

CHOCOFORM

USER AND SERVICE MANUAL



PREFACE

SELMi S.r.l. would like to thank you for purchasing our "CHOCOFORM".

This manual is to be considered an integral part of the machine and its purpose is to allow use of the machine throughout its life, from delivery until demolition. Therefore, we suggest that you read it carefully. Everyone working with the machine must read this manual. It is also necessary to keep the manual in a place accessible to operators at all times.

In the event of loss or damage of this manual, please ask SELMi S.r.l. to send you a replacement copy.

The technical information contained in this manual belongs to SELMi S.r.l. and must be considered proprietary.

The total or partial reproduction of the graphic design, text and illustrations is forbidden.

With a view to constant technical improvement, the company reserves the right to make any necessary amendments to the content of the manual, to the machine or to parts thereof. Consequently, some of the illustrations may differ slightly from your machine.

This document is an integral part of the "CHOCOFORM", as described in section 1.7.4 of annex I of directive 2006/42/EC.

The Italian edition of this manual contains the original instructions. The foreign language editions are to be considered as translations of the original instructions.

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Edition January 2018



EC DECLARATION OF CONFORMITY

The manufacturing company SELMi S.r.l., with main office in S. Vittoria D'Alba (CN) Italy – Via Statale, 151, in its capacity as manufacturer, declares, under its own responsibility, that the machine named:

"CHOCOFORM"

Serial number:

is compliant with all the provisions contained in the following directives: 2006/42/EC (machine directive), 2014/30/UE (electromagnetic compatibility)

2014/35/UE (low voltage directive) and EC regulation 1935/2004 (contact with foodstuffs).

The norms adhered to that are used as a reference for the design, realization and testing of the machine are listed in the technical files archived at Selmi Srl.

The manufacturer also wishes to inform you that the technical file may, in the cases envisaged by the directive, be put together by the manufacturing company.

Year of construction:

Date:



The liable person

1. General information	3	3. Moving and transportation section	19
1.1. Structure of the manual	3	3.1. General norms	19
1.2. Messages Used	3	3.2. Packaging	19
1.3. Aim and contents	3	3.3. Transportation	20
1.4. Preservation of the manual	3	3.4. Removal of the packaging	20
1.5. External components	4	5. Operation section	23
1.6. Internal components	6	Description of the controls	23
1.7. Details of the manufacturer	11	Using the machine	23
1.8. Identification plate of the machine	11	6. Maintenance section	40
1.9. Identification plate of the CE marking	11	6.1. General information	42
1.10. Inteded use	11	6.2. General safety practice	42
1.11. Operating environment	11	7. Technical diagrams section	42
1.12. Noise level	11	7.1. Electrical circuit diagram	42
1.13. Technical characteristics	13	Spare parts	60
1.14. Dimensions	13		
1.15. Storage	13		
1.16. Disposal	13		
1.17. Warranty	13		
1.18. person qualified to operate	14		
2. Safety section	15		
2.1. Safety information	15		
2.2. Safety limitations	15		
2.3. Safety symbols and plaques	16		
2.4. Safety and protection devices	16		
2.5. Client's safety measures	17		
2.6. Personal protection equipment	17		
2.7. Residual risks	17		
2.8. Applied Directives	18		
2.9. Harmonized technical norms	18		

1. General information

1.1. Structure of the manual

To simplify the reading and understanding of the information contained in this manual and to make searches quicker, it has been divided into sections, each dedicated to a specific subject.

1.2. Messages used

Attention

This type of message is used to draw the reader's attention to more delicate or particular procedures which, if not carried out correctly, may pose a risk to the safety of the operator and cause damage to parts of the machine.

Warning

This type of message is used to draw the reader's attention to procedures which, if not carried out correctly or at pre-set intervals, may cause damage to the machine or its parts, as well as to the product being processed.

Environment

Messages relating to the environment draw the operator's attention to the rules to be followed to prevent the risk of environmental damages deriving, directly or indirectly, from use of the machine.

Note

These messages highlight instructions, advice and notes that can be particularly helpful during the various uses of the machine.

1.3. Aim and contents

This manual has been drawn up in consideration of the requirements of directive 2006/42/EC and paying particular attention to describing all the procedures necessary to obtain the best working conditions for the machine and its operators, without neglecting product quality:

The aim of this manual is, therefore, to provide the user with all the information necessary for the correct use and maintenance of the machine. Consequently it is absolutely necessary:

- to meticulously follow the instructions given in the manual during every phase of the machine's life, from transportation to demolition;
- for every machine operator to thoroughly read the contents of this manual;
- for the company's safety officer to make sure that all machine operators have clearly understood how the machine works

Attention

In case of doubts on the correct interpretation of the instructions please contact the manufacturer to obtain the necessary clarifications. All those carrying out any kind of operation on the machine must have thoroughly read and understood the contents of this instruction manual.

Warning

If this manual is damaged or lost, please ask the manufacturer or the authorised distributor in the country where the machine is being used for another copy.

1.4. Preservation of the manual

The instruction manual is an integral part of the machine and must be used to train and inform professional figures operating on the machine. Consequently, it is necessary to follow certain simple instructions regarding its preservation, as follows:

- store the manual in areas protected from humidity and heat, so as not to jeopardise the quality or legibility of any part of the publication;
- keep the manual in an easily accessible place known to the machine operators;
- avoid handling the manual with dirty or greasy hands;
- if you think it is necessary to highlight important steps of the manual, use non-permanent systems, to preserve its legibility;
- do not remove, rip or rewrite any parts of the manual for any reason.

1.5. External Components



1. Blue belt for finish product
2. Left side protection panel
3. Vertical piston carter
4. Cartridge loading belt protection
5. Unloading belt protection
6. Emergency and Reset buttons
7. Touch screen
8. Electrical armchair
9. Swivelling wheels

Layouts possibilities

LEFT SIDE PRODUCT EXIT



SELMi AUTOMATIC TRUFFLE

SELMi CHOCOFORM

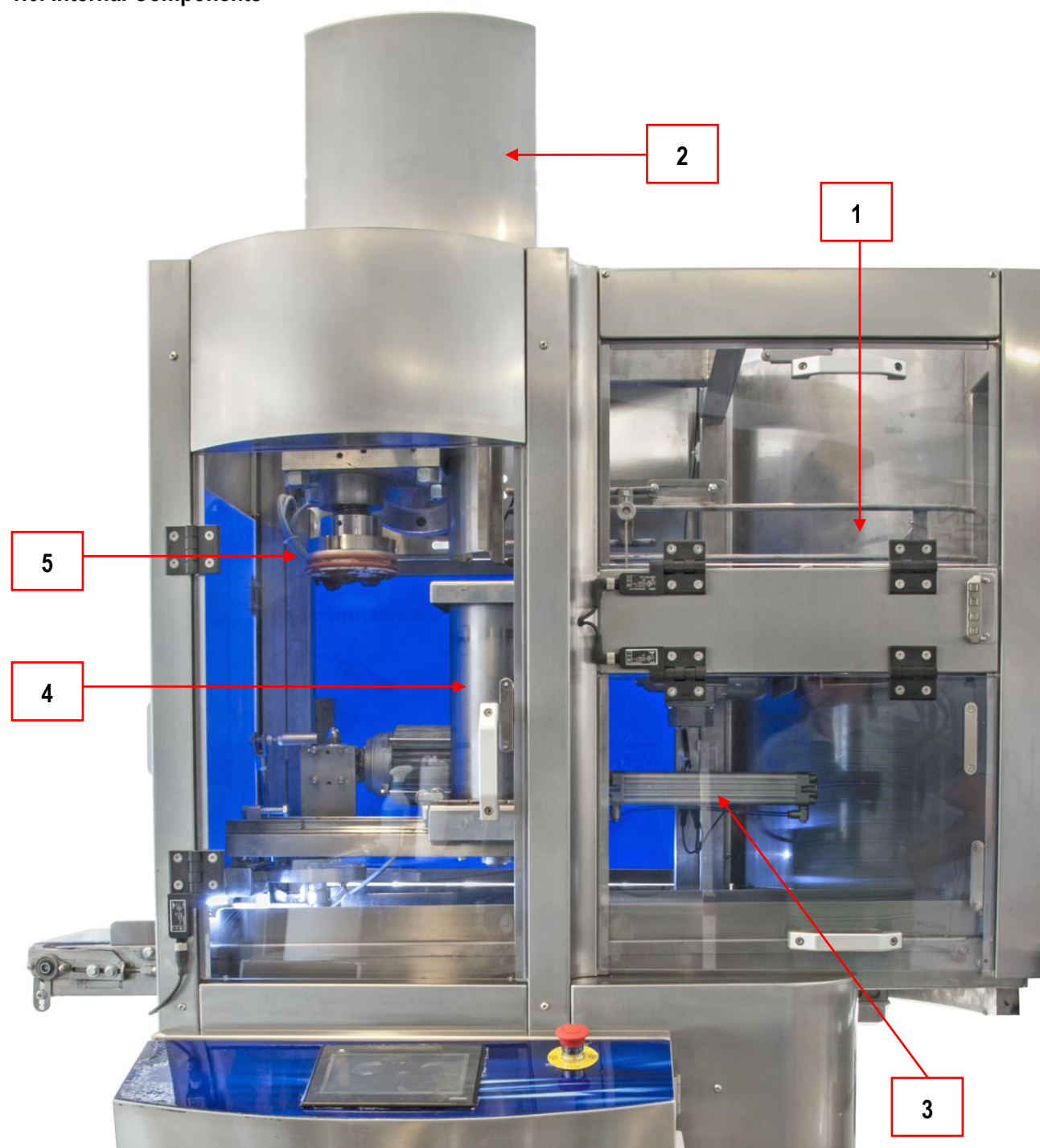
RIGHT SIDE PRODUCT EXIT



SELMi CHOCOFORM

SELMi TUNNEL

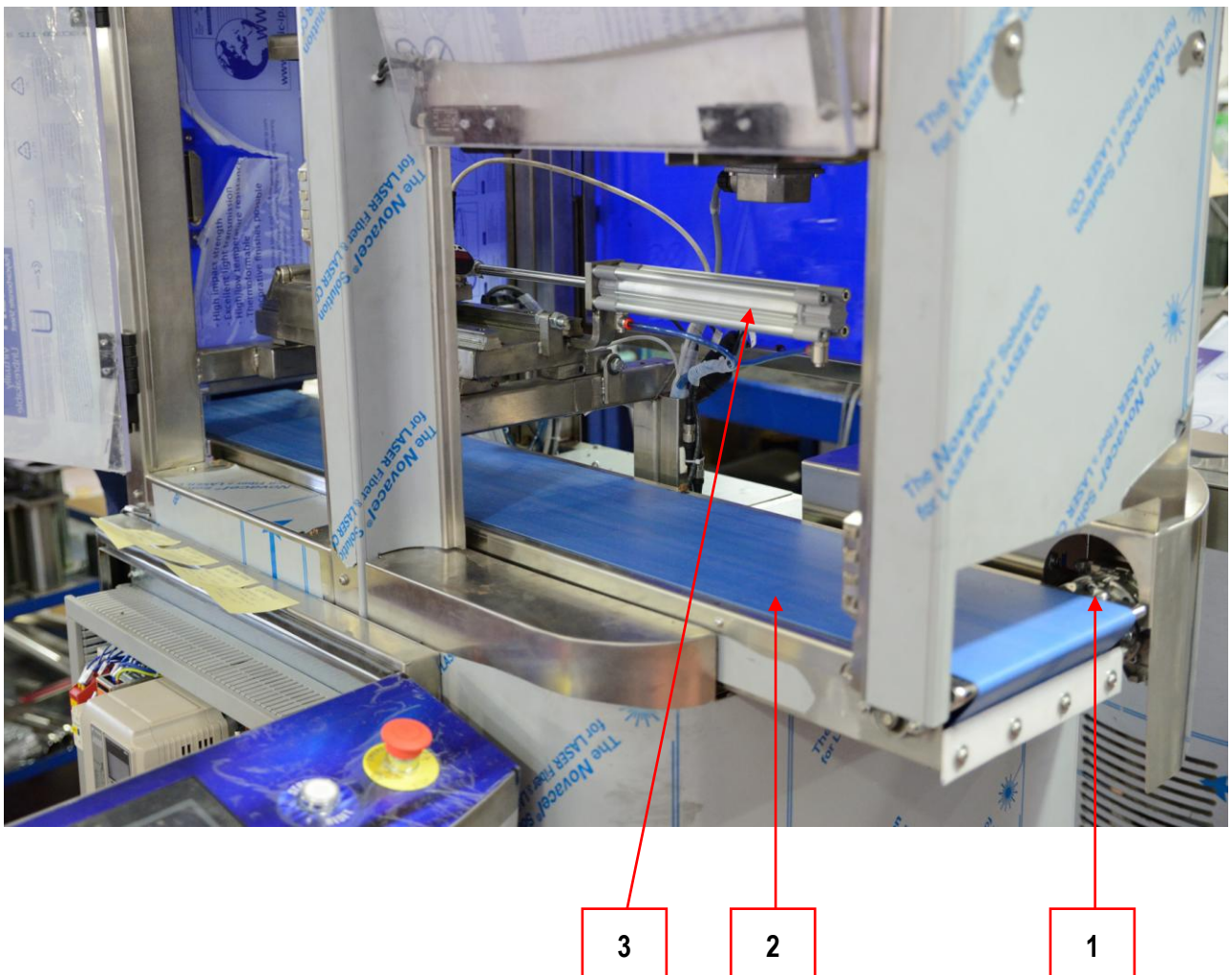
1.6. Internal Components



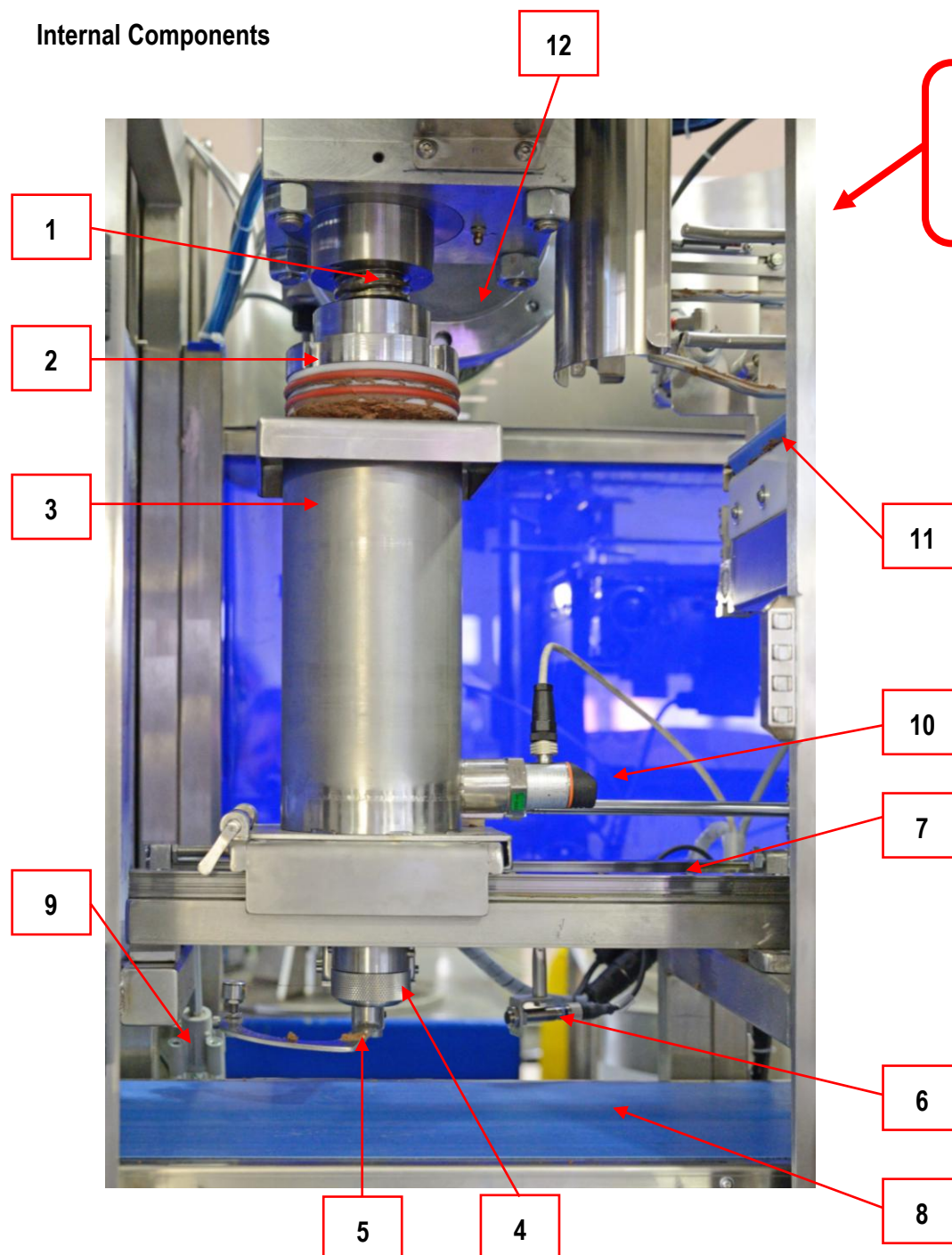
1. Upper Belt: move the carriage over the extrusion cylinder (4)
2. Vertical piston: push the carriage inside the extrusion cylinder
3. Horizontal piston: move the extrusion cylinder in position
4. Carriage holder: keep the carriage during movement
5. Extrusion piston

