

Maintenance



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10.1 Special precautions

Warning!

The maintenance operations described in this chapter, though simple, may expose operators to significant risks if not carried out properly. For this reason, before starting work, we recommend that you carefully read all the following information.

- All the checks and maintenance operations described in the following paragraphs must be performed while the machine is in the conditions specified in "MAINTENANCE STATES".
- The various maintenance states are described in the following pages of this Chapter.
- Maintenance must be entrusted to qualified personnel who have the necessary electrical and mechanical skills, as well as a general knowledge of the machine.
- In addition, all the operations described must be carried out by a single operator; this is essential to ensure the necessary protection against errors caused by the incorrect coordination of the various actions.
- Never climb the machine's components and structures as they were not designed to support people's weight.
- Be careful not to spill lubricating liquids or other environmentally damaging materials.
- Always wear the personal protective equipment most suited to the work you are about to perform.
- Keep the work area neat and clean, taking care not to lose or misplace tools, so that they will not be forgotten on the machine.
- Once done, refit and secure all safety guards and devices that may have been removed or opened.

10.2 Maintenance safety

- Always wear clothing adequate for the operations to be performed. close- fitting protective work clothing which stand up to cleaning agents are to be worn. do not wear loose clothes, ties, necklaces, belts or any other clothing which may become entangled in the machine.
- Anyone under the influence of alcohol or who is on medication must not be authorized to operate, repair or service the machine.
- Maintenance or repairs must be carried out only by qualified competent persons specialized in this area.
- Only one person is to carry out maintenance and repairs.
- Machines that handle hot glue include equipment which use heat. it is therefore extremely important that the user wears protective gloves whenever working with these machines.
- Before performing maintenance or adjusting the machine, turn the main switch, on the control cabinet, to "0" (off) and press the emergency stop button so that the machine cannot be started up unexpectedly.
- Always shut off the electricity supply to the machine before performing any maintenance. the main switch must be turned to off. make sure the machine cannot be started up by anyone.
- Unauthorized persons must keep away from the machine while maintenance and repairs are being performed.
- The safety devices or guards can be inactivated only by authorized persons only when maintenance operations need to be performed. before inactivating the devices, he/she must first make sure that the operators will in no way be harmed or the machine damaged. as soon as the operations have been completed, the safety devices are to be immediately reactivated.
- The workshop must be adequately equipped to repair the machine.
- The spare parts must conform to the specifications determined by the manufacturer. for this reason, original spare parts should always be used.
- Always carry out the checks and scheduled maintenance at the intervals stated in the Operating and Maintenance Manual.
- Do not activate or adjust the control devices and instruments installed on the machine unless authorized or without fully understanding how the machine operates.
- Do not use aggressive products to clean the machine. closely follow the instructions provided by the manufacturer. always wear adequate clothing when using these products.



- After the maintenance operations and repairs have been completed, restart the machine only after being authorized by the supervisor. the supervisor must make sure:
 - the operations have been completed
 - the machine runs perfectly
 - the safety devices and interlocks are activated
 - nobody is working on the machine.
- Before starting the machine, make sure that nothing was left on it (screw drivers, wrenches, screws, etc.) and that the parts which were adjusted or replaced are securely attached.
- Make sure there is no oil, grease or other objects on the floor which can cause the operator to slip or fall in the work area.
- Whenever one or more persons are servicing or repairing the machine, they must be informed before the machine is restarted.
- Always treat the material used so that it is biodegradable, and dispose of it, along with the parts replaced, according to the laws regarding environmental protection.



10.3 Maintenance states

In order to perform the interventions and checks described in this chapter, the machine must be in the most appropriate condition with regard to the type of operation to be performed.

There are three different machine maintenance states:

Normal operation

Normal operation is understood to be when the machine is fully operational; therefore, all the sources of energy must be available and properly connected , and the control circuits must be activated.

