ROBINO & GALANDRINO

USER'S MANUAL

MACHINE TYPE

RECORD 10000

YEAR OF MANUFACTURE : .....

SERIAL NO. : .....

ROBINO & GALANDRINO spa
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Reference : P1-05 / P2-64 / P3-64 **Manual code: 64** **Date : ..-..-....**

Thank you for buying one of our machines

ROBINO & GALANDRINO specialise in the secondary closure of bottles and products of any type. We are proud to be the supplier of all leading wine companies world wide, cider companies, breweries, distilleries, oil mills, vinegar companies.

Our range of machines covers outputs from 500 up to 30.000 bottles/hour

These are the machines in our production range:

- Capsule dispensing units (for tin, aluminium, polilaminate, PVC and PET capsules)
- Spinning machines (for tin, aluminium, polilaminate capsules)
- Heat-shrinking machines (for PVC or PET capsules)
- Dispensing units for large sparkling wine capsules
- Capsuling machine for large sparkling wine capsules
- Versatile and universal monobloc units grouping all the process sections above on a single bed
- Wirehooding machines
- Capping and wirehooding machines.

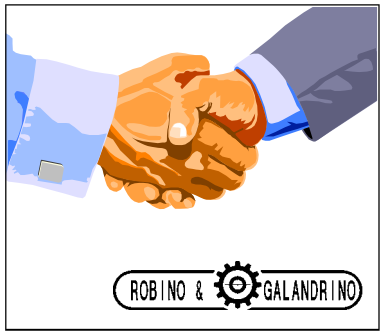

TABLE OF CONTENTS

--- *LIST OF ENCLOSED DOCUMENTS*

--- *USER'S MANUAL PRESENTATION*

--- *GUARANTEE*

--- *SYMBOLS USED*

--- *PART* ***P1***

GENERAL ROULES AND INSTRUCTIONS FOR THE PROPER USE OF CAPSULING AND SPINNING MACHINES AND CAPSULING MULTIPLE SYSTEMS.

--- *PART* ***P2***

SPECIFIC ROULES FOR MACHINE TYPE

--- *PART* ***P3***

LIST OF COMPONENTS AND SPARE PARTS FOR YOUR MACHINE TYPE

LIST OF ENCLOSED DOCUMENTS

-- Wiring diagram

-- Pneumatic diagram

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Verify fhat all the above listed items are contained in your documentation package, informing manufacturer immediately in case of missing or illegible documents, even if partial.

USER'S MANUAL PRESENTATION

The manufacturer in the writing of this manual, has paid particular attention to the aim of offering practical support and simple consultation to the end user.

The user is manual offers information on machine utilisation in conformance with the European Community directive. The manual is complementary to the machine and **must be read in its entirety before any intervention of is carried out**.

When reading the User's manual, avoid personal interpretation, and strictly follow the rules and procedures described.

This manual is made up of three parts:

P1..... GENERAL ROULES

P2..... SPECIFIC ROULES

P3 .... LIST OF COMPONENTS

The structure of the manual adopts a hierarchic approach to contents identification.
The form of indication used divides the parts of the manual into sections classified with letters of the alphabet.

EXAMPLE:

P1A SECTION OF THE IDENTIFIED PART THE MANUAL

1. CHAPTER 1 OF SECTION P1A

1.1 PARAGRAPH 1 OF CHAPTER 1 OF SECTION P1A

1.1.1 SUB-PARAGRAPH 1 OF PARAGRAPH 1 OF CHAPTER 1 OF SECTION P1A

To keep identification references as short as possible, chapter, paragraph and sub-paragraph figures are not preceded by the letter identifying the manual section which is instead shown in bold type in at the foot of the page.

The Customer engages to treat this User's Manual as confidential making it available only to the machine operators and to those responsible for the use of the machine. The User's manual shall always be available at the place of work for consultation by operators during transportation, installation, mounting and dismounting, maintenance and start-up of the machine.

GUARANTEE

Conditions and restrictions

1. The machine subject matter of this User's Manual is covered by a 12-month or 2000 hors of work guarantee on its mechanical parts; all bought-out components used by the manufacturer on the basic version of the machine enjoy the same conditions of guarantee granted by the component's manufacturer . Defective components shall be returned to the manufacturer when replaced.
The manufacturer's guarantee dose not apply to components used and applied on Customer's request, which are not of normal use by the manufacturer.

2. The guarantee takes effect from the delivery date indicated on the transportation document.
The transportation of the machine is excluded from the guarantee conditions.

3. The guarantee is not applicable if damage to the machine is caused by usage not conforming to the standards contained in the "USER'S MANUAL" or by previous tempering or accidental damage, or if the machine has been used, even occasionally, beyond its maximum capabilities.

4. Manufacturer is committed to repair or replace free of charge, in its indisputable judgement, those parts that, within the period of guarantee, show themselves to be defective as a result of manufacturing error.
Any other form of guarantee and/or compensation for indirect and/or direct damages is excluded.
The transportation expenses to repair or replace the defective parts are at the buyer's charge.
If technical assistance during the guarantee period is given by the manufacturer's personnel, the buyer is expected to give the necessary help, as requested.

5. Defects not clearly attributable to the material or to manufacture will be examined at our head-office.
If the claim should turn out to be unjustified, all repair and/or replacement costs will be charged to the purchaser.

6. All parts that are shown to be defective due to negligence or carelessness of use (non-observance of the instructions for use and operation) and any instances not arising from normal operation or use of the machine are not covered by the guarantee.

7. Defects and deficiencies due to:
natural wear, unnecessary force, poor installation, inappropriate use of the machine, non-observance of the instructions for use and maintenance contained in the manual, are excluded from the guarantee.

8. The guarantee is not valid in the event of the purchaser using equipment, accessories and/or modifications not provided by manufacturer or that do not have written approval or recommendation from manufacturer.

9. Manufacturer declines any responsibility for subsequent damages to people or objects caused by poor or imperfect use of the machine.

10. The Judiciary Court of ASTI will hear any subsequent contention.

SYMBOLS USED

The following symbols have been used in the manual to make its consultation easier

NOTE Indicates practical recommendations to be followed

PROCEDURE Indicates the procedure to be followed

Warning Indicates a condition occurred or which may occur

..../.. Indicates that the description continues on the next page

Referts to a section or part of the manual to be consulted

ROBINO & GALANDRINO

USER'S MANUAL

part P1

GENERAL ROULES AND INSTRUCTIONS FOR THE PROPER USE OF CAPSULING AND SPINNING MACHINES AND CAPSULING MULTIPLE SYSTEMS.

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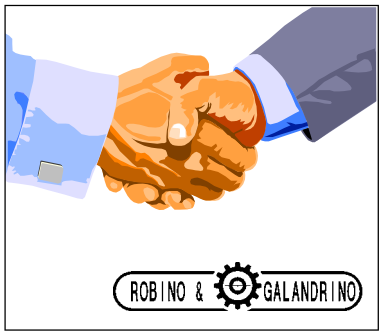
Reference : P1-05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MANUAL SECTION

Safety standards for use  ***P1 A***

Machine installation  ***P1 B***

Utilisation and controls  ***P1 C***

Maintenance  ***P1 D***

Size change  ***P1 E***

The drawings included in this section of the User's Manual do not always represent exactly you machine type-they are meant to show the general conditions of use of the manufacturer's machines or lines.

SECTION

- A -

Safety standards for use

1. Use of the machine ---------- page 13
1.1 Essential rules for a safe operation ---------- page 14
1.2 Work environment ---------- page 15
1.3 Machine operators ---------- page 15
1.4 Machine cleaning ---------- page 16
1.5 Routine maintenance program ---------- page 16
1.6 Waste disposal ---------- page 16
1.7 Abnormal and dangerous conditions ---------- page 17
1.8 Machine transportation ---------- page 18
1.9 Electrical connection ---------- page 19

2. Use of the machine by operators ---------- page 20
2.1 Operator ---------- page 20
2.2 Maintenance-man ---------- page 21

3. Location of dangerous areas ---------- page 22
3.1 Residual risks ---------- page 22

4. Out of service ---------- page 23

NOTES

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1. USE OF THE MACHINE

The machine has been designed and is intended to be used for the process of secondary closing of any type of bottles.
It is the responsibility of the user to make sure that the product's (bottle) secondary closing process is compatible with the machine's technical characteristics.
In order to prevent accidents or woundings, the machine is equipped with safety devices.

Warning

Do not tamper with the machine.
A recommendation to operators: be always careful when using the machine.

The machine must beused in strict accordance with the rules contained in the paragraphs listed below and specifically described in the following pages:

1.1 Essential rules for a safe operation

1.2 Work environment

1.3 Machine operators

1.4 Machine cleaning

1.5 Routine maintenance program

1.6 Waste disposal

1.7 Abnormal and dangerous conditions

1.8 Machine transportation

1.9 Electrical connection

Warning

The manufacturer cannot in any way be held responsible for accidents or damage consequent to the use of the machine by inadequately trained personnel, to improper use of the machine, or to non-observance (even partial) of the safety standards and general working procedures including those contained in this user's manual.

1.1 Essential rules for a safe operation

a. It is obligatory to carefully read the documentation before any operation.
In the event of part ofthe documentation not being perfectly legible, consult the manufacturer before operating the machine.

b. This section contains the **safety standards** to be strictly followed in order to carry out suitable operations on the machine in safety; the procedures for the execution of the various operations are described in the relevant chapters or sections.

c. With the aim of perfecting the competency of those assigned to the machine and to allow them to operate in complete safety, it is advised that you request manufacturer or technicians authorised by manufacturer to provide your staff with training courses in the use and maintenance of the machine.

d. It is prohibited to climb on the machine.

e. Before dismantling any part of the machine or carrying out an intervention not included in this manual, apply to manufacturer for a specific authorization.

f. The machine is equipped with a guard and other safety devices that allow:
- **semi-automatic operation,**
- **tooling**,
- **maintenance**, in complete safety only if, during use, there is **only one operator** present.

Moreover, the machine is provided with inherent safety systems such as to guarantee the safety of the operator even in unforeseen circumstances; however, in the event of any anomaly, foreseen or otherwise, the following procedure is recommended:
- stop the machine by pressing the **EMERGENCY** button
- turn off the switch on the electric panel to which the machine is connected.
- turn off the machine by turning the **MASTER SWITCH LEVER** to the "**OFF**" position.
- consult your maintenance staff or manufacturer, or else request the assistance of an authorised service centre.
- do not carry out further operations or restart the machine before you are certain that you have identified and removed the cause of the anomaly.

g. You must not carry out operations that require the presence of two operators at a time.
If in exceptional cases the presence of two operators is essential, the intervention must always be performed with the machine switched off and no power connected.

1.2 Work environment

a. The machine must be installed in an appropriate working environment, the space surrounding the machine must always be clear of obstacles, clean and well lit.
The machine must never be installed in an explosive atmosphere.
Do not install the machine in a position in which it could be exposed to jets of water, oil or any other liquid.

b. Make sure that the floor is level and that it can support the weight of the machine.
Provide a space around the machine that allows easy access for maintenance and, in particular, make sure that the guards can be removed without interference.
Before commencing any machine setup operations, completely remove any packing or lifting materials.

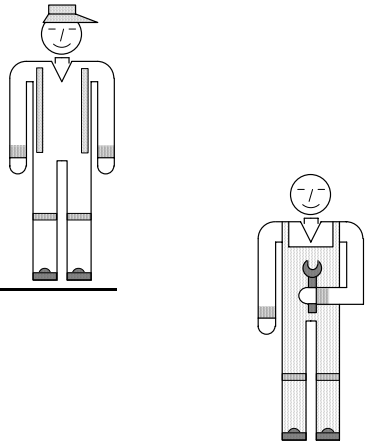
c. Do not install the machine close to other machines or equipment which could cause electrical interferences.

d. In the event of machine storage, the conditions must be equivalent to that of the working environment.

1.3 Machine operators

a. The personnel assigned to work on the machine, beside being professionally prepared for their duty, must carefully read the relevant manuals.

b. Those assigned to the machine are identified as follous:



OPERATOR

- assigned to production.

MAINTENANCE-MAN

- assigned to mechanical maintenance;
- assigned to adjustments;
- assigned to size change.

1.4 Machine cleaning

a. Always cut the power to the machine before you start any cleaning operation.

b. Periodically clean the machine inside and outside to maintain its original condition.
Do not wash the machine with flammable products (e.g.: naphta, petrol, solvents,...) nor with pressure jets above 3 bar.
Do not clean the control panel using alcohol-based products.

1.5 Routine maintenance program

a. Always cut the power to machine before you start any servicing.

b. A number of periodical preventive checks are recommended to guarantee a safe operation and, with the routine maintenance interventions, a constant reliability of the machine.

Consult section P1 D -Maintenance-

After 10 years or 20.000 machine hours of operation, it will be necessary to carry out a complete overhaul to enable the machine to be used safely.
Overhaul can be carried out by manufacturer or by an authorized center.

1.6 Waste disposal

a. The disposal of waste must be carried out by the purchaser according to the rules of the country in which the machine is being used.

b. The User shall provide the suction means necessary for collection and disposal of oils.

1.7 Abnormal and dangerous conditions

a. It is absolutely essential that the machine is utilised in the conditions foreseen by this user's manual; tampering with the machine or its protective devices or using the machine in abnormal conditions is not allowed.

b. The following abnormal situations are foreseen in the presence of which the machine must not be used, or used with extreme caution.

The personnel working on the machine should keep in mind the following recommendations to prevent the occurrence of abnormal situations:

- do not work on the machine without the fixed guards being correctly installed;
- do not process any materials other than those permitted;
- do not use your hands to halt the bottles while the machine is running
- avoid climbing on the machine;
- if a tool other than those supplied by the manufacturer is installed on the machine, the customer shall make sure that the safety requirements prescribed by Machine Directive are met; the manufacturer assumes no responsibility for any inconveniences resulting from the use of said tool.

However, any other condition of use not explicitly foreseen by the current manual must be avoided.

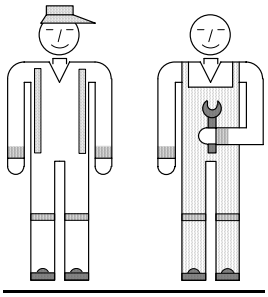
Warning

do not use the machine if:

-- the fixed guards are not installed

use the machine with extreme care when:

-- carrying out machining tests



1.8 Transportation and moving

a. The transportation of the machine can be carried out as it is or in special containers (for example, a wooden crate).
Transportation is usually carried out by carriers, under is the responsibility of the customer.
During transportation the machine orthe crate containing it must be securely fixed by means of cables or belts to prevent it from moving.
The movement of means of transport and lifting must always be carried out according to directives in force and by trained personnel (e.g. slingers, lift-truck drivers, crane operators)

b. When the machine is handled with sight control, follow the procedures described in the following section.

Consult section P1 B chapter -2. Lifting the machine-.

If the machine is handled while in the crate, it will be necessary to use fork-lift trucks or transpallets.
The centre of gravity of the crate is marked on oneside of the crate; lift the crate after having so positioned the lift-truck forks as to ensure perfect balancing.
During the movement ofthe crate, proceed slowly with the lifting equipment to avoid the risk of tipping.
Make sure the machine or the crate is well balanced on the lifting cables or supports.
If more than one man are helping with the handling operation, make sure none of them is a area not perfectly visible by the supervisor to the lifiting and handling operations. Lift the machine or the crate on the lifting points and using cables and tools of size and capacity to the Manual's prescriptions..

Consult part P2 - Specific rules for your machine typei macchina-

c. Use PPE during all phases of handling.
The operators seeing to the loading, moving and unloading or the machine shall perform these operations paying attention to avoid shocks or accidental contacts of the machine with other materials or things which could damage parts of the machine.
Said operators shall wear safety gloves and shoes against the risk of objects falling from above.

1.9 Electrical connection

a. Connection of the electric supply cables as well as any following intervention on electrical components must be carried out by **authorized personnel** only.

b. The machine shall be earthed on your network.

c. The earth cable shall be as short as possible and have a cross section not smaller than the supply cables. The connection shall be performed, if possible, on the copper bar collecting earthings of the whole plant.

d. Before applying voltage to the machine, make sure that:
- electric connectors are properly plugged in;
- connections, insulation and voltage of supply and earth cables are correct;
- the doors of the electrical cabinet and control panel are closed.

e. Use the proper tools and fixtures for each intervention to be carried out.

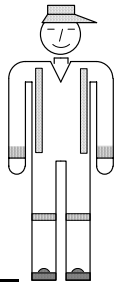
f. When the electrical connections are completed, apply tension and make sure that:
- the three-phase supply phases follow the correct sequence;
- the direction of rotation of all electric motors is correct.

Warning

If the motors direction of rotation is not correct, do not exchange connections to the motor but the wo phases of the main supply.


Consult la section P1B chapter -9. Electrical connection-.

2. USE OF THE MACHINE BY OPERATORS



2.1 Operator

- assigned to production -

a. Never work with the guards down or when safety devices are not functioning properly.

b. Always keep the machine clean and working efficiently.

c. The machine must only be used by an adequately trained operator.
If the intervention of maintenance staff becomes necessary for operations outside your responsibility, refrain from using the machine until the necessary work has been completed.

d. The clothes worn by machine operators must correspond to the safety rules in force.
The use of gloves is obligatory, long hair must be tied up and covered.
Protective shoes and overalls with no torn edges or loose belts should be worn.

e. When switching the machine on and off, strictly follow the relevant procedures outlined in this manual.

f. Before starting up the machine make sure that:
controls can be easily actuated maintaining full vision of the working cycle being run on the machine.
At the beginning of each working shift make sure that:
safety devices and means are efficient, checking all safety devices on the machines.

g. If while the machine is working you observe irregular operation signals (increase in noise level, hissing, discharges, flashing etc.) immediately press the **EMERGENCY** button .

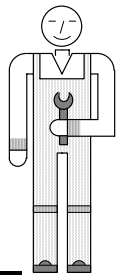
h. A greasy, wet or oily floor can cause accidents.
Always clean and dry drops of any liquid that may form during normal machine operation.

2.2 Maintenance-man

- assigned to mechanical maintenance -

- assigned to adjustments -

- assigned to size change -



a. Repairs must be carried out by authorized personnel, or by that of authorised companies.

b. Before starting any maintenance operation refer to the relevant manual sections; if the said operation is not foreseen by the manual do not carry it out without having consulted the manufacturer.

c. All ordinary and/or exceptional maintenance operations must be performed with the master switch "OFF". If in some cases it is not possible to adhere to this and an operation is necessary with the machine switched on, it is absolutely forbidden for the maintenance worker to leave the machine unattended.

d. The master switch is equipped with a mechanical safety catch to keep it in the "OFF" position; before carrying out any operation with the machine switched off, make sure the safety catch is on.

e. During maintenance, place barriers or signs around the machine indicating that the machine is out of service. If the operations are carried out by several people, everyone must be able to communicate with the others and must be aware of the operations being performed by the others.

f. **Never carry out** any operation for which you are not explicitly authorised.

g. Use tools and fixtures appropriate to the operation you are about to perform.

h. Do not carry out any alteration or operation that may cause the machine's safety devices to be bypassed.

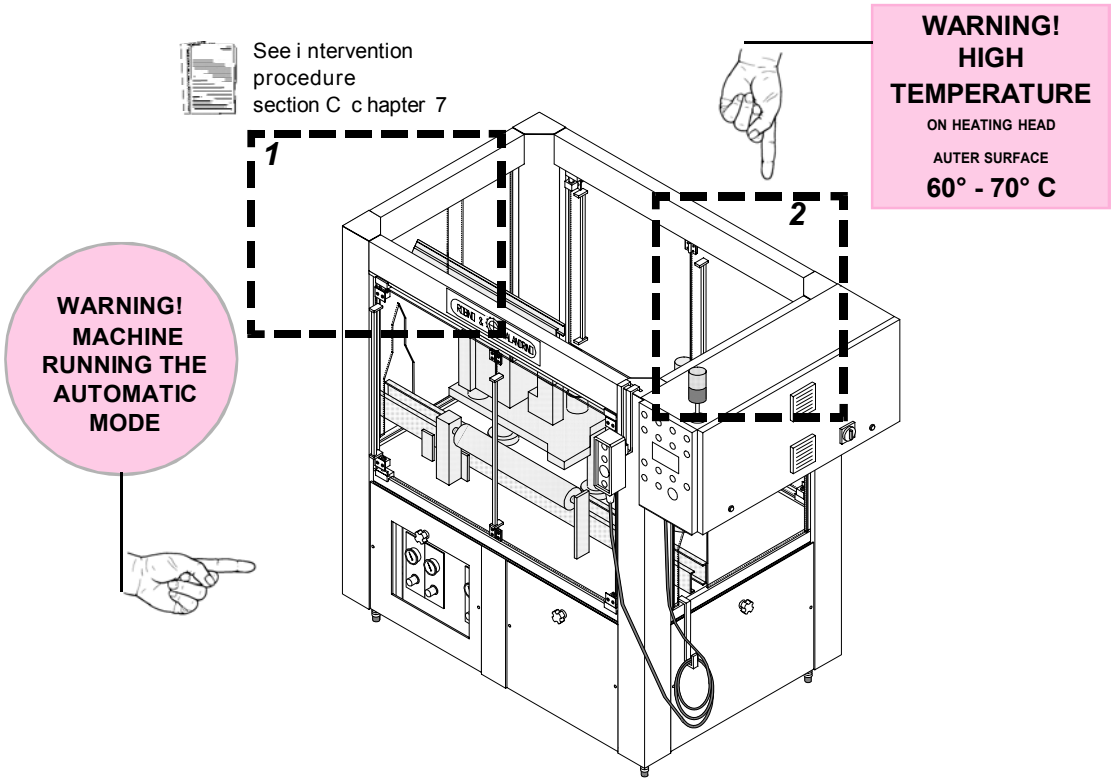
i. **When the maintenance operation is finished, before supplying voltage to the machine,** check that:

- the electric connectors are correctly inserted;
- the fittings and connections are correctly assembled;
- no object or tool has been left inside the machine;
- all the guards removed from the machine have been reassembled and fixed correctly;
- the safety devices are in perfect working order.

