page 13).



0034

5.4 Film transport

Condition
The machine is on.

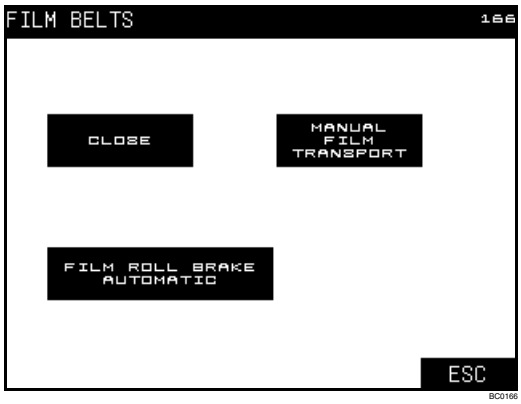
The film roll is changed.

Tools
Scissors.

WARNING!!!
Foil feeding takes place with foil belts running. The running belts can cause serious and permanent injury.

Procedure

1 Press “FILM BELTS” in the main menu.



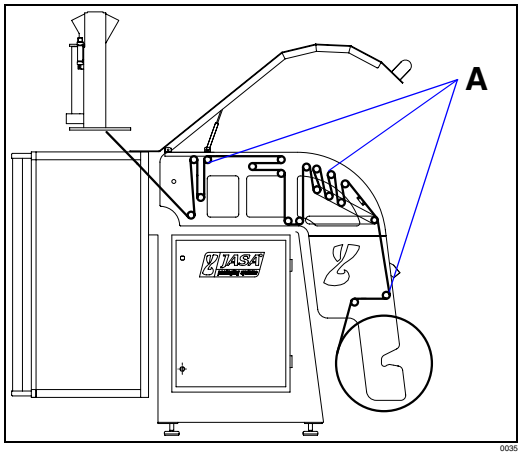
2 Open the doors.

3 Remove any remaining film from the machine.

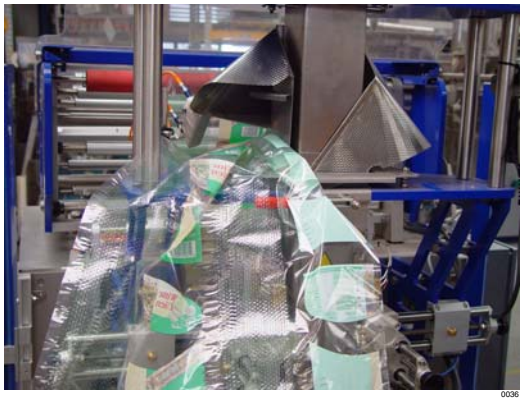
4 Open the film belt: press “FILM BELTS” and then “FILM ROLL BRAKE LOOSE”.

5 Transport the film through the machine until it is past the form shoulder.

See: Belt run (**A**).



6 Pull the film through about 1 metre.

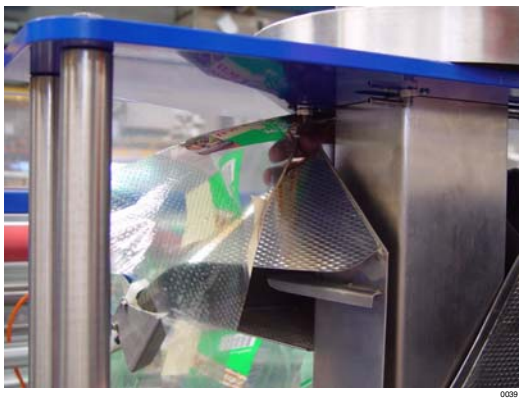


7 Cut a point of the film (45º and from left to right).

8 Put the point of film over the shoulder.

9 Pick up the point (left hand) and pull it through a bit further.

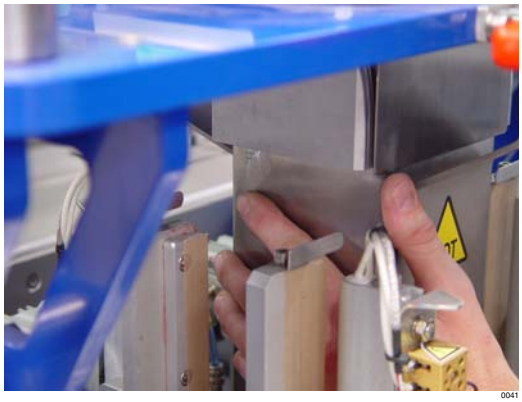
10 Place your right hand behind the film until it is a bit under the edge.



11 Hold the film taut with your right hand and fold the film behind with your right hand.

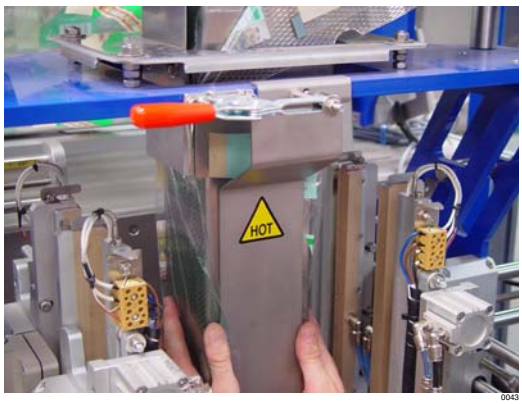
12 Place the folded part of the film between the shoulder and the product infeed. And push the film through tightly and and carefully until the point appears.

13 Pick up the point (left hand) and pull it through carefully until film appears at the top right.

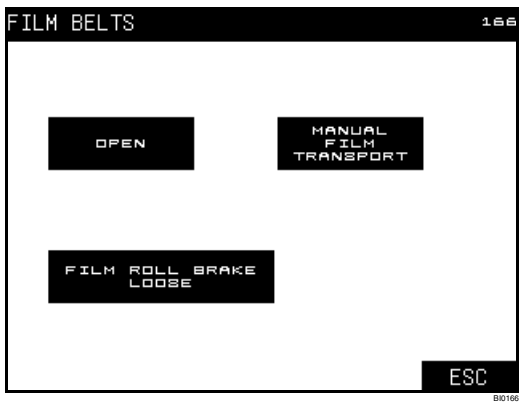


14 Pick up the film with your right hand. Then pull carefully from left - right - left - right etc.

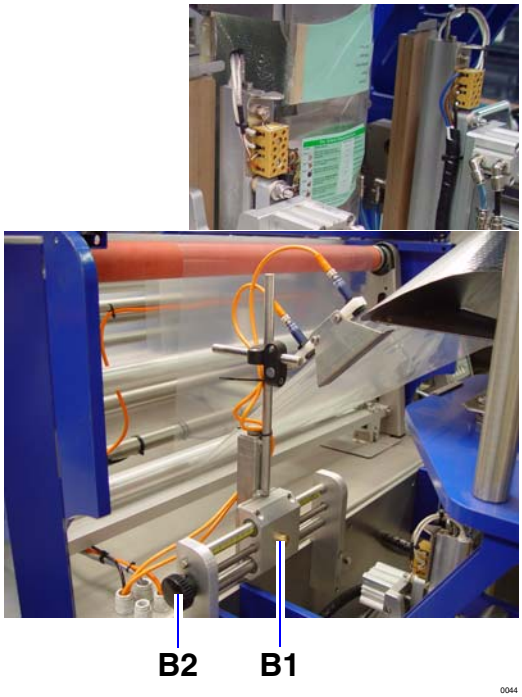
15 Pull the film downwards.



16 Film transport: press “FILM BELTS” and then “AUTOMATIC FILM ROLL BRAKE”. Keep this button pressed until the edge of the film runs true. Then press “ESC” twice to return to the main menu.