Isolation

An "Isolation" status means that the sources of electric and pneumatic energy must be adequately disconnected.

Isolation for maintenance

The maintenance isolation status means that the sources of electric and pneumatic energy must be adequately disconnected.

You must also:

- Lock the master switch with a padlock;
- Lock the air handling unit tap with a padlock;
- Place a clearly visible sign on the machine that says: "MACHINE MAINTENANCE IN PROGRESS".

Warning!

If maintenance operations must be performed with disabled guards and the machine running, keep to the machine operating modes with JOG described in chapter 2 Safeties.



10.4 Maintenance operations

Machine maintenance can be divided as follows:

- Scheduled maintenance
- Special maintenance

Scheduled maintenance

Scheduled maintenance includes:

- Cleaning
- Lubrication and greasing
- Checks, adjustments or replacements

Special maintenance

Special maintenance includes:

- Replacements due to unexpected breakdowns

Maintenance frequency

Information provided in the next pages sums up the machine's scheduled maintenance interventions and suggests the frequency of intervention for the individual parts.

The indicated frequency is based on the machine's generic operating times.

The actual frequency with which cleaning should be carried out depends on the type of filling products and cartons processed.



10.5 Scheduled maintenance

The manufacturer provides a list with all checks and scheduled maintenance interventions that are necessary to ensure a correct and safe running of the machine.

The fowolling operations must be carried out based on the indicated schedules.

As far as the warranty is concerned, the manufacturer shall not be held liable in case the above instructions are not complied with.



10.5.1 Cleaning

You should clean the entire work area before the work shift begins. After setting the machine to an "Isolated" state, use a vacuum cleaner to remove all powder, dust and/or product deposits. Also wipe off any dirt from the detection surfaces of photocells, optical fibers and sensors.

Interventions table

The table below contains the list of interventions and a short description on how to clean the units included in the summary table on the next page.

Intervention	Product	Description
Cleaning	Solution of water and neutral soap at a temperature of < 30°C	Damp cloth or soft bristle brush.
Dru de orige	Dry cloth	Use a dry cloth and, where necessary, remove any encrustations using a soft bristle brush. Do not scratch painted, polished or transparent parts.
Dry cleaning	Aspirator	Use an aspirator to remove dust/powder from the suction filters.
	Compressed air	Use compressed air to remove any residual powder of the product being processed.



Cleaning operations summary table

List of interver	Frequency (h)					
Machine part or unit	Operation	40	80	400	1000	other
Fixed parts and guards	Cleaning		Х			**
Photocells and sensors	Dry cleaning	Х				**
Operating terminal	Dry cleaning		Х			***
Electric cabinet and connected parts	Dry cleaning		Х			**
Filters on the electric cabinet	Dry cleaning	Х				**
Compressed air filter	Dry cleaning			Х		*
Drive belts	Dry cleaning		Х			*
Carton pickup arm	Dry cleaning		Х			*
Carton magazine	Dry cleaning		Х			*
Cartons transport chain	Dry cleaning		Х			*
Cartons closure	Dry cleaning		Х			*
Outfeed belt	Dry cleaning		Х			*
Exit reject	Dry cleaning		Х			*

(*) When required.

- (**) Maintenance frequency depends on the environment in which the machine is installed.
- (***) Maintenance frequency depends on the processed product.

At regular intervals, perform a general cleaning of the machine. Before beginning this maintenance operation, you must remove the light and dusty residuals from all machine areas (including the mechanical movements) by means of compressed air jets.

Warning!

All the appropriate safety rules must be complied with during the cleaning operations, i.e. machine OFF and boards isolated, to avoid the machine from starting accidentally or unexpectedly.



10.5.2 Cartoning machine

10.5.2.1 Carton magazine

A dry cloth is sufficient to clean the carton pick-up and opening zone: the best results are achieved using antistatic cloths and products, recommended to reduce product deposits and, consequently, the number of interventions.