3. LOCATION OF DANGEROUS AREAS

a. The areas listed below are defined as "**Dangerous Areas**".
Those identified as dangerous are areas of moving parts which may be a hazard for the operator if he uses them in an improper way, makes a mistake due to wrong evaluation or lack of attention. These areas become really dangerous if the operator enters the dotted zones with his body or his hands when the part is powered or in operation.
Warning plates are affixed near said **dangerous areas**

b. List of areas defined as dangerous:
1 the area where the capsules are discharged on the pulling belt to the distributor unit
2 the area on the turret where the thermal heads are mounted



3.1 Residual risks

a. Notwithstanding all the accident-prevention devices installed on the machine to eliminate any risk for the operator, **residual risk zones** may be present on the machine. These zones are located around the machine bed where guards are screwed. The risk is that at the end of the servicing intervention, the maintenance-man forgets to tighten down the screws. It is important that the maintenance-man always checks that the guards are firmly secured after any intervention requiring their removal.

b. All machine guards are fastened with screws or closed by locks requiring keys with various shapes or profiles to be opened.
All doors are fitted with electrical or mechanical devices which stop the machine if the doors are accidentally opened or opened in an improper way.

4. OUT OF SERVICE

a. Non usage of the machine means the machine remains inactive and the following recommendations should be followed:
- disconnect the machine electric supply and any other connection with other machines;
- clean and lubricate its rotating parts;
- cover the machine with a tarpaulin and store it away from weathering conditions.

b. When dismantling the machine
- remove the motors
- remove any groups containing chemicals or oils
- remove electrical cables
- remove belts or rubber or plastic components

c. Check components classification for disposal according to the rules in force in your country.

NOTE

Remember that:
- oils
- lubricants
- chemicals
- batteries

are special wastes and must be disposed of at authorised collection centres,
furthermore
all ferrous components of the machine can be scrapped at the available collection centres.

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SECTION

- B -

Machine installation

1. Operating area ---------- page 27
2. Lifting the machine ---------- page 28
2.1 How to remove the machine from the packaging page 29
2.2 Preliminary lifting of the machine ---------- page 30
3. Foundations ---------- page 31
4. Levelling ---------- page 32
5. Positioning foruse ---------- page 33
5.1 Positioning the photocells for storage control ---- page 33
5.2 Positioning the photocells for control of the flatwise bottles ---------- page 34
6. Location of components ---------- page 35
7. Push-buttons and selector switches ---------- page 37
7.1 Main switch and lights on theelectrical cabinet -- page 37
7.2 Push-buttons and selector switches onboard the machine ---------- page 38
7.3 Push-buttons and selector switches onthe control board ---------- page 39
7.4 Portable control unit ---------- page 41
8. Machine plates ---------- page 43
8.1 List of identification plates ---------- page 43
8.2 List of warning plates ---------- page 44
9. Electrical connection ---------- page 45
10. Compressed air connection ---------- page 46
11. Switching on the machine ---------- page 47
12. Switching off the machine ---------- page 48

NOTES

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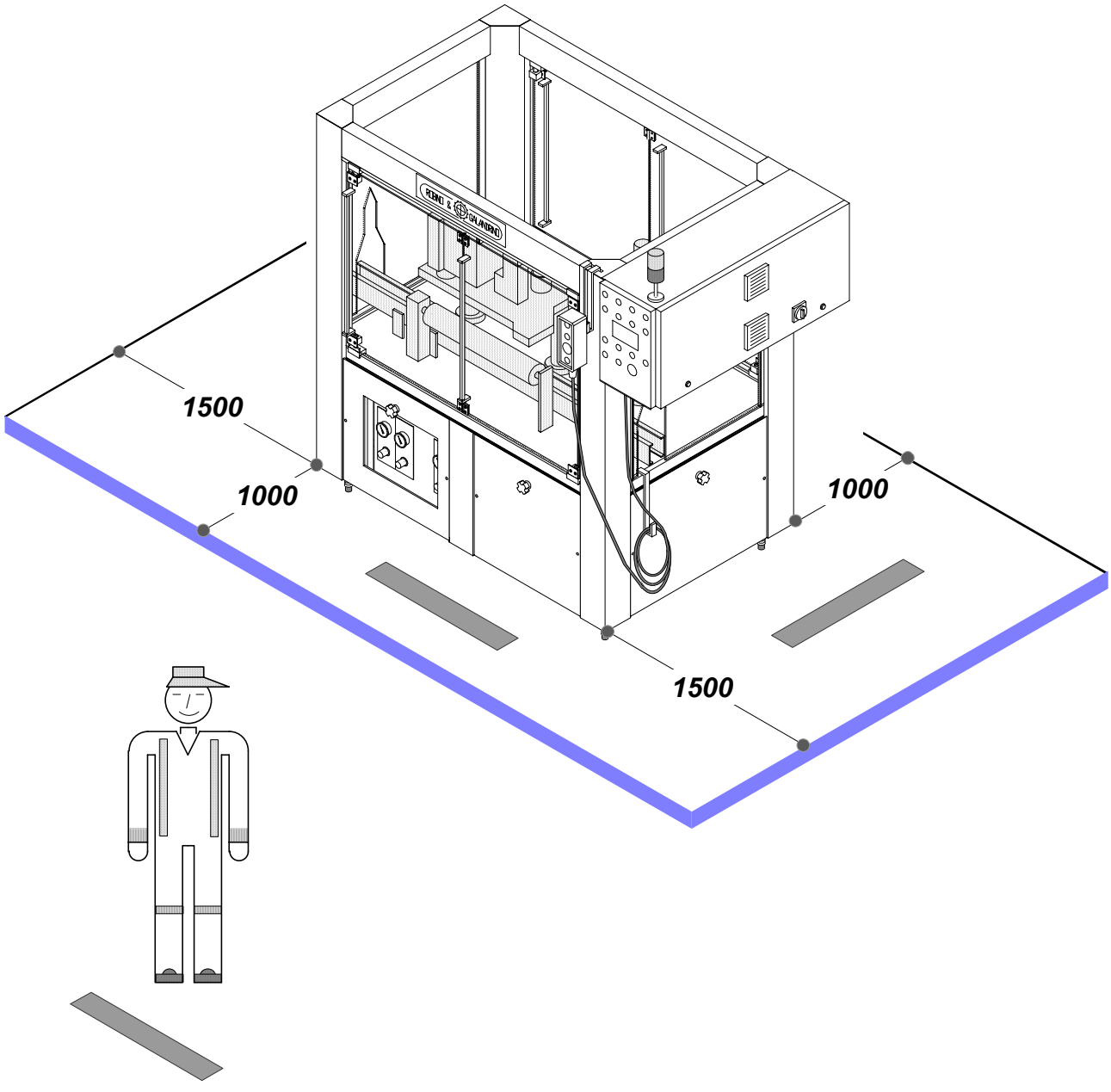
1. OPERATING AREA

a. The operating area where the machine is placed must be identified before starting any machine positioning or unloading procedure.
The operating area shall provide a passage around the machine and allow the opening of the guard without interference.
This area must be clean, well lit and free of obstacles.
The below diagram details the general dimensional indications of the operating area fundamental to the positioning of the machine and to the operators' working area.

b. Refer to the machine lay-out drawing when identifying the operating area

Consult part P2- Specific rules for your machine type



2. LIFTING THE MACHINE

a. The lifting and moving of the machine must be carried out by **authorised personnel** only.

b. When lifting the machine and moving it overhead the operator shall make sure the overhung load does not transit or dwell above people or things.

c. Use hooking devices conforming to DIN 61360 standards.
The machine is equipped with one or more hooking eyebolts to allow using the hooking devices.
The hooking devices are not supplied by manufacturer.
Begin the lifting movement slowly, checking that the cables or chains, in tension, do not damage any part of the machine.

d. Exercise maximum care when positioning the machine in its work area to avoid hitting the connected machine/machines damaging it/them and impairing the work cycle.

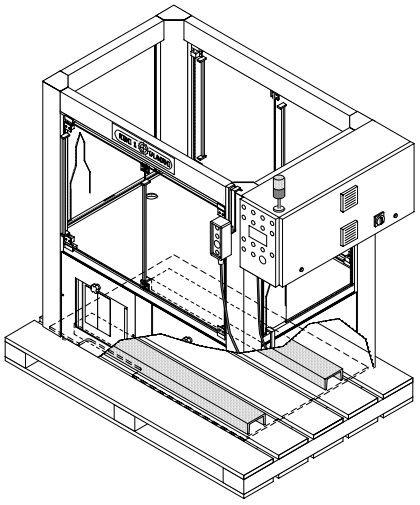
e. During machine handling operations the operators shall wear PPE, safety gloves and shoes against falling objects.

 Consult part P2 -specific rules for your machine type-

f. Where a fork-lift is used to move the machine, strictly follow the indications on the machine centre of gravity and use forks suitable for the load to be lifted positioning them so as to ensure the machine is perfectly balanced.

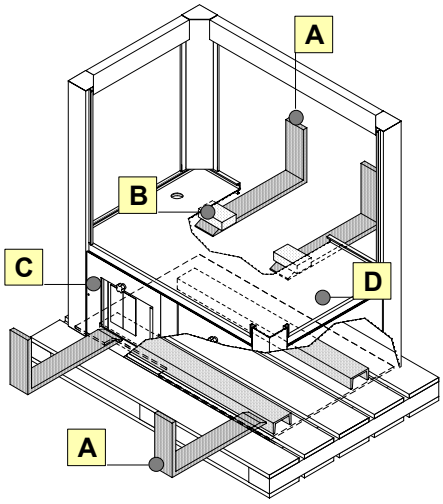
Insert forks with the utmost care to avoid impacts against machine bed projecting parts.

2.1 How to remove the machine from the packaging



a. The removal of the machine from the packaging can be performed by using a ganty crane (in this case, use the hooking ey ebolts t o al low t he use of t he hooking devices), or a fork lift.

b. The use of the fork lift for the lifting and positioning of the machine in the work area needs a special procedure to avoid the risk of damages.
The machine is leant on a raised platform: in order to put the f orks c ompletely under t he machine b ed it i s necessary to lift the machine slightly from the platform and place it on wooden spacers.
This operation is called "preliminary lifting".



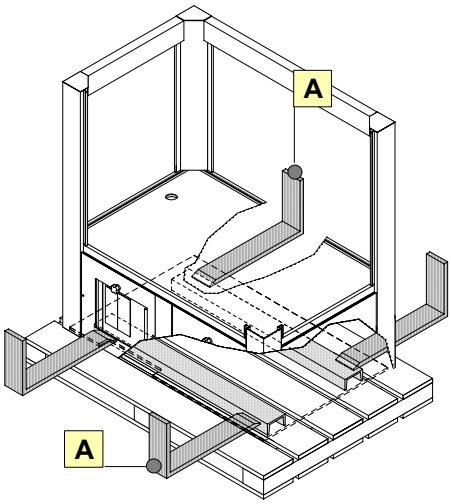
Warning

c. The **preliminary lifting** must be performed by putting the forks under the front part of the machine bed, and then under the rearward.

NOTE

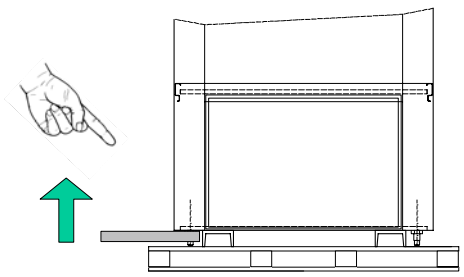
For some types of machines, the **preliminary lifting** of the rearward part must be performed by placing the forks under the upper plate of the bed.
In this case, place a wooden spacer (50 mm min.) between the forks and the plate, in order not to damage the frame profile.

This operation must be performed with maximum care to avoid any possible contact with the inner components of the machine.



A forks
B wooden spacer between the forks and the upper plate of the machine bed
C machine bed
D upper plate of the machine bed

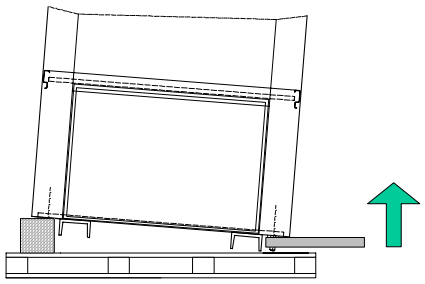
2.2 Preliminary lifting of the machine



PROCEDURE

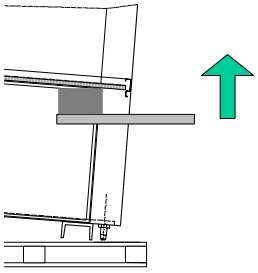
1. Place the forks on the edge of the front part of the machine, and lift about 200 mm.

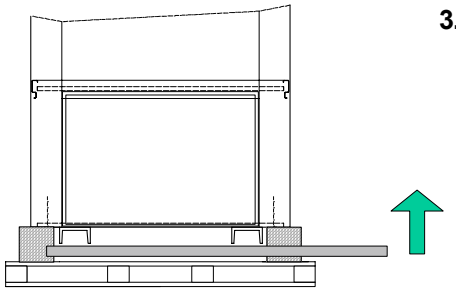
Place a wooden spacer between the machine and the pallet, lean the machine.



2. Place the forks on the edge of the rearward part, or under the upper plate of the machine bed, and lift about 200 mm.

Place a wooden spacer between the machine and the pallet, lean the machine.

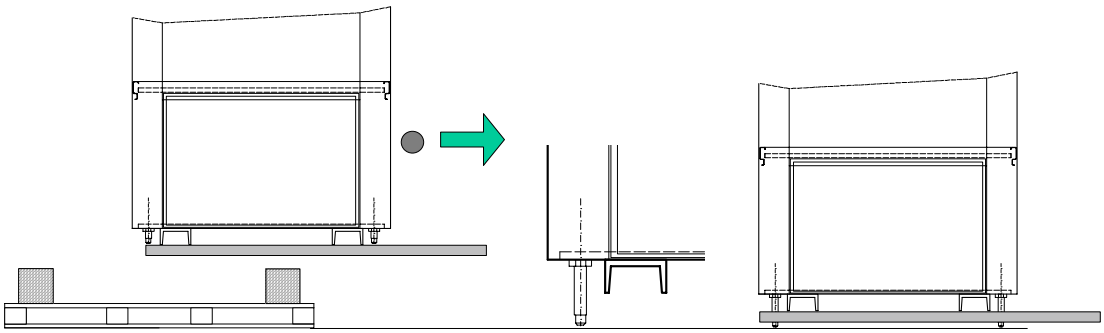




3. Place the forks under the two profiles.

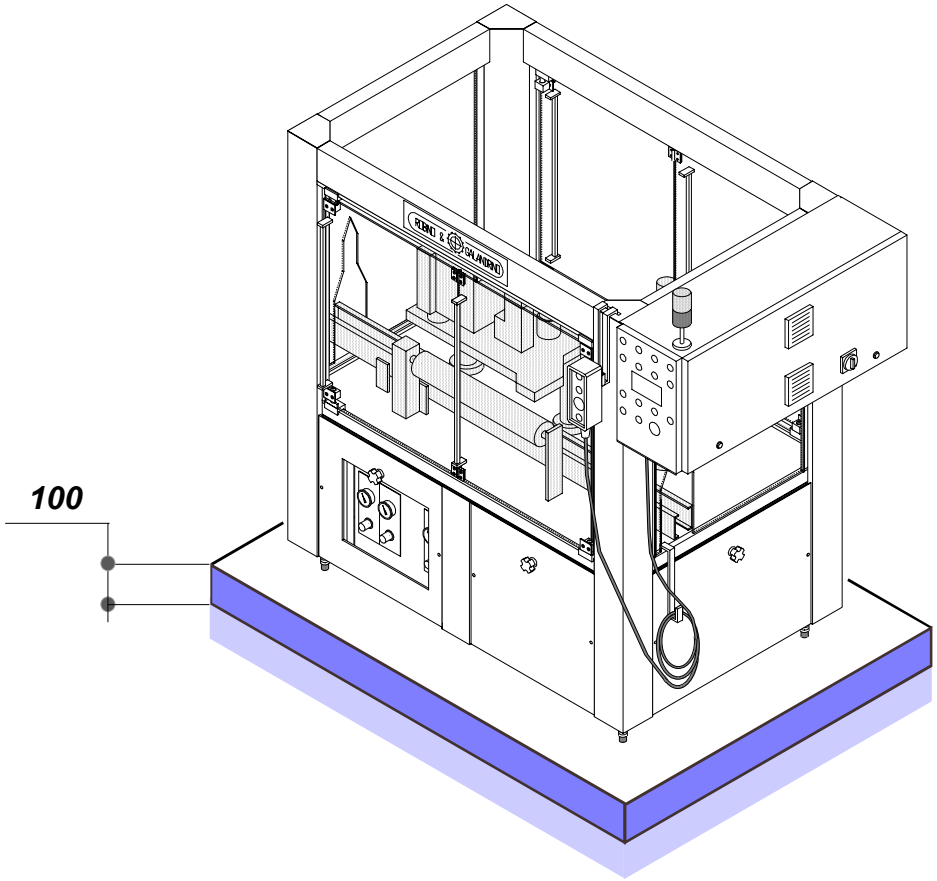
Lift the machine.

Place close to the ground, move the feet down to allow the extraction of the forks with the machine leant.



3. FOUNDATIONS

a. To obtain consistent performance over a long period of time, it is necessary to position the machine on bearing and level ground.
The machine must be positioned on a concrete base having the size of the operating area and a minimum depth of 100 mm.
Support structure calculations and ground support problems are the responsibility of the client.

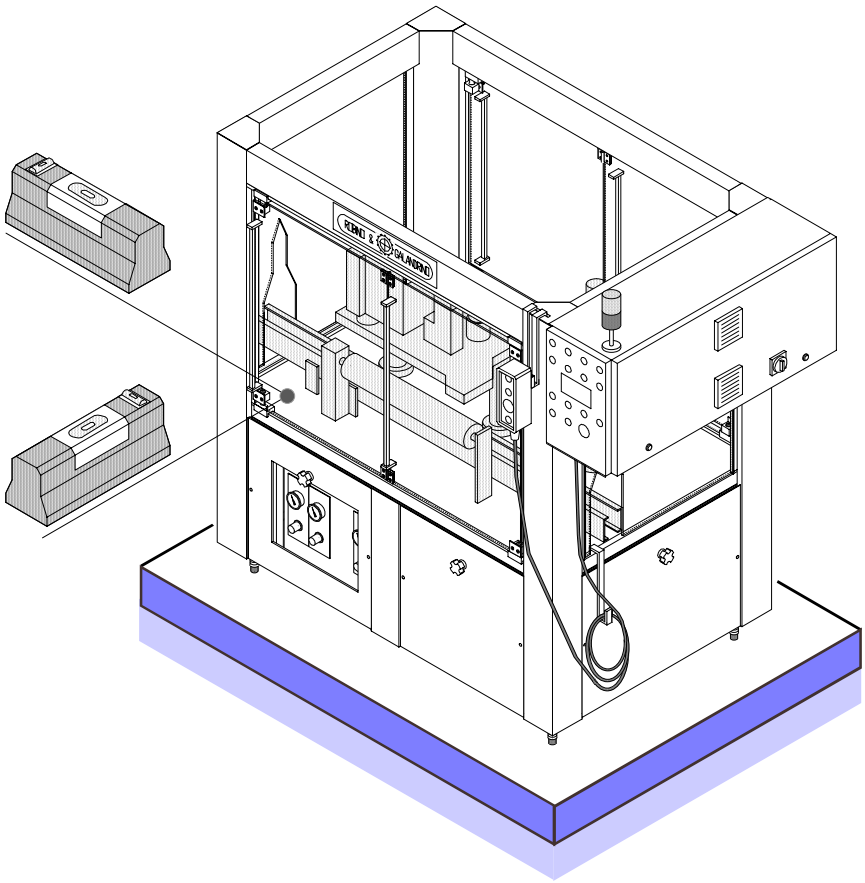


4. LEVELLING

a. As stated previously, the floor on which the machine stands must be level.
Nevertheless, it is good practice to carry out a check placing the spirit level (accuracy 0.1 mm) on a machined plane of the bed-plate in a transverse and then horizontal position.
A levelling error can be easily made up for acting on the machine mounting feet.

b. If a significant error is identified, it is advisable to verify the levelling of the surface in question.