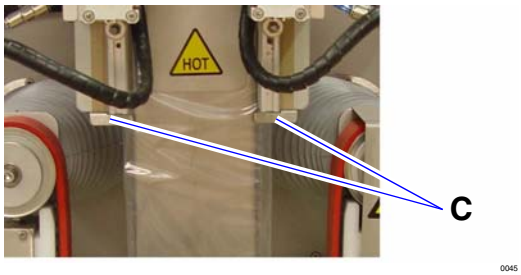
17 Check that the film edges meet each other. If there is a distance greater than 7 mm, adjust the roll (**B1** coarse or **B2** fine, see paragraph 6.6 on page 51).



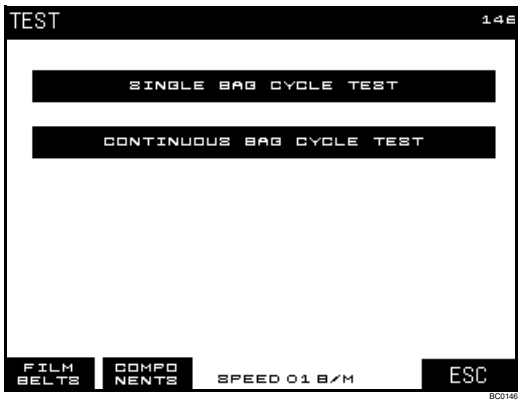
18 Set the vertical seal bars 4 mm from the product infeed. Guide the film between the seal bars. The film must run behind the film guide (**C**).

19 Close the doors.

20 Press "TEST" on the menu.



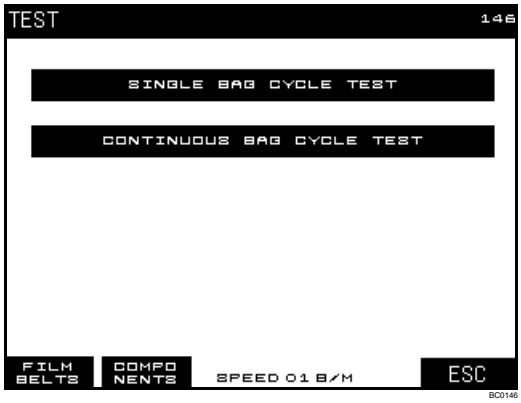
21 Press “SINGLE TEST CYCLE”.



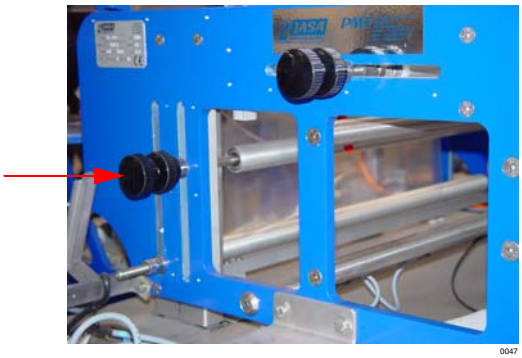
22 Press the start button twice to start the test cycle.

23 Check the film length.

24 Press "ESC" or adapt the data as required.



25 If the bag is cut on the mark, check this. Make any necessary adjustments.



5.5 Setting the mark scanner

The mark scanner is used to determine the length of the film by using the marks that are printed on the film. Because the film printing is optional, a choice can be made from 3 different settings.

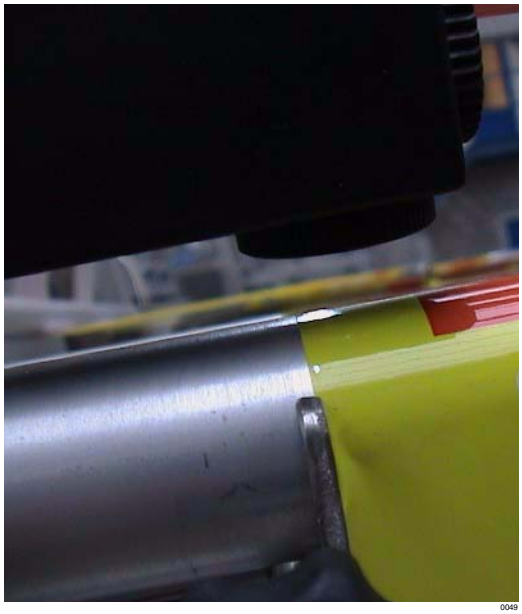
5.5.1 Mark scanner

If the mark scanner is selected, the length is determined by the marks on the film. If a converted transport time which includes a margin for error elapses without detecting a mark, the packaging machine will stop and an error message will be displayed.

5.5.2 Mark reader setting procedure

1 Check that the light window of the mark scanner is located in the path of the marks. Adjust as required.

2 Position the label film so that the light window illuminates the mark field.



3 Without disturbing the label film, press the button located below the green indicator (ready) until the indicator goes out.

4 Position the film so that the light window no longer illuminates the mark field.

5 Without disturbing the label film, press the button located below the red indicator (out) until the green indicator goes on briefly and then goes out.

The green indicator will be continuously illuminated when the mark scanner is set correctly.

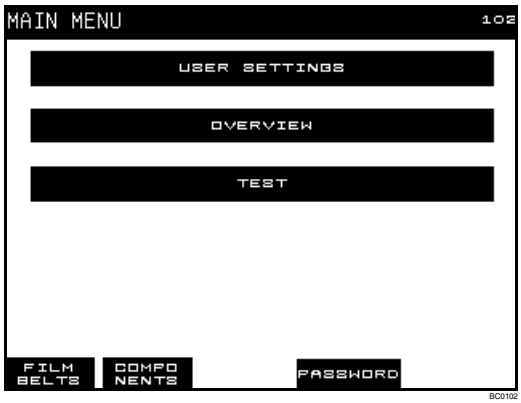
If the indicator flashes slowly, the setting procedure has failed.

A rapid flashing indicator is an indication that the photocell has short-circuited or is overloaded.

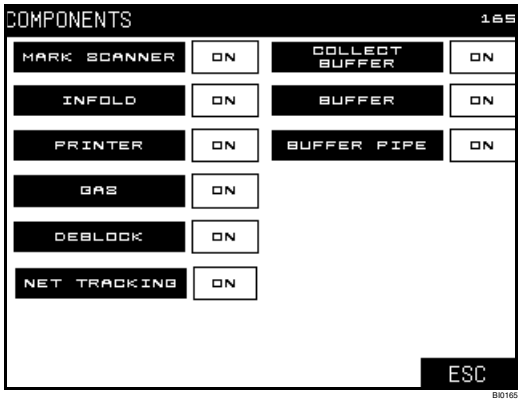
An indicator that does not come on means that the photocell is not energised or that the grey value has been achieved.

6 Turning the mark scanner on.

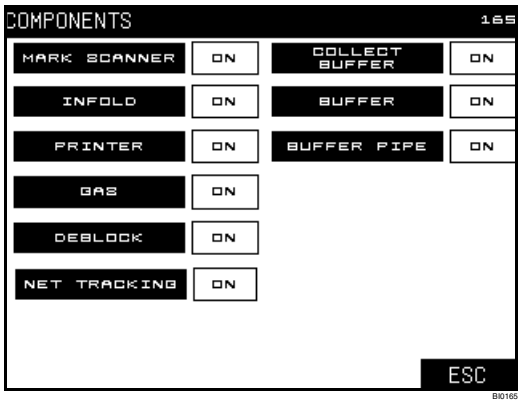
- Press “COMPONENTS” on the main menu screen.



- Press "OUT" adjacent to “MARK SCANNER”. The mark scanner is turned on.

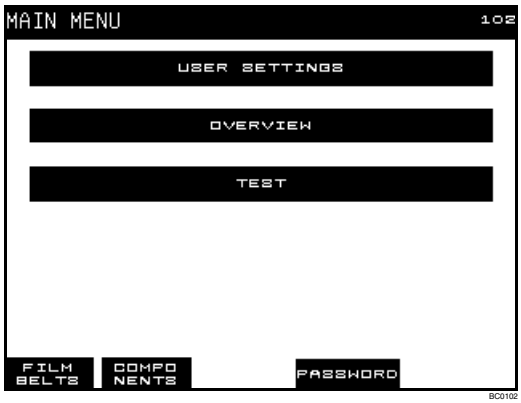


- Press “ESC” to close the components menu.

