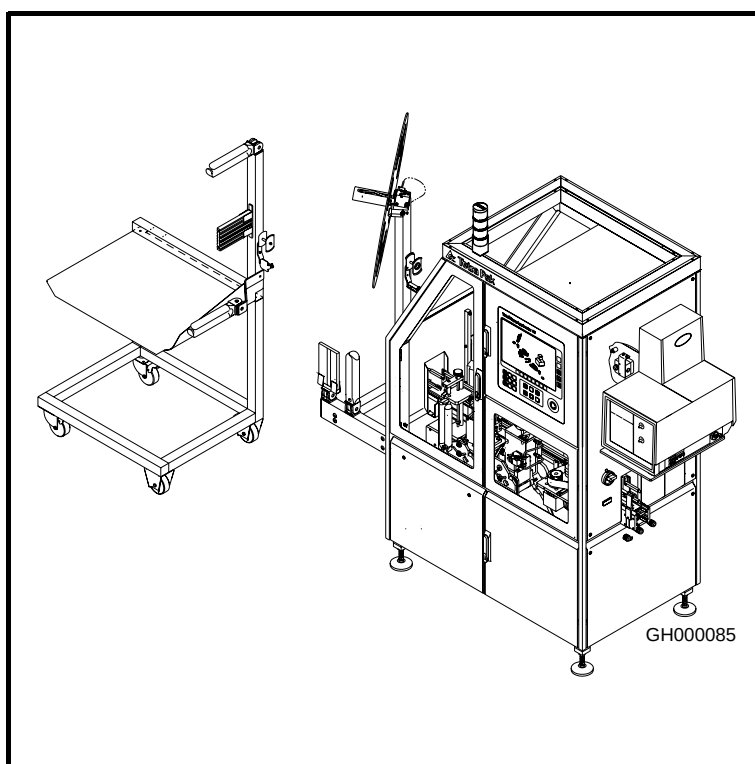


OM

Operation Manual

Tetra Applicator 46

678547-040V



2.258532201.fro



Doc No. OM-585322-01

This document is valid for:

--

Series No/ Machine No

Sign.

OM

Operation Manual

Tetra Applicator 46
678547-040V

Doc No. OM-585322-01

Issue 9611

Tetra Pak
Tetra Pak Distribution AB

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Introduction

This section contains basic information about the described Tetra Pak equipment and this document.

General



WARNING!

Risk of personal injury!

To ensure maximum safety, always read the Safety precautions before doing any work on the machine or making any adjustments.

Document information

About this Operation Manual (OM)

The purpose of this Operation Manual (OM) is to provide the operator with information on how to handle and operate the machine before, during, and after the production.

(Cont'd)

(Cont'd)

Delivered documentation

The technical documentation delivered with this machine is stated in the Machine Specification.

Note!

If any document is missing, it must be reported in the document **Start Up Machine Quality Report**. For more information, see chapter 8, Preparation for Commissioning, in the Installation Manual.

It is important that you keep these documents for the life of the equipment, and pass the documents on to any subsequent holder or user of the equipment.

Design modifications

The directives in this document are in accordance with the design and construction of the machine at the time it was released by a Tetra Pak machine production facility.

Document producer

This document has been produced by:

Tetra Pak Distribution AB
Ruben Rausings gata
221 86 Lund
Sweden

Additional copies

Additional copies can be ordered from nearest Tetra Pak service station.

(Cont'd)

2.2TH000183.en

(Cont'd)

Number of pages

This document contains a total of 64 pages.

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Machine introduction

Intended use of this Tetra Pak equipment

The Tetra Applicator 46 attaches a drinking straw or a UniCap onto Tetra Pak packages.

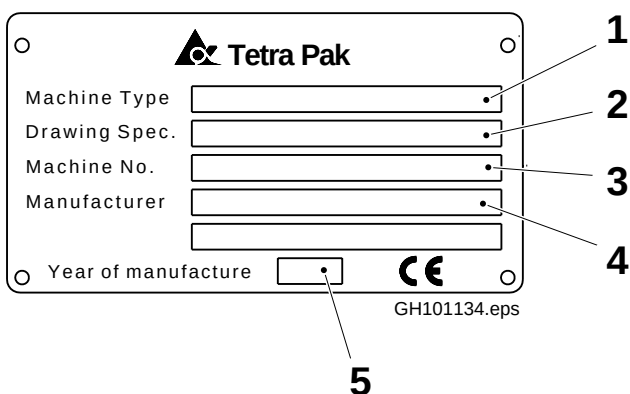
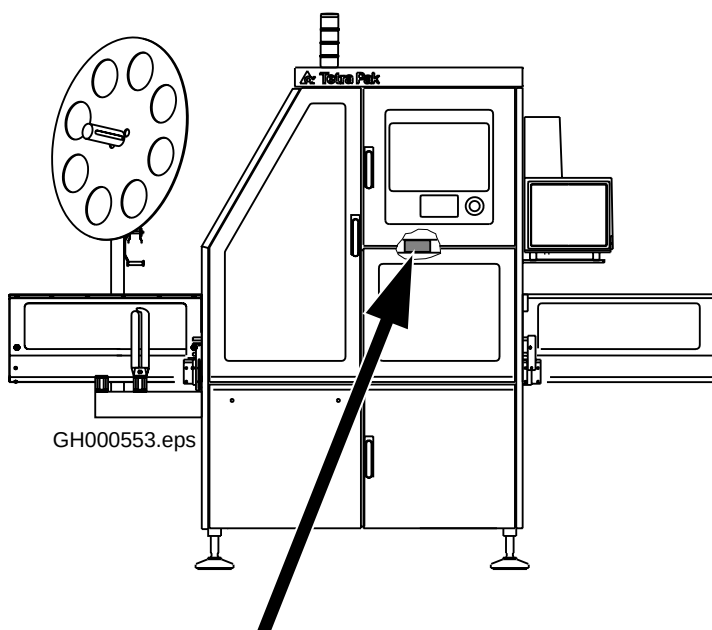
Service

In case of problems when operating the machine, contact the nearest Tetra Pak service station.

Manufacturer

This Tetra Pak equipment is produced by:

Tetra Pak Distribution AB
Ruben Rausing's gate
221 86 Lund
Sweden



- 1 Machine type
- 2 Drawing specification
- 3 Machine number
- 4 Manufacturer
- 5 Year of manufacture

Machine identification

The machine sign is attached to the machine frame. It carries data needed when contacting Tetra Pak concerning this particular machine.

The machine sign is marked with a CE symbol. It means that this machine complies with the **essential health and safety requirements of the European Economic Area (EEA)**.

Machine orientation

Definition of direction

The illustration below to the left shows the machine from above.

A indicates the **Rear** of the machine.

B indicates the **Front** of the machine.

C indicates the **Left** of the machine.

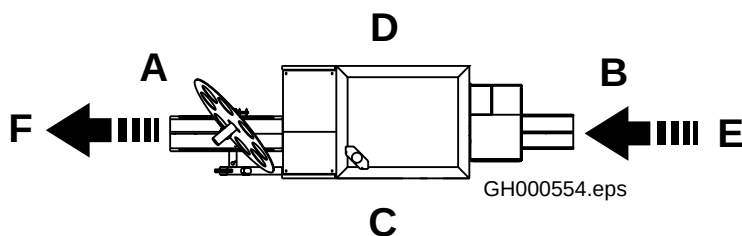
D indicates the **Right** of the machine.

E indicates the **Infeed** of the machine.

F indicates the **Discharge** of the machine

Note!

The arrows indicate the flow direction in the machine.



Terminology

Abbreviations

Words	Explanation
CE	Communautés Européennes / European Communities
EEA	European Economic Area
MM	Maintenance Manual
OM	Operation Manual

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Before any measures are taken, this section must be read.

Avoid personnel injuries and machine damages by following the instructions given.

Safety precautions

Tetra Pak will not accept any responsibility in case of injuries and damages caused by incorrect use of the machine.



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General



DANGER!

Incorrect use of the equipment may put your life in danger!

Tetra Pak will take no responsibility for any fatal accidents, injuries to personnel or damage to the machine if the Tetra Applicator 46 or associated equipment is operated without following the instructions in this Operation Manual (OM).

(Cont'd)

(Cont'd)



GH200053

Warning levels

This Operation Manual (OM) utilizes three levels for warnings and an additional level for giving other important information. The following levels and symbols are used to emphasize information.



DANGER!

Immediate danger to life!

Failure to observe this information may result in immediate danger to life!



WARNING!

Risk of serious personal injury or major damage to equipment!

Failure to observe this information may result in serious personal injury or major damage to the equipment!

CAUTION!

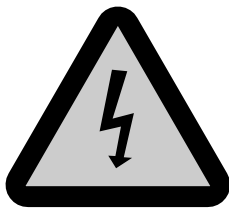
Risk of minor personal injury or damage to equipment!

Failure to observe this information may result in minor personal injury or damage to the equipment!

Note!

is used to emphasize important information. A **Note** is not to be regarded as hazard information.

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GH100787.eps



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Warning signs



DANGER!

Risk of electrical shock!

Failure to observe may result in danger to your life.

Enclosures which do not clearly show that they contain electrical devices are marked with the warning sign to the left.



WARNING!

Hot surface!

Failure to observe may result in injuries caused by burning!

Hot surfaces are marked with the warning sign below. The temperature may exceed 60°C.



WARNING!

Heat energy!

Failure to observe may result in injuries caused by burning!

The warning sign to the left indicates entrapped heat energy in the area where the sign is placed. The temperature may exceed 60°C.

Prohibition signs



DANGER!

Keep dry!

Failure to observe may result in danger to your life.



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Requirements on personnel



DANGER!

Risk of immediate danger to life!

Not following the Safety precautions may mean risk of immediate danger to life. All personnel must regard all electrical equipment as live.

The work is to be carried out in such a way that there will be no risk of personnel injury.

General

During maintenance or service work, the technicians are responsible not for the machine only, but for the personnel in the vicinity of the machine as well

It is also the responsibility of the technicians to assure that the machine safety devices are fully operational before he finishes the maintenance or service work.

Note!

For more detailed information about the definition of a Service technician or an Electrician, see Safety precautions in the Maintenance Manual.

Machine Operator

Only trained or instructed persons are allowed to operate the equipment.

A machine operator is an individual that has enough training and/or knowledge to run the equipment in the correct way.

(Cont'd)

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(Cont'd)

Service technician

Only trained or instructed service technicians are allowed to work on the machine.

Service technicians may be:

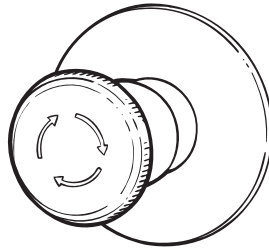
- technicians employed by **Tetra Pak**
- technicians employed by the **customer**

Electrician

Electricians should:

- be certified according to local regulations
- have experience of similar types of installations
- have proven skills in reading and working from drawings and cable lists
- have knowledge of local safety regulations for power and automation

Work with the electrical equipment must be performed by **skilled or instructed persons only**.



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Emergency stop

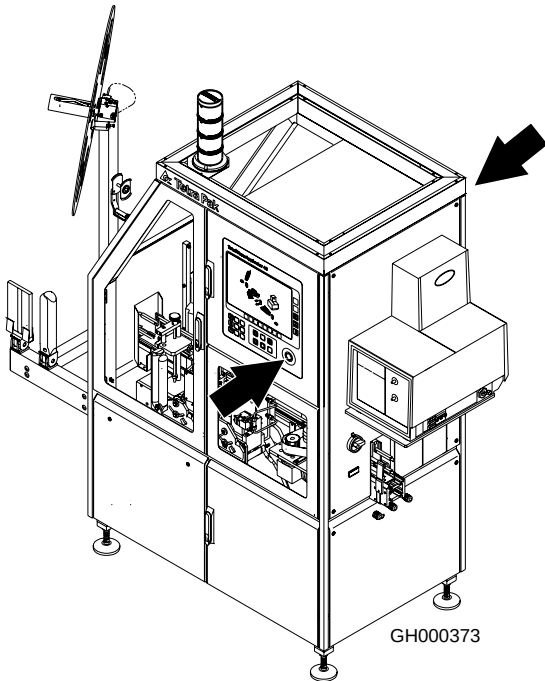
In case of danger to people or risk of damage to the machine, one of the two **Emergency stop** button must immediately be depressed.

In order to stop the machine immediately in an emergency situation, you must know the exact location of the Emergency stop buttons.

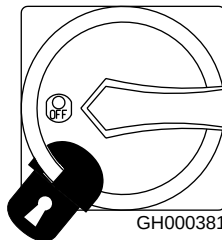
Emergency stop must only be used in case of danger to people or machine. To stop production in the normal way, see the **Stop** section.

Note!