- Remove the cartons from the guides.
- Use an aspirator to remove any powder and/or product residues from the machine.
- To clean more thoroughly, use a cloth dampened with water and neutral soap at a temperature not higher than 30°C.
- To clean parts that are difficult to reach, soak a bristle brush in the same solution of water and neutral soap.
- At the end of the cleaning operations, carefully rinse and thoroughly dry all surfaces.





10.5.2.2 Carton pickup arm

A dry cloth is sufficient to clean the carton pick-up and opening zone: the best results are achieved using antistatic cloths and products, recommended to reduce product deposits and, consequently, the number of interventions.

- Use an aspirator to remove any powder and/or product residues from the machine.
- To clean more thoroughly, use a cloth dampened with water and neutral soap at a temperature not higher than 30°C.
- To clean parts that are difficult to reach, soak a bristle brush in the same solution of water and neutral soap.
- At the end of the cleaning operations, carefully rinse and thoroughly dry all surfaces.





10.5.2.3 Cartons transport chain

A dry cloth is sufficient to clean the carton conveyor chain: the best results are achieved using antistatic cloths and products, recommended to reduce product deposits and, consequently, the number of interventions.

1 Important!

Clean the carton transfer teeth, trying to not remove the lubricant on the chain.

- To clean more thoroughly, use a cloth dampened with water and neutral soap at a temperature not higher than 30°C.
- At the end of the cleaning operations, carefully rinse and thoroughly dry all surfaces.



10.5.3 Lower flap glue closure

For the gluing treatment unit cleaning on the cartons please refer to the supplier manual enclosed.

In particular, we suggest that you:

- Use a soft bristle brush to remove any dust or dried ink from hard-to-reach areas.
- For further information, please refer to the attached manual of the glue-treatment unit.





10.5.4 Carton output

10.5.4.1 Outfeed belt

Use a dry cloth to clean the carton conveyor belt and, where necessary, remove any encrustations using a soft bristle brush.





10.5.4.2 Carton rejection device

Simply use a dry cloth to clean the rejection areas at outfeed: best results are achieved using anti-static cloths and products, recommended to reduce product deposits and, therefore, the number of cleaning interventions.

- Use an aspirator to remove any powder and/or product residues from the machine.
- To clean more thoroughly, use a cloth dampened with water and neutral soap at a temperature not higher than 30°C.
- To clean parts that are difficult to reach, soak a bristle brush in the same solution of water and neutral soap.
- At the end of the cleaning operations, carefully rinse and thoroughly dry all surfaces.





10.5.5 Service units

10.5.5.1 Cleaning fixed parts and guards

A dry cloth is sufficient to clean the transparent guards: the best results are achieved using antistatic cloths and products, recommended to reduce product deposits and, consequently, the number of interventions.

Using solvents, fuels, alcohol, abrasive materials or special detergents may damage the guards: before using these products, check their effectiveness by testing them on a small marginal area of the machine.

Carry out the following operations to clean the fixed parts and the guards:

- Open the side guards.
- Use an aspirator to remove any powder and/or product residues from the machine.
- Clean the fixed parts of the unit and all the parts that are not removed during the size changeover procedures.
- To clean more thoroughly, use a cloth dampened with water and neutral soap at a temperature not higher than 30°C.
- At the end of the cleaning operations, carefully rinse and thoroughly dry all surfaces.





10.5.5.2 Cleaning photocells and sensors

Proceed as described below to clean photocells and sensors:

- Use a soft cloth, better if made of scratchproof fabric, to thoroughly clean the photocells' lenses and glass, removing any dust patina that may have formed due to electrostatic charges that these devices create.
- Similarly, clean the reflecting plates.

1 Note:

The machine's sensors are delicate devices that require different cleaning criteria and methods.

Refer to the recommendations provided below to clean the sensors.

Recommendations for cleaning the sensors:

Inductive sensors

No specific cleaning procedure is required.