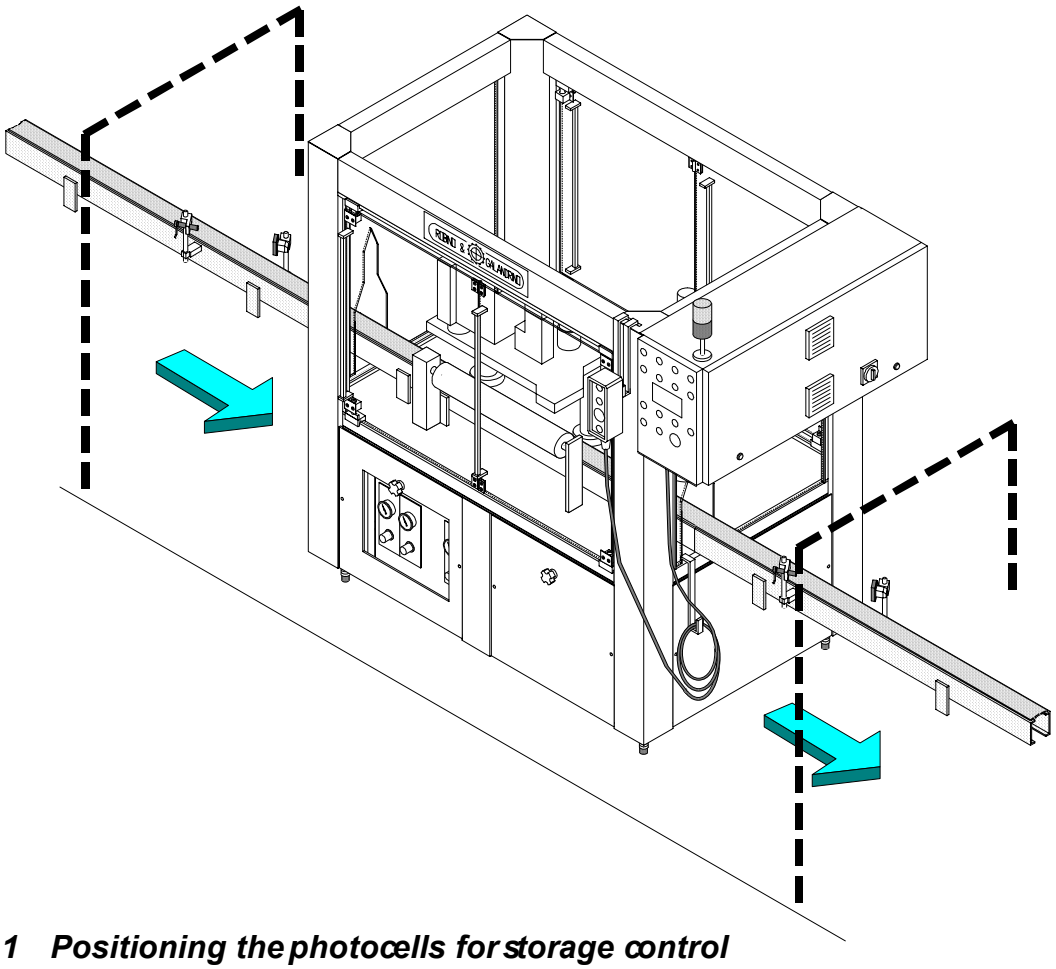
NOTE
A machine on a properly level surface can work without errors or vibrations.



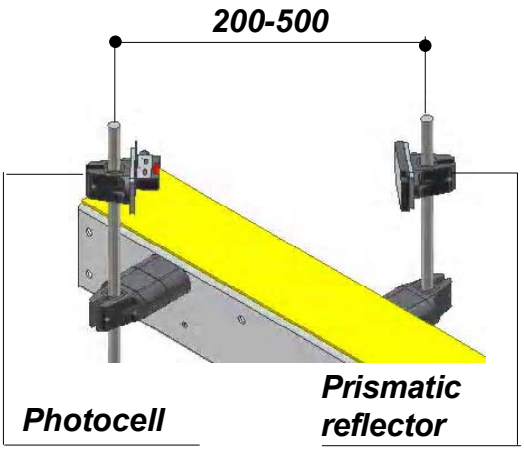
5. POSITIONING FOR USE

a. The machine is usually inserted in a product conditioning line.
When positioning the machine the machines located upstream and downstream of it should be given due consideration and heights and alignments adhered to.

b. The machine bed is fitted with adjustable mounting feet to allow levelling and adjustment in height of the work plane.



5.1 Positioning the photocells for storage control



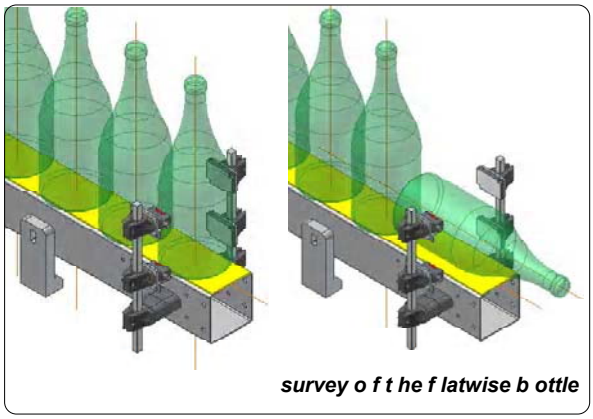
a. The groups of photocells for the control of the bottles storage must be assembled before and after the machine and they are supplied already wired.
The Customer shall locate them on the belt conveyor according to production requirements and to the machines connected to this machine.
The photoelectric cell unit is made up of a photoelectric cell and a prismatic reflector - place the photoelectric cell at a distance between 200 and 500 mm from the prismatic reflector, depending on type and trade mark.

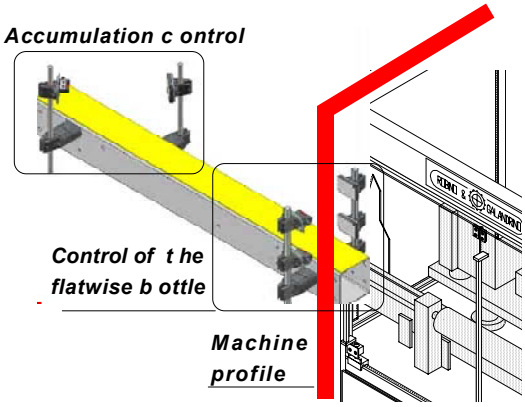
5.2 Positioning the photocells for control of the flatwise bottles

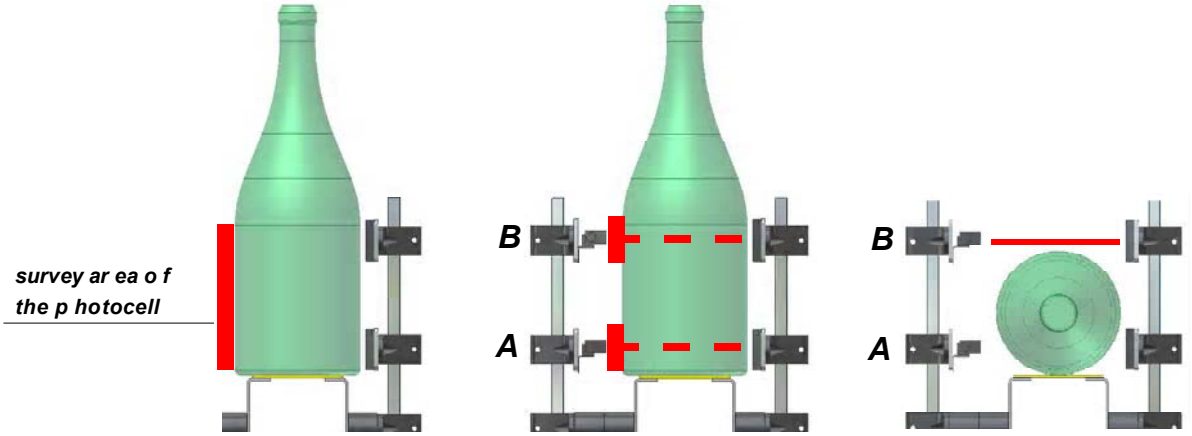
a. The unit for the control of the flatwise bottles is composed by two photocells **A** and **B** with the relevant prismatic reflector, they are already wired with the machine, and they must be fixed on the sides of the structure of the conveyor belt in the nearest position to the machine profile.
In case this positioning interferes with the rails of the conveyor belt, it is necessary to make some openings (on the rail) in the area of the photocells survey (for instance millings or slots).

b. Apply the control unit by positioning the photocells (**A** and **B**) in the front of the relevant prismatic reflectors.

c. The position of the photocells must be adjusted according to the shape of the bottle complying with the following rules:
- both photocells (**A** and **B**) must detect the presence of the bottle by surveying the cylindrical part of the bottle.
- The photocell **A** must be placed downward, near the belt profile
- The photocell **B** must be placed upward, not over the cylindrical part of the bottle, but at the same time it must allow the non survey of the bottle when it is flatwise.



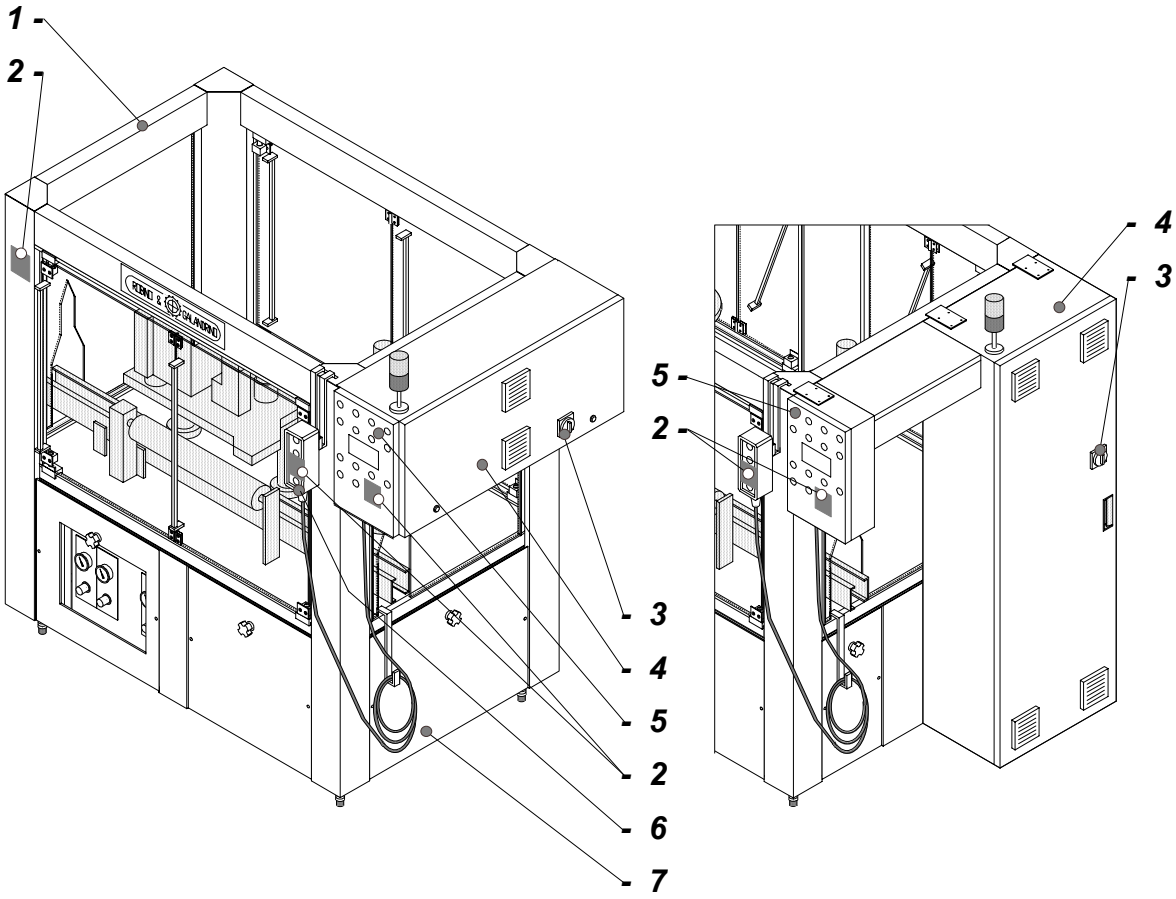




6. LOCATION OF COMPONENTS

a. This chapter shows the location of a number of the machine components.
To identify where all components and emergency push-buttons are located

Consult part P2- Specific rules for your machine type



1 Protective structure

2 Emergency push-button

3 Main switch

4 Electrical cabinet

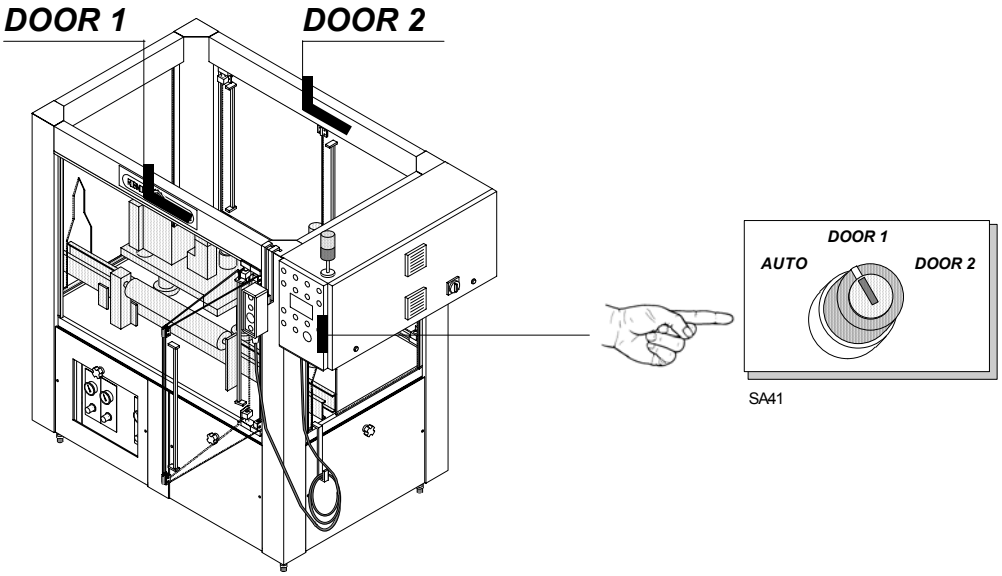
5 Control panel

6 Portable control unit

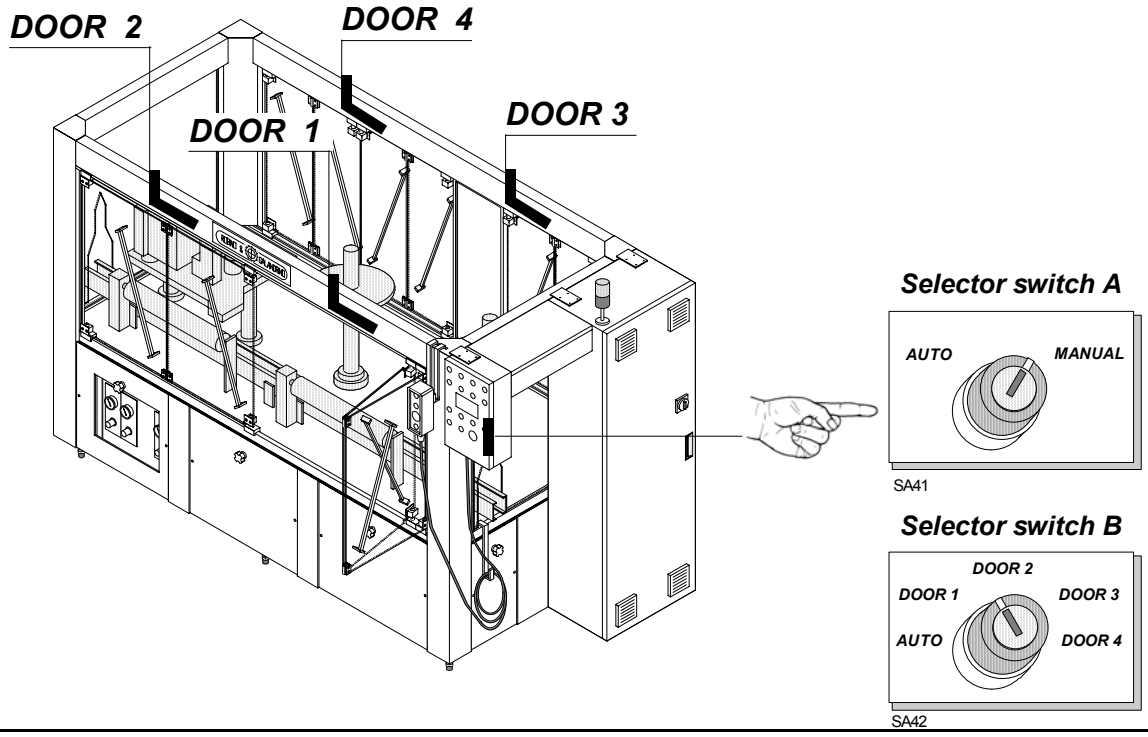
7 Machine bed

b. The protective structure has doors in it allowing access to the machine for maintenance. Whether one, two, or more than two, access doors can only be opened safely.

c. If access doors are two, turn the selector switch to the position corresponding to the door you wish to open.



d. If access doors are more than two, first turn selector switch **A** to MANUAL, then turn selector switch **B** to the position corresponding to the door you wish to open.

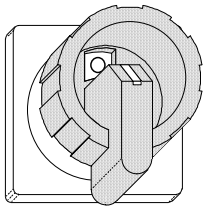


7. PUSH-BUTTONS AND SELECTOR SWITCHES

a. The control panel on-board the machine designed to suit machine specifications and functions varies according to machine type.

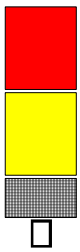
b. To identify the push-buttons, selector switches, switches and indicator lights used on your machine, refer to the wiring diagram supplied with the documentation.
The list below describes their functions and indicates, in bold type, the abbreviation used on the wiring diagram.

7.1 Main switch and lights on the electrical cabinet



QS1 MAIN SWITCH

Connects and disconnects power supply to the electrical cabinet; the switch is of the door lock type and can be padlocked.
- 0 - OFF = electrical cabinet disconnected
- 1 - ON = electrical cabinet connected to your supply line



HL36 MACHINE FAULT LAMP

The red light on signals a fault on the machine.

HL04 AUTOMATIC OPERATION MACHINE LAMP

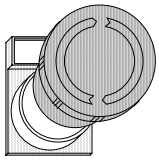
The yellow light on signals that the machine is in automatic operation.

HA05 MACHINE RUN ACOUSTIC WARNING

Intermittent acoustic signal to alert that the machine is about to start running.

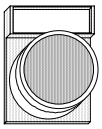
7.2 Push-buttons and selector switches onboard the machine

SB21-SB22 EMERGENCY PUSH-BUTTON



When pressed the machine comes to an immediate stop.
The machine cannot be restarted until emergency push-button is reset releasing the mechanical lock (rotate and pull)

SB51 START PUSH-BUTTON

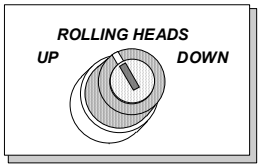


Pressing this white push-button starts the machine's working cycle.

SB44 STOP PUSH-BUTTON

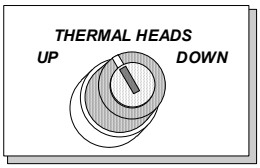
Pressing this red push-button stops the machine's working cycle.

SA73 ROLLING HEADS POSITIONING SELECT SWITCH



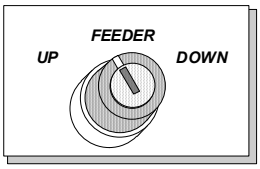
Set on:
UP enables the automatic upward movement.
DOWN enables the automatic downward movement.

SA74 THERMAL HEADS POSITIONING SELECT SWITCH

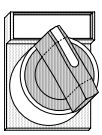


When positioned to:
UP enables the automatic upward movement.
DOWN enables the automatic downward movement

SA128 FEEDER POSITIONING SELECT SWITCH



When positioned to :
UP enables the automatic upward movement.
DOWN enables the automatic downward movement.



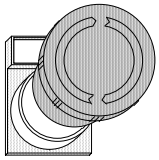
SA01 MAGNUM SELECT SWITCH
(set on the optical centring carrousel)

It slows down the optical centring speed when processing "magnum" type bottles.

SA02 OPTICAL CENTRING SELECTOR SWITCH
(set on the optical centring carrousel)

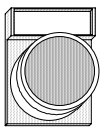
It enables the manual or automatic operation modes.