Internal Components

1. Lower Belt motor and reducer
2. Lower belt
3. Horizontal piston

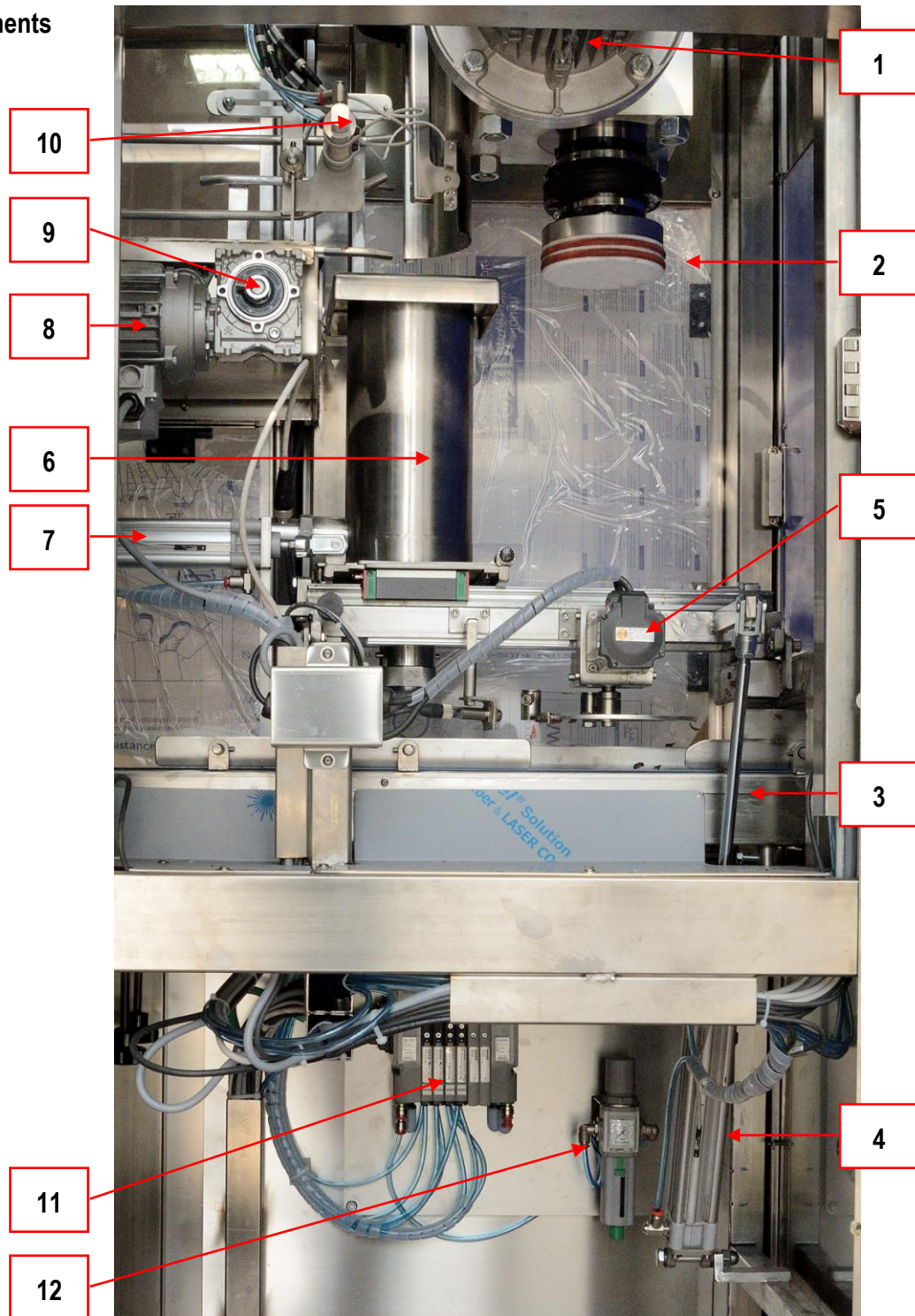


Internal Components



1. Screw of extrusion
2. Extrusion head
3. Cartridge holder
4. Extruder shape
5. Cutter
6. Cutter sensor
7. Rail for the translation of the Cartridge holder
8. Lower Belt
9. Overturn piston and leverage
10. Pressure sensor
11. Cartridge loading upper belt
12. Motor and reducer for the extrusion screw

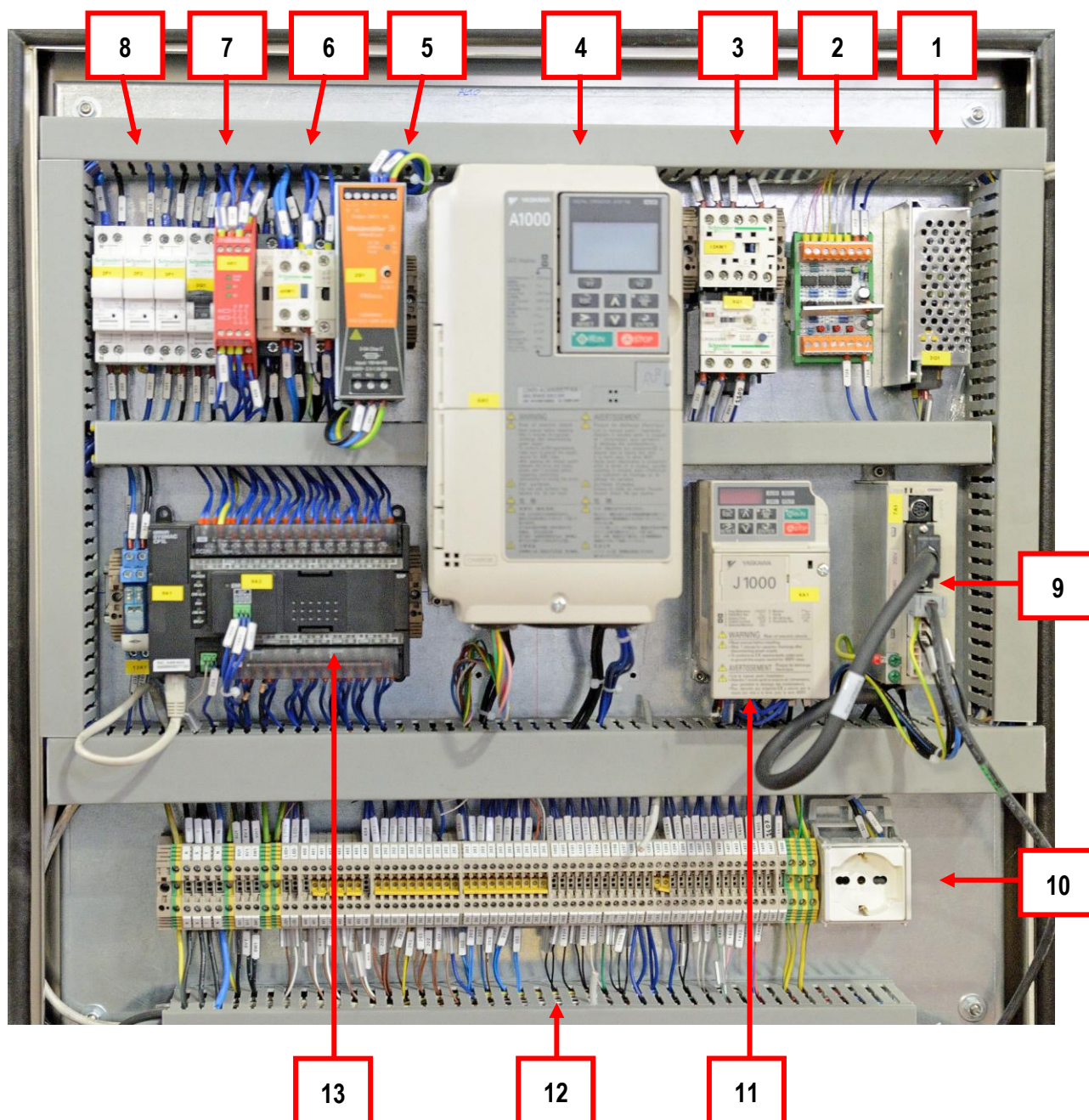
Internal Components



- 1 - Motor for the extrusion screw
- 2 - Extrusion head
- 3 - Overturn leverage
- 4 - Overturn piston
- 5 - Cutter Motor
- 6 - Cartridge holder
- 7 - Piston for translate the cylinder on the rail
- 8 - Upper belt motor
- 9 - Upper belt reducer

- 10 - Piston for holding the cartridge
- 11 - Electrovalve group
- 12 - Manometer

Electrical panel



1. Led supply
2. Electrical schedule for the cutter motor communication
3. Contactor of the upper belt motor
4. Extrusion motor inverter
5. 24V d.c. Supply
6. Main contactor
7. Security module
8. Fuses
9. Cutter motor drive
10. 220V socket
11. Inverter lower belt
12. Clamps
13. PLC

1.7. Details of the manufacturer

The machine described in this instruction manual was built by:

SELMi S.r.l.

Via Statale, 151 – 12069 – S. Vittoria D'Alba (CN) Italia
Tel. 0172.479273 - 0172.479275 - Fax 0172.477814
www.selmi-group.it - info@selmi-group.it

1.8. Identification plate of the machine (CE marketing)

There is a plate, similar to the one shown here, on the machine, indicating details of the manufacturer, the CE conformity mark and the machine's serial number. Always state this number when communicating with the manufacturer.



Example of identification plate on the machine structure

TYPE
SERIAL NUMBER
YEAR
WEIGHT

1.9. Identification plate of the CE marking electric panel (low voltage)

Example of identification plate on electrical panel. See the data shown in the section on the machine's technical specifications.



1.10. Intended use

CHOCOFORM is a completely innovative machine in the Selmi range that works with pressure upon a cylindrical cartridge (made of chocolate and hazelnut, almond etc.) for higher quantities of chocolates production in a certain shape. The cartridges, previously made by pre crystalizing the recipe into a tempering machine from our EX-range (EX= tempering machine with removable screw for Easy cleaning), will be formed into the chosen shape and size by the Chocoform machine. The Touch Screen panel will show the pressure, all other parameters and according to the desired matrix and the program set, a synchronized blade will cut the chocolates to the chosen size. The settable speed will also determine the hourly production. The placement of a cooling tunnel and of an automatic truffle machine, side by side to the CHOCOFORM, will help to transform the shape and structure of the product made by this machine to the ultimate truffle design and taste.

Warning

A use other than that specified is considered improper. The machine is intended for professional use only.

1.11. Operating environment

To guarantee proper functioning the machine must be protected from atmospheric agents. Its ambient operational temperature should be between 15C° and 35C° with relative humidity not exceeding 70%.

The working environment must be clean, sufficiently illuminated and away from an explosive environment.

The environmental characteristics of the installation site are specified in section 4.

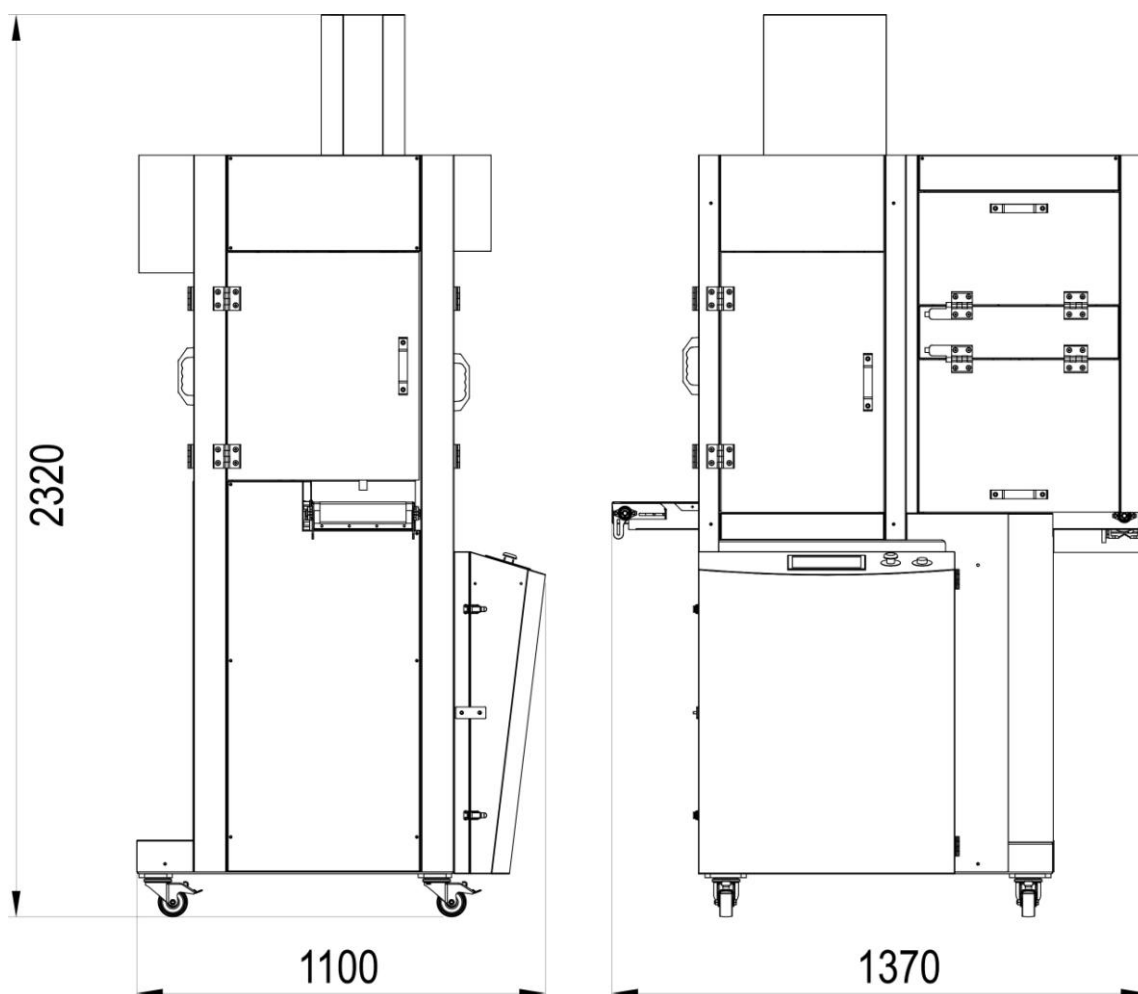
1.12. Noise level

The phonometric tests carried out on this specific machine model show an acoustic pressure lower than **70 dB(A)**.

1.13 Technical sheet

Carter	AISI 304 L
Protection door	Lexan
Weight	400 kg
Total power installed	2,5 kW max
Voltage	380V
Number phases	3
Frequency	50Hz/60Hz
Wrapping protection	IP 55
Air Compressed required	120 l/min - min. 6 bar
Air characteristics	Disoiled, Dry, filtered

1.14 Dimensions



1.15. Storage

Remove the remaining product left in the machine following the instructions in the appropriate section. Stop the machine using the main switch and disconnect it from the electricity main. Move it to a spacious place (it is necessary to work all around the machine).

Clean the tank, the removable components (i.e. screw pump, mixer, nozzle) and the pipes as described in the appropriate section.

Attention

It is absolutely necessary to follow the instructions in order to insure the safety of the operators and to avoid damaging the machine's removable parts.

Use a brush to cover the movable components and the mechanical moving parts with a thin layer of food grade lubricant. This can later be removed with an alkaline de-greaser (Sodium Hydroxide) if the machine needs to be re-installed.

Carry out the same operation on the machine surfaces, taking care of avoiding the heating elements located in the inner part of the machine.

Gather the parts (use as reference the delivery packing list) and put them in the original packaging. Place packets of hygroscopic salt based on silica gel in the packaging.

Store all the parts in a sheltered place away from atmospheric agents and in temperatures from 0° C to 40° C. Cover the parts with nylon in order to prevent the accumulation of dust.