Emergency stops do not cut the **mains**.



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GH000381

Main switch

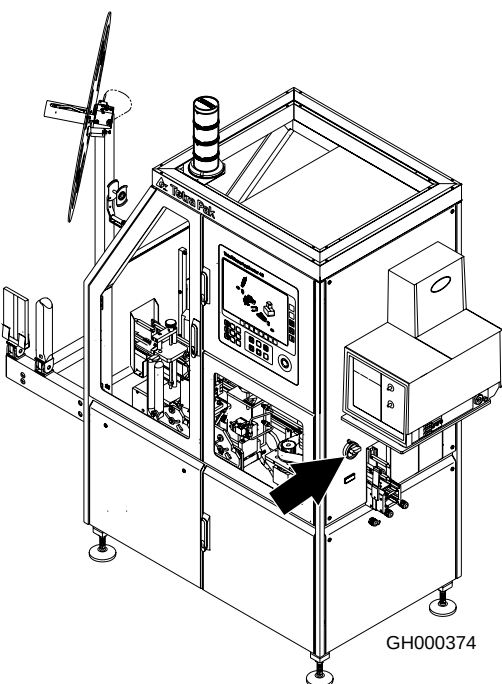


DANGER!

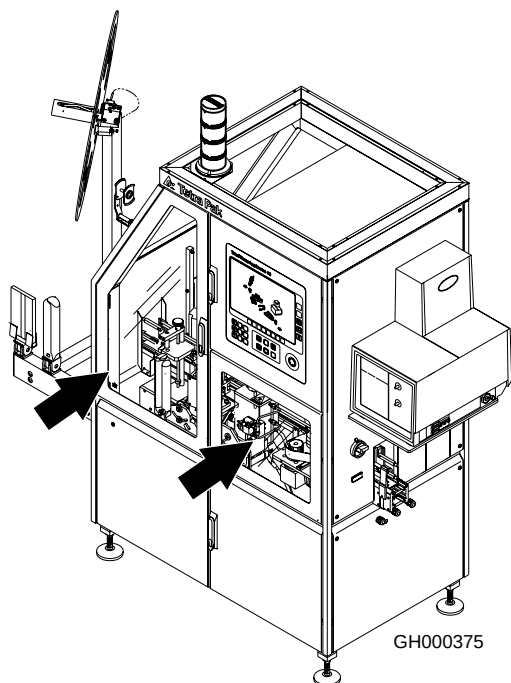
Risk of immediate danger to life!

Before starting service work the machine must be depressurized. The **Main switch** must also be turned OFF and locked in this position. The key to the padlock must be removed by the service technician or the electrician and retained in his/her possession until all work is completed.

Turning the **Main switch** OFF will not cut the power supply to the machine. The cable, the connection and the **Main switch** itself will still be energized.



GH000374



Doors and covers



WARNING!

Moving parts can cause serious injuries!

Never inch or run the machine if any safety switch is non-operational or any cover is not fitted.

Door

All doors leading to risk areas are fitted with safety switches. These switches are part of the safety system and **must under no circumstances be bridged or bypassed or otherwise made non-operational.**

If any of the doors are opened during operation, the machine will stop immediately. Never use this as a method to stop the machine. The machine may perform a reciprocating movement during the first few seconds after a stop, also some machine parts may still be hot.

Covers

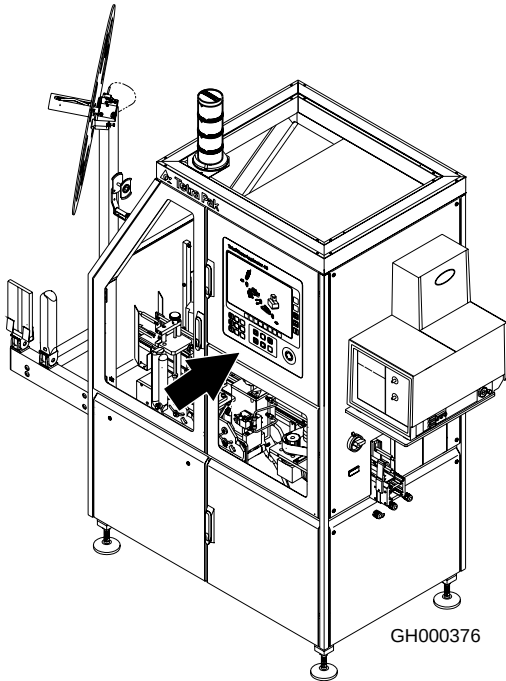
All covers are screwed on to the machine.

Note!

After maintenance, check that all covers are fitted to the machine before it is run.



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GH000376

Electrical cabinet



DANGER!

Risk of immediate danger to life!

The voltage is 400V inside the electrical cabinet. Risk of immediate danger to life through electrical shock. In case of accident, immediately call for medical attention.

After the **Main switch** has been turned OFF there still can remain high voltage in the electrical cabinet. Discharge time approximately five minutes.

Work inside the electrical cabinet must be performed by skilled or instructed persons only. For more information, see section Requirements on personnel, on page 10.



DANGER!

Risk of electrical shock!

Always make sure that the electrical cabinet door is locked after performing any type of work in the electrical cabinet.

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Hot melt equipment

General



DANGER!

Risk of immediate danger to life!

The voltage is 400V inside the hot melt unit. Risk of immediate danger to life through electrical shock.



WARNING!

Risk of personal injury!

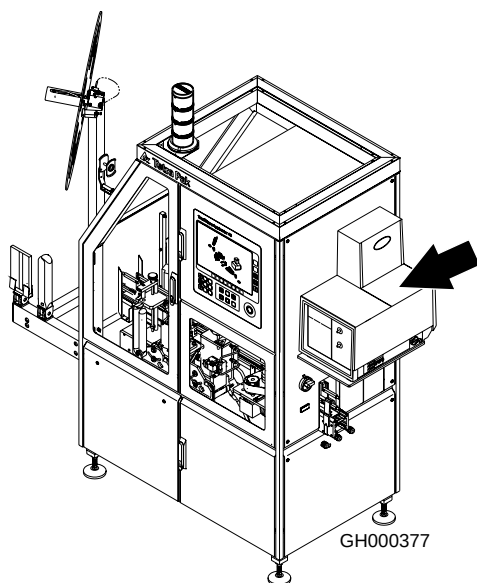
All service work on the hot melt unit must be carried out by authorized personnel.

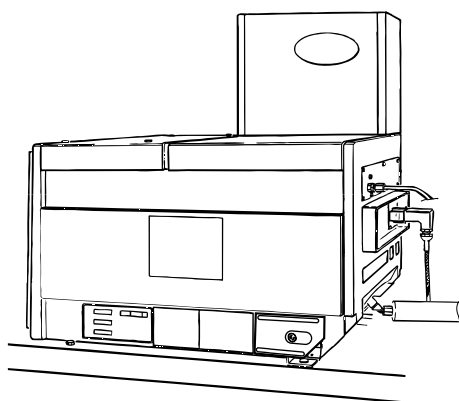
Always wear safety glasses, protective gloves, and other protective clothing to avoid injuries through burning when the hot melt filter is detached or flushed.

Never remove any part or component until air and electric power have been disconnected and the pressure of the hot melt in the system has been relieved.

Note!

Always refer to the documentation provided from Nordson Corporation before doing any kind of work on the hot melt equipment. The Nordson Series 3000 Technical Manual is included at delivery from Tetra Pak. The Hot melt equipment section in this manual only deals with what is specific for this machine.





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Hot melt unit



DANGER!

Risk of electrical shock!

Never flush water or any other liquid towards the hot melt unit when cleaning the machine. Failure to observe may result in danger to your life.

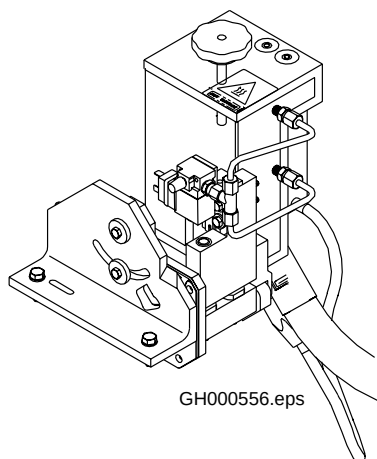


WARNING!

Risk of burning!

During heating and production the hot melt unit gets hot.

Do not touch the hot melt unit and beware of the entrapped heat inside the unit when service is performed!



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GH100785.eps



GH100787.eps

Hot melt applicator



DANGER!

Risk of electrical shock!

Never flush water or any other liquid towards the hot melt applicator when cleaning the machine. Failure to observe may result in danger to your life.



WARNING!

Risk of burning!

The cover over the hot melt applicator is very hot and there is risk of severe burns. Never touch the cover of the hot melt applicator!

Risk areas



WARNING!

Risk of crushing injuries!

Do not reach into the machine. Reaching into the machine from the side, top or from below may cause serious injury through crushing.

Only authorized personnel should be allowed in the vicinity of the machine.

Chemical products



WARNING!

Risk of personal injury!

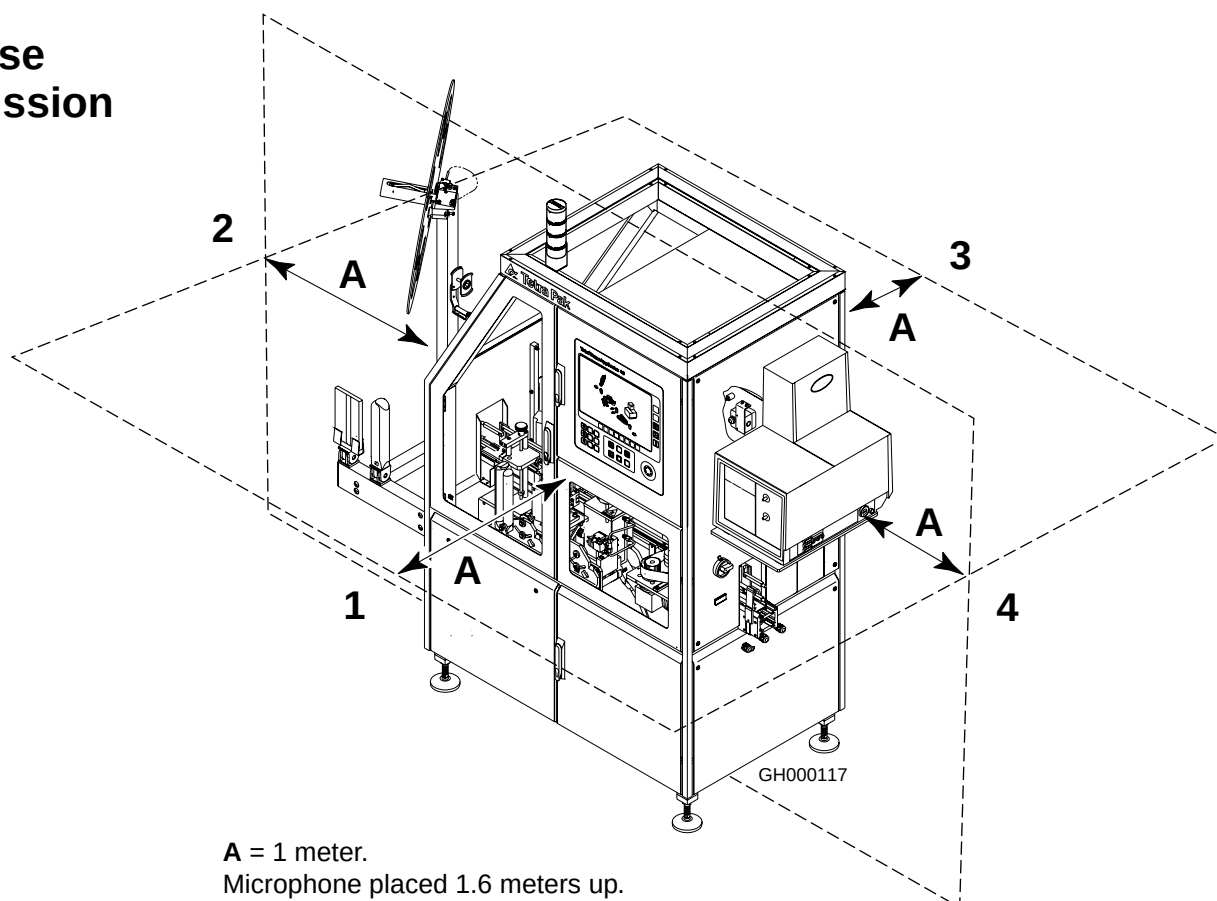
Can be flammable or hazardous to health. Read the warnings!

When handling hydraulic oil, lubricants, and cleaning solutions, carefully follow the warnings on the container labels.

Always use safety equipment according to the instructions on the container labels. Always use gloves and goggles when handling chemical products.