7.3 Push-buttons and selector switches on the control board



SB25 EMERGENCY PUSH-BUTTON

When pressed the machine comes to an immediate stop. The machine cannot be restarted until emergency push-button is reset releasing the mechanical lock (rotate and pull)



SB50 START PUSH-BUTTON

Pressing this white push-button starts the machine's working cycle.

SB40 STOP PUSH-BUTTON

Pressing this red push-button stops the machine's working cycle.

SH43 EMERGENCY RESET PUSH-BUTTON

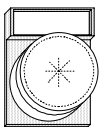
This red push-button must be pressed after having reset emergency.

SB85 BELT CONVEYOR START PUSH-BUTTON

Pressing this white push-button starts the bottle belt conveyor.

SB86 BELT CONVEYOR STOP PUSH-BUTTON

Pressing this red push-button stops the bottle belt conveyor.



HL14 LIVE ELECTRICAL CABINET WARNING LIGHT

White warning light to indicate the electrical cabinet is live.

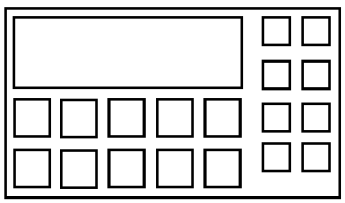
HL19 CARD1

White warning light to indicate that the optical card 1 is live.

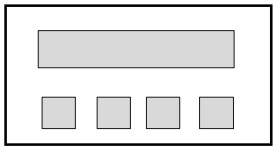
HL20 CARD2

White warning light to indicate that the optical card 2 is live.

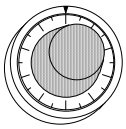
P120 MULTI-FUNCTION PANEL



A0 TEMPERATURE REGULATOR



Indicates temperature of the thermal heads resistances



RP01 MAXIMUM SPEED POTENTIOMETER

It controls the line speed

RP02 SPEED REDUCTION POTENTIOMETER

It controls the speed of the line (potentiometer RP01) according to the product flow upstream and downstream of the machine; the reduction range goes from 100% to 50%.

RP03 CAPSULE BELT SPEED POTENTIOMETER

It controls the speed of the capsule belt.

RP04 SPINNING HEAD SPEED POTENTIOMETER

It controls the spinning speed.

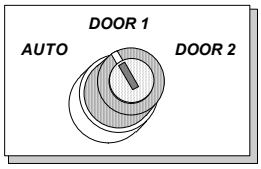
RP06 CONVEYOR BELT SPEED POTENTIOMETER

It controls the speed of the bottle belt conveyor

RP13 CONVEYOR BELT EJECTOR POTENTIOMETER

It controls the speed of bottle ejection.

SA41 RELEASE GUARD SELECTOR SWITCH



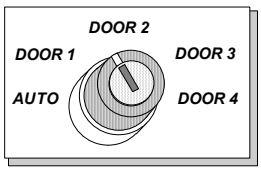
When positioned to:

AUTO the machine performs its functions in the automatic mode

DOOR 1 it allows opening of door 1 and enables the portable control unit in order to perform functions in the manual mode

DOOR 2 it allows opening of door 2 and enables the portable control unit.

SA42 MACHINE OPERATION SELECTOR SWITCH



When positioned to:

AUTO the machine performs its functions in the automatic mode

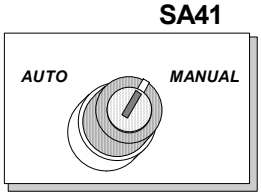
DOOR 1 it allows opening of door 1 and enables the portable control unit in order to perform functions in the manual mode

DOOR 2 it allows opening of door 2 and enables the portable control unit.

DOOR 3 it allows opening of door 3 and enables the portable control unit.

DOOR 4 it allows opening of door 4 and enables the portable control unit

SA41 AUTOMATIC/MANUAL SELECTOR SWITCH



When positioned to:

AUTOMATIC the machine performs its function in the automatic mode.

MANUAL machine functions are enabled from the portable control unit

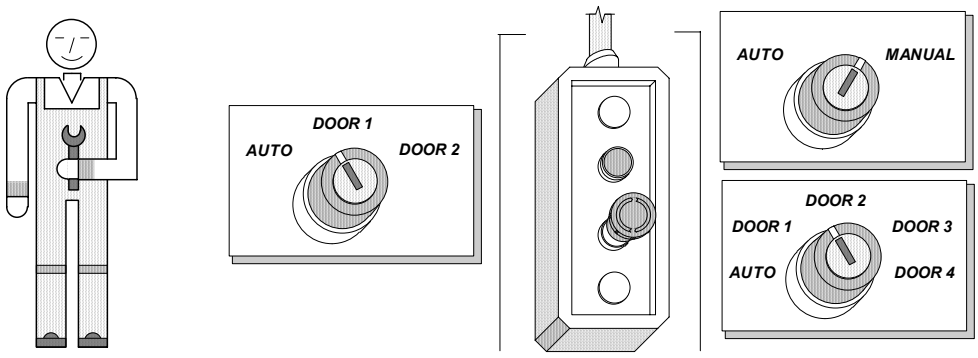
7.4 Portable control unit

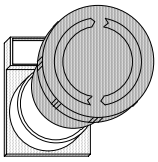
a. The portable control unit shall be used by the **MAINTENANCE MAN** only, to perform checks, maintenance and repair interventions. The portable control unit allows running the machine step by step at reduced speed and with a guard door open.

b. To activate the functions of this control unit, fitted with the RUN and EMERGENCY controls, you must decide which door you wish to use beforehand.
Select the door from the AUTO-DOOR1-DOOR2 selector switch, e.g. DOOR 2, then open it and carry out the intervention.

Warning

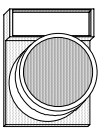
If the machine is fitted with several doors, you must first turn the AUTO-MAN selector switch to MAN, then select the door from the selector switch AUTO-DOOR1-DOOR2-DOOR3-DOOR4, open the door and carry out the intervention





SB20- EMERGENCY PUSH-BUTTON

When pressed the machine comes to an immediate stop.
The machine cannot be restarted until emergency push-button is reset releasing the mechanical lock (rotate and pull)

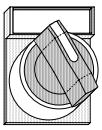


SB52 JOG PUSH-BUTTON

Green push-button, when pressed the machine carries out its functions step-by-step at reduced speed.

SB02 STEP-BY-STEP MOTOR START PUSH-BUTTON

Black push-button, it is pressed to adjust photocell for bottle orientation.



SA63 MANUAL MAGAZINE SELECTOR SWITCH

Selector switch with side return, to manually start the capsule magazine belt feed.

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8. MACHINE PLATES

a. The plates affixed to the machine must not be removed nor moved to a different location. If any of the plates become illegible over time must be replaced.

b. The plates are of two types:
- Identification plates
- Warning plates

8.1 List of identification plates

a. Bought-out components installed on the machine (e.g. motors) bear the plates affixed by the respective manufacturers.

b. The "**rif. TI…**" numbered code (in bold types) identifying each of the plates shown below is cross referenced to the machine lay-out drawing

rif. TI 01

ROBINO & GALANDRINO SpA

VIALE ITALIA, 142 -CANELLI
TEL. 0141832515/6/7 - FAX 0141 832539
TELEX 0141 211201 ROGAME.I

CE

MODEL	
SERIAL No.	
YEAR OF MANUFACTURE	

rif. TI 02

DOOR 1

rif. TI 04

400 V

rif. TI 03

DOOR 2

8.2 List of warning plates

a. The standard warning plates affixed on the machine may be completed by other plates according to machine model and characteristics.

b. The "**rif. TA…**" numbered code (in bold types) identifying each of the plates shown below is cross referenced to the machine lay-out drawing

rif. TA 01

WARNING!
HIGH TEMPERATURE
ON HEATING HEAD
OUTER SURFACE
60° - 70° C

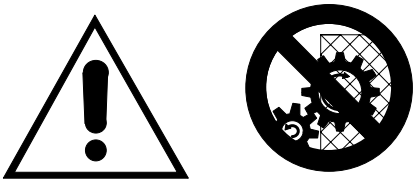
rif. TA 02

REMOVAL OF SAFETY DEVICES FORBIDDEN

rif. TA 03

WARNING!
MACHINE RUNNING THE AUTOMATIC MODE

rif. TA 04



REMOVAL OF GUARDS AND SAFETY DEVICES IS ABSOLUTELY FORBIDDEN

rif. TA 05

DO NOT USE WATER JETS TO CLEAN THE MACHINE

rif. TA 06

DO NOT REPAIR OR ADJUST WHEN RUNNING

9. ELECTRICAL CONNECTION

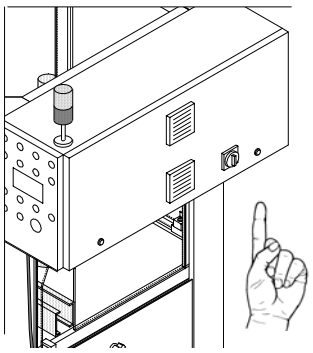
Consult section P1 A paragraph -1.9 Electrical connection-.

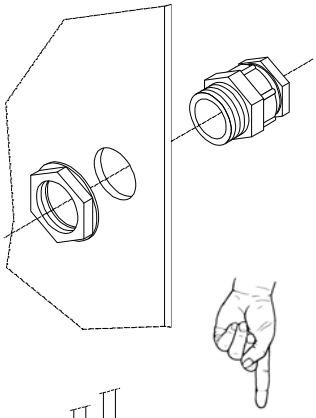
a. Before connecting the machine to the power supply, carefully read the plate on the door of the electrical cabinet that gives data on the power and voltage to be installed.
More details are available on the wiring diagram of your machine.

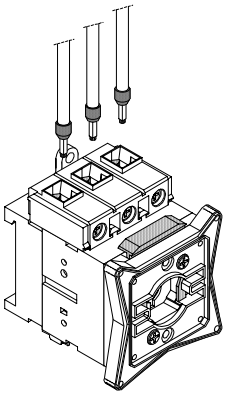
b. The user is responsible for the power line from the bus duct to the main switch and has to make provisions for protection against overcurrents and indirect contacts of the supply conductors.

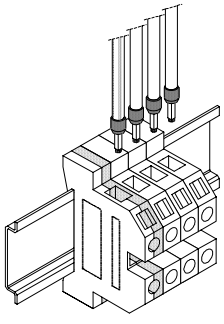
Warning

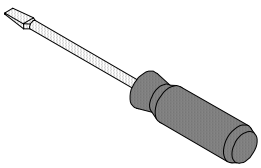
Characteristics of the cables:
for machines with dissipated power up to **25 KVA** cable cross section **10 mm²**
over **25 KVA** cable cross section **16 mm²**











PROCEDURE

1. Turn main switch handle to position -**0** - and open the electrical cabinet door.
2. Drill the hole to mount the core hitch to DIN standards. Drill the hole where it does not interfere with the components inside the electrical cabinet.
3. Run the supply cable inside the electrical cabinet through the proper raceways, connect the cables to the main switch terminals or to the terminal block if available.
4. Connect the earth cable to the mass grouping bar located on the bottom or on the side of the electrical cabinet; in the terminal block this cable is connected to the earth terminal.
5. Tighten the screws of the terminals.
6. Close the electrical cabinet door.

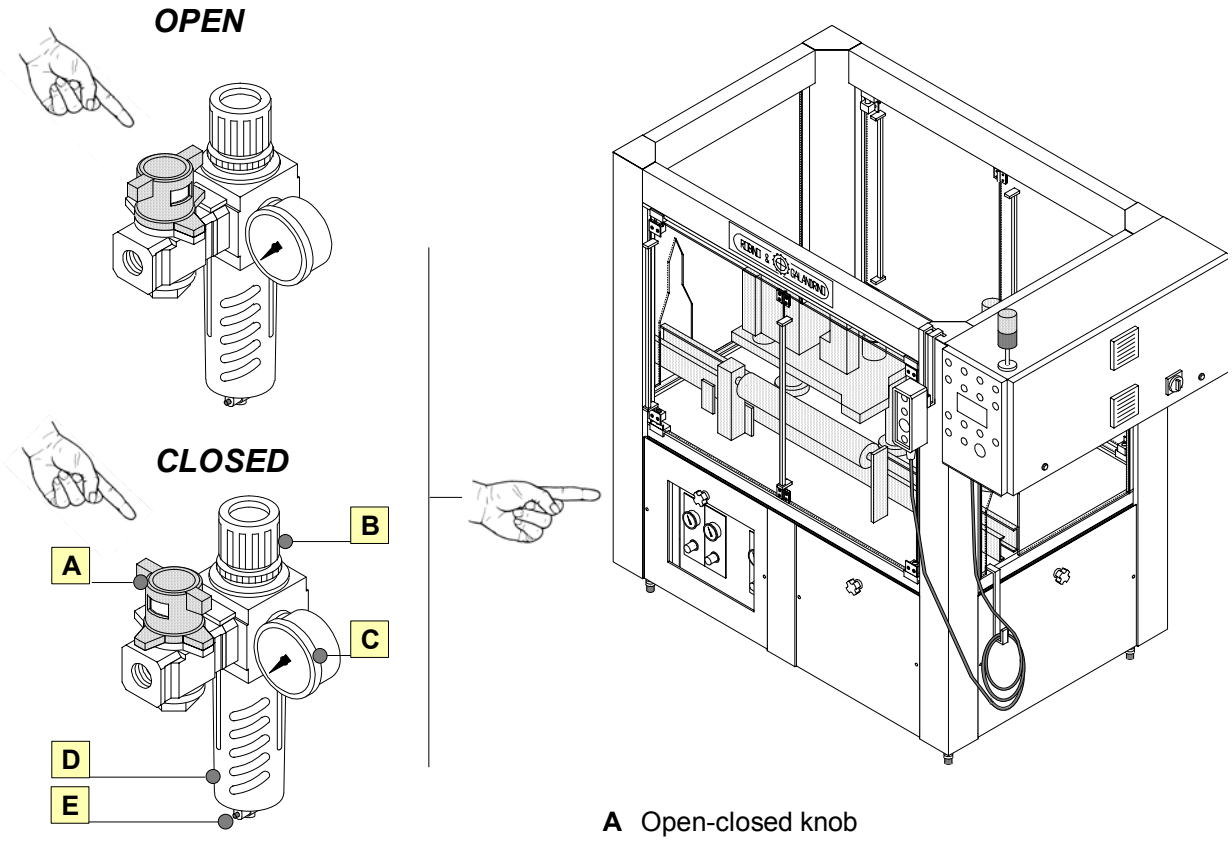
10. COMPRESSED AIR CONNECTION

a. Before applying voltage, connect the compressed air line to the machine.

b. The compressed air should be clean and dry; wet and/or dirty air could damage the plant thus reducing the working life of all pneumatic components.

c. Ideal pressure is 7 - 10 bar.
Make sure the quantity of air supplied is greater than machine requirement; machine consumption in litres/minute is specified in the technical data sheet of your machine.

Consult part P2-Specific rules for your machine type



A Open-closed knob
B Pressure reducer knob
C Pressure gauge
D Condensate cup
E Condensate drain valve

11. SWITCHING ON THE MACHINE

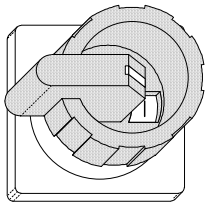
a. Before switching on the machine after a long period of inactivity carefully check that all parts requiring it are greased.

Consult section P1 D - Maintenance-

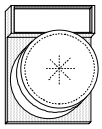
b. Before switching on the machine check all safety guards for correct positioning and fastening and doors closed.

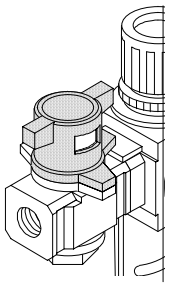
c. The machine shall be switched on by the operator or the maintenance-man

QS1

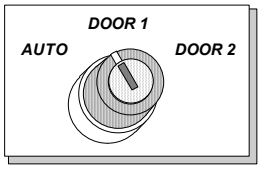


HL14

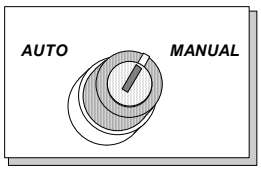




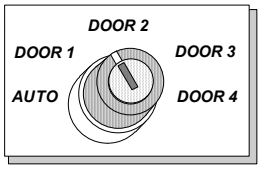
SA41



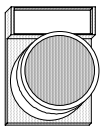
SA41



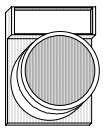
SA42



SH43



SB50



PROCEDURE

The procedure does not include the switching on of heating heads and other machine components as these are controlled by specific switches.

1. Supply the electric line to which the machine is connected.
2. Open the air system cock
3. Check that all emergency push-buttons are released (pull upwards to release)
4. Turn main switch **QS1** to position 1 - the white indicator light **HL14** LIVE CABINET comes on
5. Turn key selector switch as follows:

machines with DOOR 1 and DOOR 2
- turn key selector switch **SA41** to AUTO position.

machines with DOOR 1, DOOR 2, DOOR 3…
- turn key selector switches **SA41** and **SA42** to AUTO position.

6. pressing blue push-button **SH43** EMERGENCY RESET the emergency red indicator light goes off
7. pressing white push-button **SB50** RUN the automatic mode yellow indicator light comes on

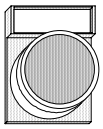
NOTE

The machine is now switched on and in stand-by condition - it is the photoelectric cells located on the entry and exit belt to control start and stop of the production cycle according to the quantity of product accumulated at the entry and exit ends. An auditory warning signal comes on every time the cycle starts and a warning light flashes on the totem so located on the machine as to be easily detectable.

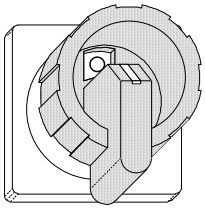
12. SWITCHING OFF THE MACHINE

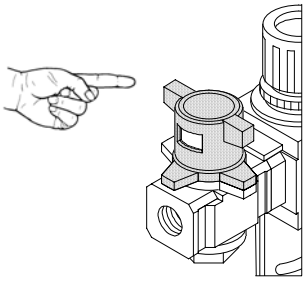
a. Machine switching off shall be carried out by the operator and completed before he leaves his place of work.

SB40



QS1





PROCEDURE

1. Press the STOP push button **SB40**.
2. Rotate the main switch **QS1** to 0 position.
3. Close the shut-off valve on the filter unit
4. Switch off the electrical line to which the machine is connected.

Warning

If the machine is connected in line, before carrying out the procedure above make sure the product on the line and the machines upstream and downstream in the line allow the switching off of the machine.

SECTION

- C -

Utilisation and controls

1. How to use the machine ---------- page 51
1.1 Modes of operation ---------- page 51

2. Daily checks ---------- page 52
2.1 Checks before switching on the machine ------- page 53
2.2 Checks with the machine switched on ---------- page 54

3. Cleaning the machine at the end of the day ---------- page 55

4. Mechanical safety system ---------- page 56
4.1 Adjusting the limit switch and stretching the spring ---------- page 57

5. Setting up the equipment ---------- page 58

6. Functions of microswitches and photoelectric cells - page 61
6.1 Bottles-on-the-belt photoelectric cells ---------- page 61
6.2 Safety microswitch at bottle entry in the worm -- page 62
6.3 Hanging bottle micro switch ---------- page 63
6.4 Pre- and post-dispenser photoelectric cells ----- page 64

7. Intervention on the long range loader ---------- page 65
7.1 Removal of the sticks of capsules in case of jamming ---------- page 65

See part P2 - Specific rules for your machine type - of this Manual for other use and check practices.

NOTES

a. .....

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b. .....

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c. .....

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g. .....

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h. .....