1.16. Disposal

Disposal will occur at the end of the working life of the machine, which under normal conditions of use and maintenance will be over ten years.

In the case of disposal all the components of the machine will have to be disposed of in adequate waste yards according to the legislation in force.

Before disposal it will be necessary to separate the plastic or rubber parts and the electrical and electronic material.

Environment

Parts made solely of plastic, aluminium and steel can be recycled in the appropriate collection centres.

According to the RoHS regulations electronic boards and electric material should be recycled separately in authorised collection centres.

1.17. Warranty

The manufacturer offers a warranty on this machine model for a period of 24 months from the purchase date, as shown on the fiscal document issued at the time the machine is delivered.

The warranty will be void if the machine is repaired by a third non authorized party or if fixtures and accessories not supplied by or recommended or approved by the manufacturer are used.

The warranty will also be void upon removal or alteration of the plate showing the serial number and other data.

Within the warranty period the manufacturer will repair or replace, free of charge, parts that are faulty due to manufacturing.

In case the repair has to take place at the manufacturer's site, the machine will have to be sent to the manufacturer in its original packaging.

Transportation expenses will be covered by the manufacturer during the warranty period.

The warranty does not cover the cleaning of the functioning parts.

Defects not clearly attributed to the material or the manufacturing will be examined. If the claim should turn out to be unjustified all repair expenses, changed parts and transportation will be charged to the buyer.

The warranty does not cover damage caused by the following:

- accidental damage during transportation
- damage due to lack of care or procedures carried out incorrectly
- damage due to improper use not conforming to the warnings of the user and service manual
- components subject to wear and tear; a detailed list is available in the components section.

Structural damage, modifications, improper alterations or repairs can affect the functioning of the safety mechanisms, thus making the declaration of conformity and warranty void. Alterations on the machine can be carried out solely by technicians authorised by the manufacturer.

1.18. Professional personnel qualified to operate the machine

The machine must only be used by authorised and purposely trained personnel; the same precautions are also applicable to personnel who carry out maintenance.

Personnel who do routine and extraordinary maintenance must be specially trained professionals; good knowledge of the machine is needed for extraordinary maintenance.

Attention

Do not permit others to approach the machine during its use or maintenance.

The following professional people, after having received all the necessary instructions, are the only ones allowed access to the machine:

Safety officer

The safety officer is responsible for protection and prevention of risks in the workplace, as is mentioned in European Directive 89/391/EEC (Safety in the workplace), introduced in Italy with the 12/11/1994 Legislative Decree.

It is the responsibility of the safety officer to make sure that all personnel who use/maintain the machine have received all the instructions regarding their relative roles contained in this manual.

Operator (user of the machine)

Operator trained and qualified for the use of the machine (working cycle, potential adjustments, etc.).

He/she can only carry out the specific tasks described in this manual reserved for this role.

Mechanical maintenance technician

The technician is qualified to use the machine as the OPERATOR and furthermore to use it with the protection disabled, to attend to the mechanical parts for adjustments, maintenance and reparations.

He/she is not qualified to act on live electrical installations.

The mechanical maintenance technician must have a generic knowledge of the machine and a specific knowledge on this machine model.

Electrical maintenance technician

The technician is qualified to use the machine as the OPERATOR and furthermore to use it with the protection disabled, to attend to the adjustments and electrical installations for the purposes of maintenance and repair.

If qualified, he/she may work when the electrical panels, control devices, are live, provided he/she uses appropriate personal protective devices.

The electrical maintenance technician must have a generic understanding of the electrical panels and specific knowledge on the electrical panel and components of this machine.

Manufacturer

The manufacturer's personnel are qualified to perform all of the above-described operations.

Any operations not described in this manual may be performed ONLY by personnel authorized by the manufacturer.

2. Safety section

2.1. Safety information

Attention

The safety officer has the obligation to inform the workers on the risks related to the use of the machine.

Furthermore the employer must inform, educate and train the user according to statutory laws.

The lack of compliance with the basic norms or precautions could result in accidents during the functioning, maintenance or reparations of the machine. Accidents can often be avoided by acknowledging potential hazardous situations before they materialise. The operator must pay attention to the potential dangers and have the training, the competence and the necessary equipment to deal with these tasks correctly.

The manufacturer cannot be held responsible for accidents or damages resulting from the use of the machine by personnel not adequately trained or having used the machine improperly, as well as the lack of, even partial, compliance to the safety norms and interventions procedures contained in this manual.

The safety precautions and the warnings messages, the operator could be subject to accidents with serious consequences for himself and for other people.

In cases where tools, procedures, work methods or working techniques not explicitly suggested by the manufacturer are used, it will be necessary to make sure that no dangers are present for the individual carrying them out and to other alike.



Use exclusively original SELMI spare parts. The manufacturer will take no responsibility for accidents or damages in the case of use of non-original spare parts.

If a tool not supplied by the manufacturer is installed on the machine, the client needs to make sure that the norms stated in Directive 2006/42/EC are adhered to. If this new tool introduces new risks to the system then the new system must be re-certified. In any case the manufacturer cannot be held responsible for accidents or damages caused by the machine if it has been modified or equipped with non original accessories.

2.2. Safety limitations

Attention

The indications mentioned hereafter cannot completely safeguard from all dangers that one might encounter while using the machine; they must be used in conjunction with common sense and the experience of the operator, the only indispensable measures for the prevention of injury.

Every section has a list of specific safety measures for different operations. The safety measures mentioned here below are generic and should be followed for all procedures on the machine.

The responsibilities assigned to specific people concerning the use of the machine must be clearly defined as stated in the "Qualified Personnel" section.

Attention

The use of the machine is forbidden to personnel who have not been authorised or trained by the safety officer.

Consult the manufacturer before carrying out procedures that are not mentioned in this manual.

Prolonged overloads or anomalies can cause the electric motors and electrical appliances to overheat with resultant harmful fumes. In such cases immediately disconnect the machine from the mains and do not approach the machine until such fumes have been dispersed via adequate ventilation. In case of fires do not use water jets on the machine – use CO2 extinguishers instead.

The operator, any helping technician and the maintenance technician must use the appropriate personal protection equipment when working on the machine.

It is forbidden to climb on the machine.

Do not touch the electrical wires, switches, buttons etc. with wet hands.

The parts subject to wear and tear during the functioning of the machine must be checked and replaced as soon as they present noticeable signs of wear and tear.

The manufacturer has designed and built the machine to last for a reasonable time with the Client's normal conditions of use in mind; it is however necessary to periodically check the components and the structure of the machine, paying attention to any anomalous conditions, such as, for example, cracks or deformations. If necessary, contact the manufacturer to ask for a complete check of the machine.

Please consult Section 4 (Installation) for the working environmental conditions of the machine.

2.3. Safety symbols and plaques

The machine has a number of plaques with symbols and and/or safety messages stuck to it.

Attention

Make sure that all the safety messages are legible and in good condition.

Replace the damaged plaques with the new ones from the manufacturer. If a plaque happens to be on a part that is being replaced, make sure that a plaque is present on the new piece.

ATTENTION

THE PERFORMANCE OF WORK ON ELECTRICAL EQUIPMENT CONNECTED TO THE POWER SUPPLY IS STRICTLY FORBIDDEN

- ANY EXCEPTIONS MUST BE AUTHORISED BY THE EXECUTIVE MANAGER
- IN PARTICULARLY DANGEROUS SITUATIONS, ANOTHER PERSON MUST BE PRESENT IN ADDITION TO THE PERSON PERFORMING THE WORK

WORK MAY ONLY BEGIN WHEN THE SAFETY MEASURES HAVE BEEN IMPLEMENTED

IN OBSERVANCE OF PRESIDENTIAL DECREE 543 ON THE PREVENTION OF ACCIDENTS



(positioned on the door of the electrical panel)



Label indicating compulsory reading of the manual
(positioned on the front of the machine)

2.4. Safety and protection devices

Attention

The components shown here are particularly important for the safety of the operator and the machine. In cases of malfunction or wear they must be replaced with spare parts supplied or authorized by the manufacturer.

While the machine is in use all the protection devices must be correctly installed.

The safety devices present on the machine are:

- *Mushroom emergency button with mechanical unblock mechanism.*

There is an emergency stop mushroom button on the machine. Pushing it cuts voltage to all live parts by means of appropriate devices. To reset it, release the emergency button by turning its head and then push the RESET button shown in the photo.

Before starting every shift, press it to make sure that it works properly.



2.5. Client's safety measures

The client must arrange for the following safety measures to be in place:

Provision of an adequate location for installation, paying particular attention to the characteristics below:

- Adequate flooring
- Normal and emergency lighting
- Adequate ventilation
- Clearly signposted emergency exits
- Provision of mains voltage connection with associated safety devices, conforming with the norms in force and the characteristics of the machine
- Adequate means for the collection and subsequent disposal of residues, even hazardous or special ones (oils and grease, broken or waste material, etc.).
- Adequate fire safety systems and equipment
- Prohibition of entry into the installation area to non authorized personnel

The customer must also provide for:

- Training of the operators and the maintenance technicians
- Training for the operators on the basic functioning of the machine and emergency devices
- Provision of personal safety equipment to protect the operator and the hygiene of the product
- Checking the qualifications of external maintenance technicians potentially called to work on the machine
- Keeping of a maintenance log book

The employer is also responsible for checking that the operators correctly carry out the procedures explained in this manual.

2.6. Personal protection equipment

The operators who carry out functions on the machine must receive appropriate instructions on the use of personal protection equipment such as shoes, gloves, etc... which will protect them from residual risks derived from the execution of various activities. The operators must furthermore be equipped with protection equipment for hygiene purposes (caps or hair nets, gown, etc...).

If the noise level in the working environment surpasses 85dB(A) appropriate ear protection must be used.

Warning

The clothing of whoever operates or carries out maintenance on the machine must conform to the essential safety requirements defined by European directive and the laws in force in the country in which the machine is installed.

Attention

During maintenance operations individuals must wear adequate clothing to prevent the occurrence of accidents.

In order to avoid mechanical risks such as snagging or dragging, it is prohibited to wear particular objects such as bracelets, watches, rings or necklaces during the working cycle and during maintenance operations.

2.7. Residual risks

The accurate risk analysis carried out by the manufacturer and archived in the technical file has eliminated most of the residual risks, which are nevertheless present during the use of the machine, to acceptable levels.

The manufacturer's recommendation is to meticulously adhere to the instructions, procedures and recommendations contained in this manual.

Attention

It is strictly prohibited to carry out any type of mechanical or electrical modification so as not to create added dangers and unforeseen risks.

The residual risks present on the machine are:

Risks during machine transportation

It is recommended to fasten the machine, or its parts, at the dedicated locations and lift it with appropriate means to the minimum permitted height, proceed at low speeds and make sure that the people helping with the moving are at a safe distance from the moving object. Before moving the machine make sure that the passage is clear and that there are no objects placed on the machine. It is important that the means of support and transportation is controlled by a person qualified for such a role, so as to avoid unforeseen movements which may be dangerous to the people in the vicinity who are helping with the moving.

Risks of faults to the circuits of signalling, safety, protection and emergency stop

In the case of a circuit fault, the safety and signaling circuits, the anti-injury protections and the emergency stop can lose their effectiveness, therefore it is asked that their functionality is periodically checked.

Identified residual risks and information plaques

The manufacturer has placed on the machine danger and/or warning plaques, based on the residual risks, with pictograms in compliance with the norm pertaining to the display of graphic symbols on the machine.

The user should immediately replace these plaques if they are not clearly legible.

Attention

It is expressly forbidden to remove the safety and/or warning plaques placed on the machine. The manufacturer will not take any responsibility on the safety of the machines if this is not observed.

Risk to life (electrolocation)

Before commencing work on any electrical appliance it is necessary to disconnect the machine from the mains. If it were to become necessary to work within the electric panel by bypassing the electricity cut off devices, then the work must be carried out exclusively by specialised personnel.

Risk of spreading fire

In case of fire never use jets of water in the vicinity of the apparatus. Disconnect all connections to the mains and use the appropriate CO2 extinguishers located in the building.

2.8. Applied Directives

The following directives apply to the machine described in this manual:

- 2006/42/EC machinery Directive
- 2014/30/UE Directive for electromagnetic compatibility
- 2014/35/UE low voltage Directive

And the regulation:

- 1935/2004 EC regulation for materials in contact with foodstuffs

2.9. Harmonized technical norms

The machine was designed and tested to conform to the "essential requirements to health and safety" present in attachment I of European Directive 2006/42/EC.

The norms used as reference for the design, the realization and the testing of the machine are listed in the technical file archived by the manufacturer.

3. Moving and transportation section

3.1. General norms

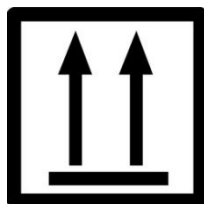
Before moving the machine always check the weight and general instructions shown on the packaging. Personnel not responsible for the movement of the machine must not remain in the area needed for movement.

3.2. Packaging

The machine is delivered on a platform, secured by means of straps and placed inside a cardboard packaging which is also secured to the platform by means of straps. An example of the machine packaging is shown in the picture below.



Instructions for transportation are on the sides of the packaging.



The first symbol shows the correct upright position of the packaging;



the second symbol shows that the packaging must be protected from the rain;



the third symbol shows that the content of the packaging is fragile and must be handled with care. On two sides of the packaging there is a device called "TILTWATCH", which can determine if the packaging has been tilted to such an extent that the content may have been damaged; it is necessary to pay attention to the instructions given on the adhesive label. If the machine has been excessively tilted during transportation (the dot at the centre of the TILTWATCH device will be red) some components could have been damaged.



Attention

The manufacturer's warranty does not cover damage during transportation; the buyer should follow the instructions on the adhesive label in order to avoid disputes.

3.3. Transportation

To transport the machine it is necessary to use a suitable vehicle equipped with a platform to lift the load; the platform must be adequate for the weight of the machine, which is stated in the technical characteristics section (section 1.13).

When the machine, still in its packaging, is in the body of the lorry, it can be carried to the lifting platform only by means of a manual transportation trolley for euro pallets.

The lifting platform has to be equipped with side rails in order to prevent the machine from falling when it is still high off the ground.

The machine can be lowered to the ground from the platform only after having lowered the manual trolley. The machine should be lowered slowly from the platform, avoiding shaking and sudden stops which could cause a loss of stability.

After having completed the unloading procedures, the machine should be moved exclusively by means of a manual transportation trolley adequate for euro pallets; the platform should only be lifted to the height needed to move the machine.

Before moving the machine verify that the passage to the final destination is clear.

Attention

Do not go on very steep ramps which could cause the loss of control of the trolley.

3.4. Removal of the packaging

Cut the straps that anchor the cardboard to the platform; remove the cardboard and put it out of the way.

Cut the straps that hold the machine to the platform, remove the machine's plastic cover and unravel the accessories provided.

Carefully lift the front of the machine and remove the wooden slat blocking the front wheels; subsequently remove also the wooden slat blocking the rear wheels by lifting the back of the machine.

Very carefully lower the machine from the platform.

Note

Keep the original packaging; it may be necessary to use it if the machine needs to be sent to the manufacturer for extraordinary maintenance or repairs.

4. Installation section

4.1. Positioning

Warning

Before positioning the machine check that the machine, the associated accessories and the parts supplied separately have not been damaged during transportation.

It is the task of the Client to make sure that the strength of the supporting surface, at the point of installation, is adequate for the weight of the machine.

The flooring at the point of installation must be sufficiently level.

Isolate the machine from any potential vibrations coming from other nearby machinery.

In the case where the machine or any of the associated accessories are found damaged it is important to alert the manufacturer of the found anomaly so as to agree on the actions to be taken.

Attention

The machine must be placed on a level surface; for the other environmental requirements necessary for optimal functioning of the machine please see sections 1.11 and 2.5..

4.2. Electrical connections

Attention

The connection of the machine to the electrical system must be carried out by personnel observing the legislation in force; the characteristics of the electrical connection must be compatible with the electrical specifications of the machine which can be found in the relevant section or on the apposite plaque on the door of the electric panel.

Attention

If the machine has been purchased to be powered by a three phase line, make sure that in the socket there is a connection to the neutral wire. This is necessary for the functioning of the machine.

Attention

Before starting any procedure make sure that there are no objects inside the tank.

Attention

This operation should be carried out by a technician or by a maintenance electrician.

4.3. Air compressed connection

In the picture below is shown the position of the air connection plug.

Attention

Make sure the pressure is around 2 bar. The air compressed must be disoiled and disidratated.