For final handling of solutions, follow the instructions from the supplier.

Noise emission

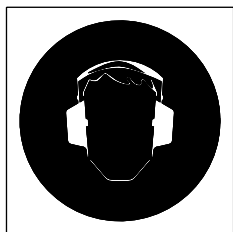


Data

Document	DE-95/147
Date	95-02-13
Machine No.	38014-28
Draw. spec.	678547-020V
Mech. ECN	22296
El. ECN	20909

Noise level according to ISO 11201

Measuring position number	Measured equivalent noise level dB(A). Production	dB(A) Production, no packages
1	65.8	60
2	65.0	-
3	65.6	-
4	66.2	-



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Hearing protection



WARNING!

Risk of impaired hearing!

Use hearing protection to minimize the risk of impaired hearing.

Always wear hearing protection while the machine is running.

Note!

Always keep the hearing protection clean.

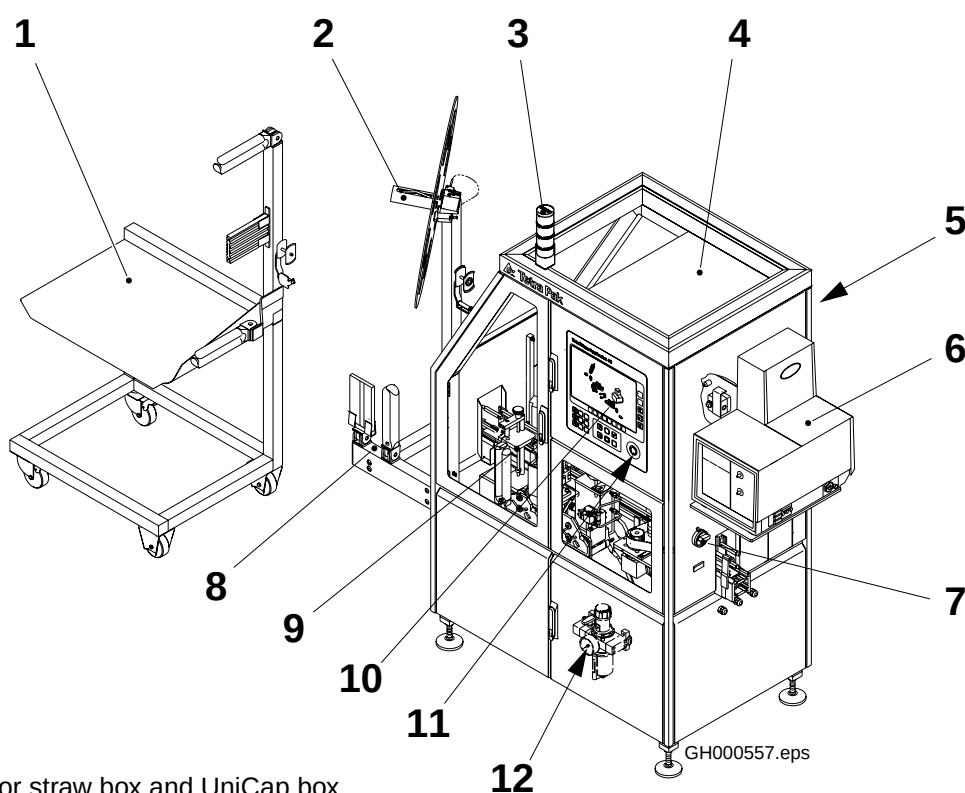
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General description

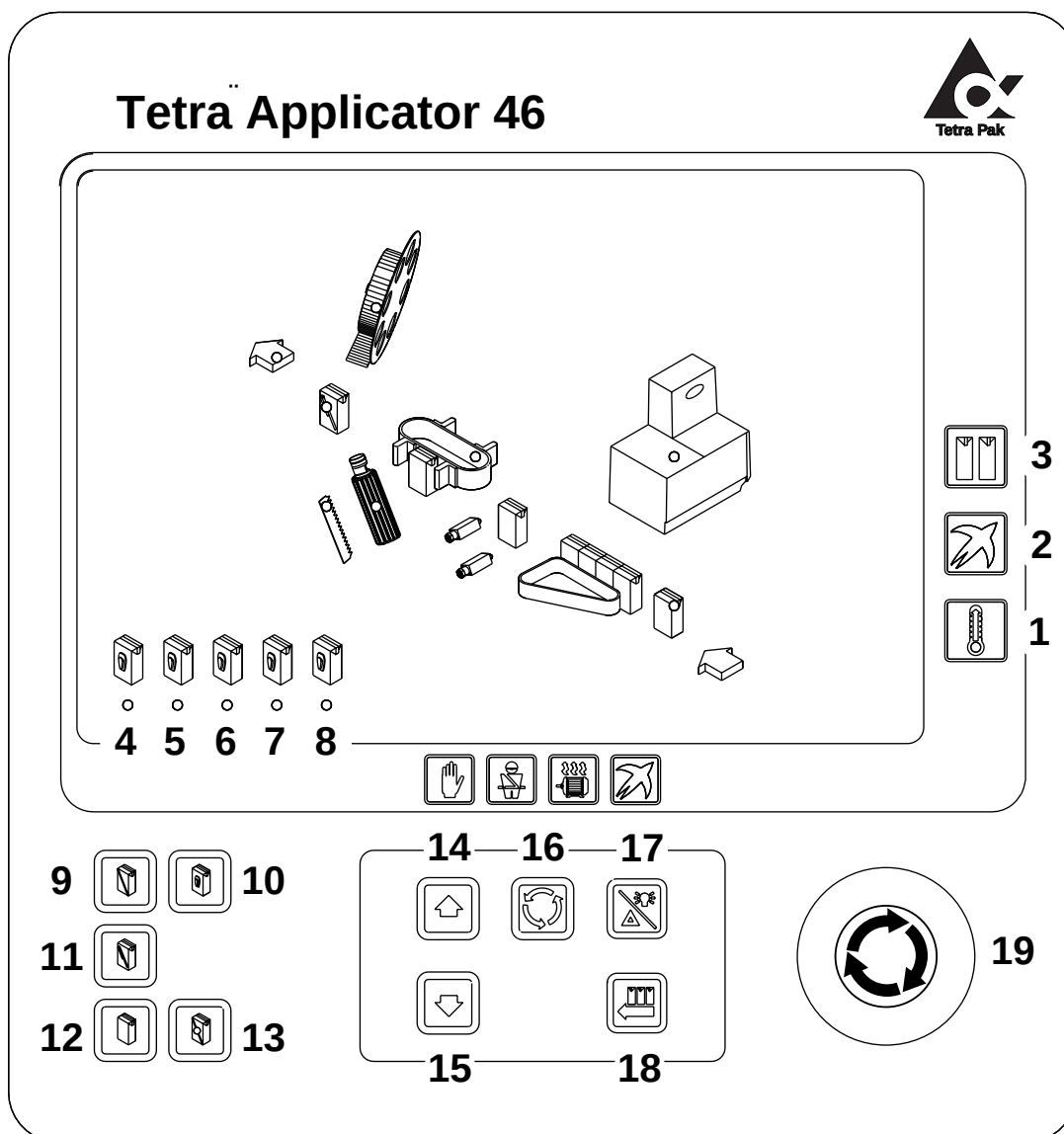
This section gives the operator information on where on the machine the parts that the operator needs to be in contact with are located and what the different regulators control.

Machine overview



- 1 Magazine for straw box and UniCap box
- 2 Magazine for straw bobbin
- 3 Warning lamp
- 4 Electrical cabinet
- 5 Emergency stop button
- 6 Hot melt unit
- 7 Main switch
- 8 Ladder band unit
- 9 Applicator unit
- 10 Control panel
- 11 Emergency stop button
- 12 Compressed air supply

Control panel indicators and push buttons



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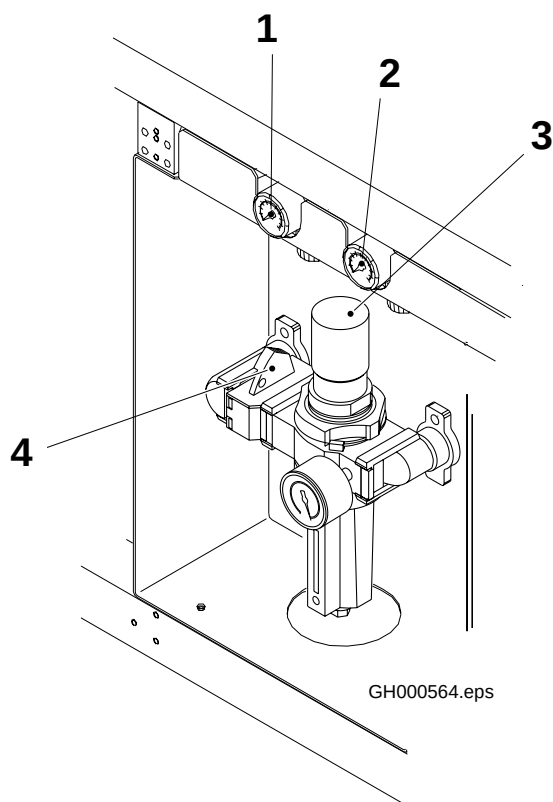
Status indicators

- 1 Step 1: Preheating
 - 2 Step 2: Air pressure ON
 - 3 Step 3: Production
 - 4 UniCap indication (on first package of five)
 - 5 UniCap indication (on second package of five)
 - 6 UniCap indication (on third package of five)
 - 7 UniCap indication (on fourth package of five)
 - 8 UniCap indication (on fifth package of five)
- See [Production with caps](#) on page 36.

Push buttons

- 9 Straight straw ON
- 10 UniCap ON
- 11 U straw ON
- 12 Straw/ UniCap OFF
- 13 Straw detector ON (option)
- 14 Program up
- 15 Program down
- 16 Manual straw/ UniCap feed; knife and squeezer
- 17 Alarm reset/ Lamp test
- 18 Manual emptying
- 19 Emergency stop

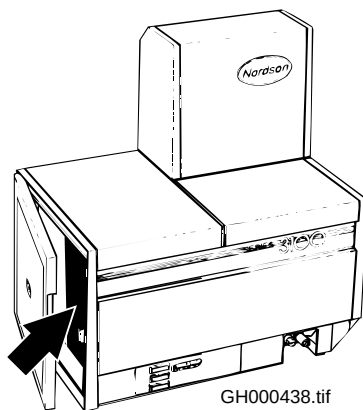
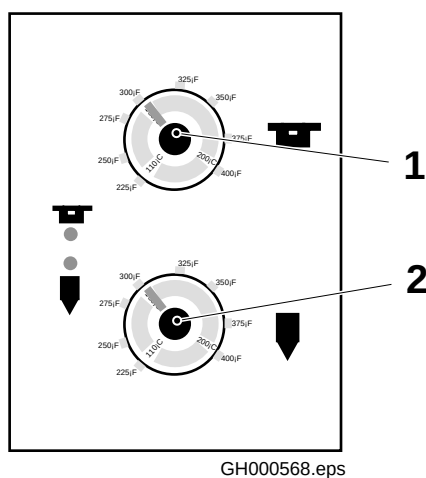
Pressure regulator



- 1 Pressure gauge, hot melt gun
- 2 Pressure gauge, hot melt pump
- 3 Pressure regulator
- 4 Regulator handle OPEN/CLOSED

See section **Technical data** for settings.

Temperature regulators, hot melt unit



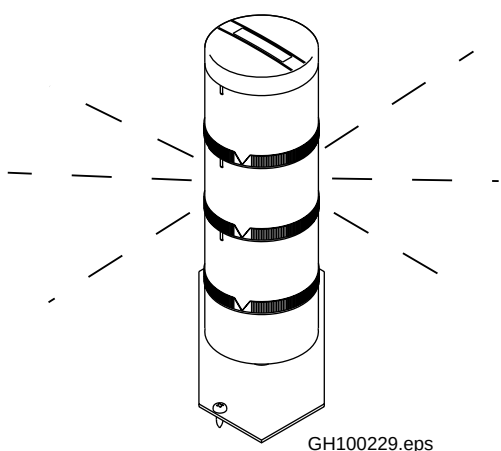
- 1 Temperature regulator, tank
 - 2 Temperature regulator, hot melt guns
- See section **Technical data** for settings.

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Alarms /Trouble shooting

This section describes all the alarms that can appear and the actions that the operator should take to correct them.