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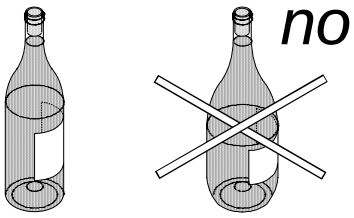
1. HOW TO USE THE MACHINE

a. The machine shall be used following the rules described in section A and according to the design specification as indicated in part P2 dealing specifically with your machine type

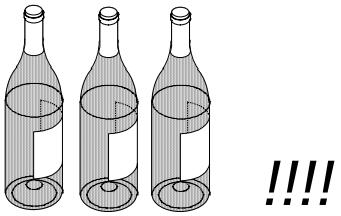
b. Using a machine does not only mean making the production the machine was designed for, but also keeping the machine in good operating conditions. Following is a list of the checks to carry out for a proper use of the machine

c. Product to process



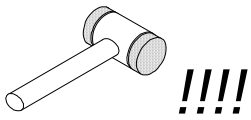
Regularly check the product to process for conformance to the sample and correspondence to the characteristics the machine was designed and sold for.

d. Output



Maximum machine output is the output the machine was designed and tested for as specified in the technical data sheet in part P2 of this manual dealing specifically with your machine type.
Any attempts to reach higher outputs are fruitless and could irreparably damage the machine.

e. Maintenance



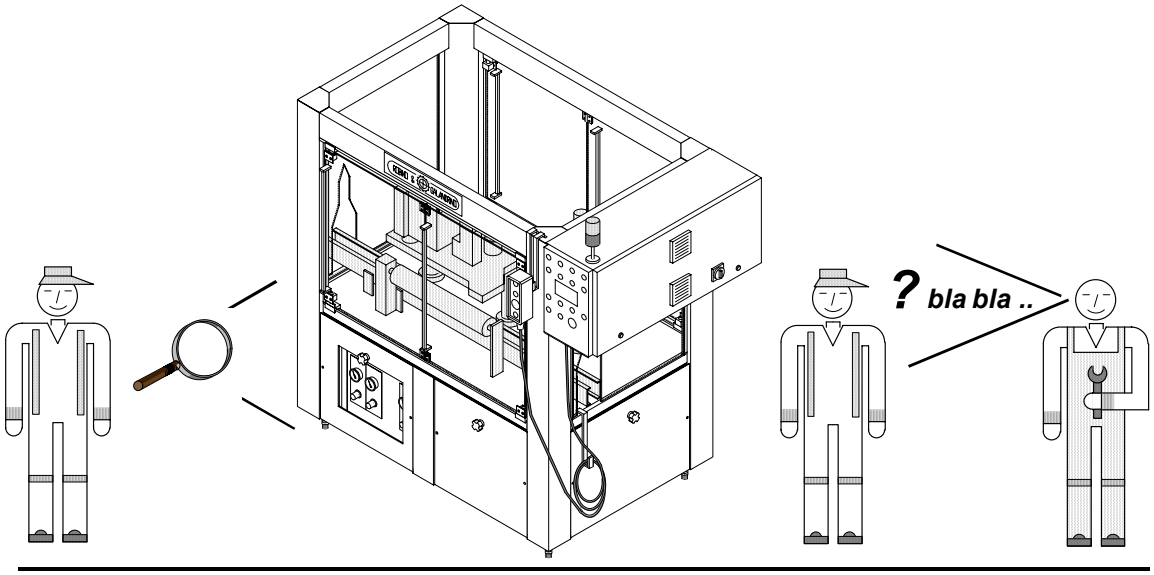
Maintenance interventions should not be carried out fortuitously but following the procedures described in section [P1]D -maintenance-

2. DAILY CHECKS

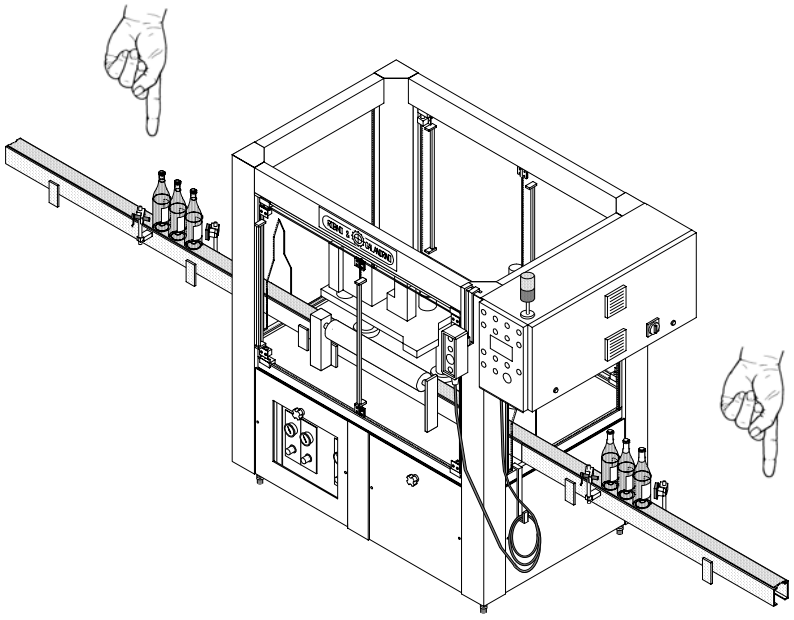
a. The unskilled production operator shall daily or atthe beginning of his work shift, carry out a number of checks in order to maintain the machine in good working conditions.

Warning

If during the checks an abnormal situation is detected, the operator shall report it to his boss to have the machine inspected by the maintenance-man.



b. Where the machine is connected to conditioning lines the operation of which is controlled by product detection systems (photoelectric cells) located upstream and downstream of the machine, beside checking the machine as specified above it is also necessary to make sure the product detection system mounted on the line is in good operating conditions.



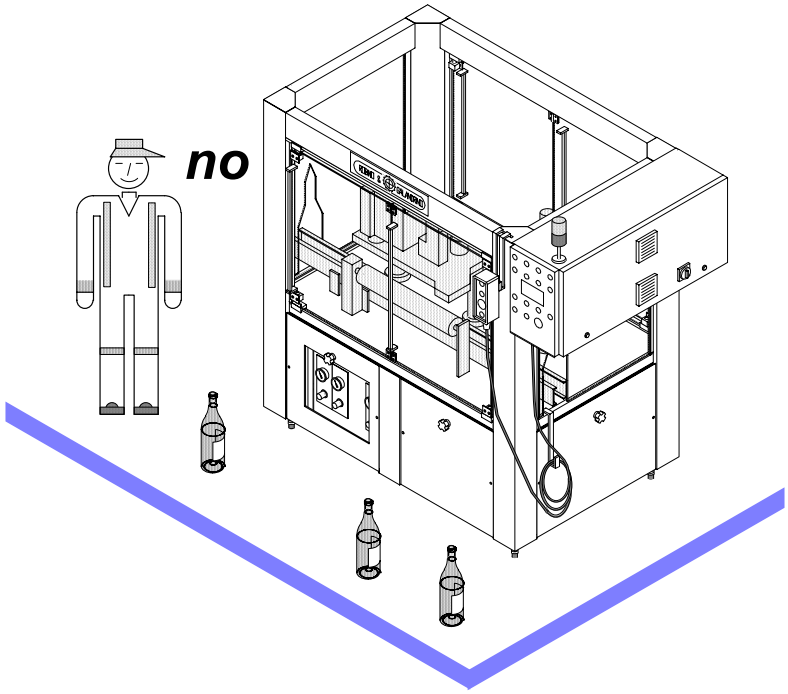
2.1 Checks before switching on the machine

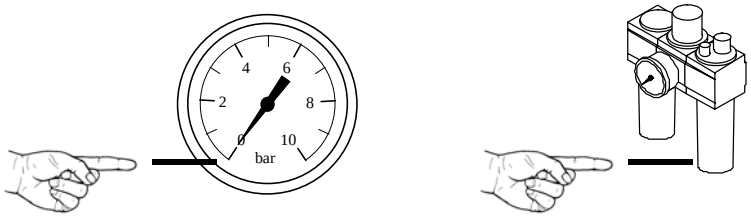
a. Make sure that:

- all guards are mounted in place,
- all doors are closed,
- all emergency push-buttons are released,
- there are no process scraps inside the machine,
- the machine set-up is correct for production process to be carried out.

b. Check:

- the floor around the machine for oil stains or processed product scraps,
- the pressure gauge to verify that the machine pressure is 0,
- condensation and lubricant levels in the air processing unit to make sure they are exactly as prescribed.

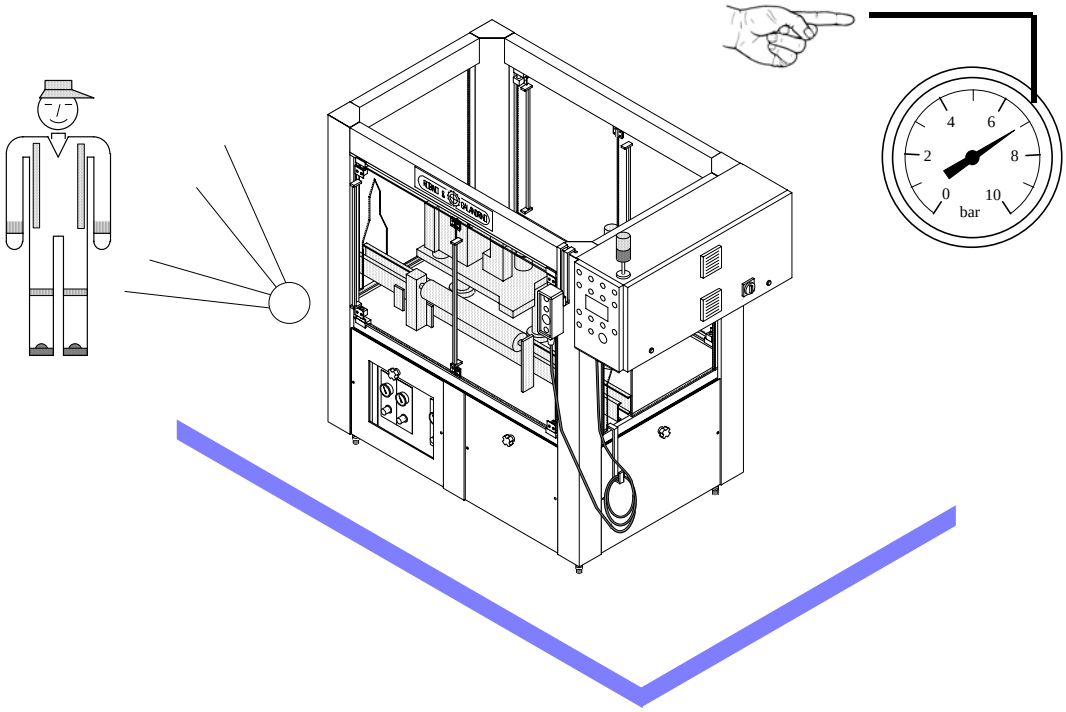




2.2 Checks with the machine switched on

a. Standing near the machine listen to perceive any abnormal noise.

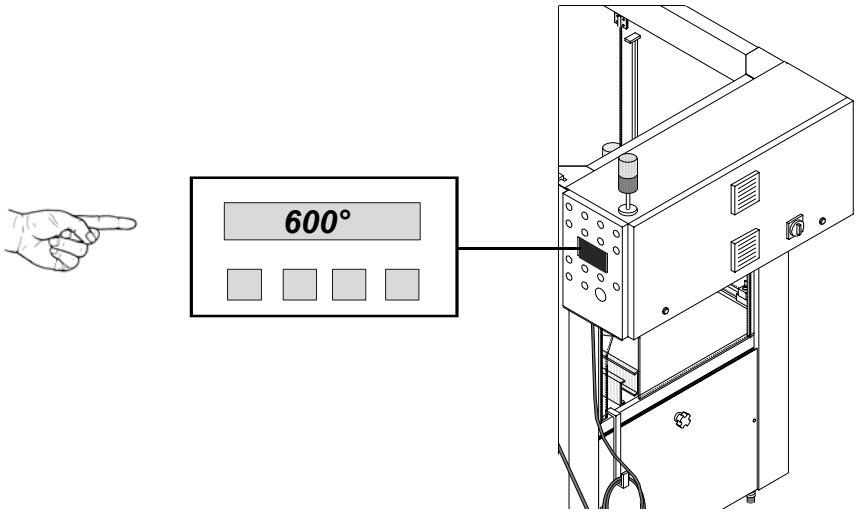
b. Check that the pressure inside the air system is between 7 and 10 bar.



c. Before starting the production cycle, enable the functions of the various machine units positioning switches and selector switches on the required function.

Warning

If heating heads are mounted on the machine, wait for the heads to reach their working temperature; the temperature value can be read on the temperature regulator display **A0**



3. CLEANING THE MACHINE AT THE END OF THE DAY

a. At the end of the day or of the shift, line and machine production cycle permitting, the unskilled production operator shall clean the machine.

b. Clean the machine plane, worms, dispensing stars, conveyors, photoelectric cells.

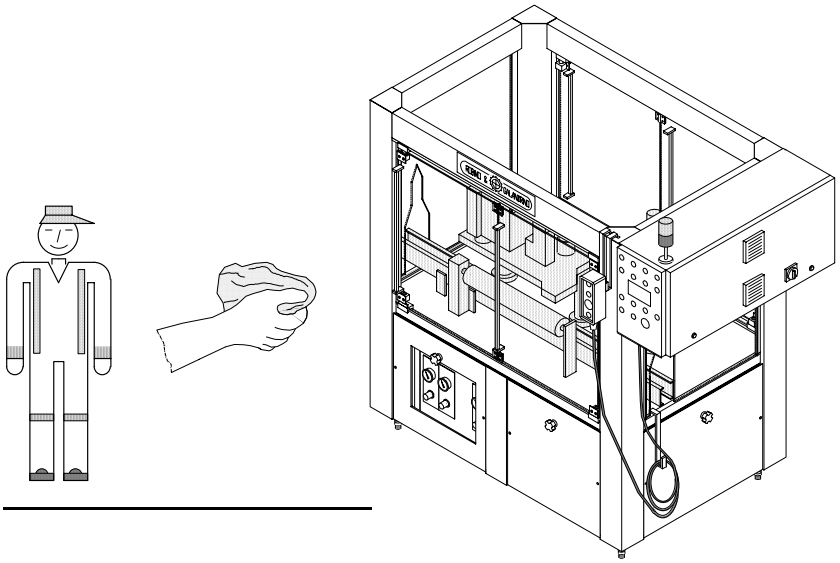
c. Remove and dispose of any process scarps following the common waste disposal rules.

d. Clean the transparent parts of the safety guards as needed.

e. Clean the work area.

Warning

Clean the machine using compressed air at a max. pressure of 3 bar.
When cleaning the machine make sure no one is standing nearby as material could be cast off by the compressed air jet



4. MECHANICAL SAFETY SYSTEM

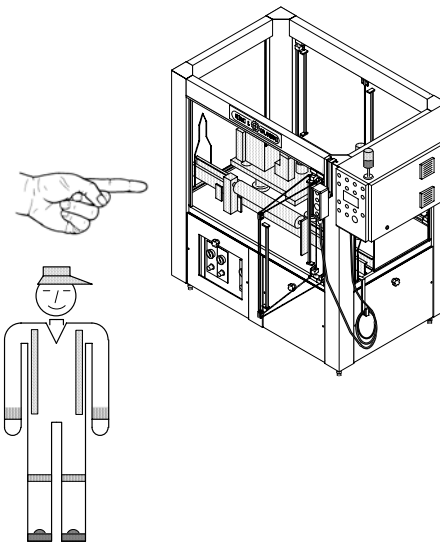
a. The machine mechanical safeties, located on components of the driving unit, are operated by ball devices acting on a **safety limit switch** (micro) which causes the machine to come to an immediate stop.

b. The location of the mechanical safeties is shown on the machine lay-out drawing "location of mechanical safeties"

Consult part P2- Specific rules for your machine type

c. Mechanical safeties operate when product jams up or forces through typically due to:
- the entry star not synchronised with the central star;
- the worm not synchronised with:
  the entry star, the dispenser bell, the dryer heads
- one or several bottles tipped over on the belt or stuck in the dispensing stars

d. When the machine stops as a result of the operation of a mechanical safety the indicator light **H3** located on the control panel comes on and **the intervention of the operator is required.**



PROCEDURE

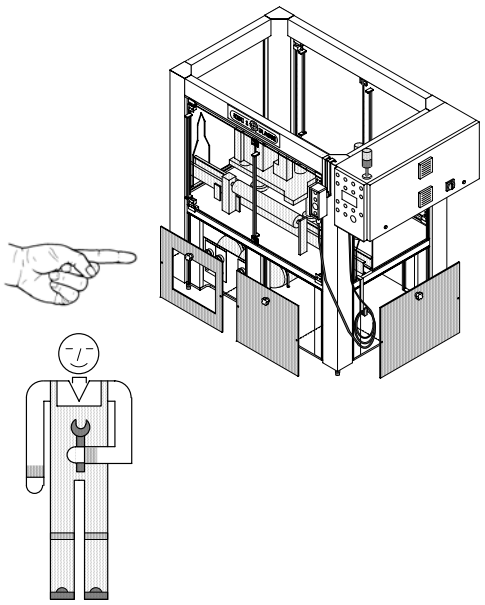
1. Check the bottle path to find out where the safety has been operated - a tilted or tipped over bottle could be the cause
2. Initiate the procedure to open the doors
3. Open the doors of the safety guards and remove the bottles which have caused the machine stop
4. Manually rotate the part where the safety has been operated (e.g. worm, star) to bring the device back to its position of engagement - this automatically releases the microswitch contact.
5. Close the doors of the safety guard.
6. To restart the machine position selector switches **SA41-SA42** back to AUTO, then press the RUN push button **SB50**

NOTE

The machine mechanical safety system is calibrated by the manufacturer at testing.
If a mechanical safety device operates too easily, prior to increasing the spring stretch acting on the ring nuts or nuts, carefully verify the conditions of the processed product.

4.1 ADJUSTING THE LIMIT SWITCH AND STRETCHING THE SPRING

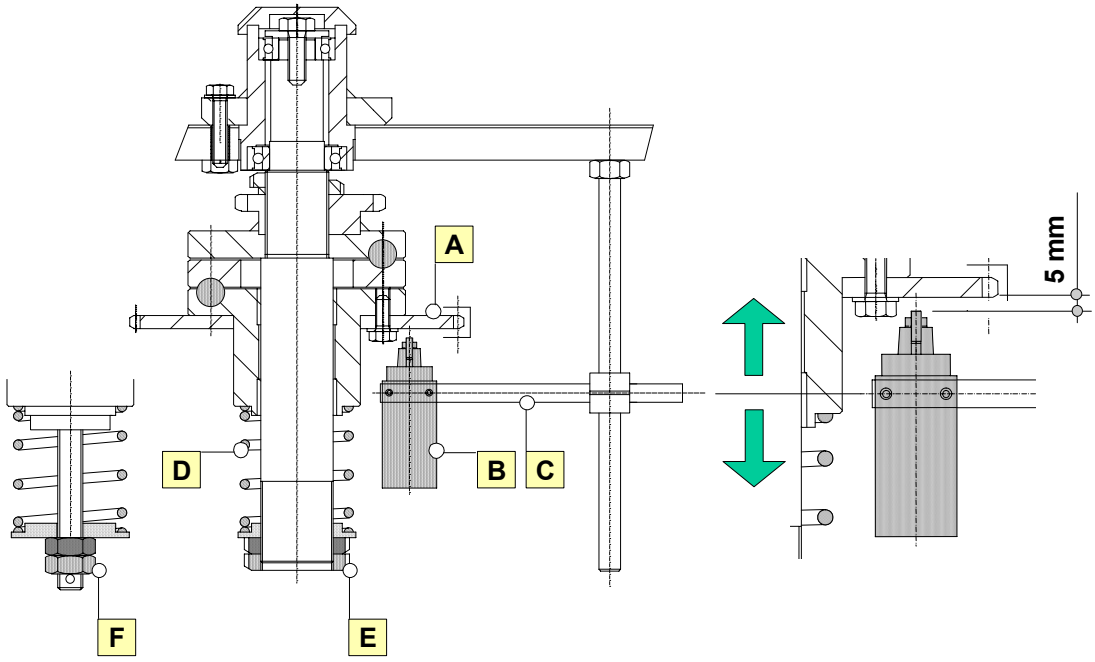
a. Adjusting of the limit switch must be carried out by **the maintenance-man only** as it requires removing the machine bed guards which must be replaced at the end of the intervention.



b. Adjust the safety limit switch (micro) so that when the safety is operated disc **A** lowers enough to close the contact of micro **B** but without overtravelling to avoid breaking the micro. Use bar **C** to make the adjustment.

c. To increase or reduce the stretch of the spring **D** act on ring nuts **E** or nuts **F**.