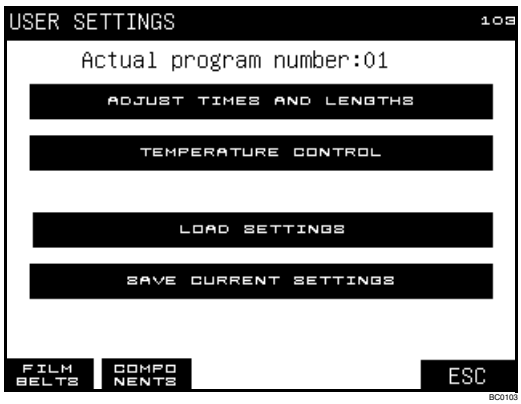


7 Film length (not printed).

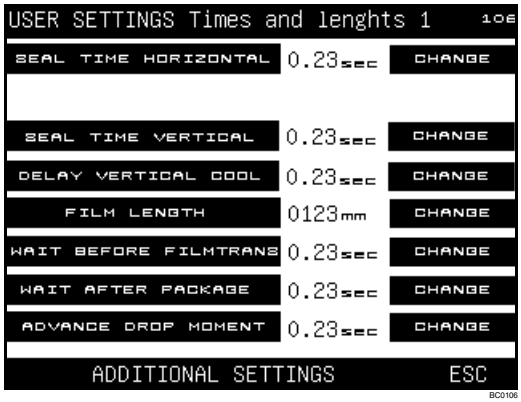
- Press “USER SETTINGS”.



- Press “SET TIMES AND LENGTHS”.

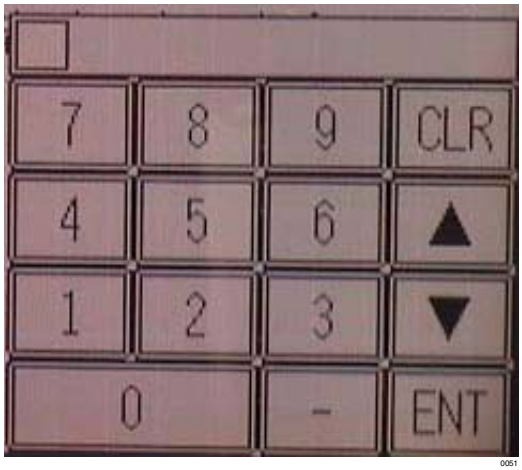


- Press "CHANGE" adjacent to "FILM LENGTH".

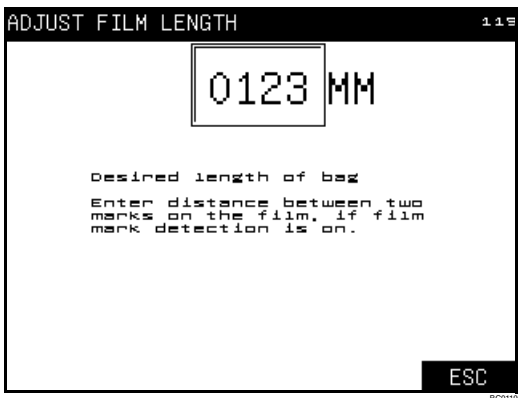


- Press the value to be changed.

- Type in the film length on the numeric screen + 10 mm and activate this value by pressing “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.

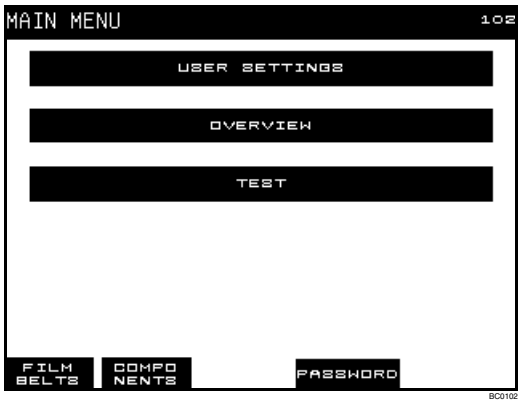


- Press “ESC” until the main menu is displayed.

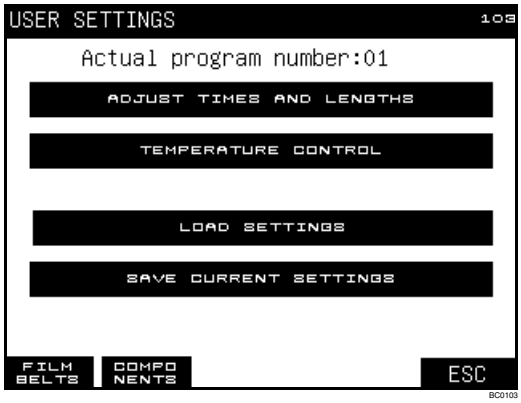


8 Film length with printed film.

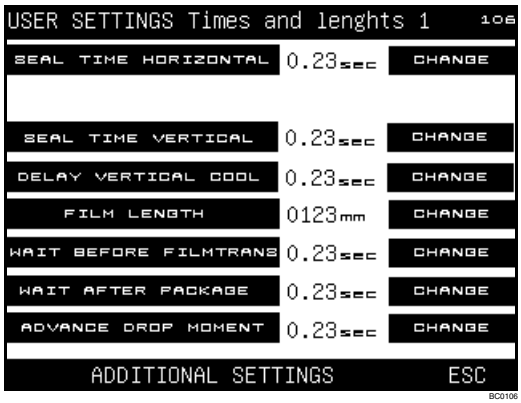
- Press “USER SETTINGS”.



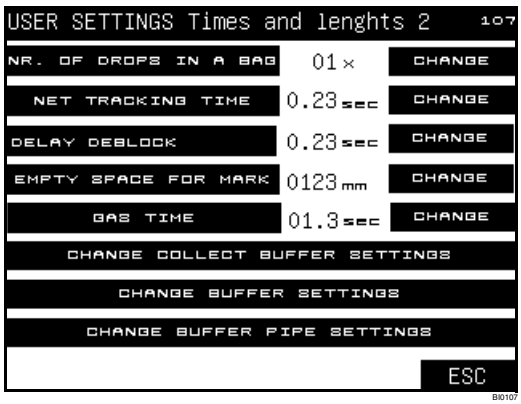
- Press “ADJUST TIMES AND LENGTHS”.



- Press “MORE SETTINGS”.
- Measure the distance between the end of the printed field and the start of the mark using a measuring tape. This should be at least 35 mm. If this distance exceeds 99mm, please enter 99 mm.

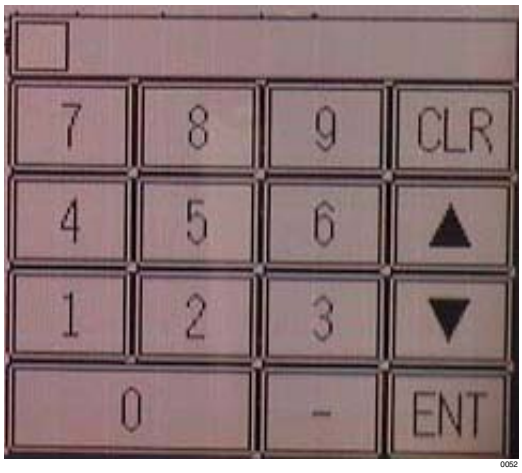


- Press "CHANGE" adjacent to the “EMPTY SPACE FOR MARK” bar.