Capacitive sensors

These sensors have a plastic cover in the detection area. Refer to cleaning instructions for plastics.

Optical sensors

Clean optical fibers and photocells using a soft brush or a cloth.



10.5.5.3

Control panel cleaning Use a damp cloth with a specific antistatic solution to clean the control panel. The control panel must be cleaned with care in order not to scratch the touch screen surface.





10.5.5.4 Cleaning the electric cabinet and connected parts

Clean the electric cabinet using a dry cloth and, where necessary, remove any encrustations using a soft bristle brush.

Clean the inner parts of electric cabinet using a dry cloth and, where necessary, remove any encrustations using a soft bristle brush.





10.5.5.5 Cleaning the electric cabinet filters

Proceed as follows to clean every filter of the fan that cools the electric cabinet:

- Remove the grid mounted by pressing;



- Clean the grid and the filter by removing any traces of dust/powder using an aspirator.
- Refit the grid.



1 Note:

It is not possible to say exactly how often this intervention should be carried out as it is closely related to the working environment in which the machine is installed.



10.5.5.6 Cleaning the compressed air filter

The air handling system is equipped with a filter that separates any condensate from the air coming from the plant's pneumatic network.

The recommended maintenance frequency is 400 hours but can be changed, depending on the characteristics of the system to which the machine is connected (such as dry air, for example).

In order to discharge the condensate, act on discharge valve 1 located at the bottom of the tank.





10.6 Lubrication and greasing

Lubrication plant

The lubrication is extremely important to ensure the efficient running of the machine and to extend the life of the members subject to wear.

It is recommended to follow the lubrication schedule and to lubricate the parts involved with the specified lubricants.

When lubricating the unit, do not excessively grease the mechanical parts and keep those parts clean that might be in contact with the products. Allow small quantity of oil on the ball bushings.

Greasing

The greasing is extremely important to ensure the efficient running of the machine and to extend the life of the members subject to wear.

It is recommended to follow the greasing schedule and to grease the parts involved with the specified greases .

Check the greasing level of the areas equipped with lubricators. Avoid excessive greasing since improper quantities of grease may damage the seals.

Moreover:

- keep a thin layer of grease on all chains and gears;
- ball bushings must be well greased;
- grease angular transmissions.

1 Note:

Before running the machine, all highlighted parts must be greased and lubricated.

For the greasing operations, always use molybdenum disulfide oil.

Table of grease to be used for lubrication

ROLOIL	SHELL	MOBIL	ESSO	AGIP	
MERCURY 3	ALVANIA R3	MOBILUX 3	BEACON 3	GR MU 3	A
ISOMOV2	RETINAX AM	MOBILGREASE SPECIAL	MULTI-PURP. MOLY	GR.SM	В
COMET 3					С

A All-purpose grease for rolling bearing and greasing operations in general.

B Grease for homokinetic joints.

C Special grease for high speed rolling bearings.

Oils table

ROLOIL	SHELL	MOBIL	ESSO	AGIP	
ARM 46. V	TELLUS 46	DTE MEDIUM	NURAY 46	RADULA 46	D
LEMANIA 100	CARNEA 100	RUBREX 600	CIRCULATING 100	RADULA 100	ш
LR 10	TELLUS C 10	VELOCITE E	SP!NESSO IO	OSO 10	F
EP 150	OMALA 150	MOBILGEAR 629	SPARTAN EP 150	BLASIA 150	G
L132	TELLUS S 32	DTE 24	NUTO H 32	OSO 32	Η
ALFANIX 68	CLAVUS/G. 68	GARGOYLE ARTIC 300	ZERICE 68	TER 68	I

D Different lubrications of components under normal working conditions

E General lubricants

F Different lubrications of components under severe working conditions.

G Lubrication of reduction units and gears in oil bath.

Note:

For further information on characteristics of makes or types of oil not contemplated in our table, please contact our customer service for the appropriate and relevant information.