Warning lamp

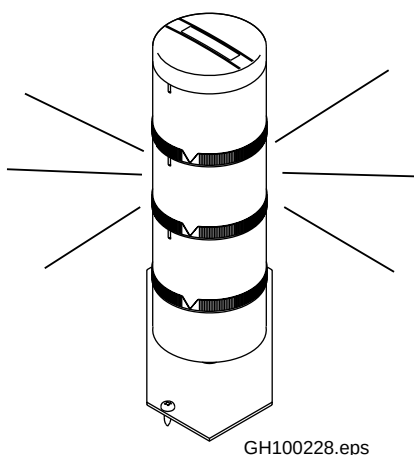
When one of the three colours of the warning lamp flashes, an alarm has been triggered.

Depending on what kind of alarm that has been triggered, the result is as follows:

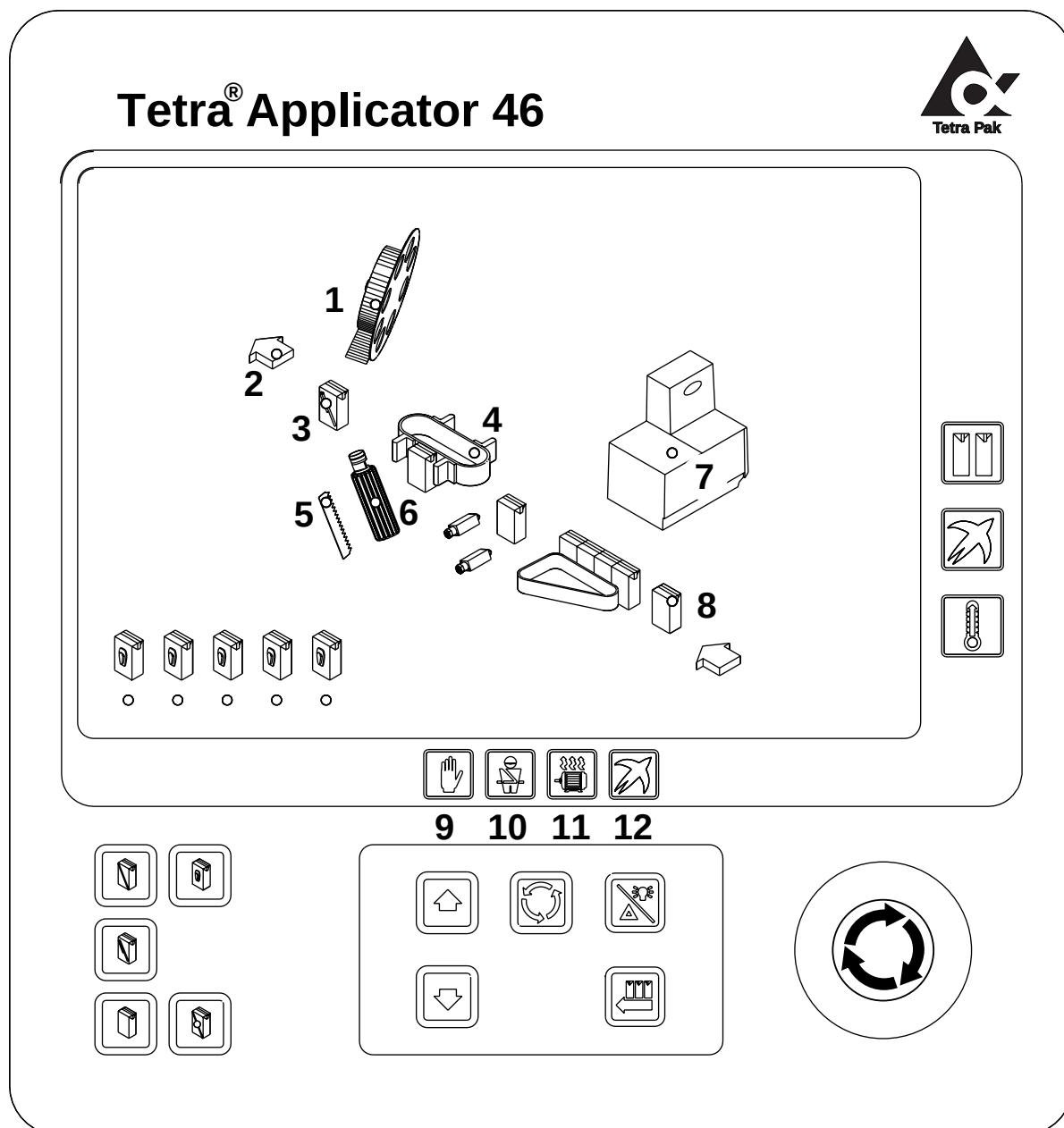
- If the red colour, at the top, is flashing, this indicates a dangerous status such as a fault in the supervision circuit of the doors. This requires an immediate action from the operator.
- If the yellow colour, in the middle, is flashing, this indicates an abnormal status such as low air pressure during production. This requires an immediate action from the operator.
- If the blue colour, at the bottom, is flashing, this indicates an alarm that requires some action from the operator.

Note!

When several alarms are triggered at the same time, only the alarm with the highest alarm status is giving a signal to the warning lamp.

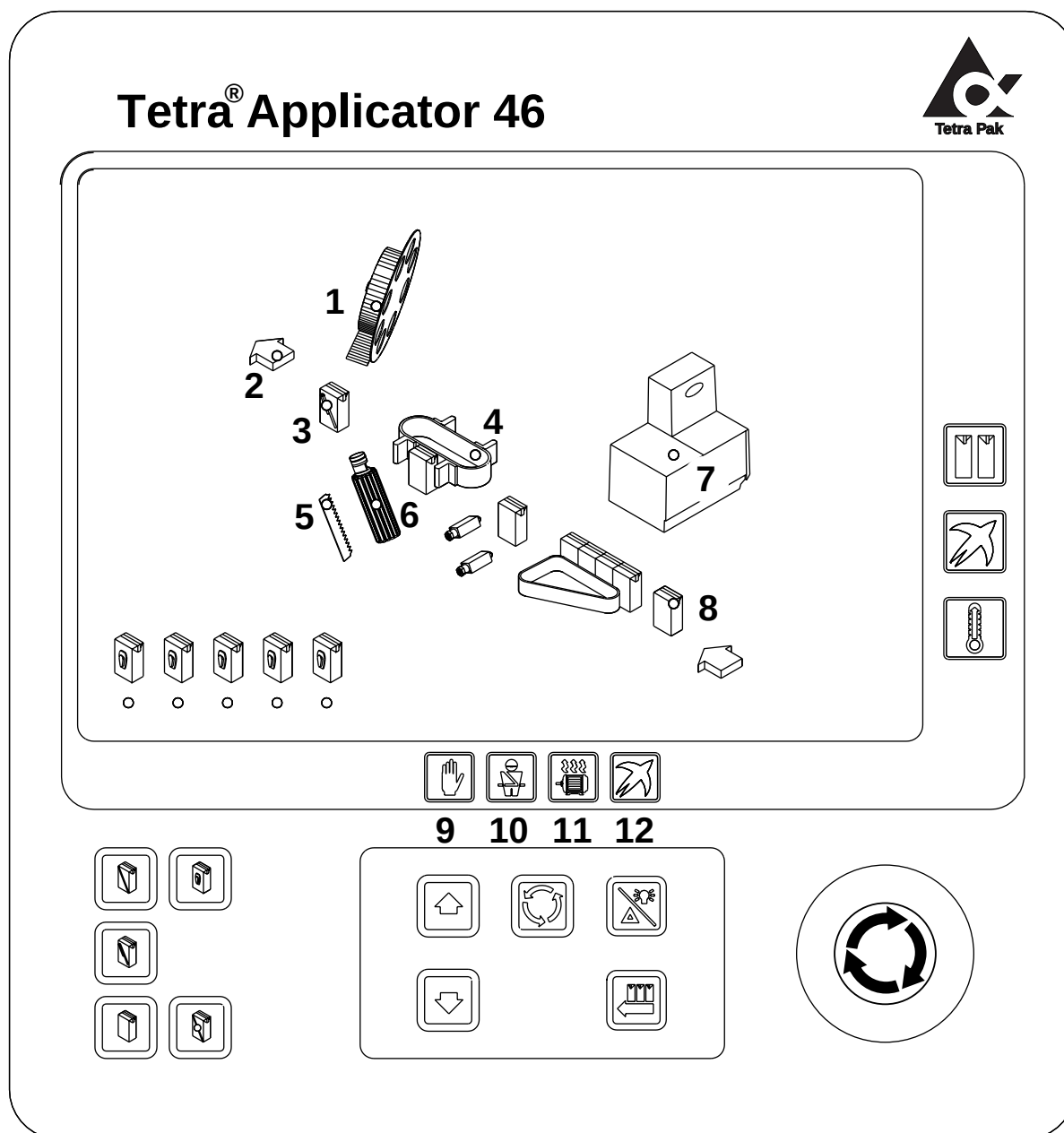


To acknowledge the alarm, push the **Alarm reset/Lamp test** button. The flashing lights in the warning lamp and the **Alarm reset/Lamp test** button become fixed. When the cause of the alarm is eliminated, the lights will go out.



Pos Lamp No	Alarm	Cause	Machine action	Instruction to operator
1 H025	Magazine	Magazine low level	Only 500 straws left on the straw reel. Warning lamp (blue) flashes.	Change reel, see Production checks .
2 H024	Queue outfeed	Queue on the conveyor from the machine	The machine will stop temporary, and will automatically restart when the queue is removed. Warning lamp (yellow) flashes.	Take corrective action to remove the queue on the conveyor.
3 H026	Straw detector (option)	Straw missing on package	Package will be blown out from conveyor	Check • straw ladder band • machine If required, call a technician
4 H021	Carrier	Crashed packages	Carrier stops Warning lamp (yellow) flashes	Take corrective action to remove crashed packages. If required, call a technician
5 H023	Knife	Feeding wheel in wrong position	Knife stops Warning lamp (yellow) flashes	Call a technician
6 H022	Feed wheel	Ladder band too tight stretched	Feed wheel stops Warning lamp (yellow) flashes	Call a technician
7 H027	Hot melt unit	• Low temperature during preheating • Low temperature during production • Any fault in hot melt unit	Until correct temperature has been reached, the machine cannot be stepped up. The red LED on the hot melt display is lit. The machine goes to Step 2: Air pressure ON . The red LED on the hot melt display is lit. The machine goes to Step 2: Air pressure ON . The red LED on the hot melt display is lit.	If preheating takes an abnormally long time, call a technician. Normal time for preheating 30 minutes. Call a technician Call a technician
8 H028	Fallen package, infeed	Fallen package	Infeed stops. The machine remains in Step 3: Production . Warning lamp (yellow) flashes.	Remove any fallen package.
9 H006	Emergency stop	Emergency stop button pushed	The machine stops and steps down to Step 1: Preheating . Warning lamp (yellow) flashes.	Perform the actions described in Stop section; Emergency stop

Control panel



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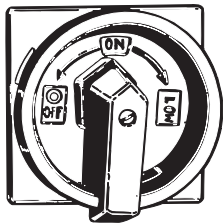
Pos Lamp No	Alarm	Cause	Machine action	Instruction to operator
10 H007	Door	Door opened	The machine stops and steps down to Step 1: Preheating . Warning lamp (yellow) flashes.	Empty the machine from packages. Close the door.
		Fault in supervision circuit of door	The machine stops and steps down to Step 1: Preheating . Warning lamp (red) flashes.	Call a technician
11 H008	Motor protection	Motor protection triggered	The machine stops and steps down to Step 1: Preheating . Warning lamp (yellow) flashes.	Call a technician
12 H009	Main air pressure	Air pressure before pressurizing	The machine cannot be stepped up until the air pressure is gone. Warning lamp (red) flashes.	Call a technician
		No pressure builds up after pressurizing (time guard)	The machine will be in Step 1: Preheating . Pressurizing will be stopped. Warning lamp (yellow) flashes.	Check that air supply is turned ON. If it is, call a technician.
		Air pressure too low during production	The machine steps down to Step 1: Preheating . Warning lamp (yellow) flashes.	Check incoming air pressure.
		Air pressure remaining after pressurizing	The machine cannot be stepped either up or down until the air pressure is zeroed. Warning lamp (red) flashes.	Call a technician

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Preparations

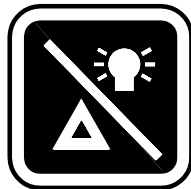
This section describes all the actions that should be carried out before actually starting the machine.



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1

Make sure that the **Main switch** is in position ON (1). It should always be in this position.