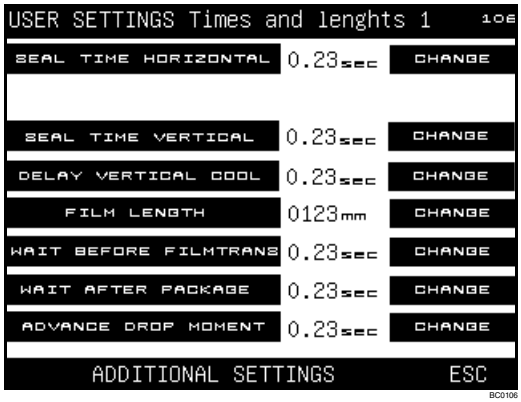


- Press the value to be changed.

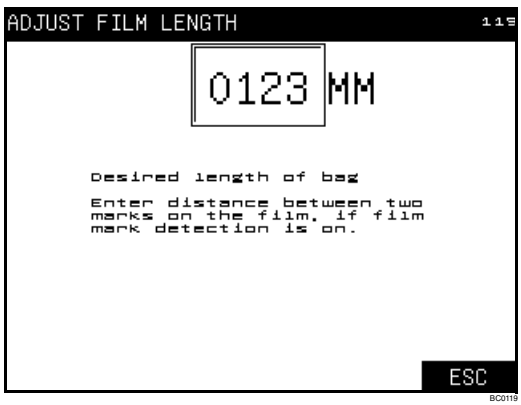
- Type the measured value on the numeric screen and press “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.
- Press “ESC”.



- Press "CHANGE" adjacent to "FILM LENGTH".

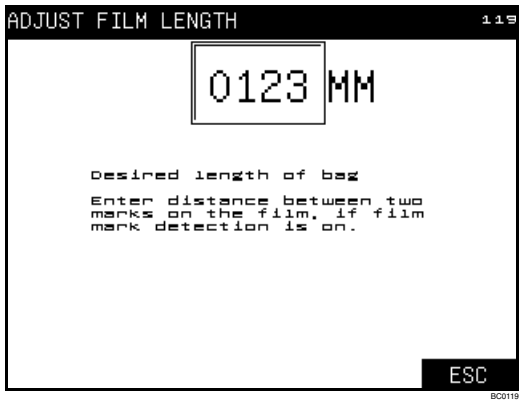


- Press the value to be changed.



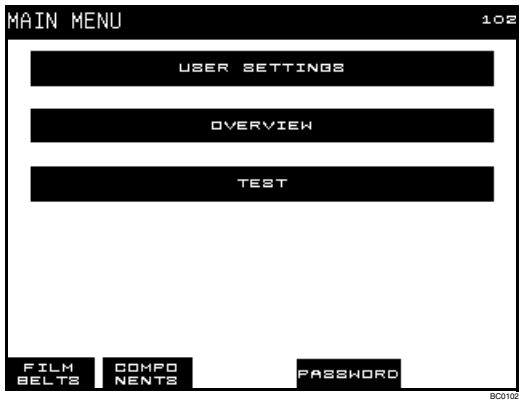
- Type the exact film length on the numeric screen and press “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.

- Press “ESC” until the main menu is displayed.

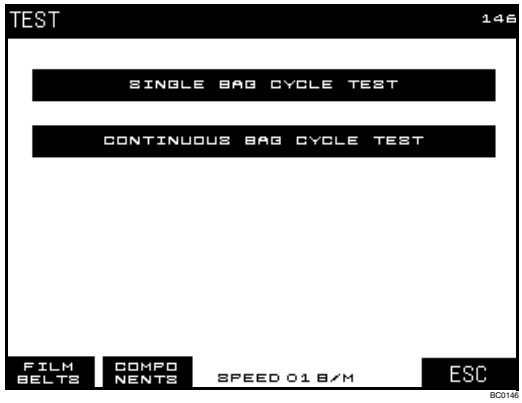


9 Making bags.

- Press "TEST" in the main menu.

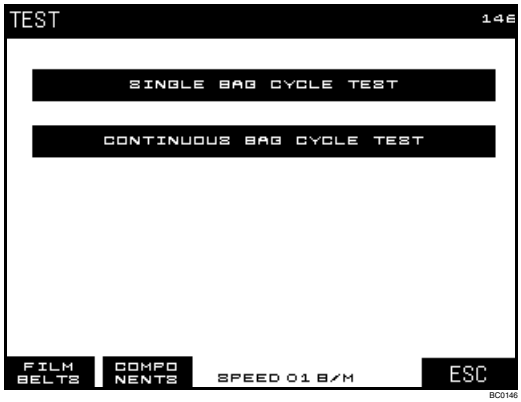


- Press “SINGLE BAG TEST CYCLE”.



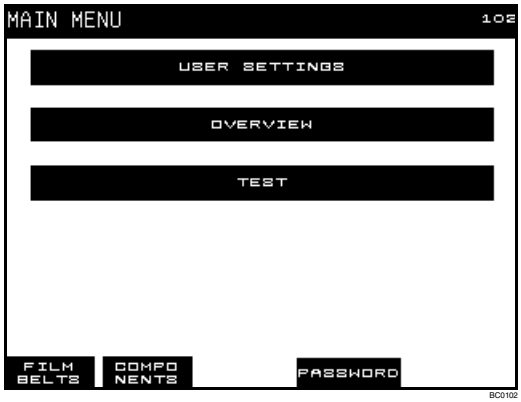
- Press the start button twice to start the test cycle.
- Check the film length.

- Press "ESC" or adjust the data as required.

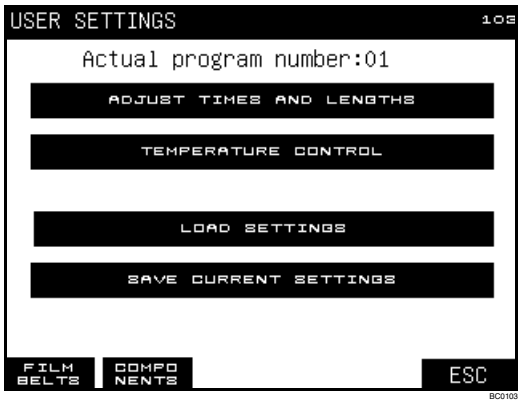


10 Save program.

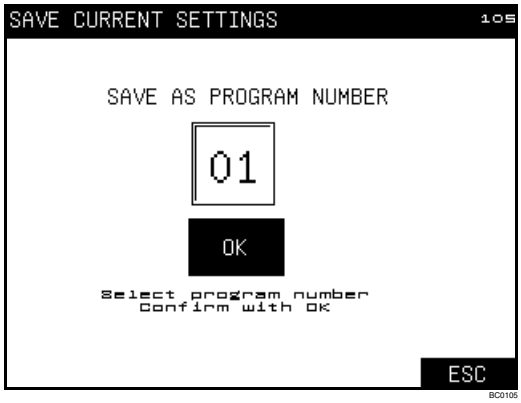
- Press “USER SETTINGS”.



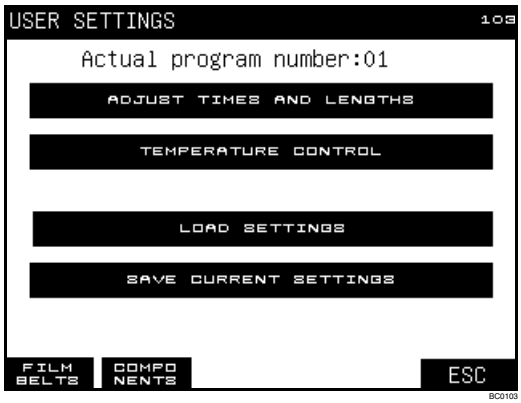
- Press “SAVE SETTINGS”.



- Press the program number.
- Type in the required program number and press “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.
- Close the ”SAVE SETTINGS" screen by pressing “ESC”.



- Press “ESC” once again.