Air compressed connection

HOW TO USE THE MACHINE

MAIN PAGE

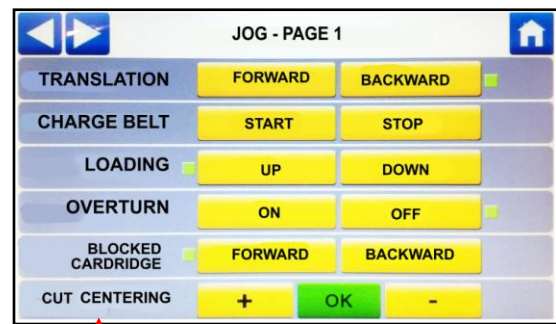


1. Choose your language pushing on the flag
2. For the next page push the center of the screen



1. **WORK:** Work page using the last recipe you've worked with
2. **JOG:** Manual settings and adjustment pages
3. **RECIPE:** use this button to start with new product
4. **LOGO:** Return to the main page

CUT CENTERING



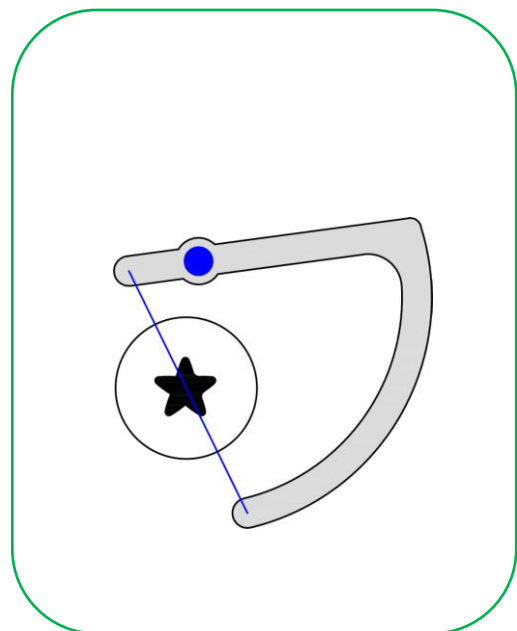
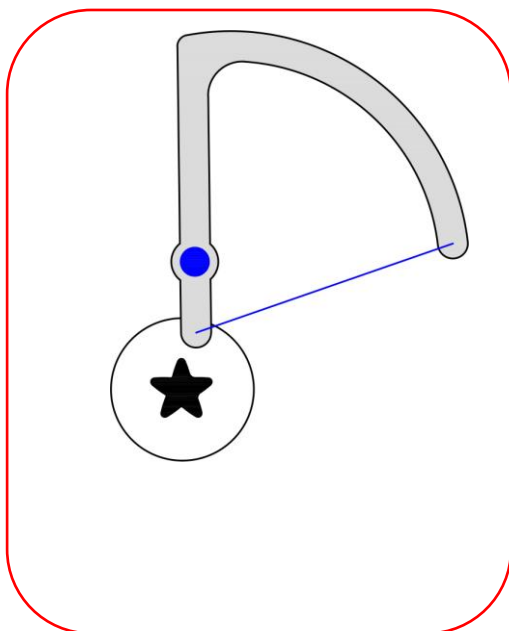
The CUT CENTERING operation is very important, the first operation done on the machine; it consists of setting the center of the **cut wire** coincident with the center of the **extrusion**.

To make this operation, choose the JOG button.

To achieve this condition, try to move the cut wire by pressing + or - and you'll see the cut wire that will rotate clockwise or anticlockwise.

Once the cut wire is coincident with the center of the extrusion, press **OK** to confirm this setting.

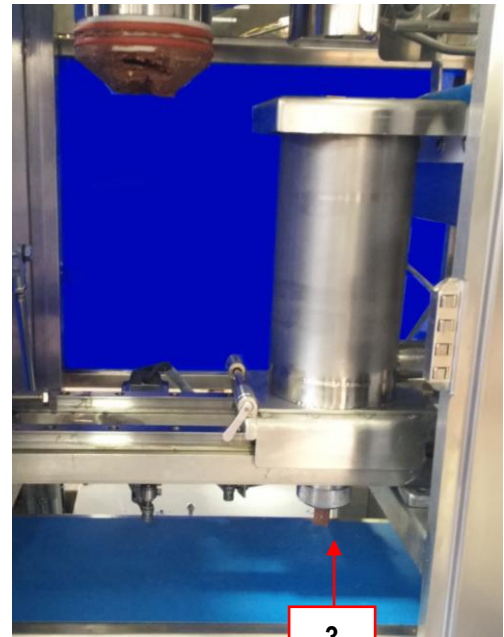
NOTE: this operation has to be done only once.



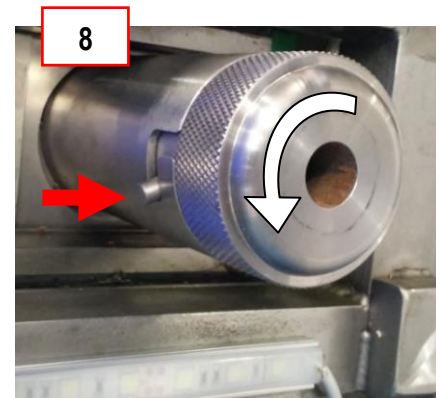
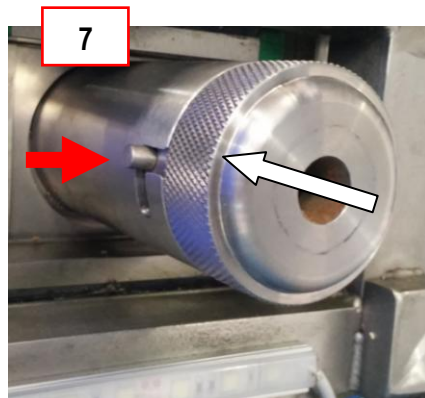
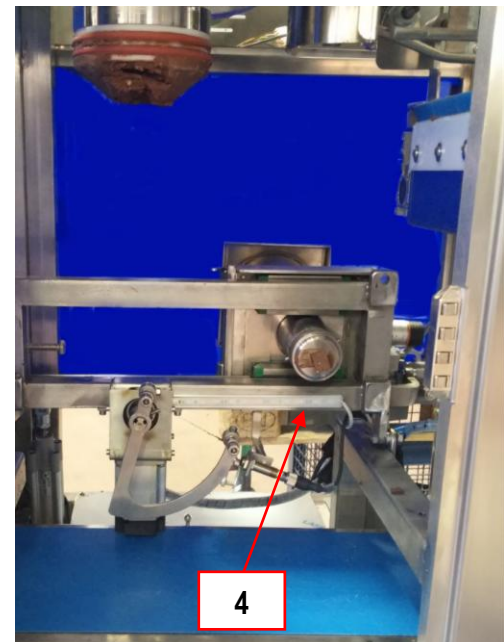
SELECT THE SHAPE

After the centering operation is done you can decide the shape of extrusion that you want to work with.

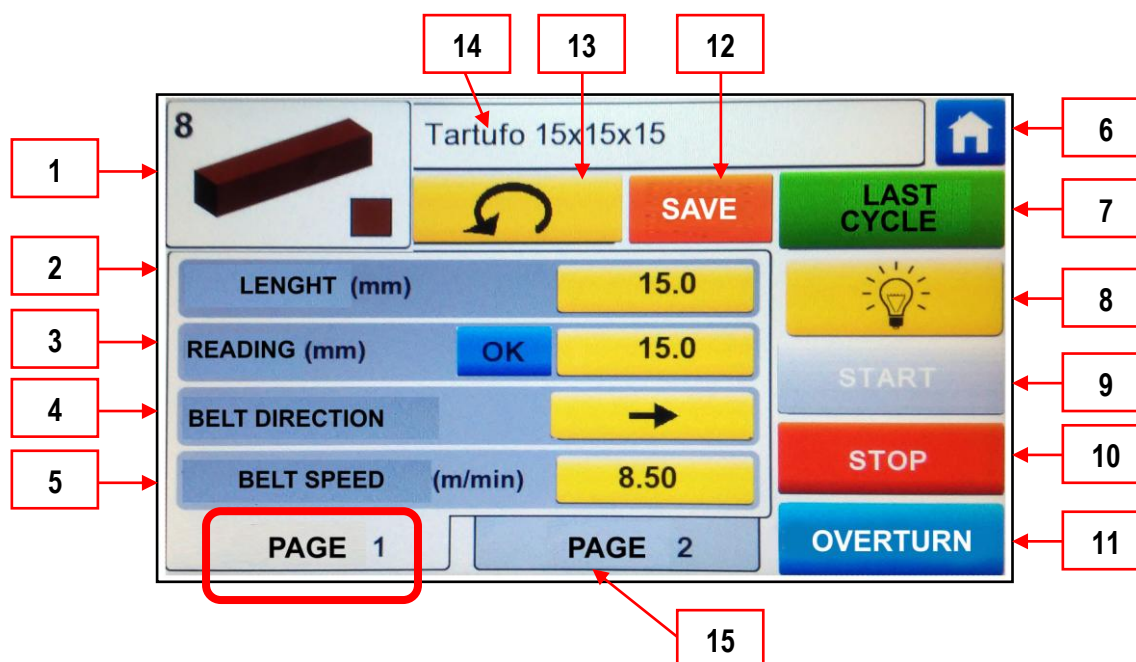
For make this operation there are few steps to do:



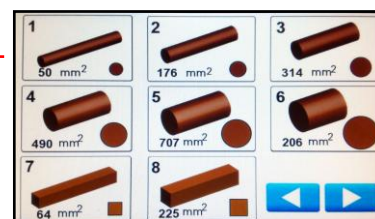
1. Select work page
2. Push OVERTURN button
3. The cylinder will move in the overturn position
4. The machine will overturn the extrusion cylinder.
5. Open the front panel.
6. Remove the extrusion shape.
7. Replace it with the one you want to work with.
8. Make sure you have fixed it in the correct way.
9. Close the front panel.
10. Push OVERTURN again.



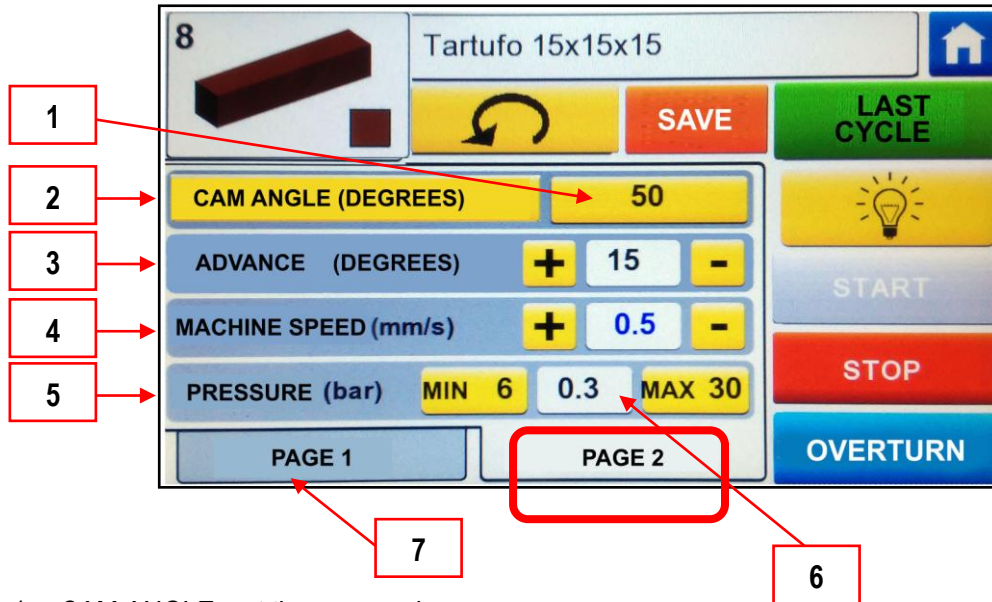
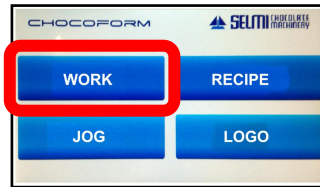
WORK PAGE 1



1. PRODUCT BUTTON: goes to the page for change product
2. LENGHT: product lenght setting
3. LENGHT READ: set the read lenght
4. BELT DIRECTION: set the belt direction
5. BELT SPEED: set the belt speed
6. HOME: return to the start page
7. LAST CYCLE: push this button if you only want to extrude only one cartridge.
8. LIGHT: switch on and off the light
9. START: start the production
10. STOP: stop the production
11. OVERTURN: overturn the cartridge holder
12. SAVE: Save your settings and give them a recipe name.
13. Set the cutting direction clockwise or anticlockwise.
14. Recipe name
15. Push PAGE 2 to open the 2nd work page and set the other parameters.

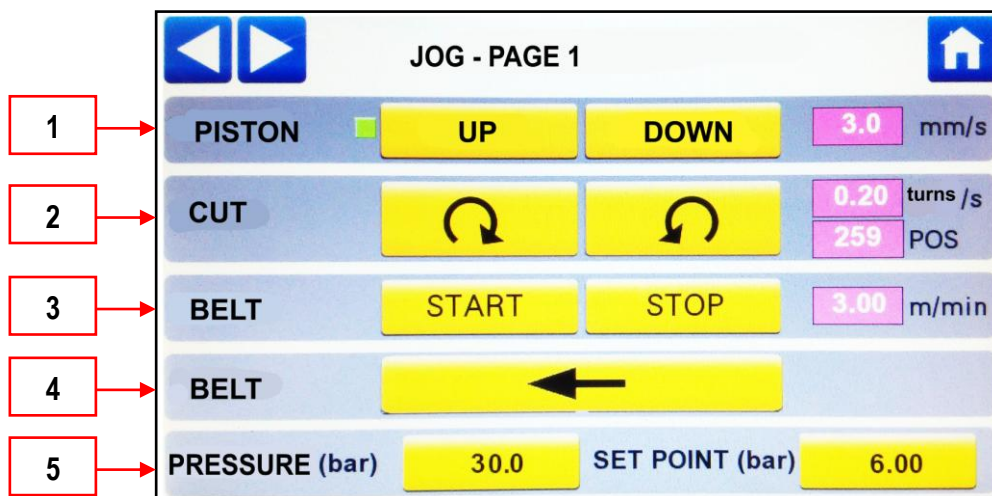


WORK PAGE 2



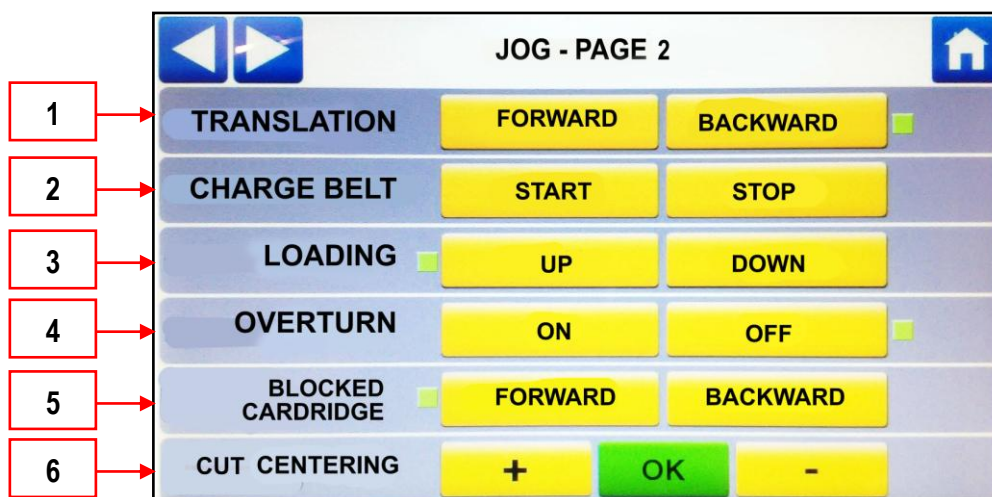
1. CAM ANGLE: set the cam angle
2. CAM ANGLE: hold pressed the button to see the cam angle movement.
3. ADVANCE: set the advance of the cam
4. MACHINE SPEED: set the machine speed
5. PRESSURE: set the maximum and minimum pressure bar
6. Current pressure value
7. Push PAGE 1 to open the 1st work page and set the other parameters.

JOG PAGE 1



1. Verify if the extrusion piston is working properly
2. Verify if the cutter is working properly
3. Verify if the belt is working properly
4. Choose the belt direction
5. Set the pressure (bar) and the set point (bar); If the machine goes under the PRESSURE set it will give an alarm.

JOG PAGE 2



1. Verify if the translation piston holder is working properly.
2. Verify if the upper belt is working properly.
3. Verify if the loading piston is working properly.
4. Verify if the overturn is working properly.
5. Verify if the piston that holds the cartridge is working properly.
6. Function to center the cutter wire with the center of the extrusion.