10.6.1 Cartoning machine

10.6.1.1 Lubrication plant



	Lubrication table						
	Frequency 200 h 1000 h 2000 h						
Α	Carton pick-up arm cam	Х					
В	Motorized chains			Х			
С	Folders cam	Х					
D	Gearbox			Х			
Ε	Ball joints		Х				



10.6.1.2 Carton pick-up arm cam lubrication

Clean the cams of old grease and lubricate them with the new grease by using a paint brush.



10.6.1.3 Motorized chains lubrication

Clean the chains from the grease and lubricate them with the new one by using a paint brush.





10.6.1.4 Folders cam lubrication

Clean the chains from the grease and lubricate them with the new one by using a paint brush.





10.6.1.5 VF Type Reduction units

The VF type reduction units, in the sizes used by us, are usually lubricated for life and consequently do not require any maintenance.

Refer to the table below in case you need to top-up the correct amount of lubricant due to leaks or overhauls:

Type of lubricant	Application	Type of oil	Manufacturer
Synthetic oil	Reduction gear and worm reduction units	OPTIFLEX320 TELIUM OIL VSF TIVELA OIL SC320 SYNTHESO D220EP GIRAN S 320 GLYCOLUBE RANGE220	Shell
	Worm screw gearboxes with torque limiter	OMALA S4 WE 320	Shell

Quantity of lubricant contained inside the VF range gearboxes

Synthetic oil lubrication (liters)							
VF 27 VF 30 VF 44 VF 49 VF 63 VF 72 VF 86							
0,025	0,045	0,075	0,120	0,320	0,50	0,870	





Generally speaking, oils or lubricating materials are extremely polluting. as such be sure to dispose of them by means of the specific organizations that collect and appropriately dispose of exhausted oils.



10.6.1.6

Ball joints lubrication Use a manual pump to lubricate the ball joints by means of the specific lubricators: A Carton side flap folding lever





10.7 Checks, adjustments or replacements

This paragraph deals only with scheduled maintenance operations associated with checks, adjustments and replacements.

Periodic checks on parts subject to wear are extremely important both to keep the machine in its best working efficiency and to minimize repairs as well as the potentially hazardous situations resulting from worn out parts.



In addition, preventive machine inspections and checks allow reducing downtime that can damage the production.

When checking, adjusting or replacing anything within the guards, pay utmost attention to the edges of the mechanical components to avoid mechanical type danger such as: scratching, cutting and crushing. It is advisable to wear protective work gloves.

Interventions table

The table below contains the list of interventions and a short description on how to clean the units included in the summary table on the next page.

Intervention	Description
Tensioning	Make sure tensioning is at best but adjust, if necessary.
Topping-up oil in the gearboxes	Check that the oil level is at best otherwise top-up if necessary.
Check	Visually check that the component is devoid of signs of wear & tear or use the tools described for each case.
Replacement	Remove the worn or broken component and install the new one.
Adjustment	Check that the adjustment of the specified components is at best, otherwise adjust as indicated.

10.7.1 Summary table for checks, adjustments or replacements

List of interventions			Frequency (h)			
Machine part or unit	Operation	80	200	400	1000	other
Drive belts	Tensioning/Replacement		Х			*
Chain	Tensioning/Replacement		Х			*
Cartons transport chain	Tensioning/Replacement		Х			*
Lower flap glue closure	Cleaning		Х			*
Motorization exit belt	Tensioning/Replacement		Х			*
Safety devices	Check		Х			**
Filters on the electric cabinet	Check/Replacement		Х			**
Compressed air pressure	Adjustment			Х		*
Electrical cabinet	Check				Х	*

- * When required.
- ** Maintenance frequency depends on the environment in which the machine is installed.
- *** Maintenance frequency depends on the processed product.



10.7.2 Cartoning machine

10.7.2.1 Tensioning/Replacing the drive belts

Warning! Replace or perform maintenance to the belts only when the machine is switched off.