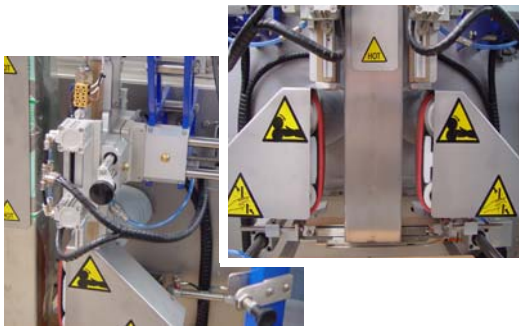


5.6 Changing a format

Procedure

1 Press the emergency stop button.

2 With a larger product infeed: Move the parts back far enough!

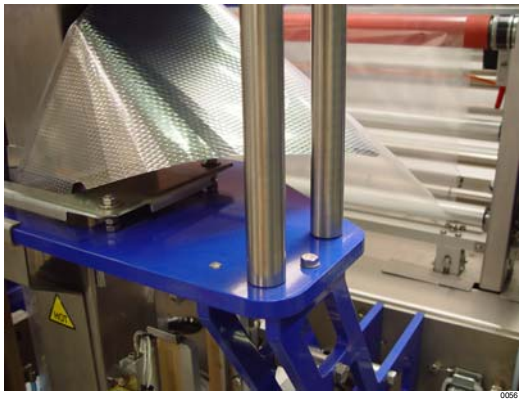


3 Replacing a format:

WARNING!!!
Avoid damage from jolts and careless handling.

A format is very heavy to be lifted by one person!

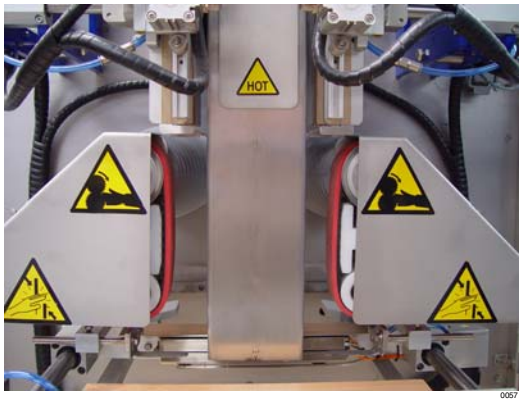
- Unscrew the two securing bolts of the product infeed with the form shoulder.
- Take the product infeed off the machine.
- Put the new format in the machine, move it until the contacts meet and secure it with the two bolts.



4 Visually check to ensure that the product infeed is parallel to the film belts. If not, contact the maintenance technician.

5 Feed the film through the machine.

6 Reset the emergency stop (see paragraph 4.1 on page 13).



5.6.1 Setting vertical seal bars

The correct place can be determined when the film is fed through (see paragraph 5.4 on page 29).

7 Guide the film between the seal bars.

8 Set the vertical seal bar so that there is a gap of about 4 mm between the seal bars and the product infeed. Make sure that the film runs behind the guide.

5.6.2 Setting block base

9 Set the block base so that the product infeed is in the middle of the transverse seal when the transverse seal bars are closed.
Make sure that the vertical seal does not push the product infeed away from the middle. If necessary, also set the vertical seal. Setting the vertical seal is possible in two ways depending on the version:

- using the star button behind the product infeed.
- using a cylinder which is behind the product infeed and which is controlled at the same time as the vertical seal.

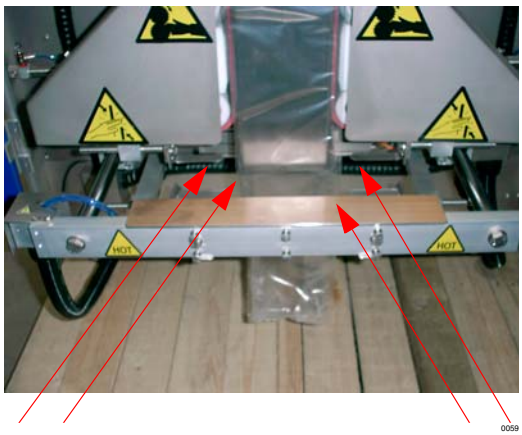
10 Set the reduction of the closing speed for the block base. This must be set in such a way that the block base fold reaches the end of its range when the transverse seal is closed.

5.6.3 Setting folding mechanism

11 Set the folding blades in such a way that they are 1 - 2 mm under the product infeed. Make sure that the folding blades do not touch the transverse seal bar.

12 Set lower blades in such a way that they are directly below the transverse seal bars. Make sure the blades do not reach the jaws.

13 Check that the folding blade points are set up in such a way that they are all the same distance from the product infeed for an open transverse seal and they do not touch each other when folding.



5.6.4 Setting film position sensors

14 Set the film position sensors so that the overlap stays the same during the operation of the machine.

5.7 Replacing a horizontal seal bar

Material
Heat conducting paste.

Procedure

WARNING!!!
Even after the machine is switched off, the seal bars are still hot.

WARNING!!!
One of the seal bars is equipped with a cutting edge.

1 Dismantle the knife from the horizontal seal bar.

- Hook the springs from the knife over the ridge. These springs can be found on the back of the seal bar.

2 Dismantle the seal bar:

- Apply even pressure to the spring, or use the tool supplied.
- Lift the spring carefully over the lip.
- Remove the seal bar from its holder.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3 Apply a thin even layer of heat conducting paste to the inside of the new seal bar.

4 Attach the seal bar:

- Place the seal bar in the seal unit against the laying surface.
- Return the spring symmetrically to its place by hand.
- If this requires some force, repeat the procedure.


0063

6 Operating procedures

6.1 Starting and checking production introduction

Conditions
The machine is turned on and the user settings have been entered.

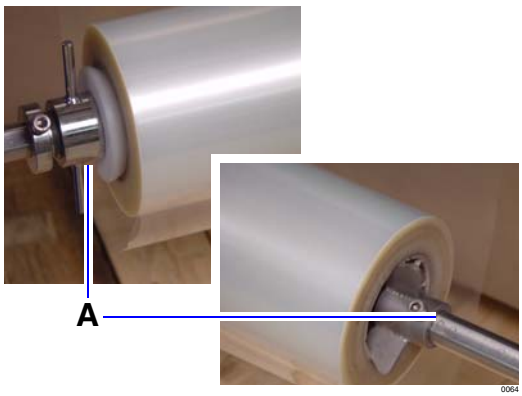
The film is transported through.

The equipment used for transporting products is ready for production.

Procedure

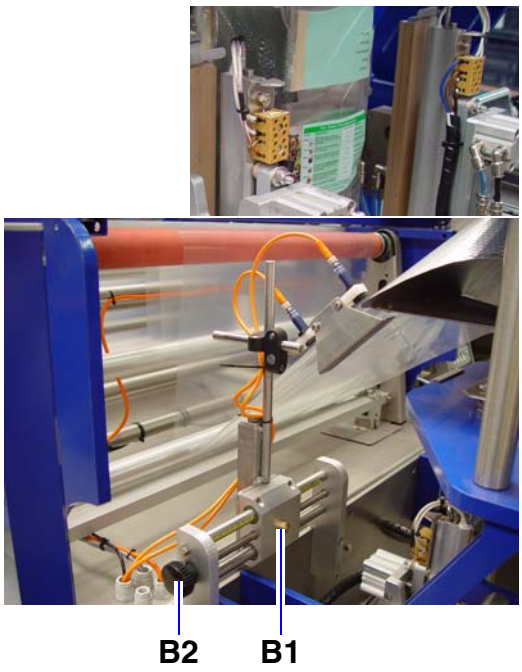
1 Check that the film roll is properly fixed to the spindle (**A**).

When fitted, the pinion locks as the film is unrolled.



2 Starting production: push the start button.

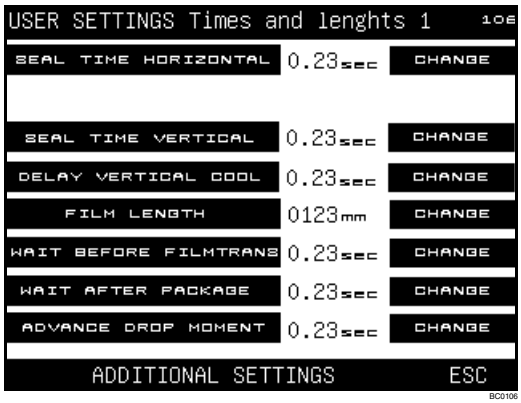
3 Check the film overlap at the transverse seal unit. If the difference is greater than 7 mm, re-adjust the roll (**B1** and **B2**, see paragraph 6.6 on page 51) and check again.