LOADING A RECIPE

To load a recipe:

1. Push the button recipe
2. choose the family on witch the recepy is saved.
3. Choose an exixting recepy name
4. The machine goes to the working page
5. Start to work

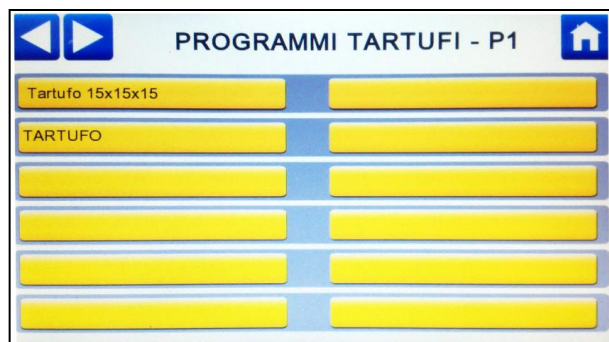
1



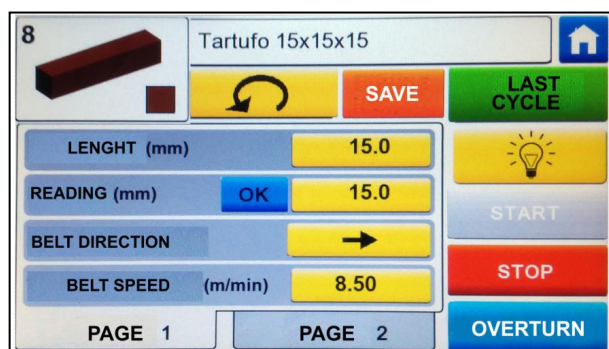
2



3



4



SAVE THE RECIPE

To save the recipe:

1. Push on the save button in the working page
2. Choose if overwrite the current recipe or create a new recipe
3. If you choose to overwrite it's done

4. If you choose to save as new recipe the next step is to select the family group in witch save the recipe:

TRUFFLES

SNACK

PRALINE

BARS

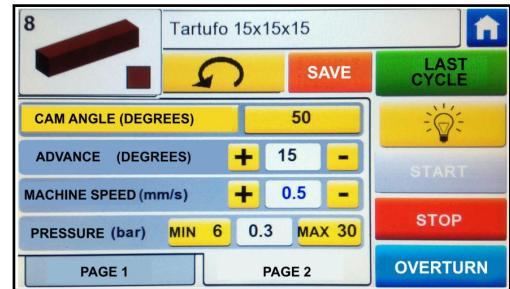
5. When the family is choosen it will appear the list of recipes for that family of product. Not all the recipes togheter but divided by family.

6. Choose an empty yellow button

7. Enter the name for the recipe.

8. If you want to modify an existing recepy push the name you want to modify and enter a new name.

1



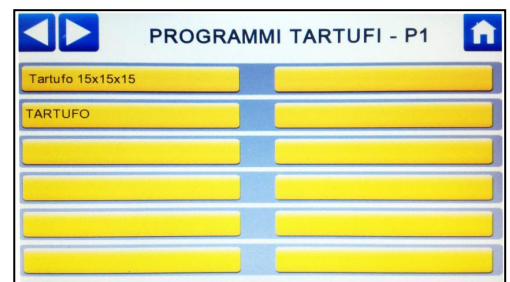
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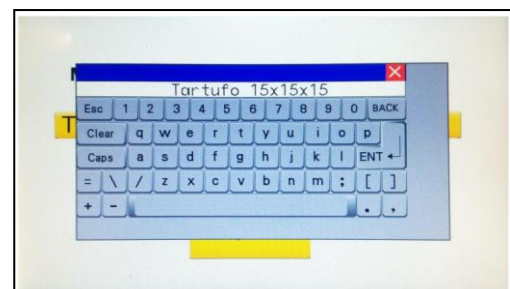
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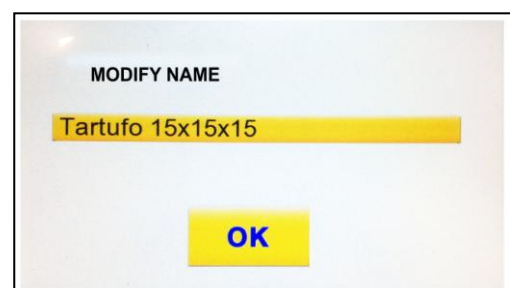
5



7

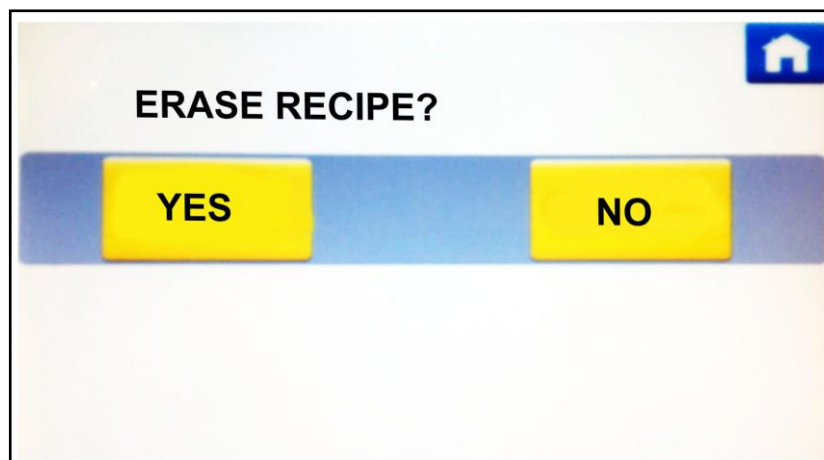
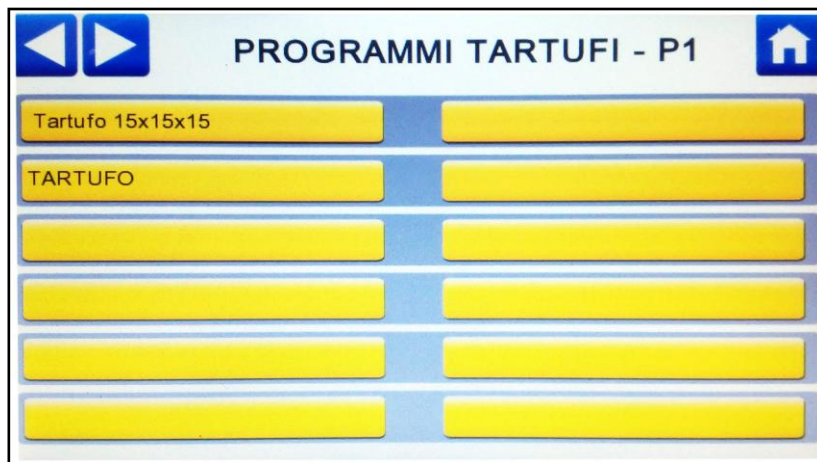


8



ERASE RECIPE

1. For erase a recipe
2. hold the button pressed for 4-5 seconds,
3. will appear the screen for to errase the selected recipe.
4. Confirm or return back pressing NO



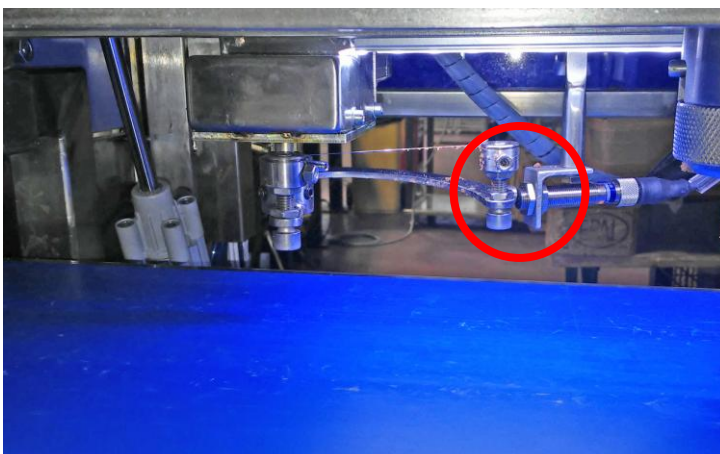
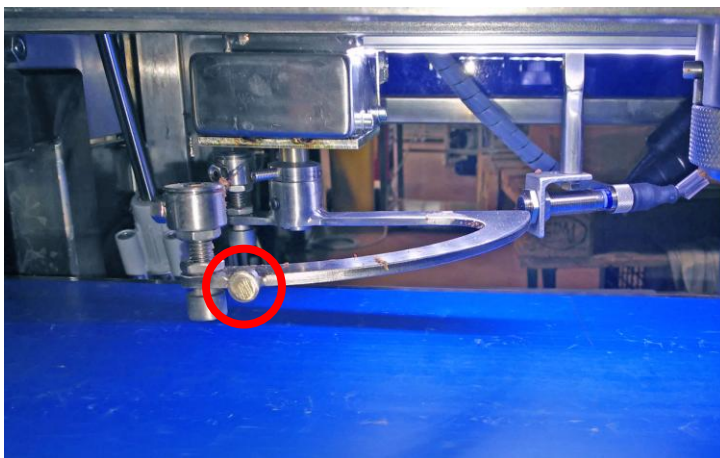
CUT RESET POSITION



This is an alarm that we have everytime, during the work process, we open the panels or STOP the production with the emergency button.

The screen will display the alarm signal and the machine will ask to RESET THE CUT

1. To solve this request push somewhere on the touch screen
2. On the display it will appear the alarm CUT RESET
3. Push on the alarm
4. the machine automatically will reset the position of the cutter as you can see it the picture below



WORK PAGE DETAILS

LENGHT AND READING

The lenght of the product in the extrusion process can be different from the lenght that you've set.

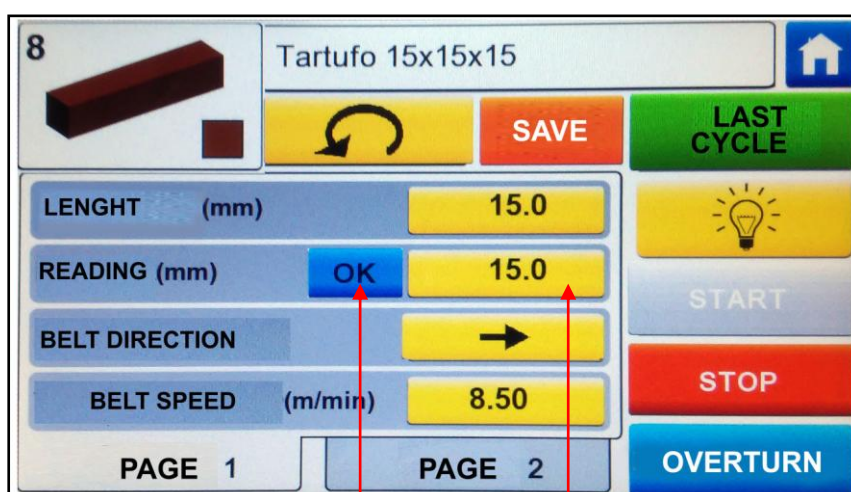
It's possible to adjust the lenght in order to have the correct product.

For make this operation follow those steps:

1. Take a caliper.
2. Take a piece of product cutted.
3. Measure it.
4. In the READING parameter enter the value that you've measured.
5. Press OK to confirm.
6. Chocoform will adjust automatically the lenght.
7. Now you can restart the production.



NOTE: the adjustment can be done also during the production

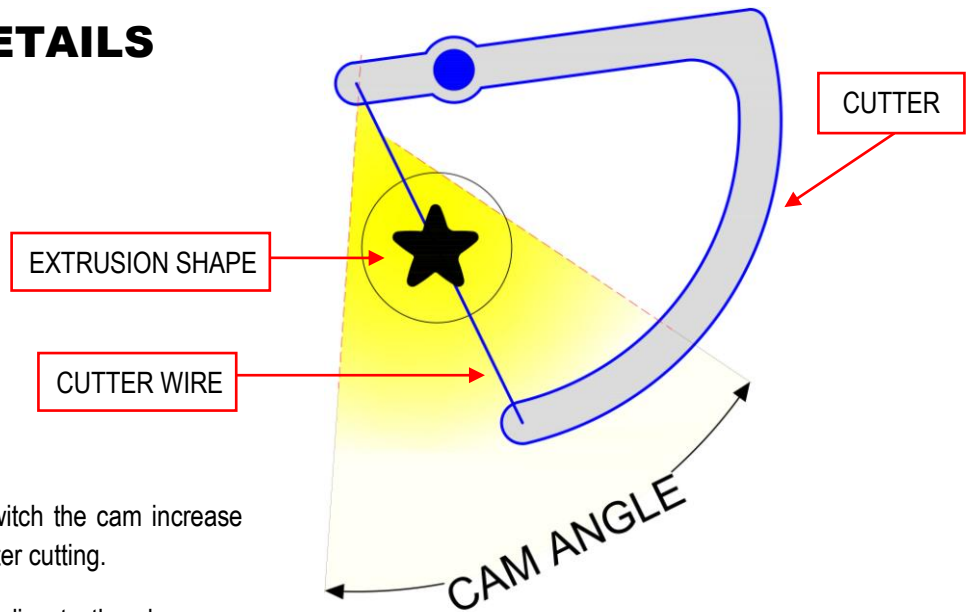


confirm button

reading value

WORK PAGE DETAILS

CAM ANGLE



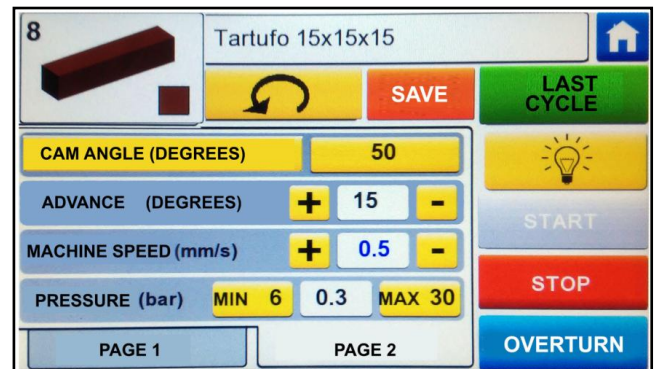
The CAM ANGLE is the angle in which the cam increases the cut speed in order to have a better cutting.

This parameter must change according to the shape we are going to cut.

Enter a wider cam angle if you are cutting a shape with a large surface.

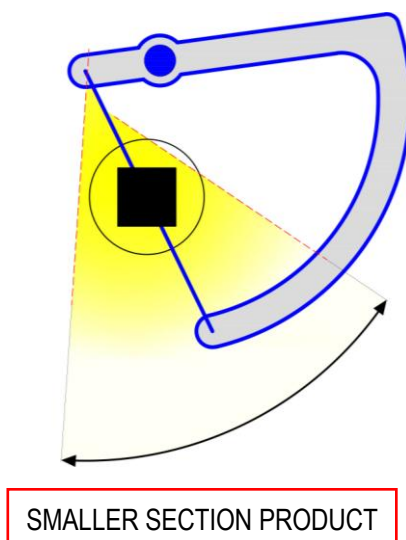
Enter a thin cam angle if you are cutting a shape with a small surface.

NOTE: If you hold pressed the button "CAM ANGLE (DEGREES)" the machine will move the cutter showing the cam angle moving forward and backward.