H200004

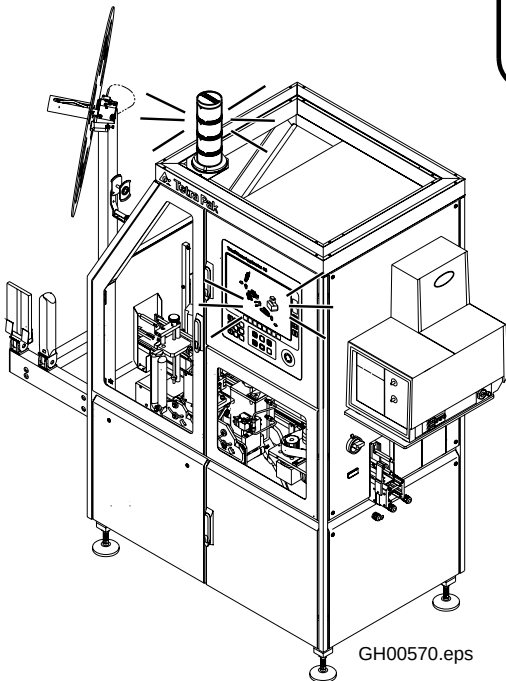
2

Press the **Alarm reset/Lamp test** button for two seconds.

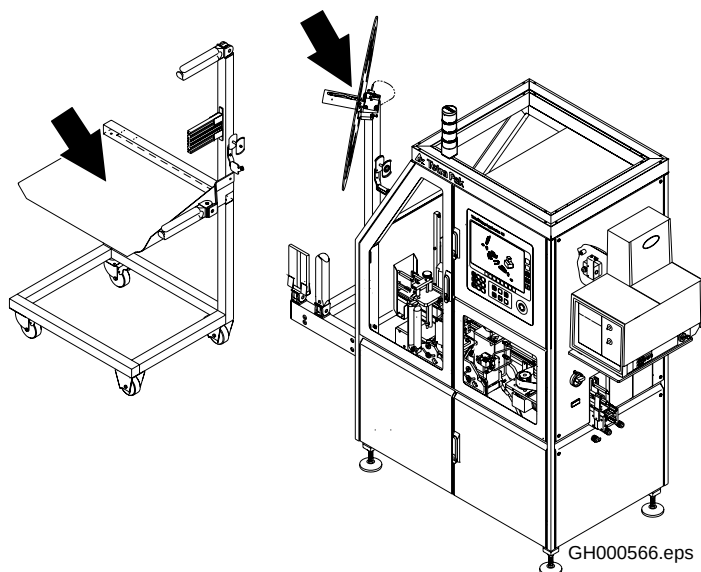
Check that

- all indicator lamps on the control panel are lit
- the warning lamp is lit

Call a technician to replace any faulty lamp.



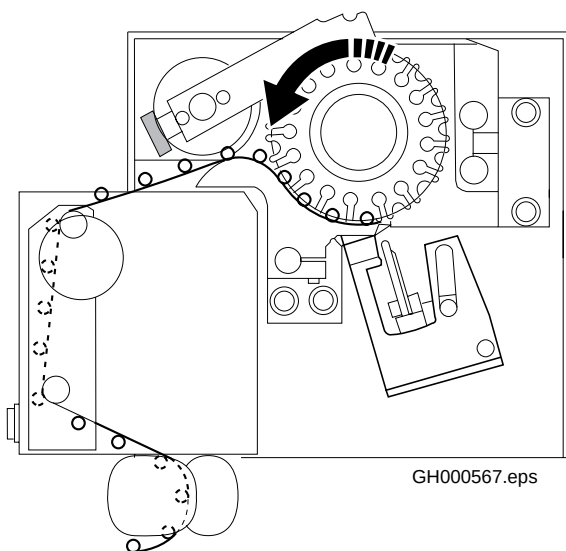
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3

Prepare

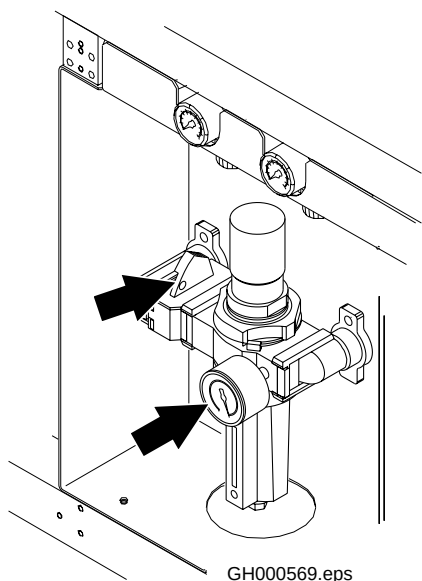
- a roll of straws on the bobbin holder
- or
- a straw box, or a UniCap box on the magazine



4a

Insert the first straw or UniCap in the feed wheel unit. Turn the feed wheel unit anti-clockwise until the first straw or UniCap is positioned just before the knife, as illustrated.

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5

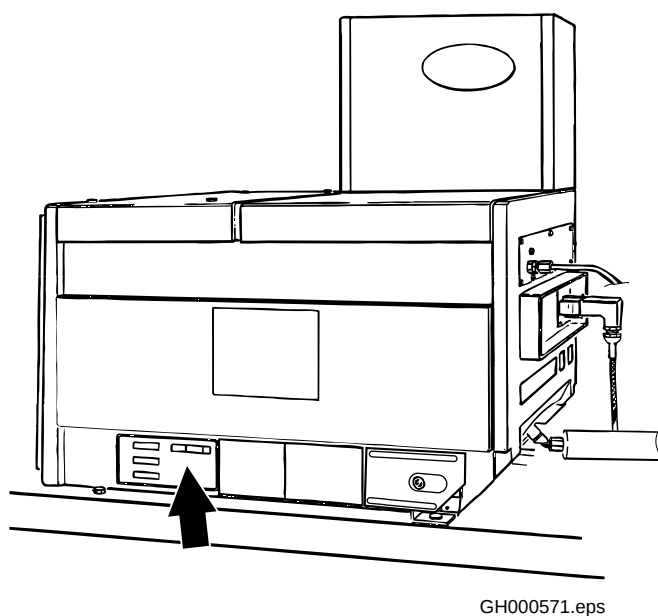
Open the compressed air supply valve.

Note!

The valve is illustrated in position OPEN. The word OPEN is stamped and visible on the side of the regulator handle.

Check the working pressure, see section **Technical data**.

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6



WARNING!

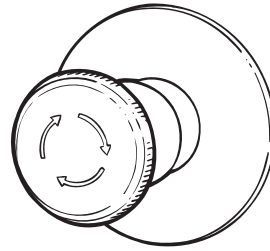
Risk of burning!

During heating and production the cover to the hot melt unit gets hot. Do not touch the cover!

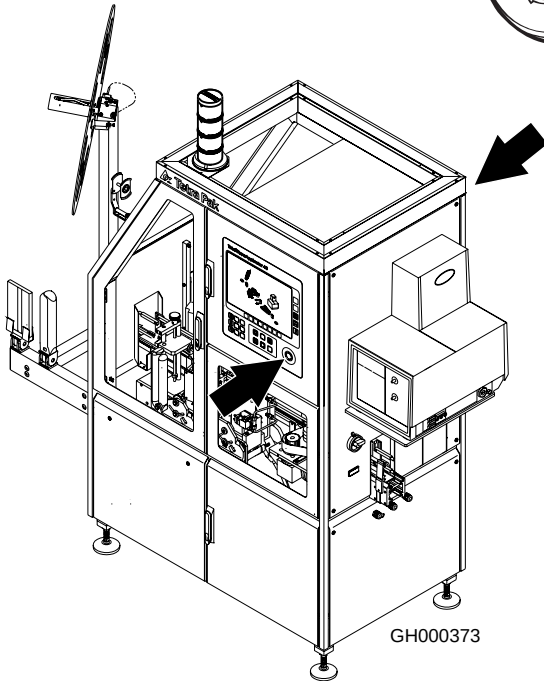
Make sure that the hot melt unit is turned ON.

7

Make sure that no **Emergency stop** button is pushed.



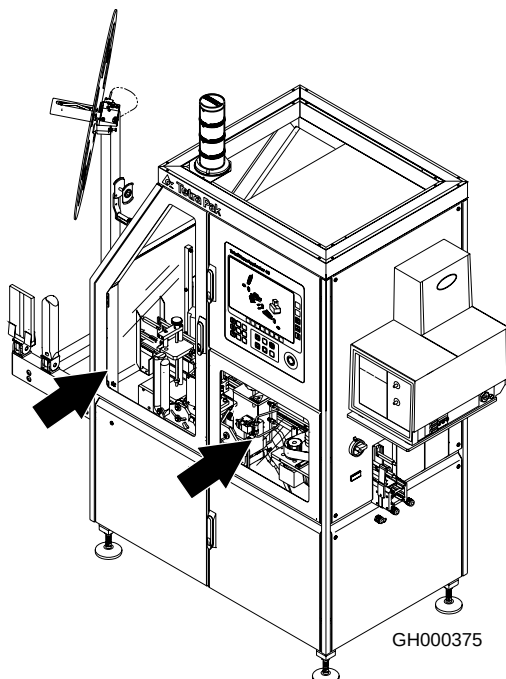
GH100876.eps



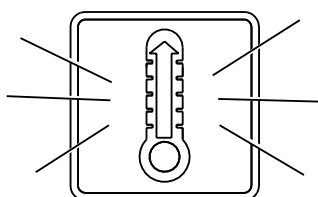
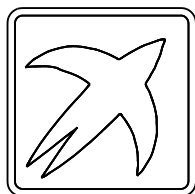
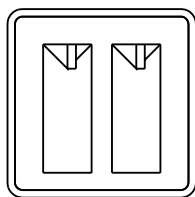
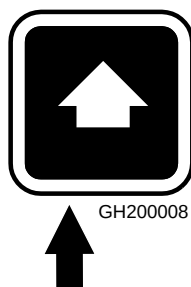
GH000373

8

Check that all doors are closed, and that all covers are fitted.



GH000375



GH000572.eps

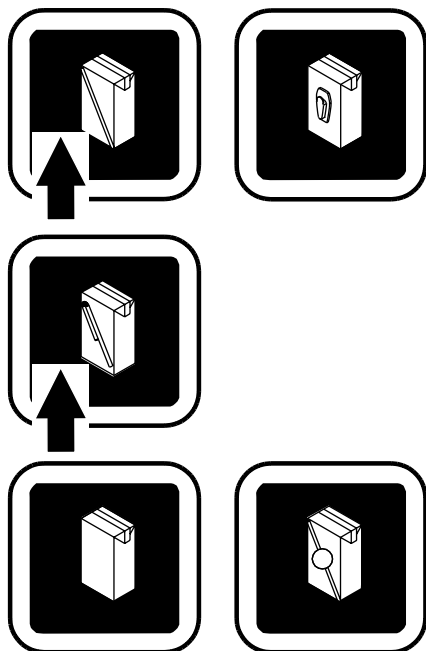
9

Push the **Program up** button.

The **Step 1: Preheating** indicator gets fixed light, and heating of the hot melt starts.

It will take about half an hour to reach correct working temperature.

2.2TH000187.en



GH000573.eps

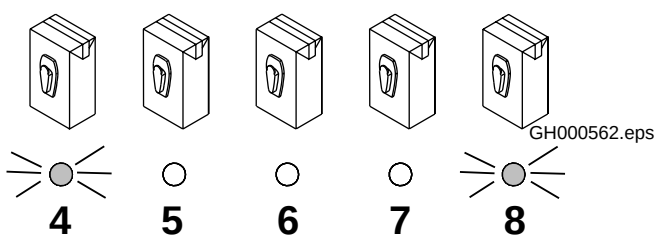
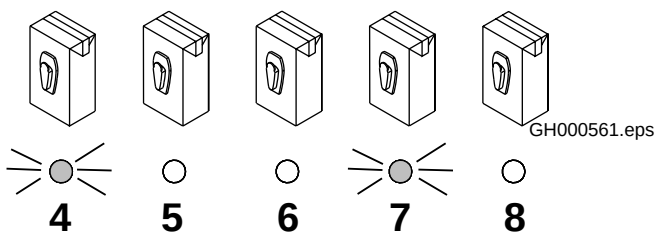
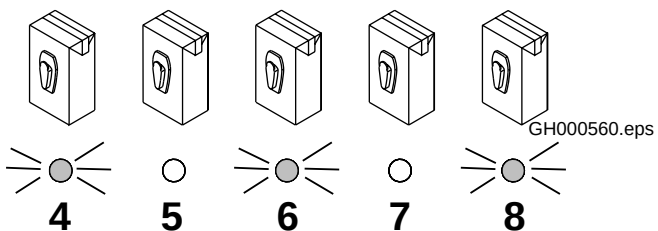
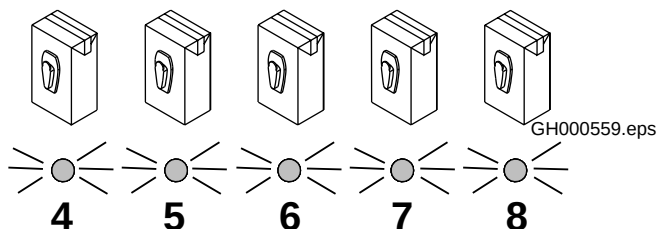
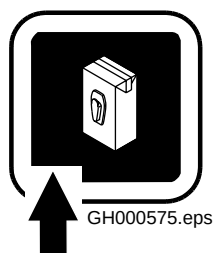
10a

Production with straws

Activate one of the buttons

- **Straight straw ON**
- **U straw ON**

Production with caps, see item 10b.