4 Check the seal connection, see paragraph 6.3 on page 48.

5 Check that:

- The deposits are ready when the seal jaws close. Adjust by changing the “WAIT TIME AFTER PACK”.
- The product is received by the seal jaws. This can be adjusted by changing the value behind “ADVANCE DEPOSIT MOMENT”.



6.2 Checking production

Procedure
Check at least once a day:

WARNING!!!
Even after the machine is switched off, the seal bars are still hot.

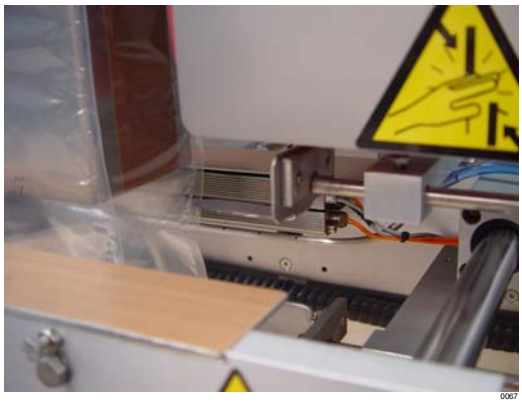
WARNING!!!
Caution: One of the seal bars is equipped with a cutting edge.

1 The horizontal seal bars for damage and soiling.

- Change any damaged seal bars, see paragraph 5.7 on page 44.
- If the seal bar is dirty:

  Clean the warm horizontal seal bars and cutting edge groove with a wooden spatula.

2 Check the seal connection, see paragraph 6.3 on page 48.



6.3 Checking the seal connection

Procedure

1 The seal connection should be of adequate strength. If this is not the case:

- Increase the seal time.
- And/or increase the cooling time.
- And/or increase the seal temperature.
- And/or check the system air pressure.
- If the film does not seal well, load a new roll.

2 The seal surface should not get too hot, characteristics of the surface getting too hot are:

- Polypropane (PP) or laminate: the seal joint is deformed.

Possible causes:

- The seal time is too long.
- And/or the seal temperature is too high.
- And/or the teflon coating of the seal bar is worn or the teflon film of the longitudinal connection seal bar is worn.

6.4 Check fumigation time

Check the oxygen content in the product infeed when the products are deposited. Checking the surplus oxygen content can only be done with an oxygen meter.

6.5 Changing film roll

Material
Single-sided tape.

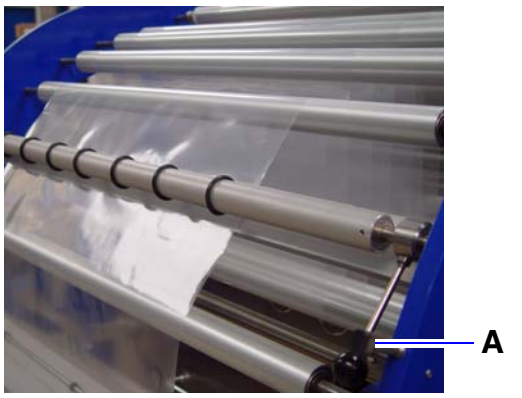
Procedure

1 The machine stops automatically when the roll is empty or you can stop the production by pressing the stop button.

0068

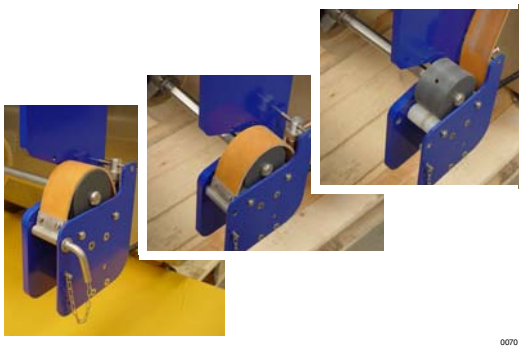
2 Secure the film holder by turning the handle (**A**).

3 Press "FILM BELTS" in the main menu and then "FILM ROLL BRAKE LOOSE".



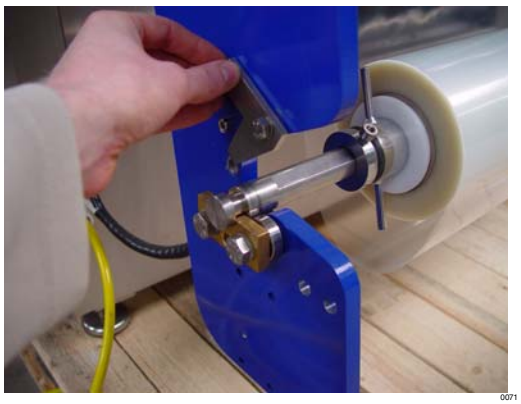
0069

4 Take off the brake belt.



5 Lift up the catch and remove the spindle from the machine.

6 Slacken the case fastening and turn the clamp loose.



7 Slide the spindle out of the old tube and place into the tube of the new roll. Place the new roll complete with spindle into the machine.

Make sure that the roll is located in the centre of the machine.

8 Tighten the latches.

9 Assemble the brake in reverse order, see point 4.

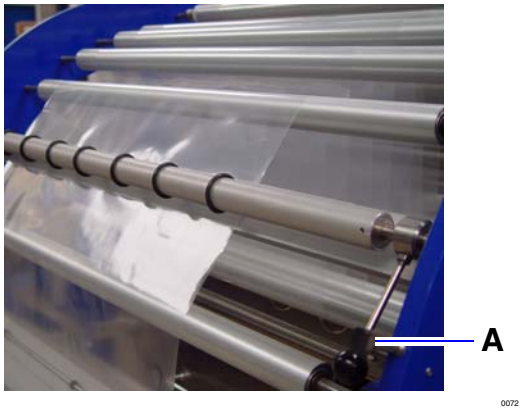
10 Attach the film lengths to each other: tape of film seal unit (option):

Tape	**Film seal unit**
Attach 3 lengths of adhesive tape lengthways to the inside of the new film.	Put the old belt on the film seal unit, cut off the excess overlap.
Take the belt in the film accumulator and lay it in position over the adhesive tapes.	Take the film from the roll and lay it into position (overlapping the old film).
Stick three strips of adhesive tape on the outside of the film joint and secure firmly.	Push the seal arm down and then release it.

11 Go to the “AUTOMATIC FILM ROLL BRAKE” screen and loosen the film holder.

12 Loosen the film holder by turning the handle (**A**).

13 Turn back the film roll until the film is taut and the film balance is in the middle.



6.6 Adjusting the film control

Conditions
The automatic film control is on.