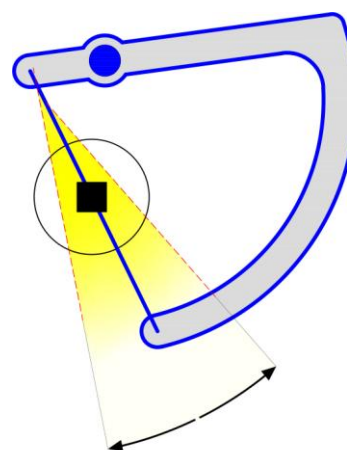


BUTTON TO SEE THE ANGLE

CAM ANGLE VALUE



SMALLER SECTION PRODUCT



BIGGER SECTION PRODUCT

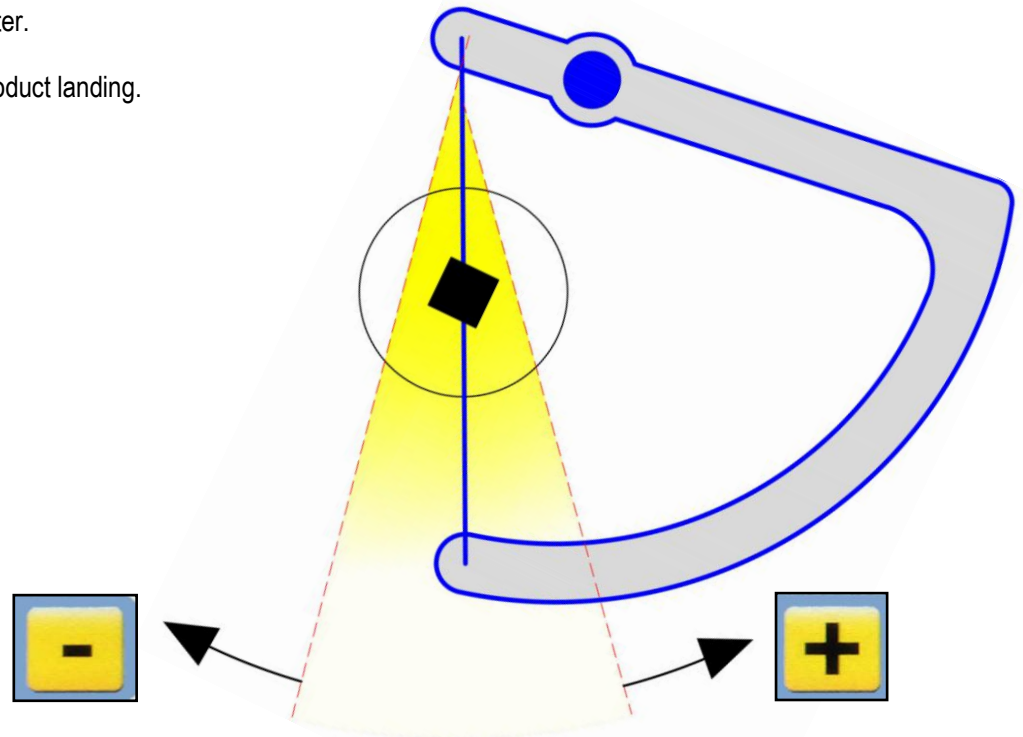
WORK PAGE DETAILS

ADVANCE




The ADVANCE parameter is the translation of the cam angle.

The operator can adjust the translation more or less according to the shape center.

This operation affect the product landing.



ADVANCE (DEGREES)	+	15	-
--------------------------	----------	-----------	----------

8		Tartufo 15x15x15	
		SAVE	LAST CYCLE
CAM ANGLE (DEGREES)		50	
ADVANCE (DEGREES)		+	15
MACHINE SPEED (mm/s)		+	0.5
PRESSURE (bar)		MIN 6	0.3 MAX 30
PAGE 1		PAGE 2	
		OVERTURN	

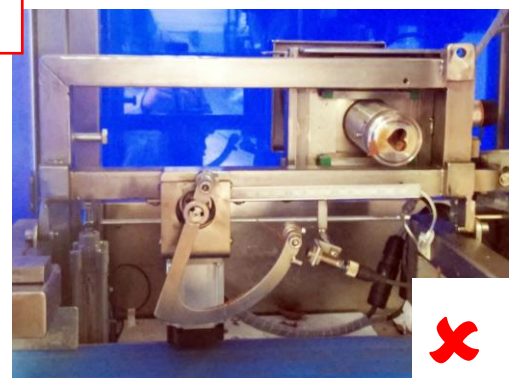
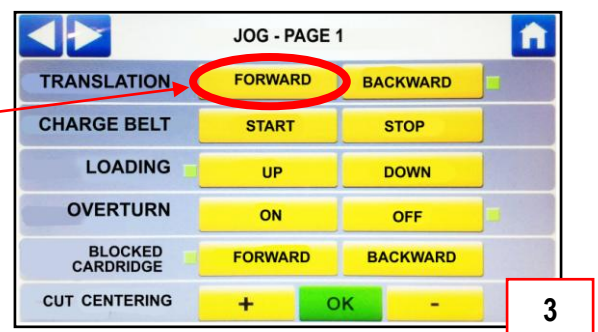
MAINTENANCE

CHANGE THE CUTTER WIRE

If the cutter wire is broken follow the steps to change it with new one.

EXTRACTION OF THE CUTTER

1. Push STOP button to stop the production.
2. Push OVERTURN button.
3. Push home for return to the home page.
Then go to JOG page 2.
4. Hold the translation forward button till the cylinder is in the left side.
5. Open the protection panel.
6. Loosen both screw using the allen key.
7. Pull out the cutter.



REMOVE THE BROKEN WIRE

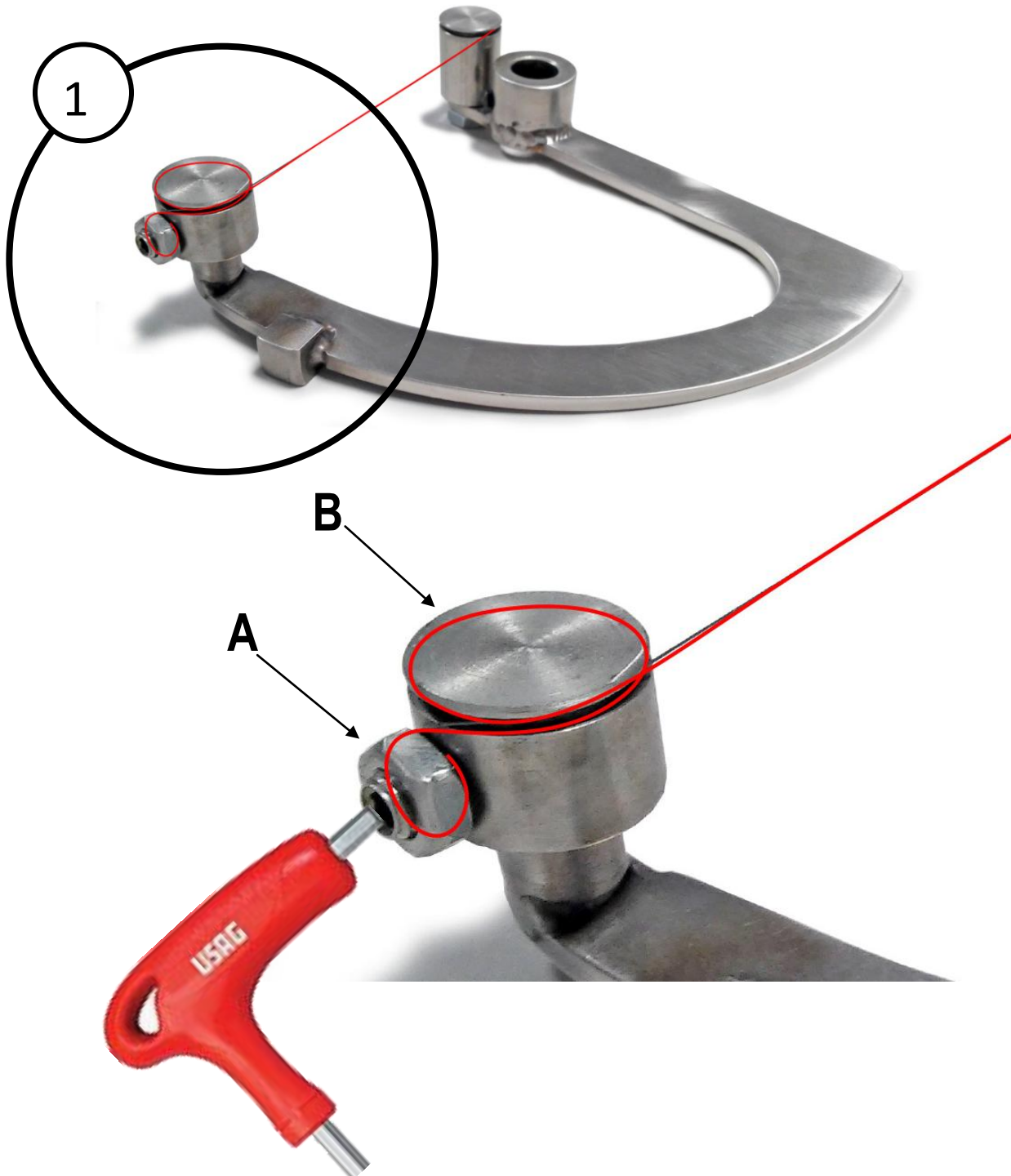
Remove the broken wire as explained in the picture enclosed: moreover remove the wire from both the fasteners.



REPLACE A NEW WIRE

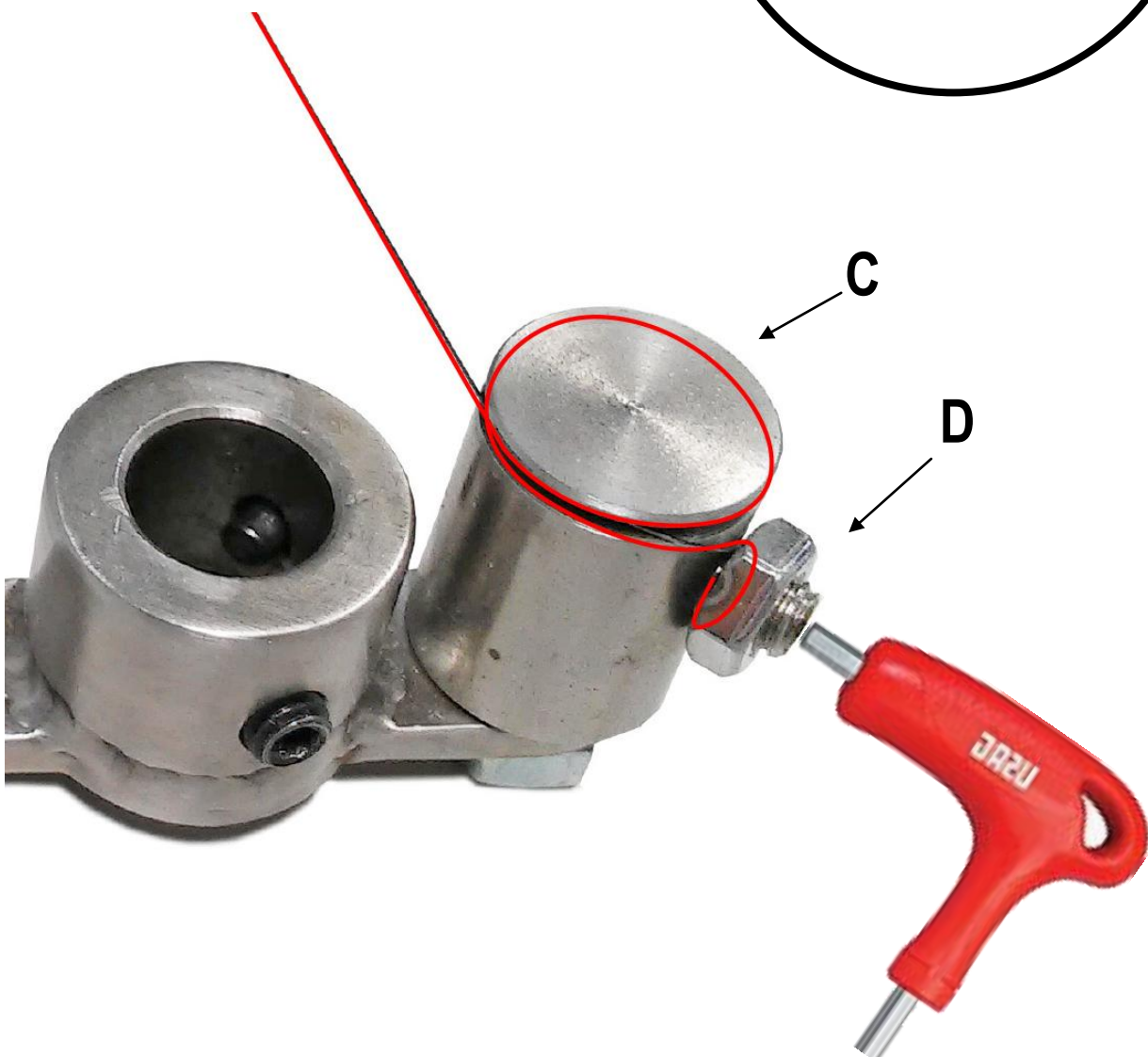
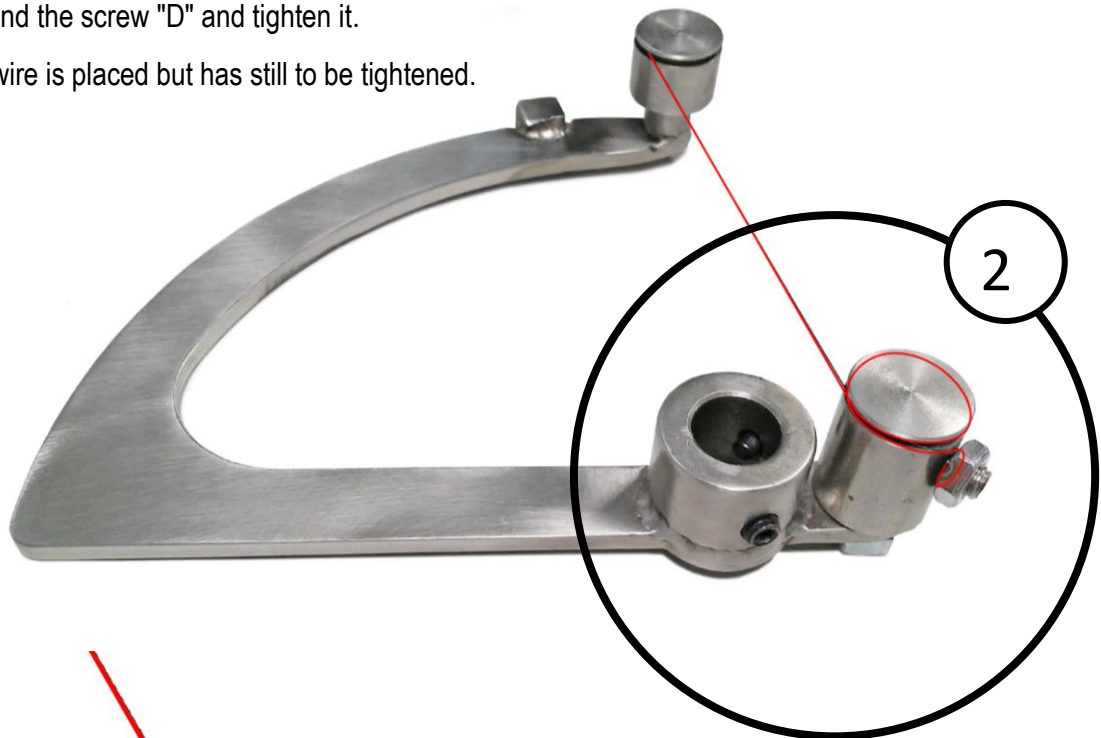
Replace the new wire starting from the point 1:

- Turn around the screw "A" and tighten it
- Turn around the pin "B" let the wire pass into its place