Normally the driving belts do not need to be re-tensioned. however this operation could be necessary at times and after repeated interventions of this kind the belts may have to be replaced since too much stretching drastically reduces their resistance.

When the belt frays this means that the belt is wearing out and should be replaced. It is also essential to check that the pulleys are parallel to prevent the belt from rubbing on the sides.

During assembly, too little tension causes vibrations, premature wear and possible overlapping of the belt's teeth with those of the pulley.

Try not to force the assembly of the belt by means of tools and on pre-tensioned axes, as this would cause irreversible damage to the internal structure of the belt itself.

Do not lubricate the belts. oil could cause the material to deteriorate quickly and if any "v" belts are present, it would drastically reduce transmission power..





10.7.2.2 Tensioning the drive belts

To tension the drive belt A proceed as follows:

- Loosen the screw B of the tensioner C.
- Use screw D to move tensioner C .





10.7.2.3 Assembly and disassembly of the drive belts

Rubber toothed belts on fixed axes must never be assembled or disassembled by forcing the belt but by dismounting and remounting the tightening bush a of one of the two pulleys.

- First remove the screws B and then one of the above mentioned bushes;
- Remove the pulley and assemble or disassemble the belt c.
- Then re-insert the pulley and reposition the screws in their original seat;
- Align the pulley and tighten the screws b.





When tensioning, in order not to excessively stress the shaft of either the pulleys or the servomotor, we recommend to pay attention to the following data:



T Length of the free shaft (mm)

F Requested force (N)

PROMATIC

f Arrow generated by the F force (mm)

In the middle of T, use a dynamometer to apply a perpendicular force F, capable of generating the arrow F that corresponds to the result of the formula:

$$f = 0,0156 \cdot T = (mm)$$

The minimum (F min) and maximum (F max) range value of the force F are:

$$F \max = (Tst \cdot 1,5) / 16 = (N)$$

Tst Static tension (N)

$$Tst = 500 \cdot ((P \cdot Km) / V) = (N)$$

P Motor power (kW)

Km Motor class factor

V Linear speed of the belt (m/s)

Km factor based on the motor class

- 1.35 Class I
- 1.50 Class II
- 1.75 Class III

Generally, allow a weak installation tension for low power transmissions with continuous and uniform motion

On the contrary, allow a stronger installation tension for high power transmissions, the motion of which is subject to frequent starts, high static torques, and sudden overloads.

In practice, based on the type of transmission, the force F to be applied is calculated in the middle of the free T section and the force F generated by said force shall correspond to the calculated value.

If this is not the case, tension until such value is reached.



The T value can be determined by means of the ratio:

$$T = \sqrt{l^2 - \left(\frac{Dp - dp}{2}\right)^2} = (mm)$$

Dp Bigger pulley pitch diameter (mm)

dp Smaller pulley pitch diameter (mm)

I Distance between centers (mm)

For a smooth operation, axes and pulleys must be perfectly parallel. Undesired parallelism errors generate differentiated tensions on the sides of the belt so that the belt side slips and is subject to high wear.



10.7.2.4 Driving belts



- The driving chains are subject to progressive stretching and should be retensioned at regular intervals.

They should be replaced, for example, when a pair of chains can no longer be retensioned uniformly, or when the tension adjustment has already reached 2/3 of its total stroke.

When the articulated joints bind and the chain does not stretch correctly on rectilinear sections, this clearly indicates the need to be cleaned and/or lubricated.





10.7.2.5 Tensioning the carton conveyor chains

- Loosen the nut A.
- Tension the chain B by means of the screw C.
- Tighten the nut.





10.7.2.6 Lower flap glue closure

For the glue treatment and maintaining of the gluing unit and gluing application parts on the cartons please refer to what reported in the supplier manual enclosed.