10b

Production with caps

To set the **UniCap indication** push the **UniCap ON** button to indicate which packages should be applied with a cap.

UniCap indication

By pushing the **UniCap ON** button once all indication lamps are lit.

All packages will be applied with a UniCap.

By pushing the **UniCap ON** button once again every second indication lamp is lit.

Every second package will be applied with a UniCap.

By pushing the **UniCap ON** button the third time, every third indication lamp is lit.

Every third package will be applied with a UniCap.

By pushing the **UniCap ON** button the fourth time every fourth indication lamp is lit.

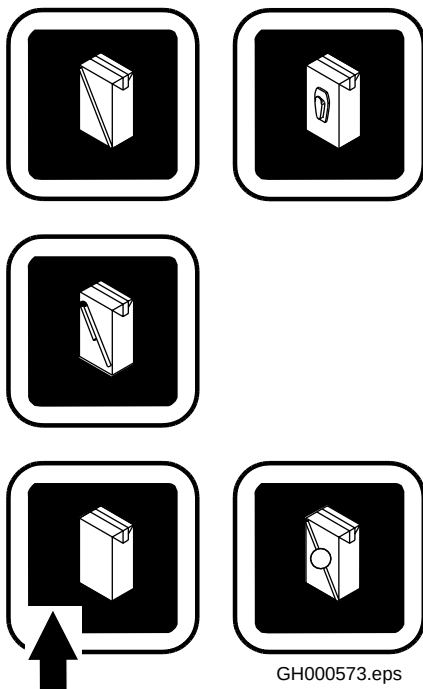
Every fourth package will be applied with a UniCap.

By pushing the **UniCap ON** button once again all lamps are lit. See above.

10c

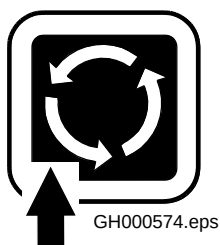
Production without straws or caps

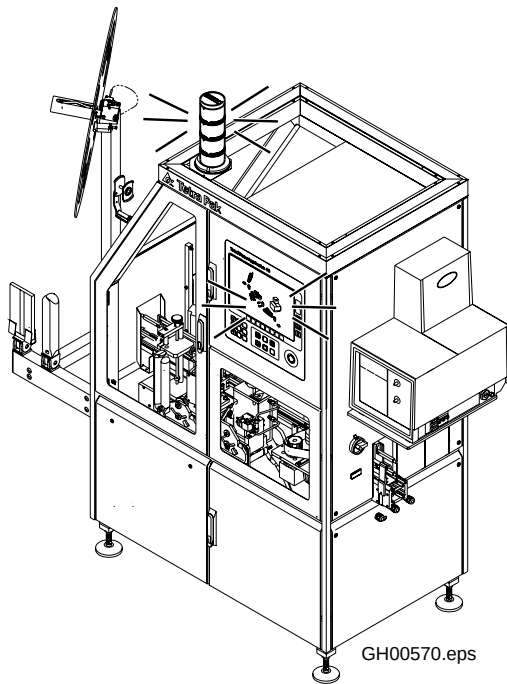
If producing without straws or caps, press the **Straw/UniCap OFF** button



11

Press the **Manual straw/UniCap feed** button until the first straw or UniCap is in application position.





12

Check that no alarm is indicated on the control panel.

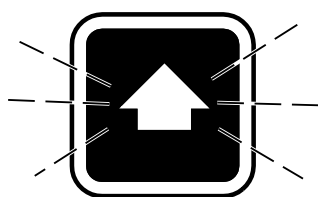


13

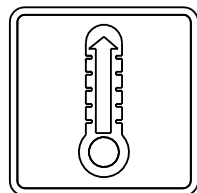
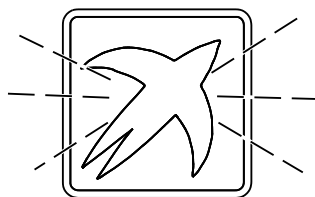
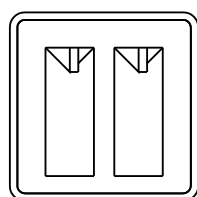
If an alarm is indicated, remedy the cause of the alarm.

Then push the **Alarm reset/Lamp test** button.

Start



GH000577.eps

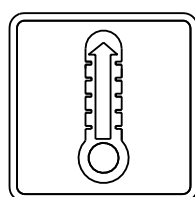
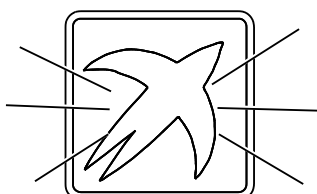
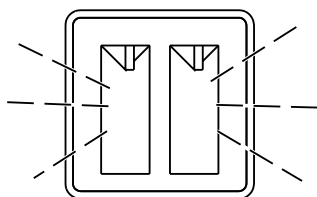
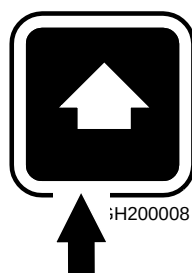


GH000576.eps

1

When the hot melt unit has reached correct working temperature, the **Step 2: Air pressure ON** and the **Program up** button start flashing.

The blue colour of the warning lamp flashes.



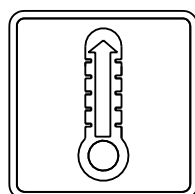
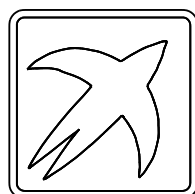
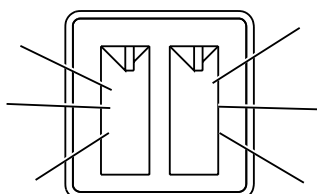
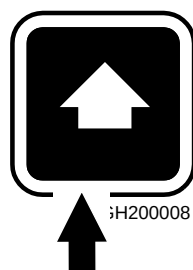
GH000579.eps

2

Push **Program up**.

Result: The **Step 2: Air pressure ON** symbol gets fixed light.

After a few seconds the **Program up** button and the **Step 3: Production** symbol start flashing.



GH000578.eps

3

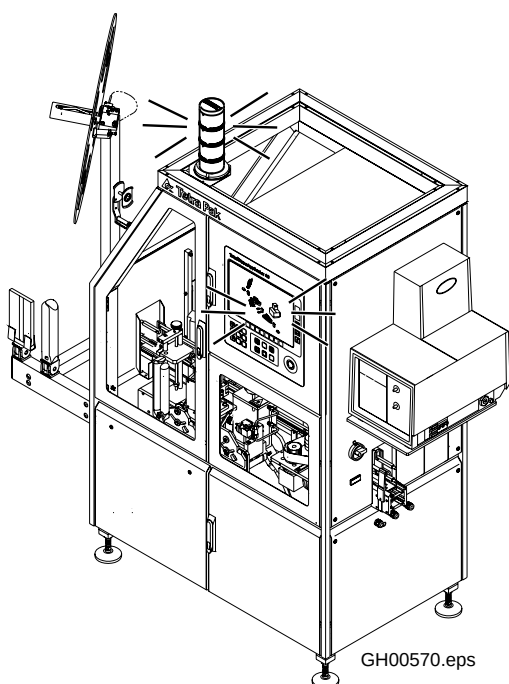
Push **Program up** again.

Result: The **Step 3: Production** symbol gets fixed light. Production will now start.

Production checks

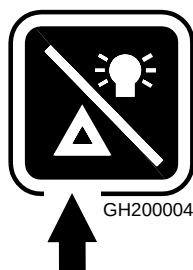
These checks are to be made continually when the machine is in step **Production**.

When there is a fault or a fault cannot be eliminated, call a technician.



1

If an alarm occurs, the warning lamp and the corresponding indicator lamp on the control panel start flashing.

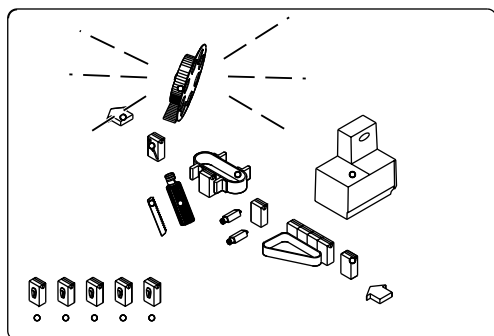


2

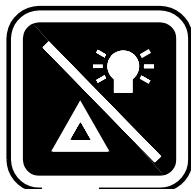
Take actions required, see section **Alarms/Trouble shooting** for further information.

Push the **Alarm reset/Lamp test** button.

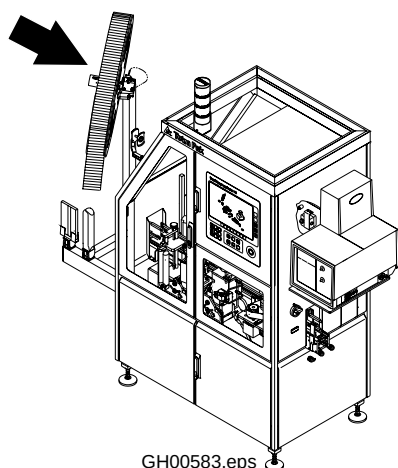
When the alarm is acknowledged, the flashing lights become fixed. When the cause of the alarm is eliminated, the lights will go out.



GH000582.eps



GH200004



GH00583.eps

3a

Production with straws - magazine for straw bobbin

When the **Straw bobbin** alarm is indicated there is low level in the magazine.

Push the **Alarm reset/Lamp test** button.

Put the old reel onto the ladder band unit (1). Put a new reel onto the empty bobbin holder (2).

Unreel the remainder of the old reel.

Continue with item 3c on page 43.

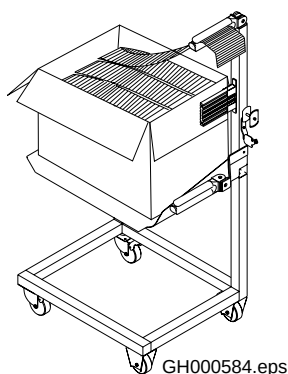
3b

Production with straws and caps - magazine for straw box, and UniCap box

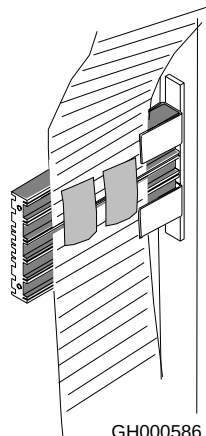
Check the magazine during production.
(No alarm is available.)

When the level is low, a new box must be prepared, and put on place.

Continue with item 3c on page 43.



GH000584.eps

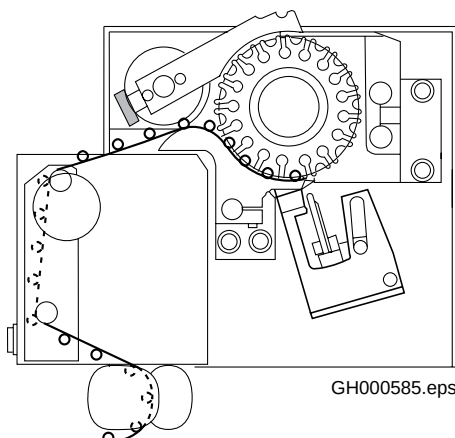


GH000586.eps

3c

Splice the ladder band ends by attaching two pieces of adhesive tape.

Check that the straws or the caps are divided equal around the splice (same dividing as on the ladder bands).



GH000585.eps

3d

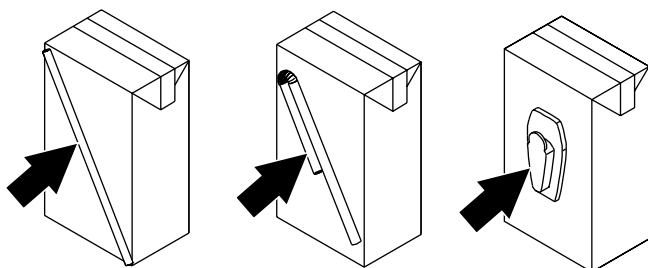
Make sure the splice will run through the applicator unit without trouble.

3e

Remove packages with adhesive tape attached.