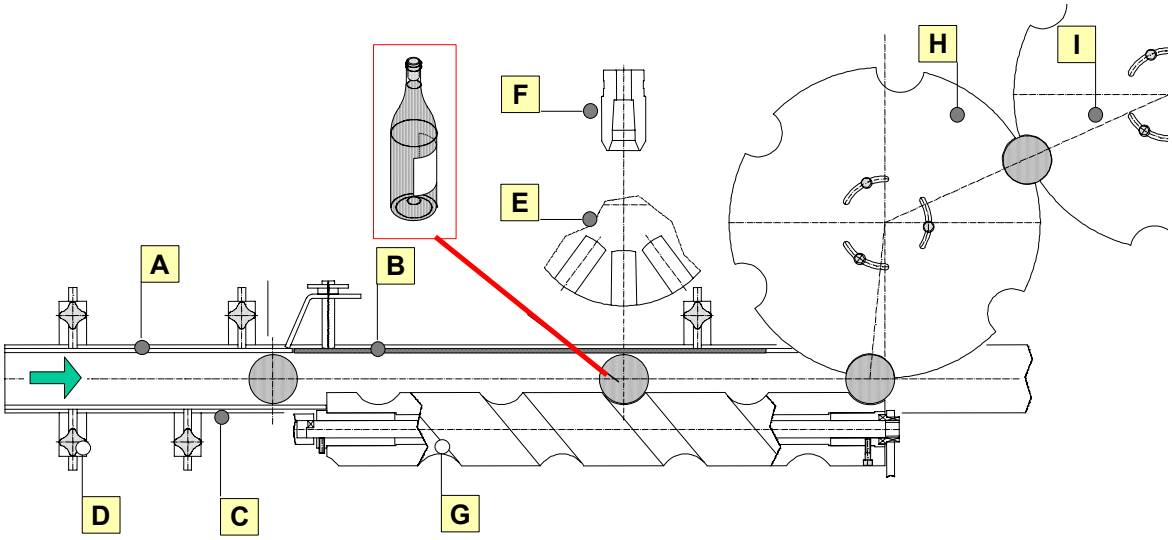
A disc
B microswitch
C bar
D spring
E ring nuts
F wrench-22 nuts



5. SETTING UP THE EQUIPMENT

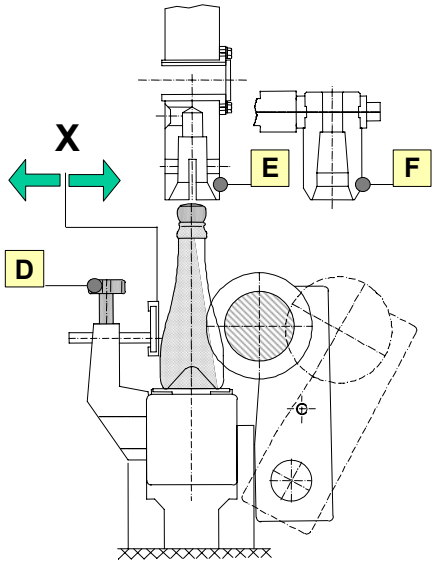
a. Machine setting-up must be performed **by the maintenance-man only**. Before initiating the procedure the maintenance-man shall enable the portable control unit and carry out the door opening procedure. Use the portable control unit to stop the machine with the dispenser bell in its bottom dead centre (capsule ejection)

b. Place the bottle to process on the conveyor under the capsule bell or the dispensing rotor



A guide rail
B guide rail
C guide rail
D knob
E capsule dispensing rotor
F capsule dispensing bell
G worm
H entry star
I central star

c. Adjusting the conveyor guide rails - **X** adjustment

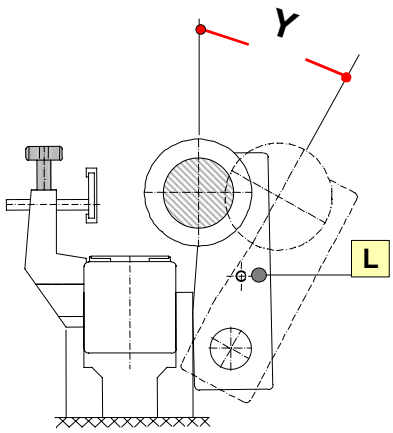


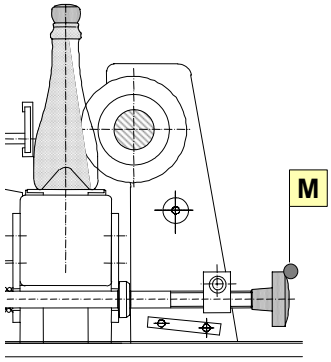
PROCEDURE

1. Loosen knobs **D**.
2. Adjust guide rails **A**-**B** and **C** so that the centre of the bottle is in alignment with the centre of the bell **F** or of the dispensing rotor **E**.
3. Tighten knobs **D**.

..../..

d. Adjusting worm approach to the bottle - **Y** adjustment





PROCEDURE

1. Loosen the two side screws **L** of the worm
2. Adjust the worm approach to the bottle
3. Tighten down the two screws **L**.

Warning

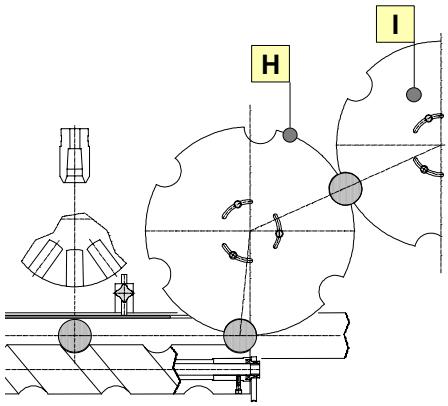
On some machine types or lines screws **L** are replaced by knob **M**

NOTE

For a correct adjustment take care to leave the proper clearance between guide rails, bottle and worm.
This should be as little as possible, but enough to allow the bottle to rotate on its axis with no interference.

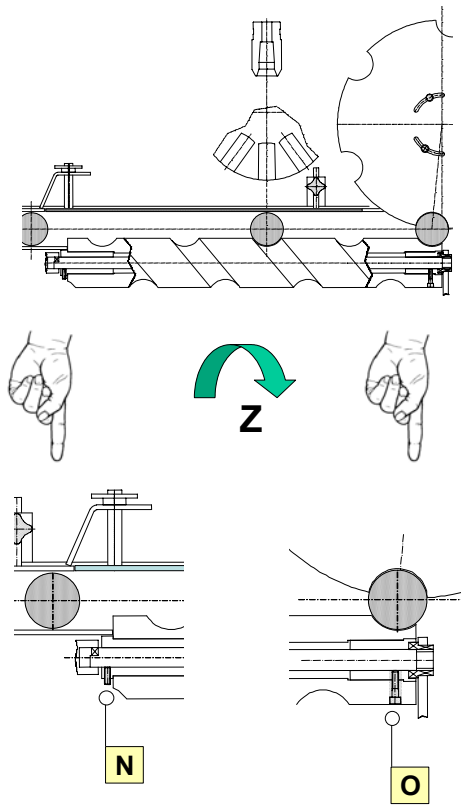
L wrench-19 screw
M knob

e. Star synchronisation



Check synchronisation of the entry star with the central star - where the two stars meet the two hollows must match to house the bottle freely.
Act on the star slots to adjust synchronisation as needed.

f. Adjusting the worm relative to the entry star and the capsule dispensing bell or rotor. **Z** adjustment.



PROCEDURE

1. Loosen the two dowels **N** and the screw or dowel **O**
2. Carry out the adjustment rotating the worn on its shaft, then look for the correct position allowing the bottles to move freely from the worm to the entry star with no interference and the bottle receiving the capsule to be perfectly aligned with the axis of the dispensing bell.
3. Tighten down the dowels or screws **N** or **O**

Warning

Where the machine features a rotating dryer make sure there is no interference between the bottles and the dryer heads.

N 4-setscrew wrench dowel
O 4-setscrew wrench screw or dowel

NOTE

Conveyor belt speed and machine speed must be synchronised for good machine operation.
The optimal ratio between conveyor belt speed and machine speed, asdefined during in-line testing, must be automatically kept with any machine outputs.
To do this use the supplied electronic output for interfaced control of belt speed with machine speed.

Consult the electrical wiring diagram

For any problem found during the setting up of the equipment, consult the manufacturer's after-sale service.

6. FUNCTIONS OF MICROSWITCHES AND PHOTOELECTRIC CELLS

6.1 Bottle-on-belt photoelectric cell

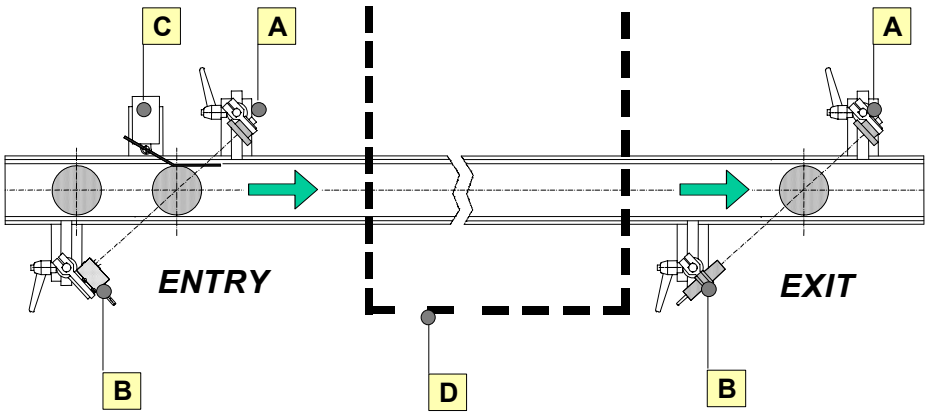
a. The photoelectric cells are secured to the belt guide rails and located on the entry (before the machine) and on the exit side (after the machine).
The entry photoelectric cell sees the bottles on the belt and sends permission to start the machine.
There are cases where the entry photoelectric cell with prismatic reflector is replaced by a microswitch **C**.
The exit photoelectric cell controls bottle accumulation (too many bottles)

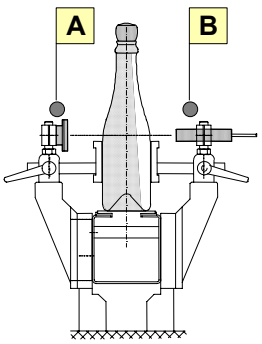
NOTE

Place the photoelectric cell group, made up of a photoelectric cell and a prismatic reflector, taking care to locate the photoelectric cell **B** at a distance of 200 to 500 mm from the prismatic reflector **A**.

b. When the belt is full the machine stops restarting automatically as soon as the photoelectric cell is no longer obscured by bottles.

c. Both photoelectric cells can also be used to control bottle speed.





A prismatic reflector
B photoelectric cell
C microswitch
D machine overall dimensions

6.2 *Safety microswitch at bottle entry in the worm*

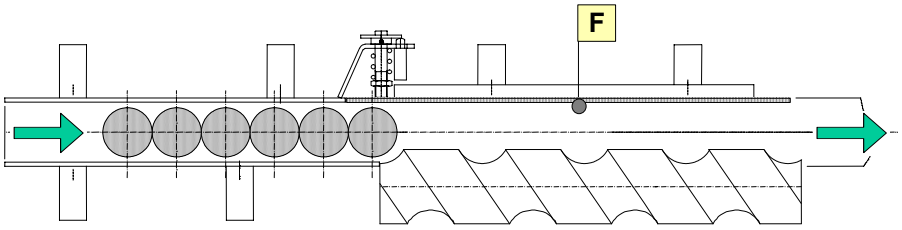
a. A safety microswitch is connected to the sprung guide rail **F**.
The bottle not entering the worm because of interference is pushed against the sprung guide rail **F** tripping the microswitch **G** thus causing the machine to stop.

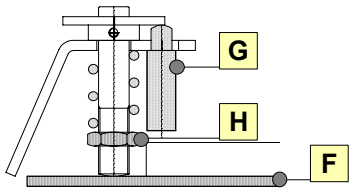
b. Causes of interference are :
- worm pit diameter mistakenly smaller than teh bottle diameter;
- faulty guide rail adjustment;
- bottle laying on the belt;
- the column of bottles at the entry exerts too much push.

PROCEDURE

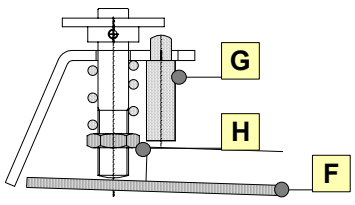
1. Carry out the door opening procedure
2. Open the door
3. Remove the causes of interference
4. Close the door
5. To restart the machine turn selector switches **SA41-SA42**back to AUTO, then press the push-button **SB50** START

c. Act on the nut **H** to adjust spring stretch - stiffness of the guide rail varies with spring stretch





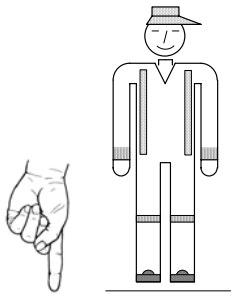
F sprung guide rail
G microswitch
H 27-wrench nut



6.3 Hanging bottle microswitch

a. A microswitch is installed on the capsule folding and spinning turret. It is so located as to control the exit side of the capsuling turret where bottles should always beresting on their plate.

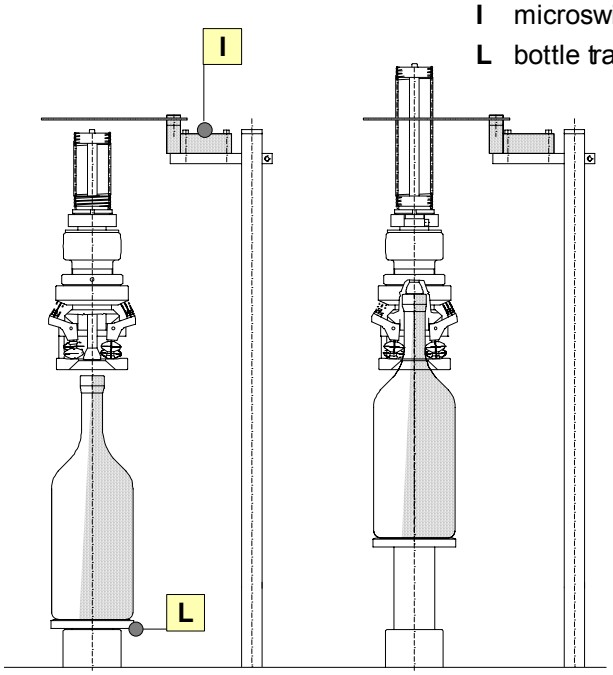
b. If there is a bottle still hanging on the folding or spinning turret, the microswitch detects its position and the machine stops to allow manual removal of the bottle.



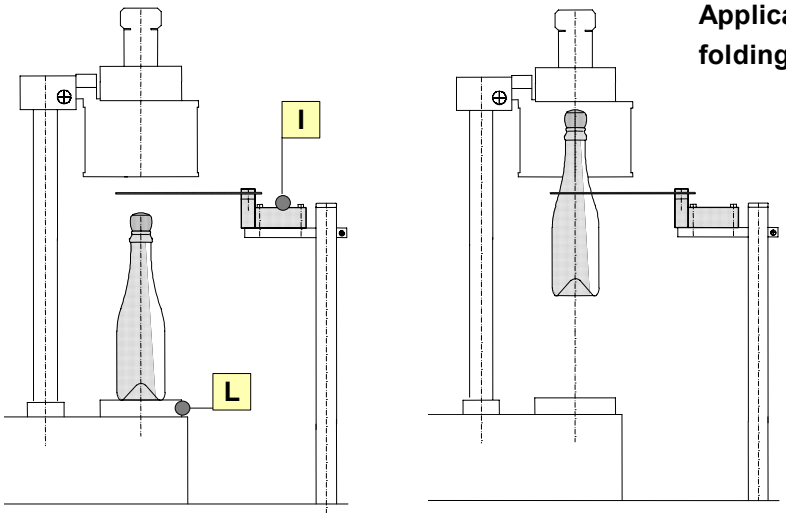
PROCEDURE

1. Carry out the door opening procedure
2. Open the door
3. Remove the bottle
4. Close the door
5. To restart the machine turn selector switches **SA41-SA42** back to AUTO, then press the push-button **SB50** START.

I microswitch
L bottle travelling plane



Application with spinning head

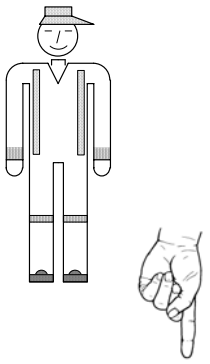


Application with pneumatic folding head

6.4 Pre- and post-dispenser photoelectric cells

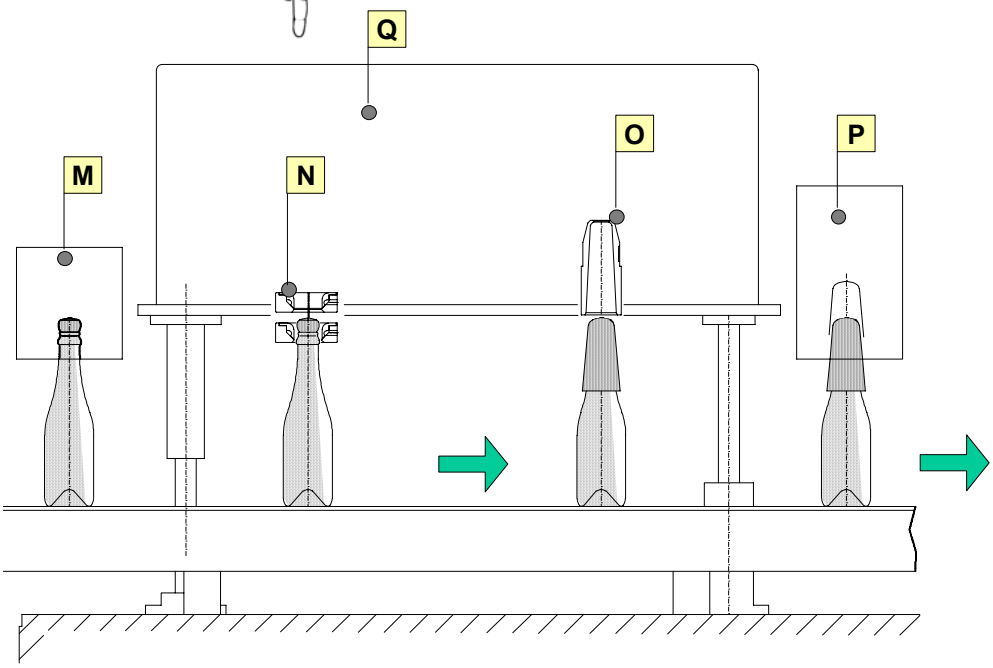
a. Entry photoelectric cells detect bottle, cork and wirehood to avoid capsuling bottles lacking cork and/or wirehood.

b. Exit photoelectric cells detect the capsule dispensed on the bottle.
If more than three bottles lacking capsule are detected the machine stops to allow the dispenser to be checked for correct operation.



PROCEDURE

1. Carry out the door opening procedure
2. Open the door
3. Act on the dispenser to remove the fault
4. Close the door
5. To restart the machine turn selector switches **SA41-SA42** back to AUTO, then press the push-button **SB50** START



M entry photoelectric cell
N dryer
O dispenser
P exit photoelectric cell
Q dispensing system

c. Where the machine is fitted with an ejection belt capsuled bottles are stored in memory before being automatically ejected from the line.

7. INTERVENTION ON T HE LONG RANGE L OADER

a. The long range loader performs the automatic positioning of the sticks of capsules on the pulling belt to the distribution.
The depositing of the sticks of capsules is staggered depending on the machine production. The loader makes the chain turn slowly, on the chain there are chutes that load the sticks of capsules, according to the production needs or to the machine cycle.
The operator cannot foresee the chain rotation, or the movement for depositing the sticks of capsules on the belt.
The manufacturer has provided the loader with some guards in order to protect the area near the chain rotation.

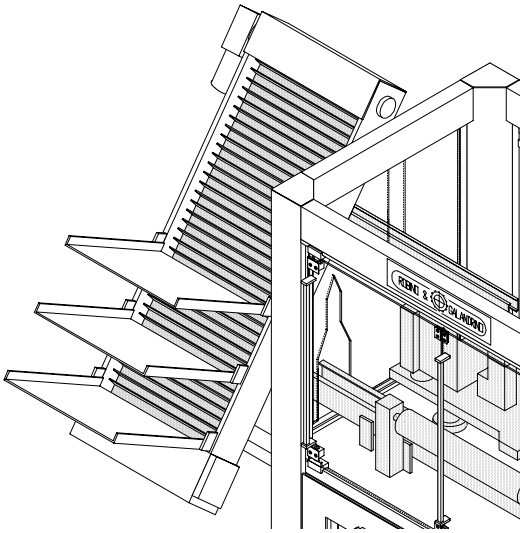
7.1 Removal of the sticks of capsules in case of jamming

a. The sticks of capsules may jam in the storage area of the belt or in the adjoining one, due to an inexact size of the sticks. If this happens, it is possible to remove the jammed stick of capsules without stopping the automatic cycle of the machine.

This operation must be peformed **exclusively by the maintenance-man**, who must know the loader functioning and must follow this procedure:

PROCEDURE

1. Unscrew the fixing screws and remove guards
2. Remove the jammed capsules **by a special tool** (e.g. screwdriver)
3. Assemble the guards again and set the fixing screws



WARNING
USE A SUITABLE TOOL
DO NOT USE YOUR HANDS

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SECTION

- D -

Maintenance

1. Maintenance intervention ---------- page 69
1.1 The tasks of the maintenance-man ---------- page 69
1.2 Repairing and servicing in safety ---------- page 69

2. Maintenance ---------- page 70
2.1 Getting ready for a maintenance intervention --- page 70
2.2 Releasing of the doors ---------- page 71
2.3 Machine washing ---------- page 72

3. Routine maintenance programme ---------- page 73

4. Maintenance procedures ---------- page 74
4.1 Lubrication ---------- page 74
4.2 Air treatment unit inspection ---------- page 76
4.3 Air tanks condensate drainage system---------- page 76
4.4 Greasing of the cardan joint ---------- page 77
4.5 Greasing of the slide ways of the suction cup holder page 78
4.6 Belt tension control ---------- page 79
4.7 Miscellaneous maintenance ---------- page 79
5. Mounting and dismounting the worm ---------- page 80
6. Adjusting the chain tension ---------- page 82
7. Checking efficiency of photoelectric cells ---------- page 83
8. Adjusting of the wirehood holder chain (Record) ---- page 84
8.1 Chain tensioning ---------- page 84
8.2 Alignment correction ---------- page 85

See part P2 of this Manual - Specific rules for your machine type - for other maintenance procedures

NOTES

a. .....

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b. .....

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c. .....