10.7.3 Carton output

10.7.3.1 Tensioning the carton exit belt

- Loosen the nuts A
- Tighten the belt, working on the screws B
- Tighten the nuts A







10.7.3.2 Belt motorization chain tensioning

- Loosen the screw C
- Rotate the bracket D to stretch the chain
- Re-lock the screws C





10.7.4 Service units

10.7.4.1 Checking the safety devices

Check the working efficiency of the safety devices. The proper procedures are indicated below:

Check the E-stop button

- When the machine is running under normal conditions:
- Start the machine in automatic mode when there are no products inside the bucket chain;
- Press the "EMERGENCY" button and make sure the machine stops at once;
- Release the button and ensure the machine can be restarted as usual;
- If there is an anomaly, contact the manufacturer's technical service.

Checking the interlocks associated with the guards

- When the machine is running under normal conditions:
- Start the machine in automatic mode when there are no products inside the bucket chain;
- Open the mobile guards one at a time without tools, making sure that every part of the machine stops at once;
- Close each guard and ensure the machine can be restarted as usual;
- If there is an anomaly, contact the manufacturer's technical service.





10.7.4.2 Checking/Replacing electric cabinet filters

Check the condition of the filter of each fan that cools the electric cabinet and replace it if necessary.

Proceed as follows to replace the filter of the fan that cools the electric cabinet:

- Remove the grid mounted by pressing.



- Replace the filter.
- Refit the grid.



(Î) Тір

It is not possible to say exactly how often this intervention should be carried out as it is closely related to the working environment in which the machine is installed.



10.7.4.3 Compressed air pressure adjustment

Check the pneumatic system's correct supply pressure and also check for any condensate in the air handling unit. The proper procedures are indicated below:

When the machine is running under normal conditions:

- Make sure the operating pressure on pressure gauge 1 is 6 bar.



 If necessary, adjust it by means of the knob 2 (pressure increases clockwise and decreases counterclockwise);





- Check if there is any condensate inside bowl 3; if there is, proceed as follows:
- set the machine to Isolated status;
- drain the condensate through the appropriate drain 4.





10.7.4.4 Checking the electric cabinet

Run a few checks to ascertain the good general condition of the electric cabinet. After setting the machine to Isolated status for maintenance, check:

- The wear of the seal gasket of the electric cabinet's doors; replace if you notice any cuts or cracks that could adversely affect their seal against the liquid or dust penetration.
- Check the correct tightness of the conductor's terminals, especially the power leads and protective conductors.
- Make sure all fuses are firmly in place; should you notice any anomalies or loose connections, contact the manufacturer's technical service.



10.8 Maintenance from sub suppliers

10.8.1 Hot melt gluing unit

For the glue treatment and maintaning of the gluing unit and gluing application parts on the cartons please refer to what reported in the supplier manual enclosed.





10.9 Special maintenance

All the interventions that are not specifically reported in this instructions manual, such as:

- interventions due to faults of the components of the electrical system
- interventions due to faults of the components of the pneumatic system
- interventions due to faults of the electric components or motors
- intervention due to faults of the mechanical components

shall be considered extraordinary maintenance.

Such interventions require specific skill and must be carried out by qualified staff authorized by the machine manufacturer.

For the technical assistance, please contact the manufacturer directly.



In case of a fault that requires the intervention of the manufacturer, the machine must be isolated for maintenance reasons.

Never try to carry out improvised repairs or replacements, since this could cause be very dangerous to the people involved and to the machine.



10.10 Disposal of processing waste

During the routine processing operations, waste and rejects are generated that shall have to be collected, recycled or disposed of in compliance with the the rules in force in the country where the machine is installed. The substances produced during the operations are:

- Residual filling product used during the process
- Machine washing water contaminated with the above mentioned residues
- Etcetera....

Such substances must not be disposed of in the environment or directly in the sewerage system but stocked in suitable containers (please refer to the relevant product technical sheet) and delivered to the authorized centers.