4

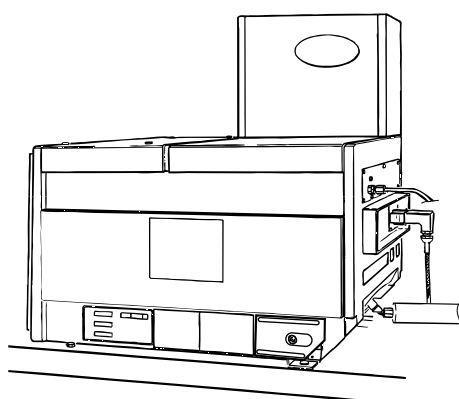
If the straws or caps during production are not properly cut apart, call a technician.



GH000581.eps

5

Continually check the packages, see section **Package checks**.



GH000555.eps

6



WARNING!

Risk of burning!

During heating and production the hot melt cover gets hot.

Check the level of the hot melt in the container.

Top up if necessary. Recommended type of hot melt, see section **Technical data**.

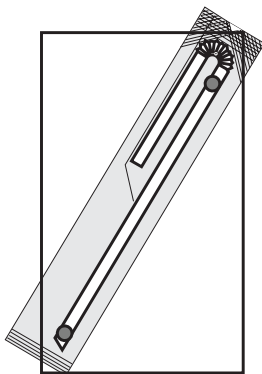
2.2TH000189.en

Package checks

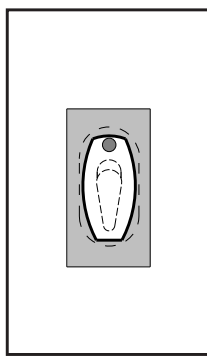
Check the packages after every start, and after a ladder band splice.

Also check the packages continually during production.

When there is a fault or a fault cannot be eliminated, call a technician.



GH000580.eps



GH000596.eps

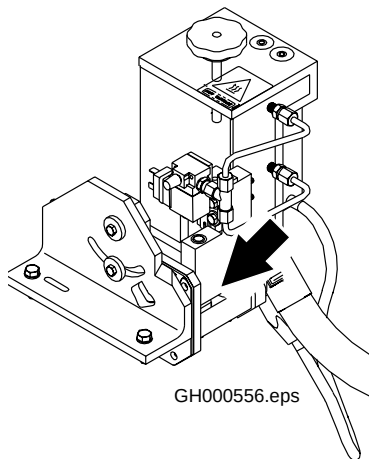
1

Make sure the straws or caps are correctly sticking to the packages. If not, check the machine as to the list below.

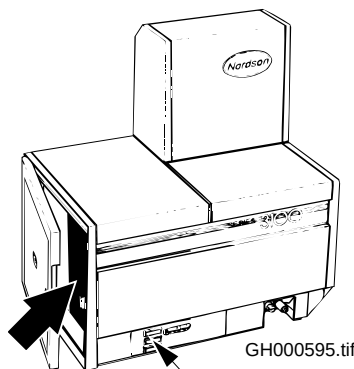


WARNING!

Risk of personal injury or/and burning!
Read the Safety precautions!



GH000556.eps



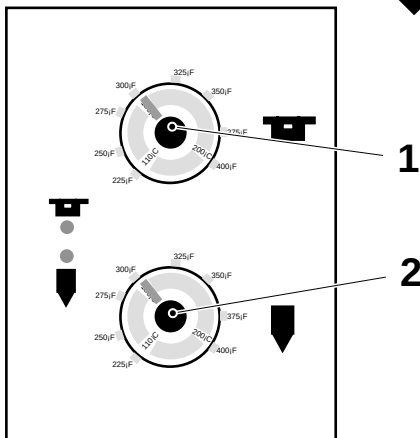
GH000595.tif

2a

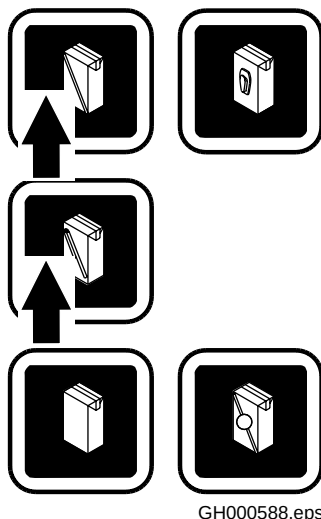
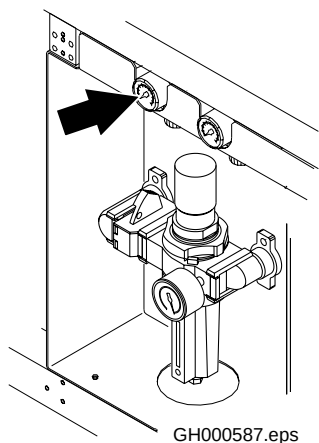
Check that

- the hot melt guns function
- the squeezers reach the packages. If not, call a technician.
- the squeezers are free from hot melt
- the conveyor and the guides are free from hot melt
- the hot melt container is filled and that the operation temperatures for the tank/ hose (1) and the guns (2) are correct set, see section **Technical data**
- the white and green lamps (3) on the hot melt unit are lighting. If not, check that the fuse is intact. If not, call a technician.

(Cont'd)



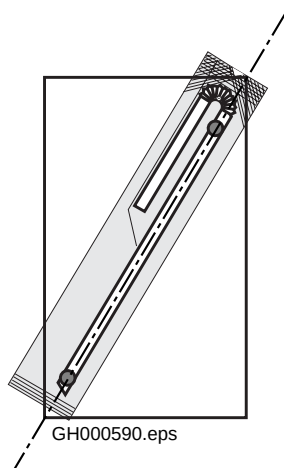
GH000568.eps



2b

(Cont'd; Check that:)

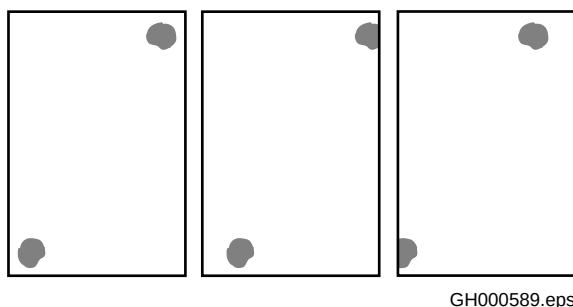
- the hot melt guns have the correct working pressure, see section **Technical data**
- the straws or caps are cut apart correctly. If not, check that the correct straw type is selected, see section **Preparations**. Also check that the feed wheel stops in the right position.



Production with straws

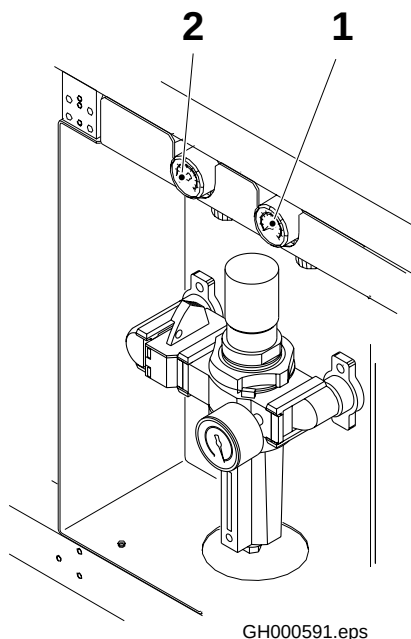
3a

The dots shall be positioned on a package as illustrated; on the package diagonal.



3b

If the dot positions are varying sideways on the packages, the reason could be one of the following, see item 3c.

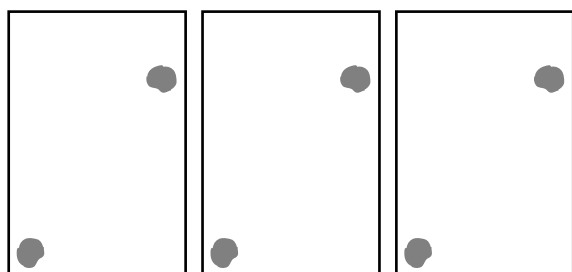


3c

Possible faults:

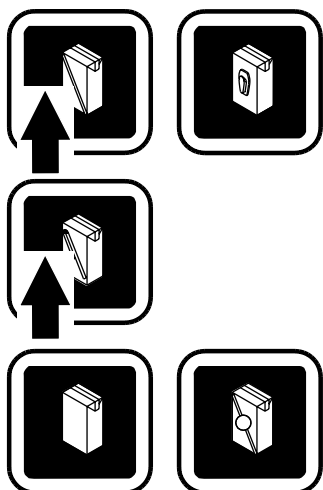
- conveyor speed varies. Call a technician
- incorrect pressure of pump (1) and gun (2); values see section **Technical data**
- packages not transported properly. (Check for hot melt waste and other obstructions.)

2.2TH000190.en



3d

If the dots are incorrectly positioned (upwards/downwards) as to the illustration to the left, the reason could be one of the following, see item 3e.

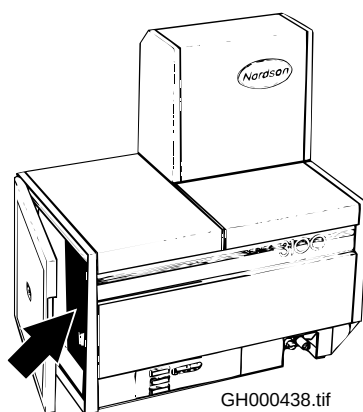


GH000588.eps

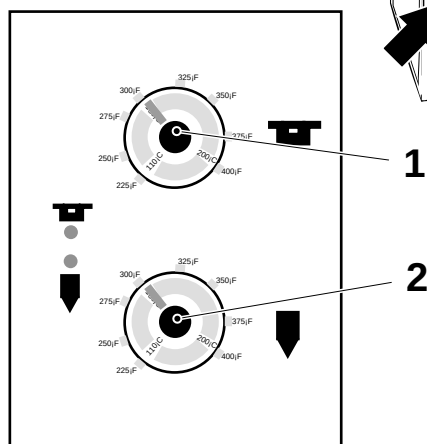
3e

Possible faults:

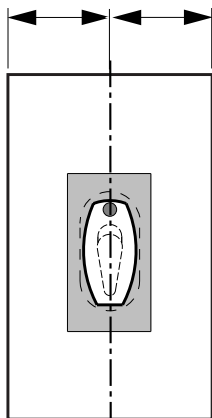
- incorrect straw type is selected
- incorrect temperature settings of hot melt tank (1) and/or guns (2); set values see section **Technical data**
- hot melt guns not properly set upwards/ downwards. Call a technician.



GH000438.tif



GH000568.eps



GH000597.eps

Production with caps 4

The dot shall be positioned under the upper end of the cap, approximately in the package centre sideways, see illustration.

If not, call a technician to set the hot melt gun.

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2.2TH000190.en

Stop

There are four ways to stop the machine:

- Emergency stop
- Safety stop
- Normal stop
- Production finished

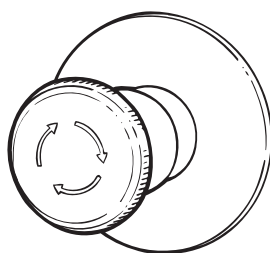
Emergency stop 1a

Note!

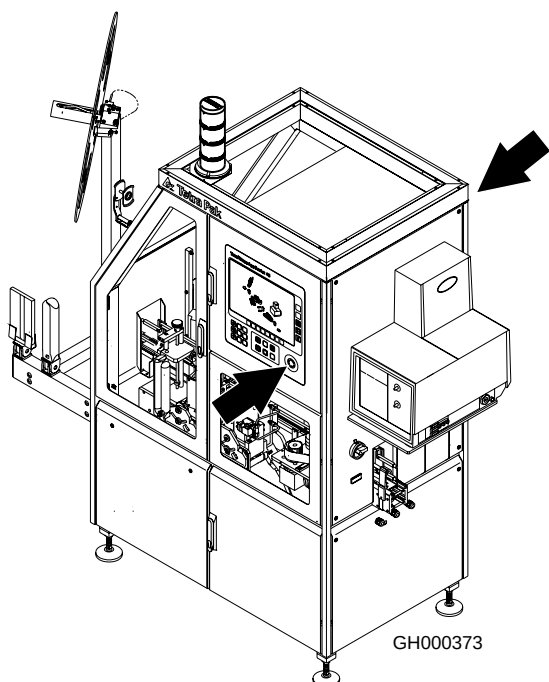
The emergency stop is only to be used when there is danger to person or machine.

Push the **Emergency stop** button.

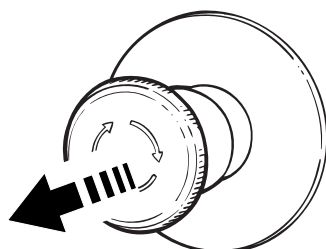
Result: The machine will stop immediately.