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d. .....

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e. .....

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f. .....

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g. .....

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h. .....

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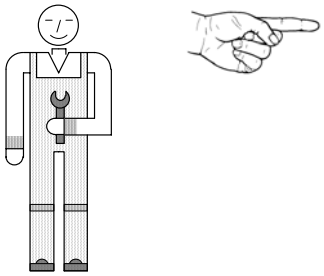
1. MAINTENANCE INTERVENTION

a. The man in charge of machine maintenance is referred to as "THE MAINTENANCE-MAN" in this Manual and this is the corresponding symbol.



b. All operations described in this section shall be carried out by the maintenance-man only who must be familiar with and follow all procedures to work in safety.

c. Think the maintenance intervention over before carrying it out to avoid making mistakes or damaging the machine.

1.1 The tasks of the maintenance man

a. He has the task to carry out machine maintenance and make sure mechanical parts are in good operating conditions.

b. Should an abnormal condition be found when inspecting the machine which is unusual for machines with moving parts, contact the manufacturer to define the correct maintenance and acting procedures.

c. The maintenance-man shall be familiar with:
- **the procedures to check that mechanical, electrical and pneumatic operation of moving parts is satisfactory**
- **technical and mechanical characteristics of the machine**

1.2 Repairing and servicing in safety

a. Should it be necessary to make repairs on the machine, the Customer shall immediately contact the manufacturer who will supply the necessary instructions and define the practice to use.

b. Repairs and interventions on the machine made by the Customer without the manufacturer's prior consent, make all commercial guarantees null and void and relieve from any liability regarding safety and defective product.

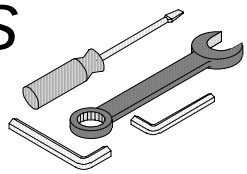
2. MAINTENANCE

Warning

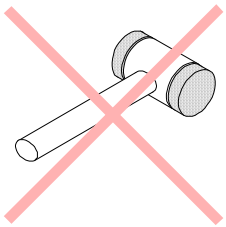
Before attempting the maintenance intervention take care to position the machine units sothat the area involved is easily accessible.
All maintenance interventions must be carried out with the machine switched off.

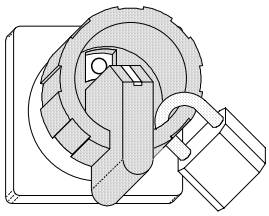
2.1 The tasks of the maintenance man

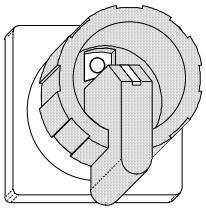
YES



NO







a. Before starting, make sure you have tools and fixtures suitable for the work you are about to make.

PROCEDURE

1. Switch off the machine.

2. Lock the main switch (after turning it to "0" OFF position) and take out the padlock key.
The key must be kept by the maintenance-man.

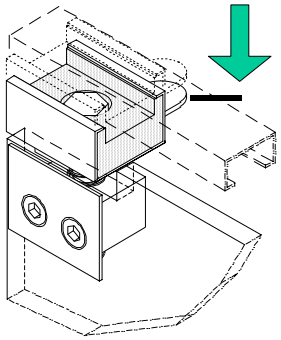
3. Carry out the intervention following the procedures laid down in this User's manual.
Think the maintenance intervention over before carrying it out to avoid making mistakes or damaging the machine

4. The work completed, make sure you left no tools or fixtures inside the machine or in the area around it.

5. Unlock the main switch leaving tion the "0" OFF position.

2.2 Releasing of the doors

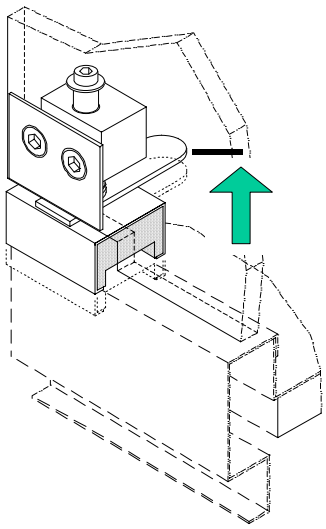
a. All the double doors may be released for an easier cleaning or for maintenance interventions. In order to perform this operation it is necessary to unlock the sliding shoes placed on the casing guide, on the not hinged side of the door, by means of the cursor lever of the locking device.



Door releasing

PROCEDURE

1. Partially open the door.
2. Release the upper sliding shoe
3. Release the lower sliding shoe

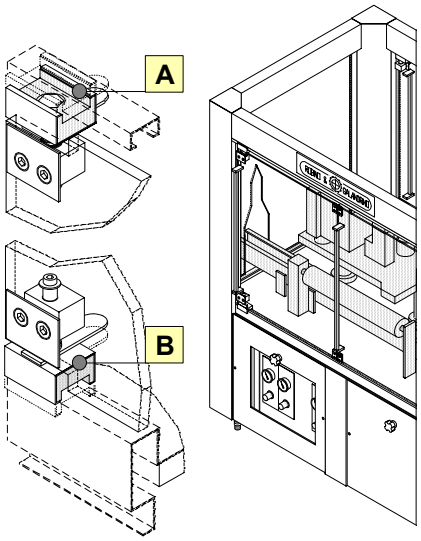


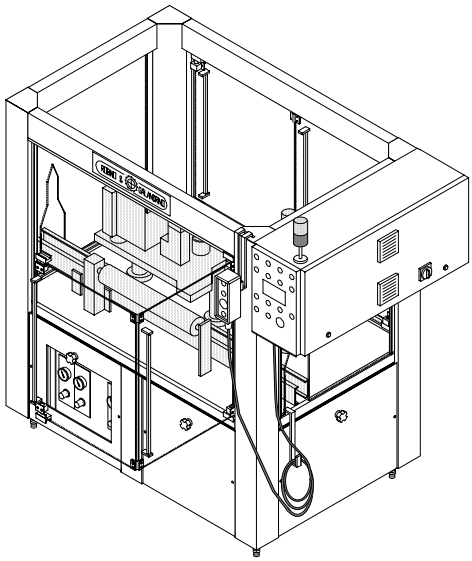
Door hooking

PROCEDURE

1. Partially close the door
2. Hook the lower sliding shoe
3. Hook the upper sliding shoe

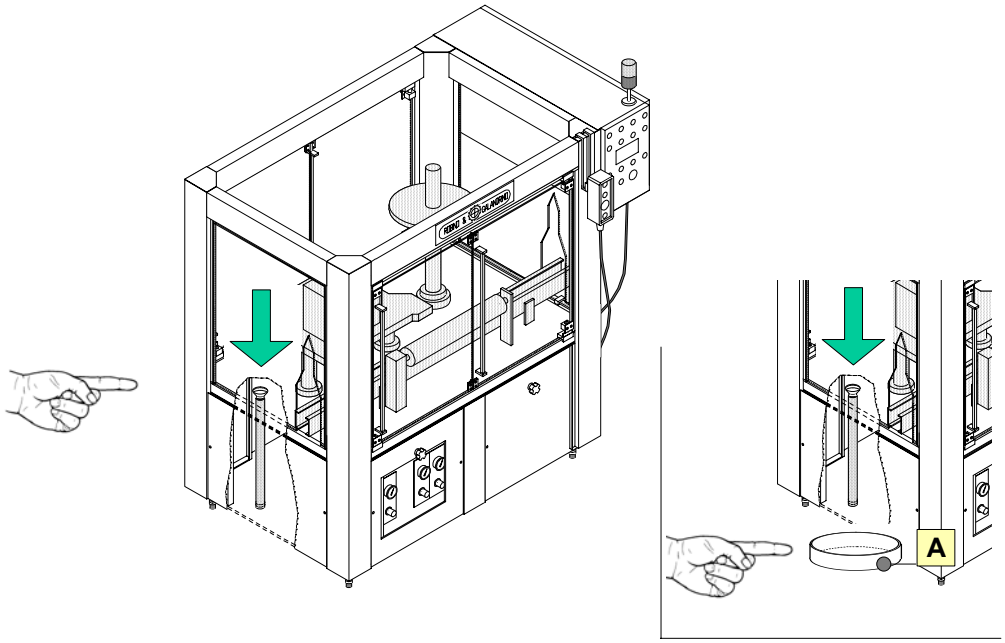
A upper sliding shoe
B lower sliding shoe





2.3 Machine washing

a. On the machine base there are one or two discharging holes allowing the collection of the washing water into a vessel during the machine cleaning.



A vessel

b. In case the washing water is not discharged through drain wells, before washing the machine, take a vessel **A** and place it under the draining pipe.

c. Wash the machine carefully, by using a sponge soaked in water, avoiding, if possible, the use of water jets.
Pour the water towards the discharging holes.
Carefully dry the machine base.

3. ROUTINE MAINTENANCE PROGRAMME

a. For easy reference the routine maintenance interventions are summarised in the "Routine Maintenance Programme" table .

b. Beside routine maintenance and those maintenance interventions which may prove necessary, the maintenance-man shall carry out the following

EVERY 8 HOURS OF WORK (EVERY SHIFT)

- Drain condensate from the air treatment unit
- Clean the rollers of the spinning heads

EVERY 40 HOURS OF WORK (WEEKLY)

- Top up oil in the lubricator glass of the air treatment unit
- Drain the condensate from air tanks
- Using the oiler lubricate the side support located at worm exit end and grease the thrust bearing inside
- Grease the guide blocks of the capsule dispensing trolley

EVERY 200 HOURS OF WORK (MONTHLY

- Grease the cams of the mechanical dispenser - do not use too much grease
- Grease the bearings of the central shaft of the spinning turret (2-3 grams)
- If the machine is equipped with heating heads, check the electrical collector brushes for wear
- Check the drive chains of the spinning turret for correct tension and wear
- For machines with universal screw, grease the cardan joint.
- For machines with automatic star, grease the suction cup holder slide ways.

EVERY 1000 HOURS OF WORK (HALF-YEARLY)

- Grease the machine chain drive
- Check oil level in the central spinning turret
- Check and adjust chain tension
- Visually inspect fitting, pipes, etc. for leaks

EVERY 2000 HOURS OF WORK (YEARLY)

- Grease the bearings of the central spinning turret

4. MAINTENANCE PROCEDURES

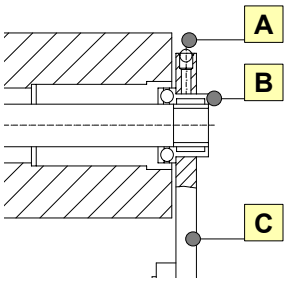
4.1 Lubrication

Recommended oil:
PHYSEL OIL 15 (ISO-VG 15) KLUBER LUBRIFICATION
or equivalent.

Recommended grease:
POLYLUB GA 352 KLUBER LUBRIFICATION
or equivalent.

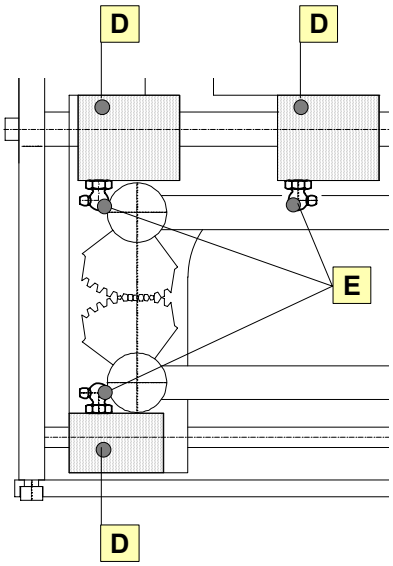
a. The machine components are fitted with ball oilers and grease nipples for lubrication. When lubricating the machine do not forget checking the oil level and greasing the spinning turret.

Components requiring lubrication are:



b. Side support at worm exit end:
oil the thrust bearing.

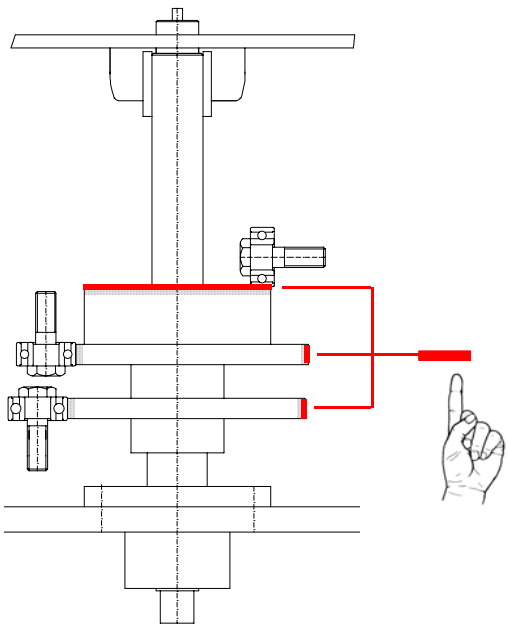
A ball oiler
B thrust bearing
C side pillow bloc at worm exit end



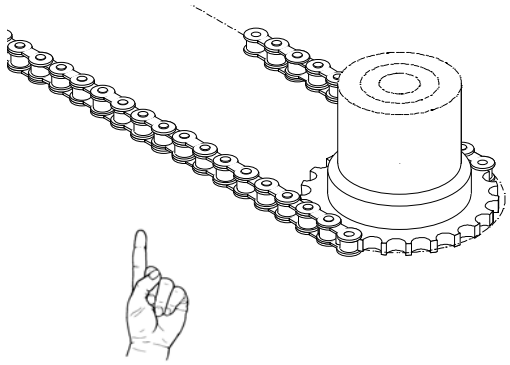
c. Capsule dispenser:
grease the guide blocks of the capsule dispenser trolley, inject small quantities of grease to avoid it spreading out of gaskets.

D guide block of the dispenser trolley
E grease nipples

..../..



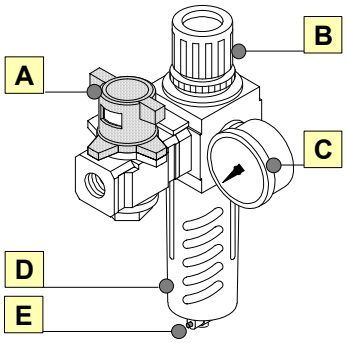
d. Mechanical dispenser cams
grease only when cams are dry;
smear a thin layer of grease taking care not to dirty the distributor

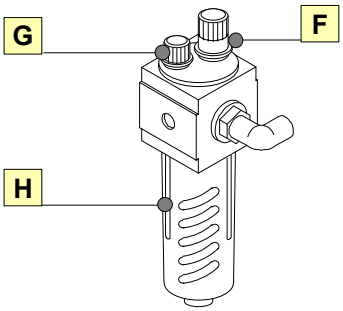


e. Drive chains:
lubricate in the proper way as needed.

Before lubrication, clean the chain to remove any dirt which would prevent oil penetration.
Clean using only paraffin-based products such as gas oil, oil, trichloroethylene.
Do not use steam jets, cold detergents, or acid-based corrosive products which would damage the chain.
A well lubricated chain shows no dirt on the outside and oils your finger if you touch it.
Where lubrication oil is used, make sure to apply it avoiding dripping.

4.2 Air treatment unit inspection





a. The air treatment unit is composed of filter-reducer and lubricator; condensate and lubricant levels must be checked daily.

b. Before draining the condensate and/or topping up oil, shut off air turning the corresponding knob. The condensate collecting in the cup must be drained every day through the proper valve.

c. Top-up the lubrication oil in the glass when the level is down to 1/4.

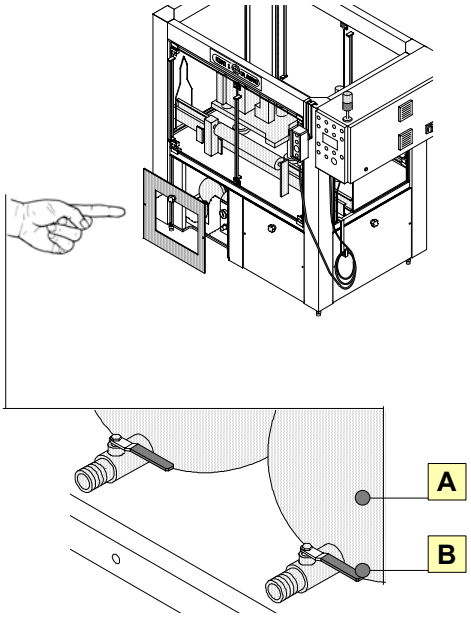
Filter-Reducer

A open-close knob
B pressure reducer knob
C pressure gauge
D condensate cup
E condensate drain valve

Lubricator

F drip-feed screw
G oil filler
H lubrication oil glass

4.3 Air tanks condensate drainage system



a. Buffer air tanks are located inside the machine bed for use by the groups the machine is fitted with.

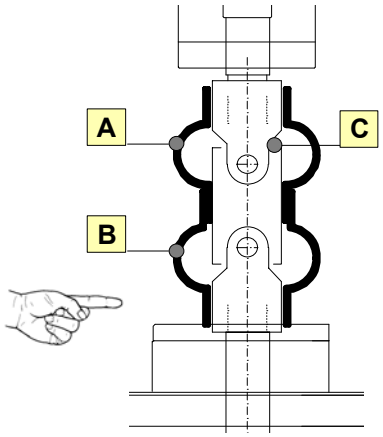
b. Regularly drain condensate from the air tanks opening the cocks located on the tanks - place a bucket under the cock before opening it.

Warning

To drain condensate the floor-secured guards must be removed and replaced as soon as the work is over

A air tank
B cock

4.4 Greasing of the cardan joint *(for machines with universal screw)*



a. The greasing of the cardan joint must be performed using a not excessive quantity of grease in order to allow the correct positioning of the protection guard.

The protection guard is made of rubber, so to be easily moved for the joint greasing.

PROCEDURE

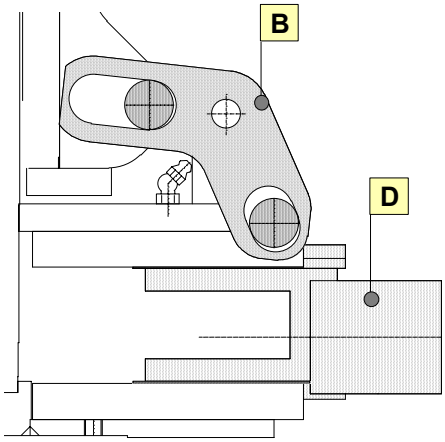
1. Move the guards bottom-up and grease the lower joint. Move the guards downward and grease the upper joint.

2. Place the guards correctly.

A Upper guard
B Lower guard
C Cardan joint

4.5 Greasing of the slide ways of the suction cup holder

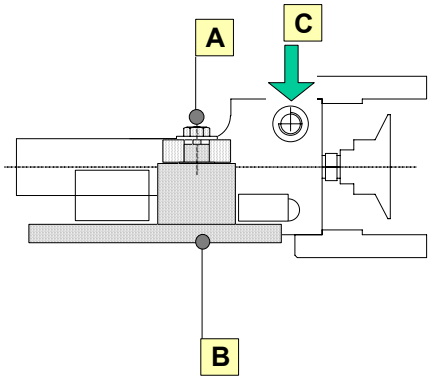
(for machines with automatic star)



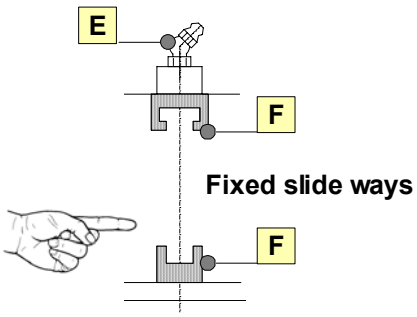
a. In order to perform the greasing operations, the suction cup holder must be taken off.

PROCEDURE

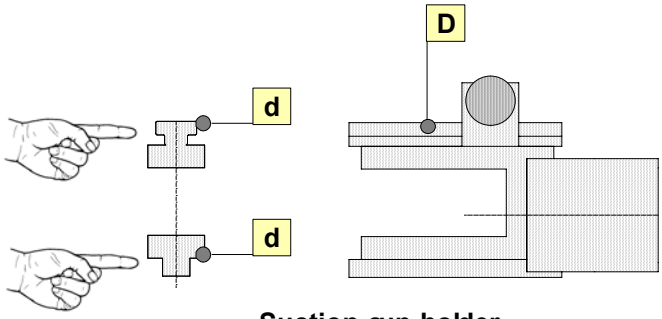
1. Disconnect the air delivery pipe **C**.
2. Unscrew **A**.
3. Unscrew **B**.
4. Extract the holder from the fixed slide ways.
5. Clean carefully slide ways **d** of holder **D**.
6. Clean carefully the fixed slide ways **F**.
7. Grease the lower fixed slide way using a brush.
8. Place holder **D** , again, grease the upper fixed slide way by greaser **E**.
   Surplus grease, if any, must be eliminated.
9. Assembly lever **B**, screw up **A**, connect the air delivery pipe **C**



A Screw 13
B Lever
C Air delivery pipe connection
D Suction cup holder
d Slide ways
E Greaser
F Fixed slide ways

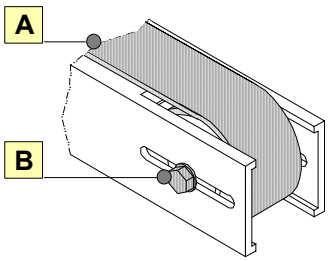


Fixed slide ways



Suction cup holder

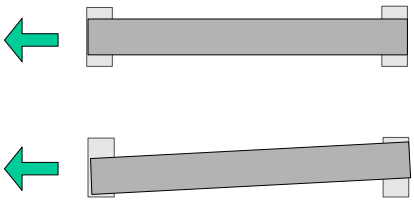
4.6 Belt tension control



a. Slots are provided in the side channel iron of the capsule belt, where the driving roller is, to allow tensioning of the belt.

b. Adjust belt tension acting onthe corresponding screws and slots.