Procedure

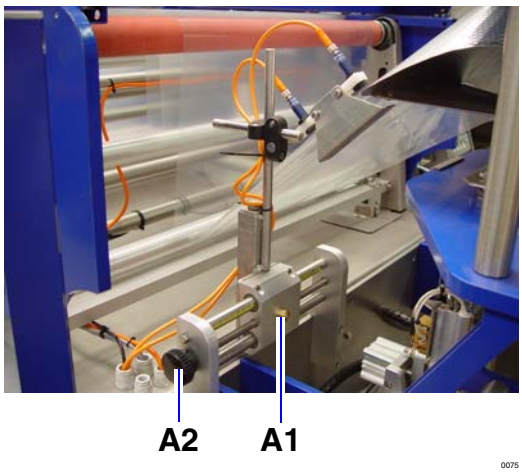
6.6.1 Film adjustment

1 Stop the machine when the basic roll is stationary by means of the stop button.

2 Mark the film at the inlets and then press the start button.

3 Check the film overlap at the transverse seal unit. Repeat the procedure when the difference is too great.

4 Mark the inlet set and adjust it (**A1** and **A2**). Repeat the previous points.



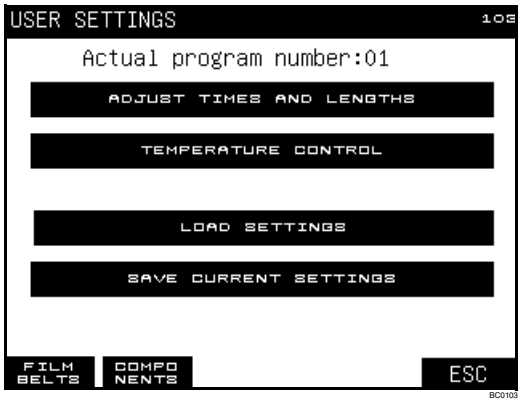
6.6.2 Setting tracking time

5 During production, check that the tracking:

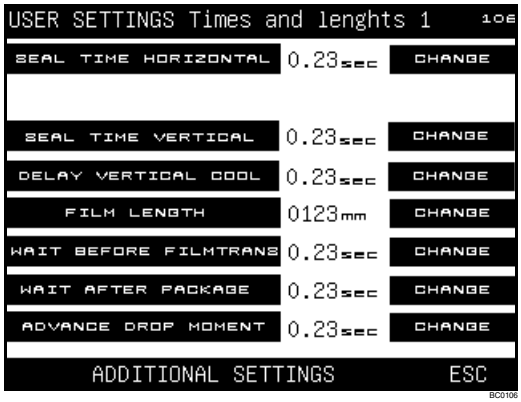
- Changes direction frequently: reduce the tracking time.
- During production of a number of bags, is sent in the same direction while the film almost doesn't pass the inlets: increase the tracking time.

6 Changing tracking time:

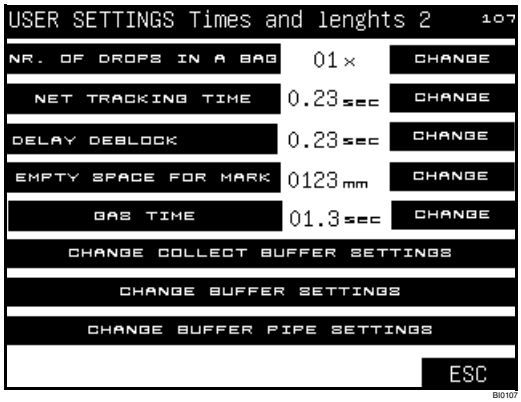
- Press "USER SETTINGS" on the main menu, then press “ADJUST TIMES AND LENGTHS”.



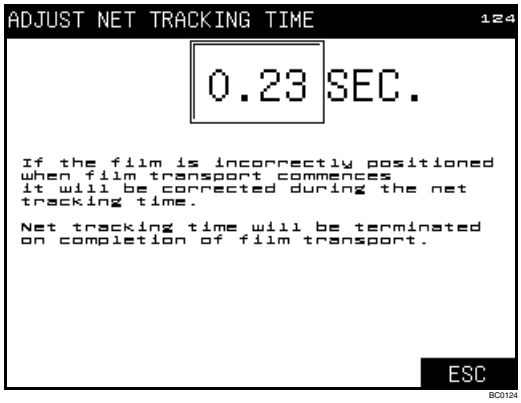
- Press “ADDITIONAL SETTINGS”.



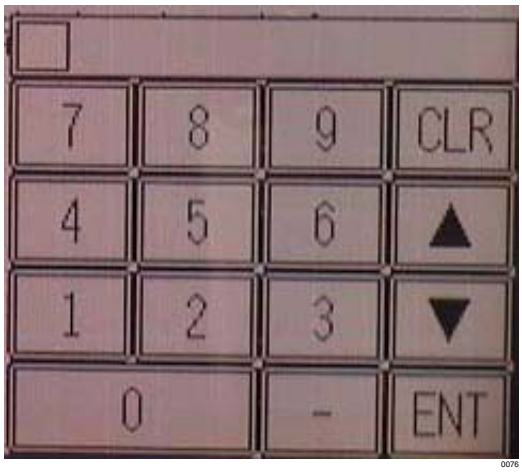
- Press "CHANGE" adjacent to "FILM CONTROL TIME".



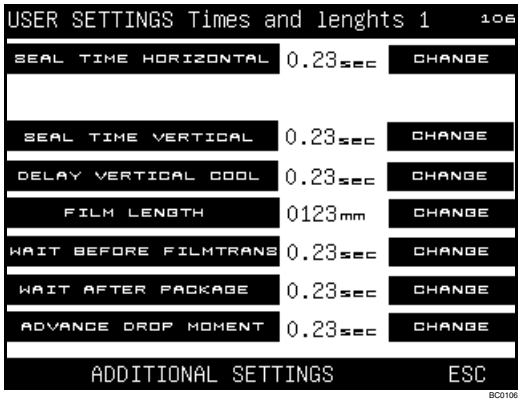
- Press the value to be changed.



- Type the desired value in the numeric screen and press “ENT”.
- Close the numeric screen by pressing the small square in the top left-hand corner of the numeric screen.



7 Press “ESC” until the main menu is displayed.



6.7 Turning the machine off

Material
Wooden spatula

Procedure

WARNING!!!
Even after the machine is switched off, the seal bars are still hot.

WARNING!!!
Caution: One of the seal bars is equipped with a cutting edge.

1 Stop the production by pushing the stop button.

0077

2 Turn off the power supply.

3 Check that the cutting edge and its groove on the horizontal seal bars are clean. Carefully clean dirty seal bars while they are still warm using a wooden spatula.

0078

6.8 Cleaning

WARNING!!!
Turn the machine off using the main switch before carrying out any cleaning.

- Clean the machine using low pressure compressed air or a dry cloth.

WARNING!!!
Never clean the machine with water or cleaning agents. The only exception being the product contact surface of the product infeed. For this purpose, the product infeed should be removed from the machine.

- Remove the product infeed from the machine if this needs to be cleaned more thoroughly.
- Clean the product contact surface of the product infeed with water and the possible addition of a cleaning agent.
- Dry the product infeed.
- Attach the product infeed to the machine.
- Clean the seal bars with a wooden spatula only.

WARNING!!!
After the machine has been switched off the seal bars remain hot.

WARNING!!!
One of the seal bars is equipped with a cutting edge.

7 Maintenance

7.1 Checking and cleaning

Regularly check the teflon on the product infeed. When damaged, the teflon on the product infeed must be replaced.

Clean regularly with a steel brush and transverse seal. The steel brush must be suitable for stainless steel.

Check the working of the brake flap regularly. If a brake flap is not working properly, it must be replaced.

Check the bronze layer of the film spindle. If the block is worn, it must be replaced.

7.2 Changing the knife

1 Dismantle the knife from the horizontal seal bar.

WARNING!!!
Even after the machine is switched off, the seal bars are still hot.

WARNING!!!
One of the seal bars is equipped with a cutting edge.

2 Take the springs off the back side of the assembly plate. The springs are fixed to a hooked peg (**A**).

3 Fit the knife.

- First make sure that the sloping side of the knife is in the heart of the reverse groove.
- Feed the springs through the assembly plate and hook it behind the hooked peg.

7.3 Changing film belts

The changing of film belts is done by taking off the outermost guiding roll.

When fitting a new roll make sure the belt's turning direction is correct.