GH100876.eps



GH000373



GH100876.eps



H200004



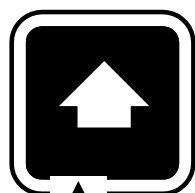
1b

Do the following:

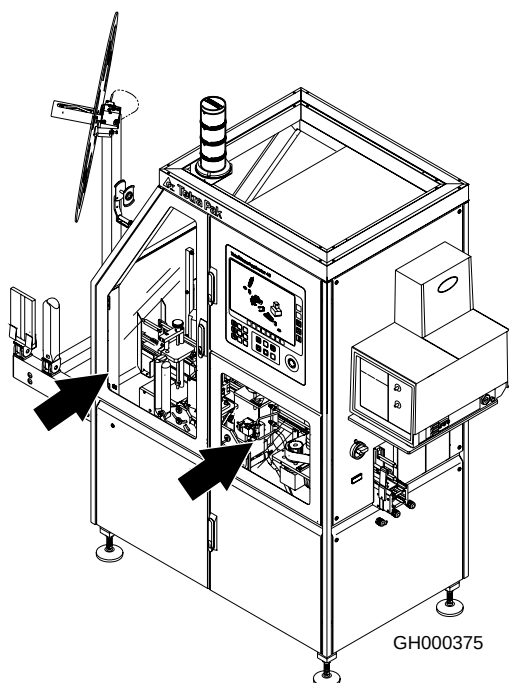
- Eliminate the cause to the emergency stop.
- Reset the **Emergency stop** button.
- Acknowledge the alarm with the **Alarm reset/Lamp test** button.

1c

Restart the machine, see section **Start**.



3H200008



GH000375

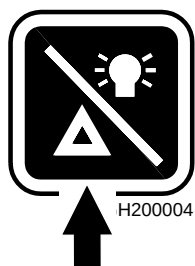
Safety stop

2a

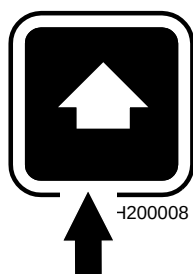
Note!

Never use this as an intended method to stop the machine.

If the doors marked with arrows are opened during production the machine stops.



H200004



H200008

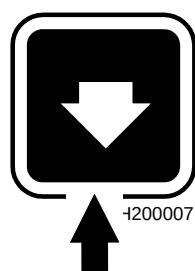
2b

Close the door(s).

Restart the machine by pushing

a) **Alarm reset/Lamp test**

b) **Program up**



H200007

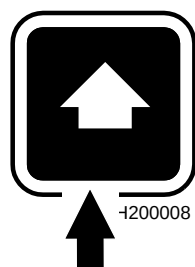
Normal stop

3a

Push the **Program down** button.

Result: The machine steps down to **Step 2; Air pressure ON**. The machine movements stop.

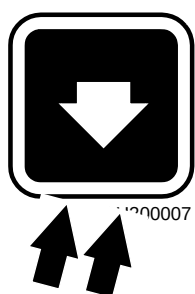
The blue colour of the warning lamp flashes.



H200008

3b

Restart the machine by pushing **Program up**.



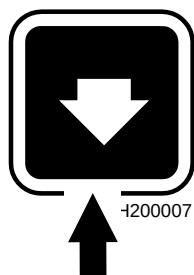
H200007

Production finished

4a

Push **Program down** twice.

Result: The machine steps down to **Step 1; Preheating**. The **Program up** button flashes.



4b

Press the **Program down** button for two seconds.

Result: The heating of the hot melt elements is closed.

The **Program down** button gets fixed light.

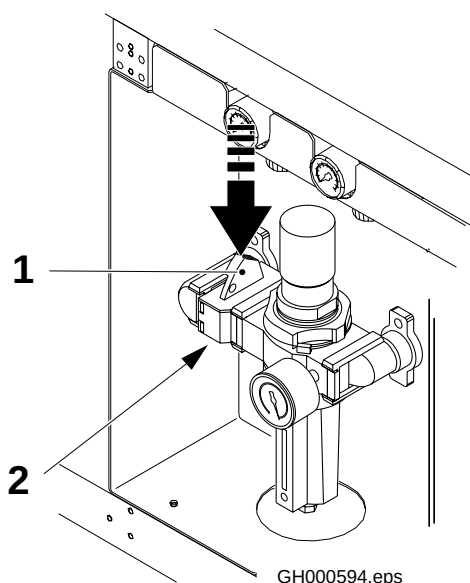
CAUTION!

Let the switch on the hot melt unit remain ON!

Continue with **Daily care**.

Daily care

Carry out Daily care after every production run.



1

Shut OFF the compressed air supply by pressing the regulator handle (1) downwards.

The valve is closed when the handle is visible at the underside (2). The word CLOSED is stamped and visible on the side of the regulator handle.

2

Wash the machine thoroughly.

Water temperature should be maximum 50° C.

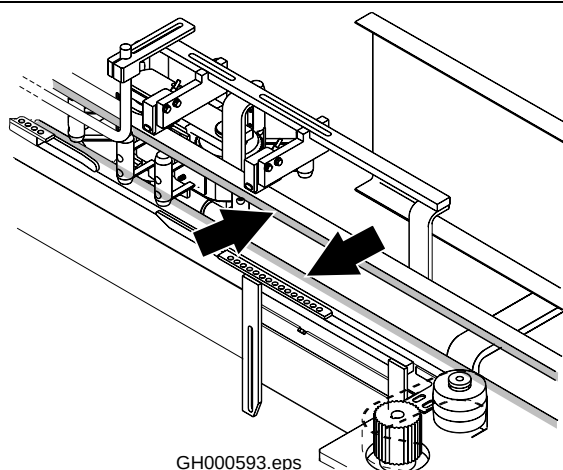
CAUTION!

Do not flush water at the hot melt unit.
Never let water into the electrical cabinet.

Wipe the electrical cabinet with a dry cloth.

3

Remove hot melt waste, and straws or caps from the machine.



4

Use warm water and a cloth to clean the rails from any deposits that might have built up.

CAUTION!

Do not use any sharp or hard object when cleaning the rails!

2.2TH000192.en

5



WARNING!

Risk of burning!

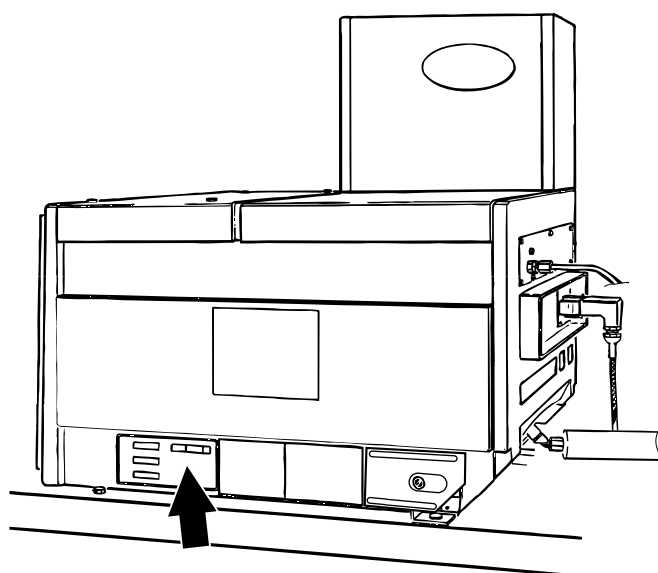
During heating and production the hot melt cover gets hot.

Top up with hot melt in the container.
Never fill the container more than 15 mm below the top.

Recommended type of hot melt, see section **Technical data**.

CAUTION!

Let the switch (arrow) on the hot melt unit remain ON.



Weekly care

Carry out Weekly care at least once a week.

Make sure that the Daily care has been carried out before.

1

Inspect all air connections to cylinder and valves.

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Technical data

Contents:

- Basic settings
- Storage of material

The table below gives the setting the operator should make. See section General description for the location of the regulator.

2.2TH000194.en

Function	Unit	Value	Product / environmental condition
Working pressure	MPa / bar	0.5 - 0.6 / 5 - 6	
Hot melt gun working pressure	MPa / bar	0.25 - 0.3 / 2.5 - 3	
Hot melt pump working pressure	MPa / bar	0.4 - 0.5 / 4 - 5	
Hot melt tank / hose temperature	°C	150	
Hot melt gun temperature	°C	165	
Hot melt adhesive			Jowatherm Hotmelt 25700

Storage of material

Straws and caps

The straws and caps are wrapped in plastic film and joined to a ladder, like cartridges in a cartridge belt.

Straws can be packed in boxes or winded on reels, depending on what magazine the machine is equipped with.

Caps are packed in boxes.

The boxes and reel boxes are delivered on pallets.

Storage

The boxes should be stored indoors under dry conditions. Never place a box directly on the floor, and never stack pallets on top of each other!

Note!

Handle the boxes with care!

Storage temperature:

Constant. Minimum +10°C

Maximum +30 °C

Relative humidity:

Approximately 65%

Order of consumption:

First box in - first box out!

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Hot melt

The hot melt can be stored for a maximum of one year. The storing facility should be cold and dry.

Try to avoid dust and damp in the storage facility.

The first box in should be the first box out.

Lubricants

The table below lists only a selection of lubricants with their respective designations. Comparable lubricants from other suppliers may be selected with the aid of the lubricant specifications (document No in the table)

Lubricant specifications may be ordered from Central Technical Publications
Publication Support
Ruben Rausings gata
S-221 86 Lund.

Lubricant code	Document No	Material No (internal TP designation for material type).	Part No (used when ordering from Tetra Pak).	Example	
				Supplier	Product designation
A Motor oil	M 1251.122	51122-85	90 296-28	BP Esso Statoil Mobil Shell	Energol HD 20W-30 Essolube XD-3 PowerWay D4/ DieselWay D2 HD 20W-30 Shell X-100 20W-30
B High pressure oil	M 1254.322	54322-220	90 296-73 90 296-78	BP Esso Statoil Mobil Shell	Energol GR-XP 220 Spartan EP 220 LoadWay EP 220 Mobilgear 630 Omala oil 220
		54322-150 For use in production plant with start temperature below 5°C	90 296-72	BP Esso Statoil Mobil Shell	Energol GR-XP 150 Spartan EP 150 LoadWay EP 150 Mobilgear 629 Omala oil 150
C Hydraulic oil	M 1252.122	52122-31	90 296-53	BP Esso Statoil Mobil Shell	Bartran HV 32 Univis N 32 HydraWay HV 32 DTE Oil 113 Tellus T 32
D Mist lubrication oil	M 1251.822	51822-37	90 296-80	BP Esso Statoil Mobil Shel	Autran GM-MP ATF Dexron II TransWay DX II ATF 220 ATF Dexron II
E Com-pounded cyl-inder oil	M 1254.922	54922-460	90 296-77 90 296-2	BP Esso Statoil Mobil Shell	Energol AC-C460 Cylesso TK 460 CylWay FZ 460 600W Super Cylinder Oil Valvata Oil J460

Lubricant code	Document No	Material No (internal TP designation for material type).	Part No (used when ordering from Tetra Pak).	Exampel Supplier	Product designation
F Lithium grease EP type	M 1255.115	55115-20	90 296-68	BP	Energrease LS EP 2
				Esso	Grease XRB 2EP Esso MP Grease/ Beacon EP 2
				Statoil	UniWay EP 2N
				Mobil Shell	Mobilux EP 2 Calithia EP Grease T2 Grease 1344 LiEP 2
H High-pressure oil	M 1254.322	54322-320	90 296-75	BP	Energol GR-XP 320
				Esso	Spartan EP 320
				Statoil	LoadWay EP 320
				Mobil Shell	Mobilgear 632 Omala oil 320
		54322-220	90 296-73 90 296-78	BP	Energol GR-XP 220
				Esso	Spartan EP 220
				Statoil	LoadWay EP 220
				Mobil Shell	Mobilgear 630 Omala oil 220
K Circulation oil	M 1254.942	54942-100	90 296-15	BP	Energol CS 100
				Esso	Teresso 100
				Statoil	TurbWay 100
				Mobil Shell	DTE Oil Heavy Tellus Oil 100
L Silicon grease	M 1255.322	55322-30	90 296-9	Dow	Dow Corning 7 Compound
				Klüber	Unisilikon L 250 L
M Lithium grease EP type	M 1255.112	55112-10	90 296-70	BP	Energrease LS EP 1
				Esso	Beacon EP 1
				Statoil	UniWay EP 1
				Mobil	Mobilux EP 1
O Lithium complex grease	M 1255.122	55122-30	90 296-61	BP	Energrease LS 3
				Esso	Unirex N3
				Statoil	UniWay HTC3
				Shell	Alvania Grease R3
P Synthetic compressor oil	M 1254.632	54632-68	90 296-54	BP	Energol RC 68
				Esso	Compressor oil 68
				Statoil	
				Mobil Shell	

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