A belt
B screw



Warning
When tensioning the belt do not forget to make sure it travels straight.

4.7 Miscellaneous maintenance

a. Monthly check the screws on the moving parts to see that they are tight

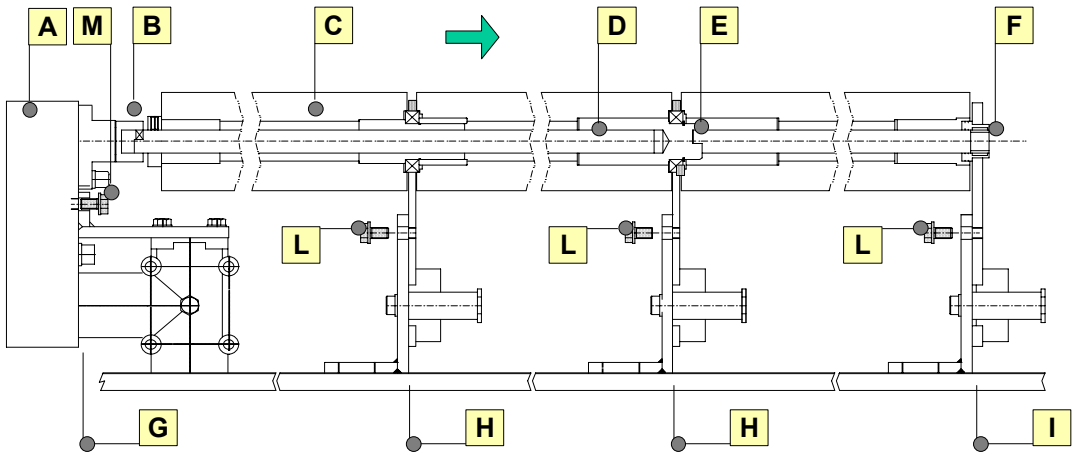
b. Monthly grease the self-aligning bearings and sleeves through the grease nipples located in the area of use.

a. The electrical cabinet is fitted with air recirculation fans.
Monthly clean the ventilation filters mounted between the fan and the safety plastic grid.

5. MOUNTING AND DISMOUNTING THE WORM

a. Placed on two supports, one at the entry end and one at the exit end, the worm is easily taken down for replacement or job size change.
Motion is transmitted by means of a reducer located to the side of the side support, entry end.

b. Beyond a given length of the worm intermediate supports with brackets are added to ensure proper support.



A driving unit
B driving dutch
C worm
D worm shaft
E connecting clutch
F bearing
G side support, entry end
H intermediate or intermediate break-off support
I side support, exit end
L wrench-19 screw
M wrench-19 screw

NOTE

To position the worm in alignment with machine axis when changing job size, loosen screw **M**.
The intermediate support simply supports the worm.
The intermediate break-off support is located where the two worm halves connect through the connecting dutch.

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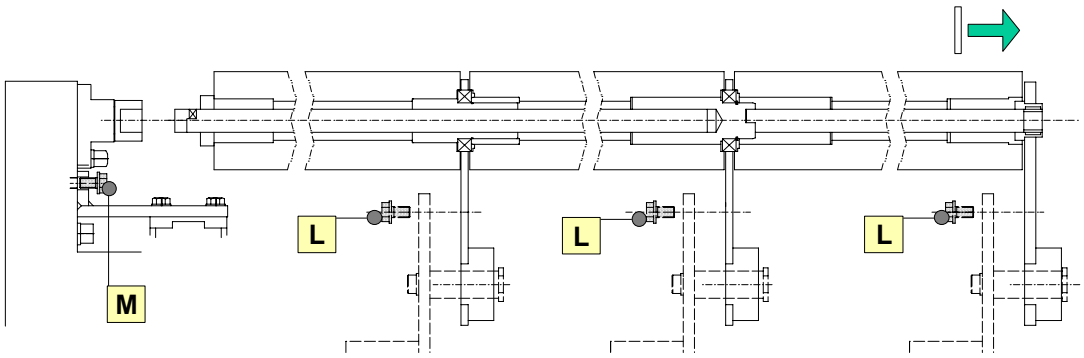
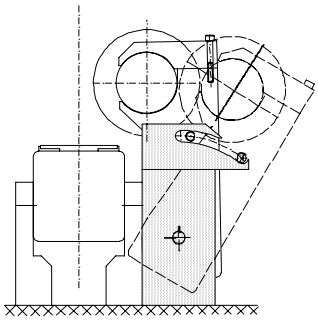
c. Replacing the worm

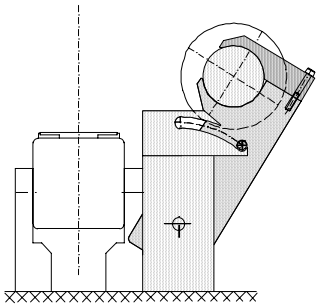




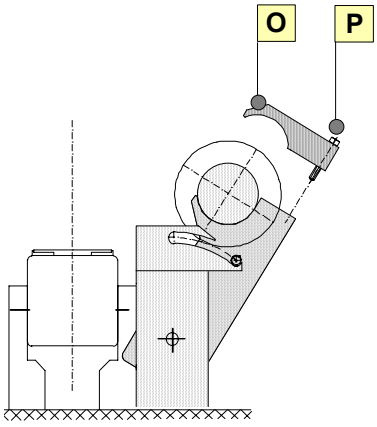
PROCEDURE

1. Carry out the door opening procedure.
2. Open the door.

3. Remove screws **L**
   Loosen screw **M**
   Tilt the worm, as shown on the diagram.
   If there are intermediate supports, remove bearing brackets **O**



4. Move the worm sideways away from the entry side to drive the worm shaft out of the driving clutch **B**, drive the shaft out of the side support, exit end **F,** then lift the worm and take it out of the machine
5. Installing the new worm
   Drive the worm shaft in the driving clutch **B** on the side support, entry end.
   Mount the bearing of the side support, exit end, on the worm shaft.
   Mount the brackets back on the intermediate supports, if applicable.
6. Carry out the setting-up procedure
   Tighten screws **L - M**



Consult section P1 C chapter -5. setting up the machine-.

7. Close the door
8. To restart the machine position selector switches **SA41-SA42** back to AUTO, then press the RUN push button **SB50**.

O bearing locking bracket
P wrench-10 screw

6. ADJUSTING THE CHAIN TENSION

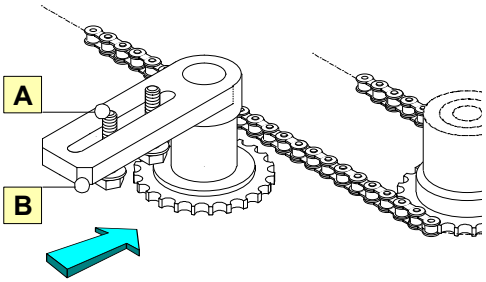
a. Chain tighteners are fitted to the machine in the most suitable position to tension the chain when it slackens.

Consult part P2- Specific rules for your machine type

b. To adjust chain tension act on the tighteners. Do not tension the chain too much to avoid reducing the life of the support bearings.
Check chain tension after the first 200 hours of work of the machine, then check it every 2000 hours of work.

c. Different types of chain tighteners are fitted depending on their use.

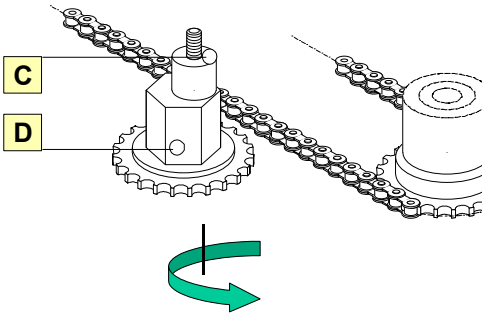
Fork tightener



Loosen screws **A**, manually position fork **B** against the chain to tension it, tighten screws **A**.

A screw
B sprocket wheel holder, fork type

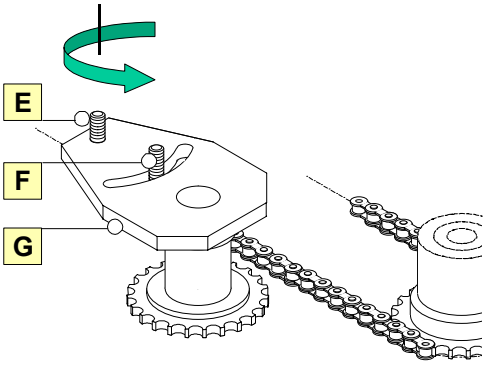
Eccentric pin tightener



Loosen screw **C**, use a suitable wrench to rotate the eccentric against the chain to tension it, tighten screw **C**.

C screw
D sprocket wheel holder, eccentric type

Fulcrum tightener



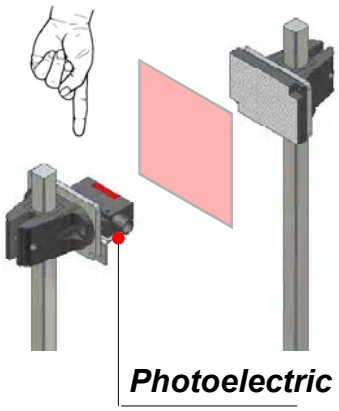
Loosen s crews **E** an d **F**, m anually r otate pl ate **G** against the chain to tension it, tighten screw **C**.

E screw
F 22-wrench nut screw
G sprocket wheel holder, plate type

7. CHECKING EFFICIENCY OF PHOTOELECTRIC CELLS

a. The machine is fitted with photoelectric cells with prismatic reflector to control the various phases of the process.

b. A faulty photoelectric cell causes the machine to stop, so it is important that all photoelectric cells are kept efficient. In case of fault check the photoelectric cell operation following the procedure below, before calling for the electrician



PROCEDURE

1. Obscure the photoelectric cell

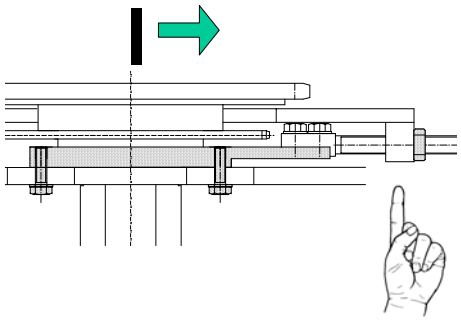
2. Check that the LED on the photoelectric cell either lights or extinguishes. If the LED does not change its state:

- the photoelectric cell is out of alignment with its work axis-check and align it
- connection cable has broken
- the photoelectric cell is out of order.

8. ADJUSTING OF THE WIREHOOD HOLDER CHAIN (RECORD)

a. When you see that the tension of the chain holding the wirehoods is not optimal, it is necessary to restore the ideal conditions again in order to avoid possible anomalies.

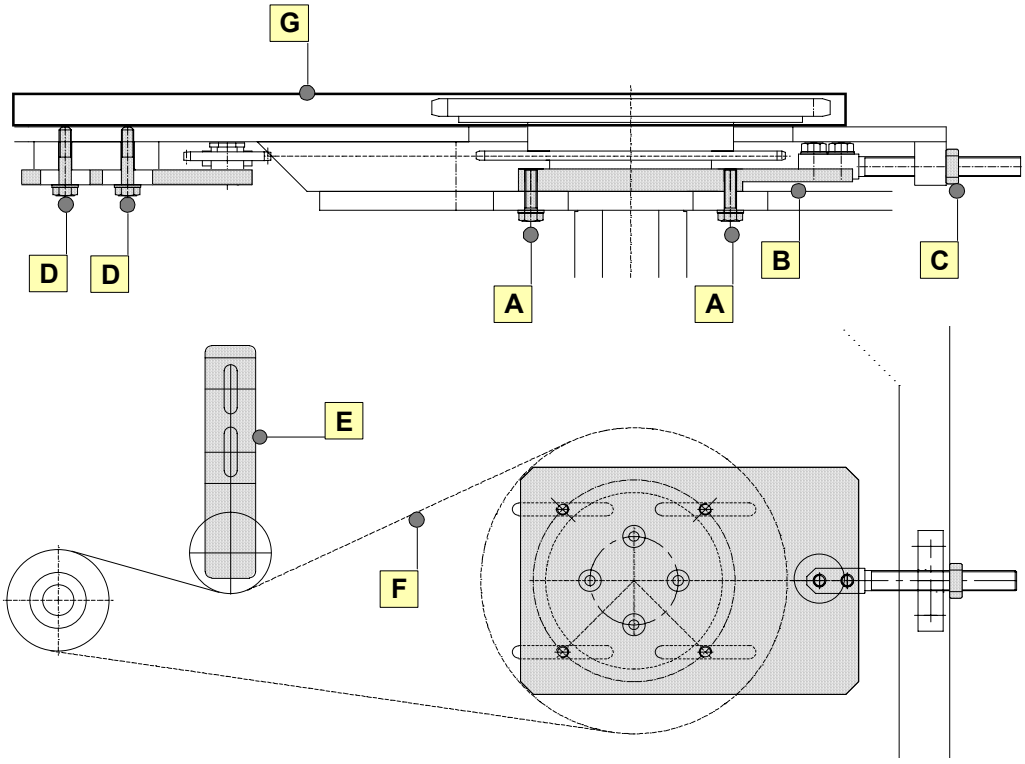
8.1 Chain tensioning



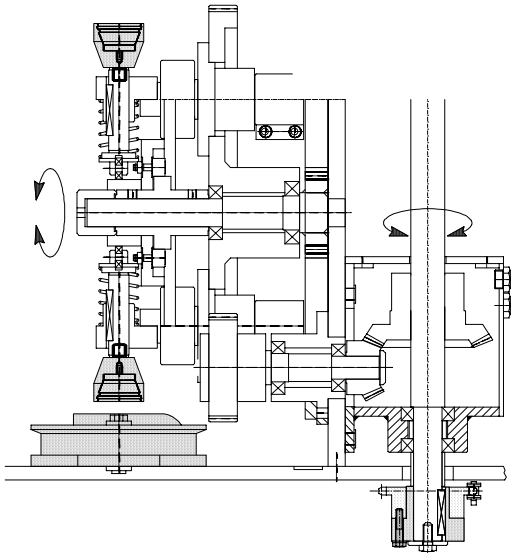
PROCEDURE

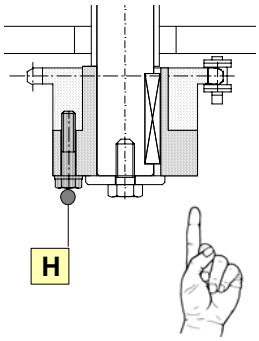
1. Loosen the 4 screws **A**
2. Loosen the 2 screws **D**
3. Adjust the tension of the wirehood chain **G** by tightening the tension nut **C**
4. Tighten screws **A** and **D** of the tension chain **E**, which must be placed in the correct position in order to assure normal tension to the transmission chain **F**.

A Locking screws for crowns holder plate
B Crowns holder plate
C Tension nut
D Locking screws for chain tension
E Tension chain
F Transmission chain
G Wirehood holder chain



8.2 Alignment correction





After performing the tensioning of the wirehood holder chain, it is necessary to correct the alignment between the wirehood holder head and the wirehood holder jig:

PROCEDURE

1. Loosen the 3 screws **H**
2. Turn the shaft to accelerate or delay the heads, in order to adjust them with the jigs of the wirehood holder chain.
3. Tighten screws **H**

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SECTION

- E -

Size change

1. Changing job size ---------- page 89

2. Areas affected by job size change ---------- page 90

3. Final checks before starting the new job ---------- page 91

The areas affected by and the mechanical procedures for job size change are dealt with in part P2 of this manual - specific rules for your machine type

NOTES

a. .....

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b. .....

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c. .....

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d. .....

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e. .....

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f. .....

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g. .....

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h. .....

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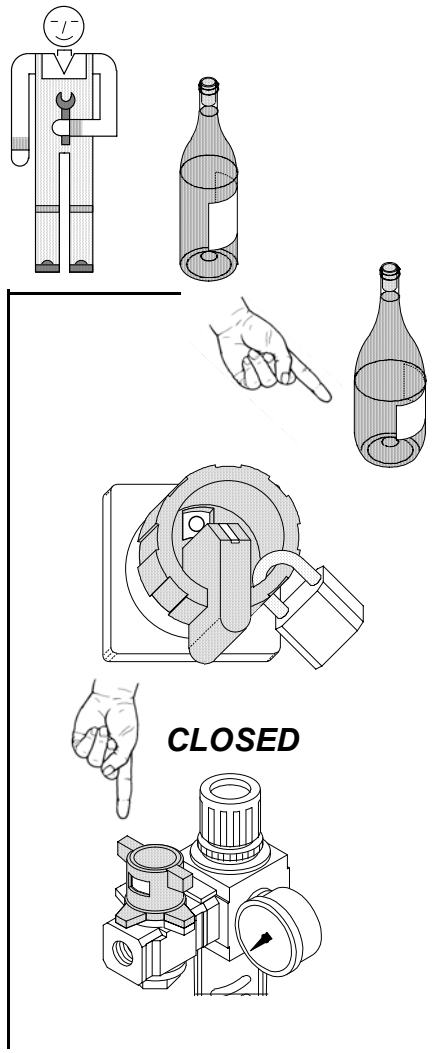
1. CHANGING JOB SIZE

a. The task of preparing the machine for job size change is referred to as the maintenance-ma in this Manual.

b. All operations described in this section shall be carried out by the maintenance-man only who must be familiar with and follow all procedures to work in safety.

c. Think the job size change over before carrying it out to avoid making mistakes or damaging the machine.



d. Before starting, make sure you have tools and fixtures suitable for the work you are about to make, and that the characteristic of the new product are actually those considered for the job.

PROCEDURE

1. Switch off the machine.
If the machine is part of a line, disconnect any connections per mitting to unintentionally start the machine moving parts.

2. Lock the main switch (after turning it to " 0" OFF position) and take out the padlock key. The key must be kept by the maintenance-man

3. Make sure the sliding valve of the air treatment unit is closed

4. Changing job size

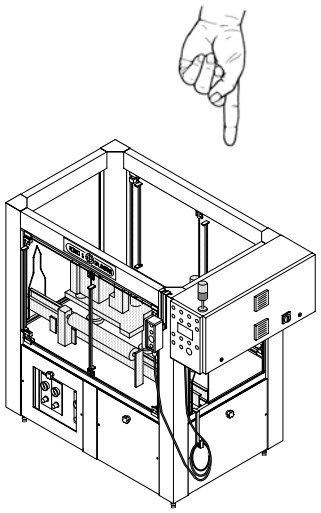
5. The areas affected by and the mechanical procedures for job size change are dealt with in part P2 of this manual - specific rules for your machine type

6. The work completed, make sure you left no tools or fixtures inside the machine or in the area around it.

7. Close all doors, unlock the main switch leaving it on the "0" OFF position, open the air treatment unit valve.

2. AREAS AFFECTED BY JOB SIZE CHANGE

a. The machine is designed to dispense various capsule sizes on various bottle types.
Job size change, i.e. adjustment and replacement of machine components, allows changing the type of processed bottle or dispensing capsules of a different size.



PROCEDURE

1. Adjust the belt guide rails.

2. Adjust the height of the heads reading it on the millimetre scale located next to the handle.

3. Use the specific handle to adjust the height of the dispensing unit support; a bottle height gauge is provided for the purpose.

4. The dispensing unit can be set up to suit various size capsules - make the adjustments required to suit the capsule size to process.

5. Replace the worm and adjust its position.

6. Replace guides and bottle dispensing stars.

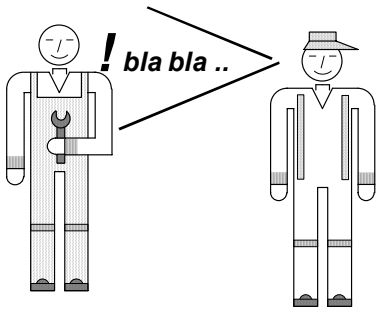
Consult part P2- specific rules for you machine type

3. FINAL CHECKS BEFORE STARTING THE NEW JOB

a. Before delivering the machine to the operator ready to run the new job the maintenance-man shall perform a number of checks to make sure the machine can be run in safety.

b. Make sure all safety guards are securely fastened.
Switch on the machine according to the procedures described in this manual.
Start the new work cycle.
Check work speed and pressure and adjust as needed for steady state running. of the machine

c. Make the operator aware of the general characteristics of the new job.



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