7.4 Adjusting film belts

The film belts for the Quatro Pack are already adjusted by the manufacturer. If further adjustment is necessary:

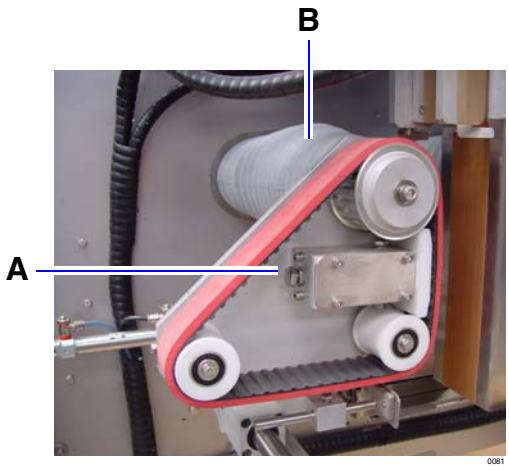
1 Make sure that the product infeed is vertical.

2 Undo the securing bolt at A.

3 Press the whole construction with a pressure (look on the presure for the film belts) of approx. 1.5-2.0 bar against product infeed.

4 Turn the bolt at **A** in such a way that the sprung synthetic plate **B** does not push the rolls off the pipe.

5 Turn the bolt back one turn and secure the securing nut.



8 Faults

8.1 Fault alerts

A fault detected by the operating control system will be shown as an alert on the display and the reset LED will be on. The operating control system will terminate the process (production or start).

No.	Fault alert	Cause	User solution
201	Emergency stop in.	• Machine switched on. • Emergency stop in.	• Follow the instructions on the screen. • If the fault continues, contact the maintenance technician.
202	Door open.	Door relay is not energised.	Close doors and see instructions on screen.
203	Horizontal seal unit blocked	The horizontal seal unit is not closed within a certain time.	The product to be packaged in horizontal seal unit: • Remove any products. • The bag length setting on the screen is too small. • Deposit time setting on the screen is incorrect.
204	Horizontal seal unit does not open completely	The horizontal seal unit is not opened within a certain time.	Product to be packaged between machine and horizontal seal unit: • Remove any products. • If the fault continues contact the maintenance technician.
205	Film end	The film accumulator is in a forward position.	• Roll finished, change the roll. • Check the fixing of the film roll to the spindle. • If fault continues, see paragraph 8.2.4 on page 60.
206	Film end – end film		
207	Film end – end film		
208	Mark on film missed.	The mark scanner has failed to detect a mark during film transport.	• Clean eye of mark reader. • Change screen setting bag length. • Film belts have slipped due to increased resistance during transport, check film transport, is the format and film dry. • With counter: empty space for mark not or incorrectly set. • Close film belts.
209	Film transport – protection.	The motor protection for the film belts or the auxiliary drive is activated.	Contact the maintenance technician.
210	Film transport – counter fault.	The counter transmits insufficient pulses within a given time during the film transport.	Close film belts.

211	Film transport – motor fault	The motor protection is activated.	Contact the maintenance technician.
212	Buffer belt product infeed – protection.		
213	Export belt – protection.		
214	Automatic film control – securing		
215	Automatic film control – fault	Detected by an end sensor.	Check film roll on the spindle.
216	Printer fault.	The printer gives an error report.	Refer to the printer manual.
217	Film accumulator of the film is not in rest position	The film accumulator is not in the rest position within a certain time.	Roll finished, change the roll.
218	No communication with the PT100 module.	No response from the PT100 module (serial communication).	Contact the maintenance technician.
221	product infeed blocked.	The sensor directed at the product infeed remains active.	• Unblock the product infeed. • If the fault continues, contact the maintenance technician.
223	TEST COUNTER screen.	In the test screen press START.	START with the main menu screen.
224	TEST BUFFER screen.		
226	TEST EXITS.		START with the main menu screen.
227	MACHINE SETTINGS screen.	START pressed on the Machine Settings screen.	
228	CHANGE FILM screen	START pressed on the film change screen.	
229	TEST screen.	START pressed on the test screen.	
230	HORIZONTAL FRONT	The difference between the actual and set temperature is too great.	Seal bars are not sufficiently preheated, wait at least 10 min.
231	HORIZONTAL REAR		
232	VERTICAL LEFT FRONT		
233	VERTICAL LEFT REAR		
234	VERTICAL RIGHT REAR		
235	VERTICAL RIGHT FRONT		

240	HORIZONTAL FRONT	PT100 displays incorrect values.	Contact the maintenance technician.
241	HORIZONTAL REAR		
242	VERTICAL LEFT FRONT		
243	VERTICAL LEFT REAR		
244	VERTICAL RIGHT REAR		
245	VERTICAL RIGHT FRONT		
250	Collection belt	Motor fault	Contact the maintenance technician.
251	Sensor collection belt		Check sensor collection belt.
252	Funnel belt	Motor fault	Contact the maintenance technician.
253	Plunge cylinder	Blocked	Clean the plunge cylinder.

8.2 Faults summary

8.2.1 Cutting edge

The cut edge on a packaging bag should be a straight and even cut:

1 Cutting not clean. The cutting edge, the cutting edge groove or the reverse side is dirty. Clean carefully with a wooden spatula.

2 The cut edge is curved, renew the cutting edge.

3 The cut edge is clean but incomplete; the cylinder is functioning incorrectly.

8.2.2 Film transport

No or incorrect film transport:

4 The bag length in the user settings is set to zero.

5 The film belts are tight against the product infeed (pressure set to approx. 2 bar.).

6 The film belts are free of the product infeed.

Choose “FILM BELTS” in the main menu.

Press “CLOSE”.

7 The film belts are worn or are not against the product infeed.

8 The motor is faulty.

8.2.3 Bag length variation

9 The format is wet due to cleaning or condensation, causing the film to stick to the format.

8.2.4 Film end error report (check film brake)

10 If the “Film end” error report from the film roll appears regularly:

- Pull the film until it offers resistance. The film accumulator fills, and the brake is energised as soon as it is full.
- Check that the film accumulator is stationary well before the film finished sensor point. If not, increase the tightness of the brake.

9 Appendix

9.1 Technical details

Product identification	
Name	JASA packaging systems
Type number	Quatro Pack
Manufacturer	Pannekeet Machinetechniek bv
Dimensions	
Length	2000 mm
Width	1290 mm
Height including funnel	2232 mm
Weight	approx. 900 kg
Electrical details	
Electrical details	3 phase 400 V 50/60 Hz. + N + PE, 16A
Capacity	4.5 kW model 4
Pneumatic details	
Diameter feed pipe	Internal Ø12 mm
Air pressure	6 bar
Air consumption	Depends on cooling time, to 400 l/min
Additional details	
Bag width	To 185 mm (depending on width/depth proportion)
Capacity	Maximum 45 packages per min. This will be less depending on the type of film, type of product, bag length
Operating control system	PLC
Memory	30 programs with user settings

9.2 Film requirements, net

Products can be packaged in net and film types with a maximum seal temperature of 250 ºC.

However, JASA packaging systems cannot guarantee the correct functioning of the packaging machine if film types are used that have not been tested and approved by JASA packaging systems.

9.3 Liability and guarantee

The Metaalunie (Employers' Organisation for Small and Medium Sized Companies in the Metal Industry in The Netherlands) Conditions of Delivery and Payment as supplied with the order confirmation apply to this packaging machine.

The Metaalunie conditions also include the guarantee and liability requirements.

9.3.1 Liability

JASA packaging systems or your dealer will not be liable:

- If the installation is not carried out by the manufacturer without taking the recommended guidelines into account or if it is carried out by unqualified personnel.
- If the packaging machine is not maintained or used in accordance with its intended use, see paragraph 2.2 on page 4.
- If the safety regulations are ignored or the instructions contained in this document are not followed.
- For any situations that arise as a consequence of incorrect translation of the text contained in the original instruction manual supplied.

9.3.2 Guarantee conditions

The guarantee does not cover normal wear and tear. The guarantee does not cover labour costs and travelling expenses that arise from carrying out any claim on the guarantee.

The guarantee will be void if:

- Unauthorised personnel have operated or maintained the packaging machine.
- The operation, service and maintenance are not carried out in accordance with the regulations.
- Any spare parts are used for maintenance or repair other than the original spare parts.

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