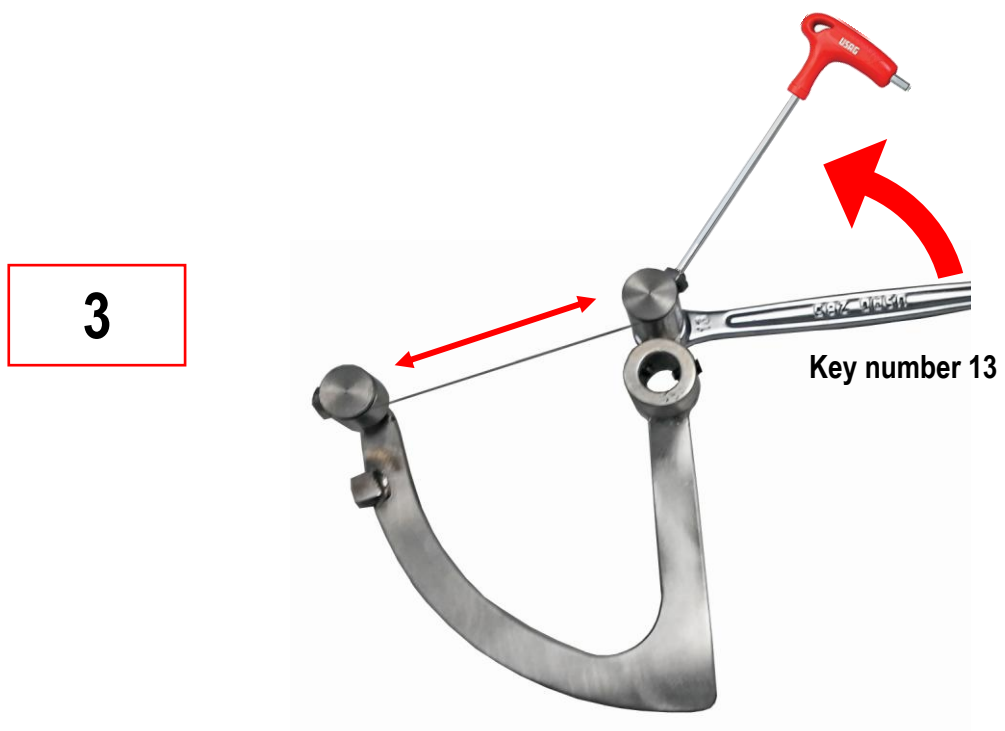
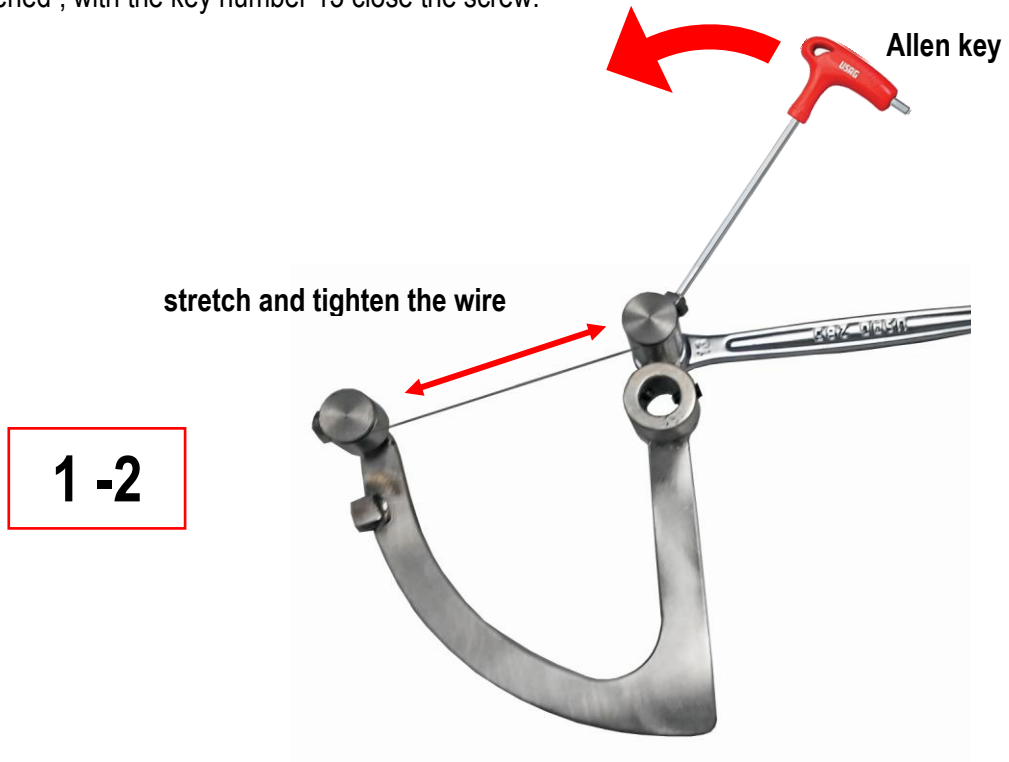
Continue to the point 2:

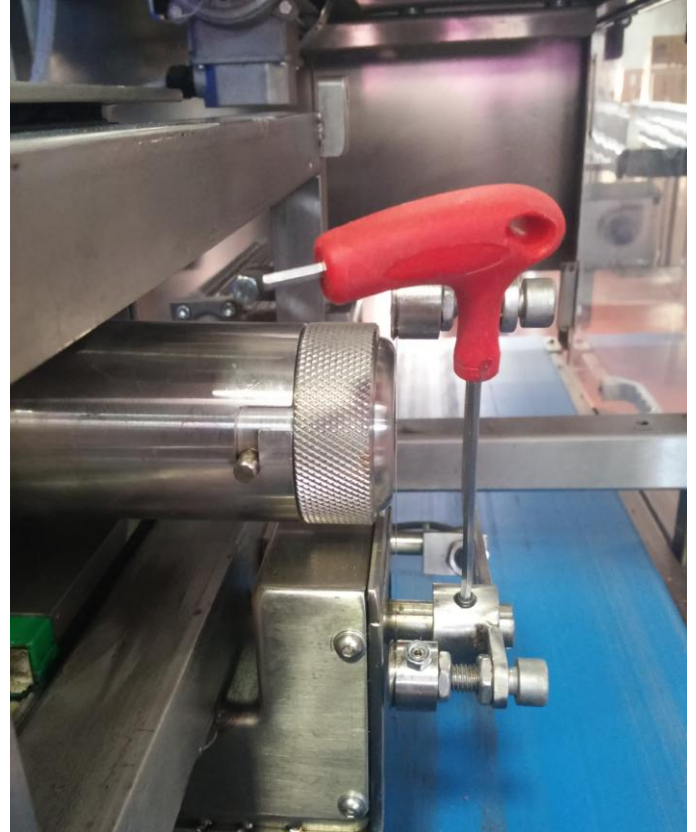
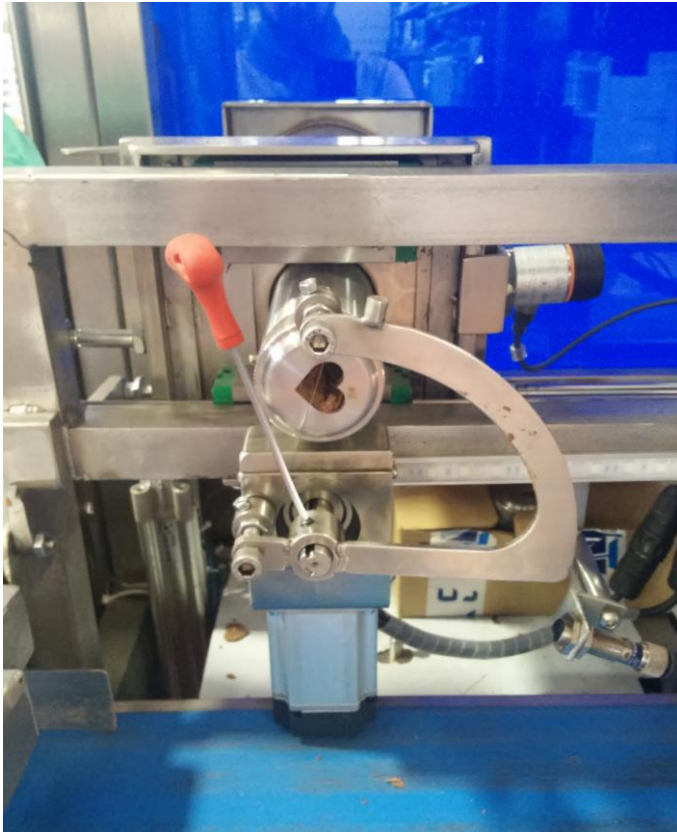
- Turn around the pin "C" let the wire pass into its place
- Turn around the screw "D" and tighten it.
- Now the wire is placed but has still to be tightened.



To tighten the wire:

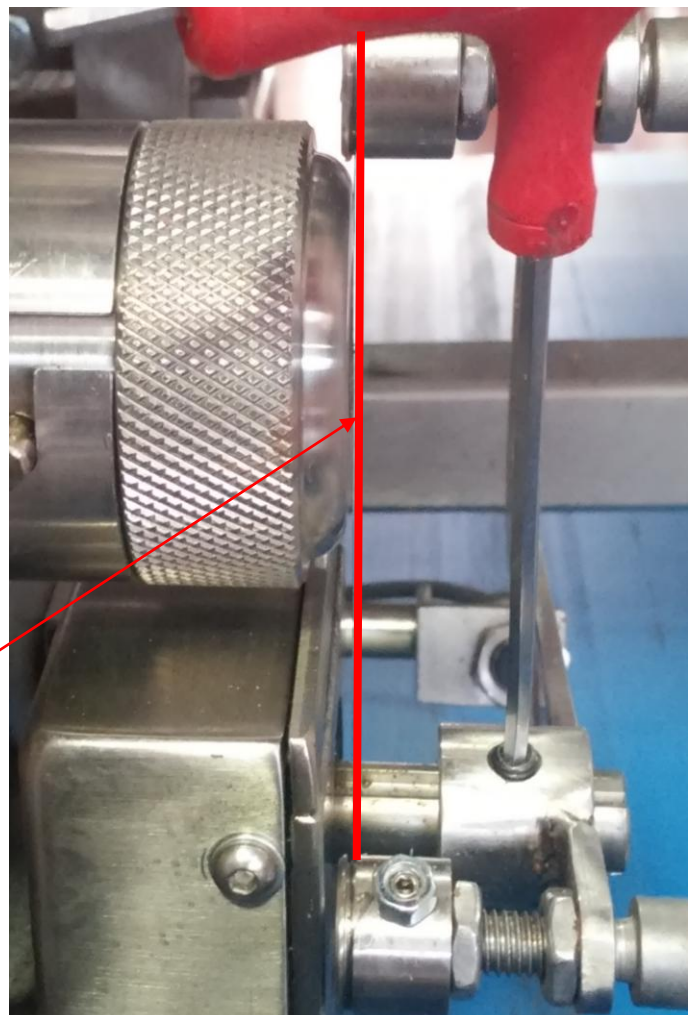
1. Place the allen key on the screw.
2. Use it as a leverage with the thumb in order to tighten it
3. While is tightetened , with the key number 13 close the screw.





REINSTALL THE FIXED CUTTER

Replace the cutter in the right position taking care to leave some space in between the wire and the shape.



ALARMS



Emergency taken	Emergency button pressed
Error inverter extruder	
Error inverter belt	
Error inverter cut	
Cartridge load belt motor thermal protection	
Micro security side door	Open
Micro security front door	Open
Micro security unload belt door	Open
Micro security load belt door	Open
Micro security side door	Open
Alarm piston for cartridge blocking	
Alarm piston for cartridge blocking	
Alarm micro switch cartridge blocked	
Alarm piston for cartridge loading low	
Alarm piston for cartridge loading high	
Alarm end run cartridge load	
Alarm piston for the cylinder translation during work	
Alarm piston for the cylinder translation during break	
Alarm micro switch cylinder translation	
Alarm piston for cylinder overturn during work	
Alarm piston for cylinder overturn during break	
Alarm micro switch cylinder flip	
Extrusion pressure alarm	
Product can't be made	
Reset probe alarm	

6. Maintenance section

6.1. General information

Attention

The product present in the tank or internally to the machine must NEVER come into contact with water or other liquids: this may lead to the formation of moulds and bacterial loads.

Attention

If a bacterial presence is found on the product derived from the processing carried out with this machine model it will be necessary to stop production immediately and contact the manufacturer for the disinfection procedures.

Before carrying out maintenance or cleaning procedures on the machine, cover the tank with the supplied lid.

Never clean or lubricate components in motion.

Warning

Extraordinary maintenance on the machine is exclusively carried out by the technicians approved by the manufacturer.

The training course carried out only gives the client the base instructions for ordinary maintenance. The manufacturer suggests carrying out a full service every two years to guarantee the safety conditions.

Note

The maintenance technician must note on an appropriate logbook all the interventions carried out on the machine.

This section describes the ordinary checking and maintenance procedures needed to guarantee the correct functioning of the machine.

Any other intervention that may be necessary to eliminate anomalies or faults must be expressly authorised by the manufacturer.

For major repairs it is recommended to turn to the manufacturer whose specialised personnel, possessing the technical expertise acquired from the original manufacturing in the factory, are always reachable and able to intervene quickly.

For maintenance or replacement of commercial components installed on the machine keep to the instructions provided directly by the manufacturers.

Such instructions are normally attached to the components or obtainable via catalogues or manuals provided by the manufacturers.

Environment

The components replaced during maintenance operations must be disposed of according to the laws in force concerning waste materials. If necessary, they can be sent to the manufacturer, who will dispose of them in the most appropriate manner.

6.2. General safety practice

Attention

Before starting a maintenance procedure disconnect the machine from the mains and put in place all the necessary safety measures.

Attention

During maintenance procedures place on the machine, preferably on the control panel but in any case in a clearly visible location, a sign with the text: "MACHINE UNDER MAINTENANCE, DO NOT SWITCH ON".

Maintenance work must be carried out by specialised technicians who are trained in specific sectors, which for this machine are:

- mechanical maintenance technicians;
- electrical maintenance technicians.

It is the duty of the Safety Officer to ascertain the professionalism and competence of the maintenance technicians.

Before starting a maintenance procedure the safety officer must:

- 1) Clear the working area of extraneous materials and people.
- 2) Make sure that the necessary tools are conveniently available to the maintenance technician and that they are in good condition.
- 3) Make sure that the lighting is sufficient and provide, if necessary, portable low voltage lights.
- 4) Make sure that the maintenance technician is equipped with the necessary approved personal protection equipment for the specific operation (gloves, safety glasses, shoes, etc.).
- 5) Make sure that the maintenance technician has carefully read the instructions contained in this manual and has excellent knowledge of how the machine works.

At the end of every maintenance intervention the following procedures need to be carried out before restarting the machine:

- 1) Carefully clean the floor in the work area, removing any residues that may cause slippage
- 2) Make sure that no extraneous components have been left in the machine, especially mechanical parts, utensils or components used for maintenance that could cause damage to the machine or put personnel at risk.
- 3) Before switching the machine back on make sure that all personnel are at a safety distance.
- 4) Before restarting the processing, the maintenance technician must check the entire working cycle, the functionality of the safety mechanisms and the integrity of the fixed protective panels.
- 5) before restarting the working cycle the machine must be cleaned.

Attention

Following every maintenance intervention it is the Safety Officer duty to ascertain that the machine is working properly and that all the safety devices are present and functional.

Unless expressly required for the solution of a breakdown, never interfere with the adjustments and positioning of the limit microswitches;

Before assembling a block always cover with a thin layer of alimentary grade oil the internal parts and coupled surfaces. replace all the seals and gaskets with original parts before reassembling the components.

Note

Before reinstalling the machine components that have been washed with water or other liquids, check that they are completely dry.

Work on electrical components must only be carried out by the electrical maintenance technician specially trained and authorized by the Safety Officer.

7. Electrical diagrams

Nome progetto: **ESTRUSORE v3.0**

Impianto:

Specifiche:

Disegnatore:

Tensione esercizio: 380 V

Tensione ausiliari: 24 Vdc

Frequenza: 50 Hz

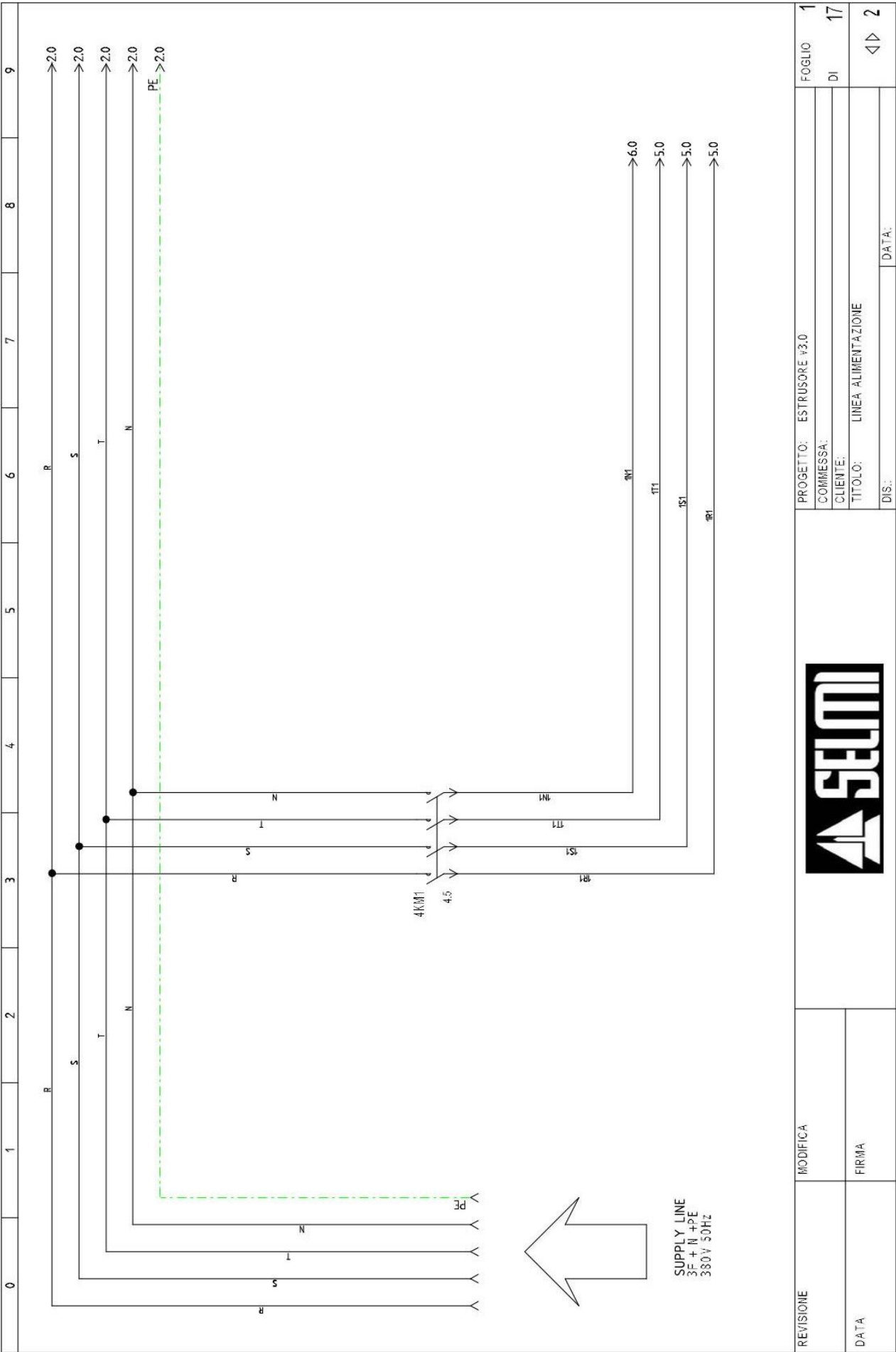
Corrente nominale:

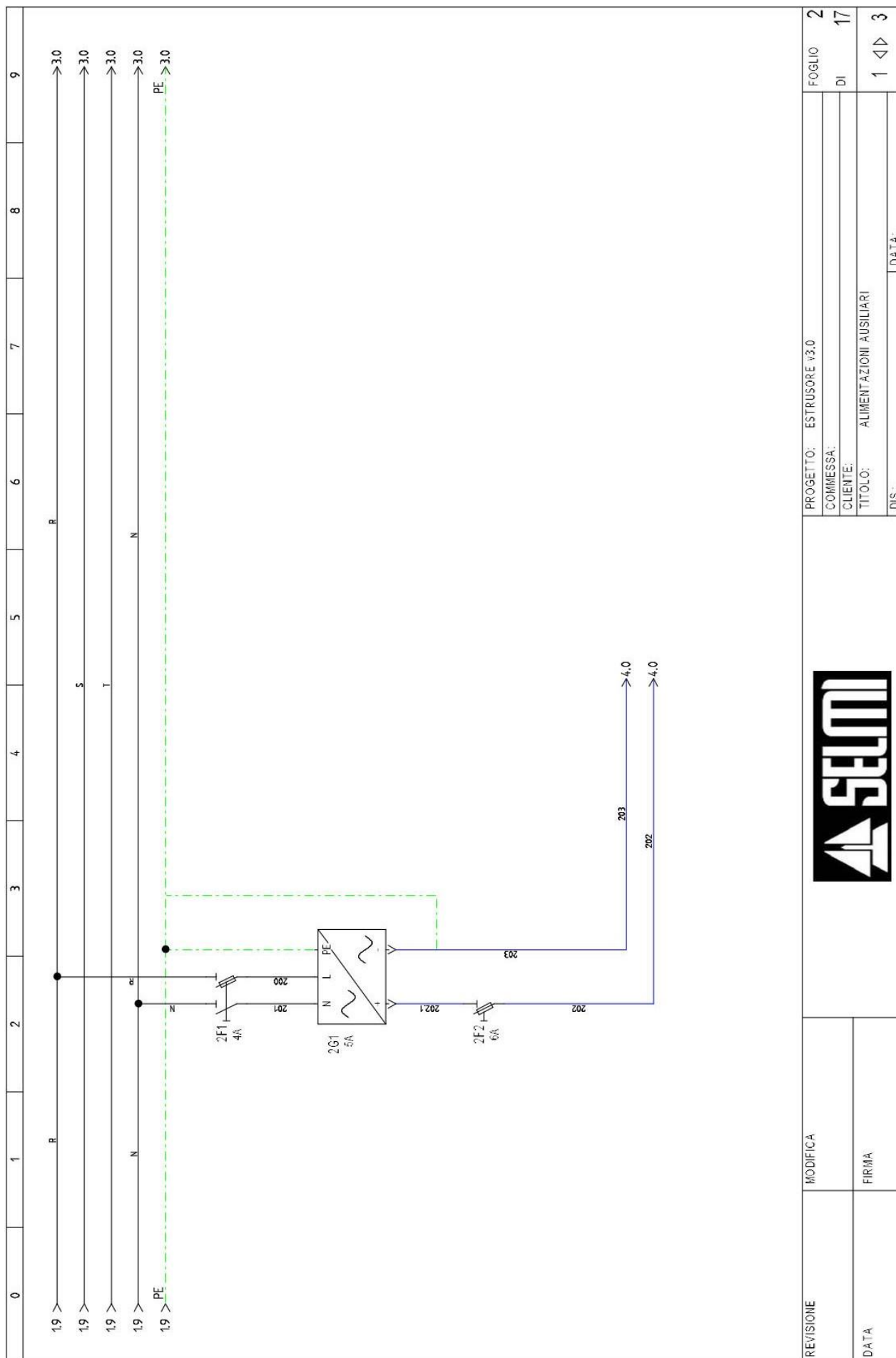
Potenza totale:

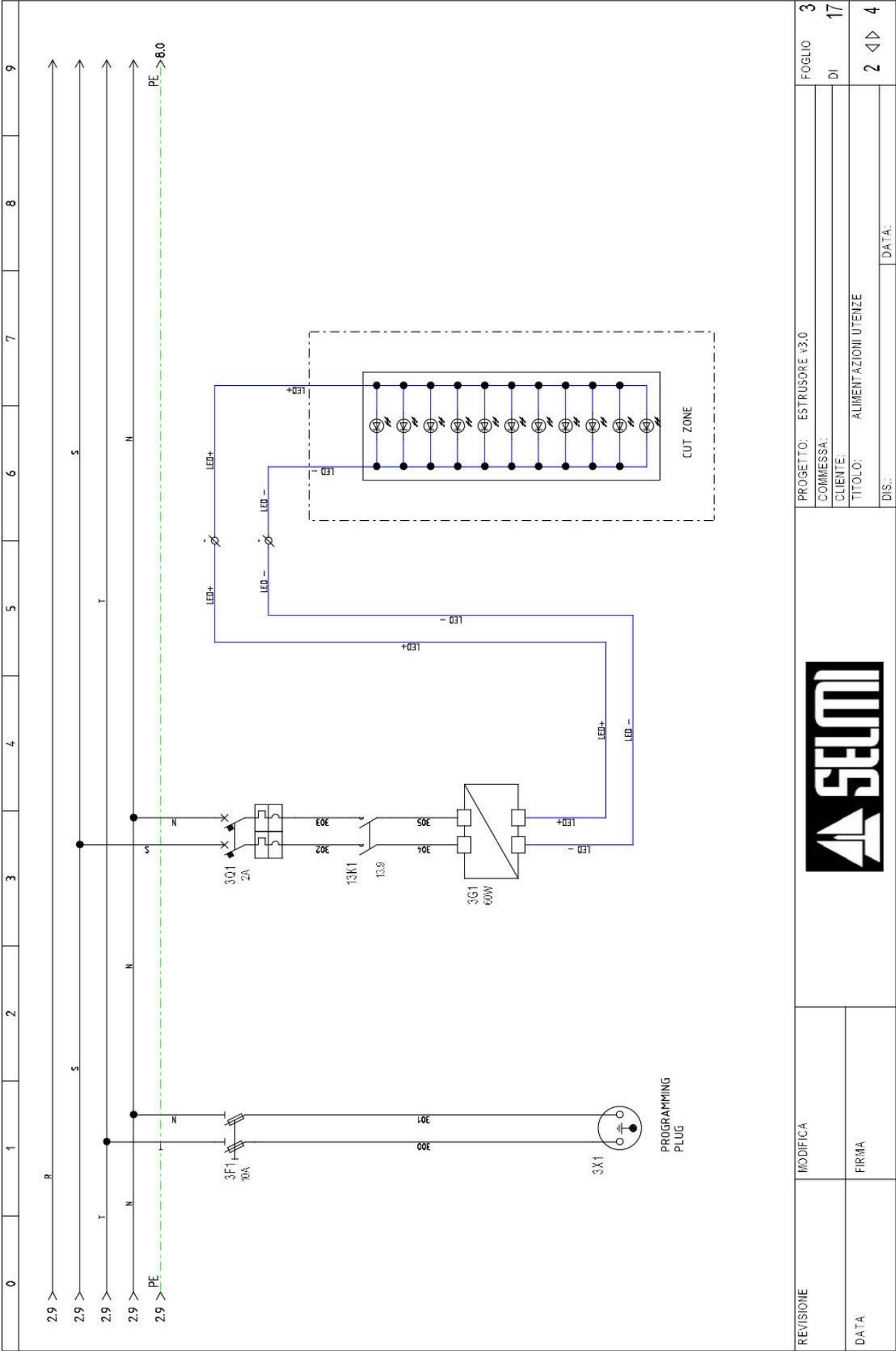
Grado di protezione:



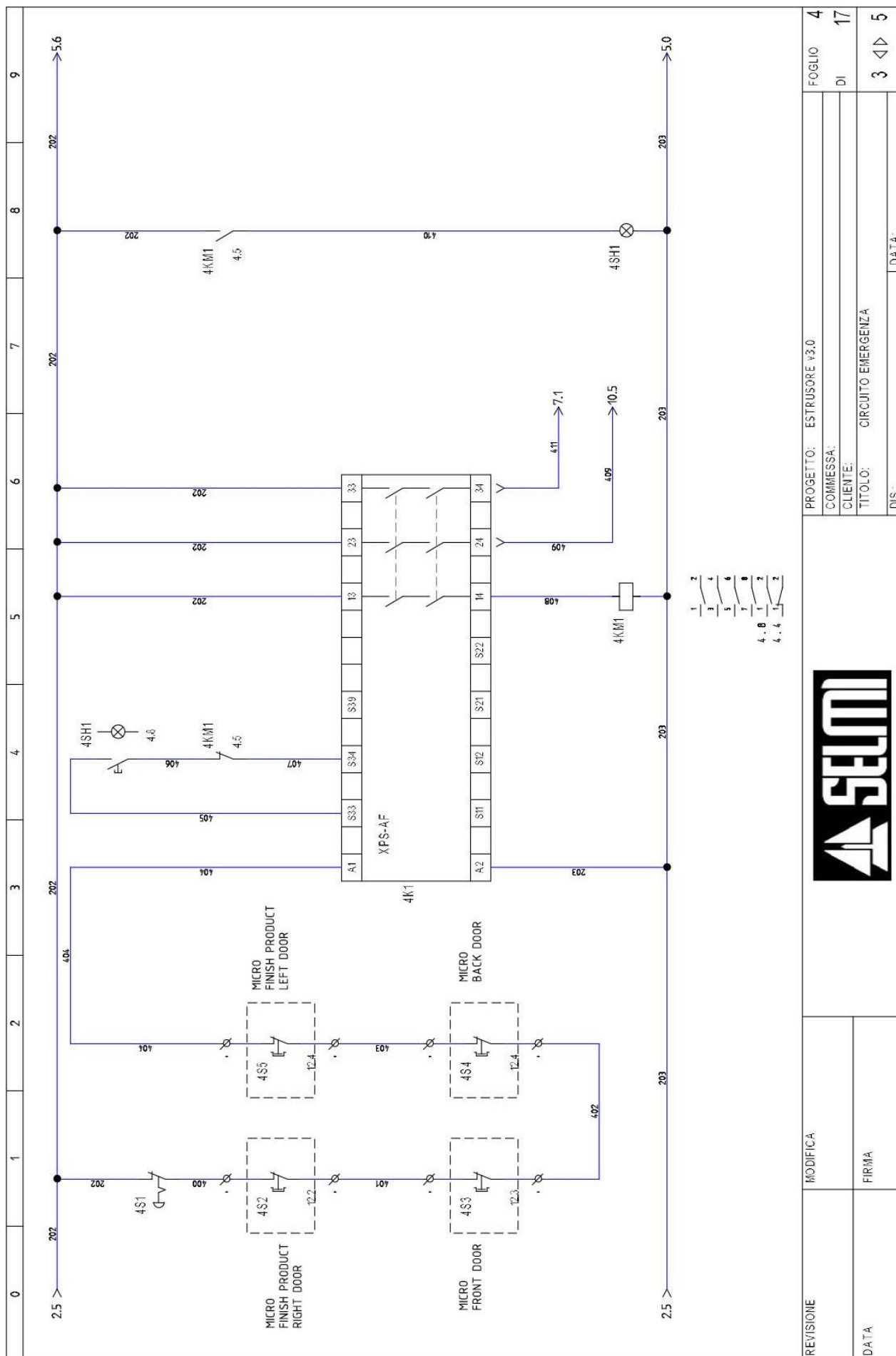
Rev.	Modifiche			Data	Preparato	Verificato	Approvato		

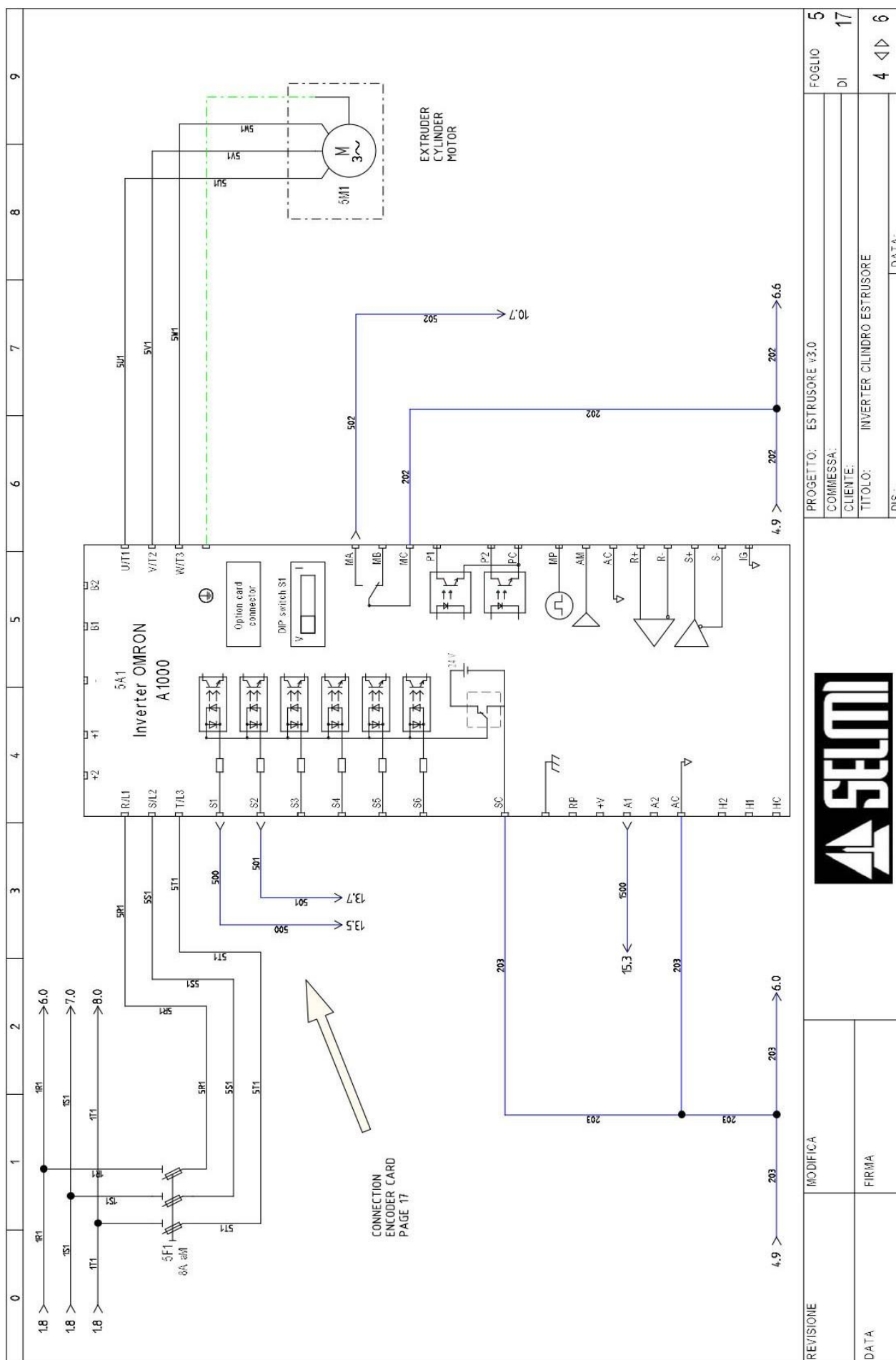




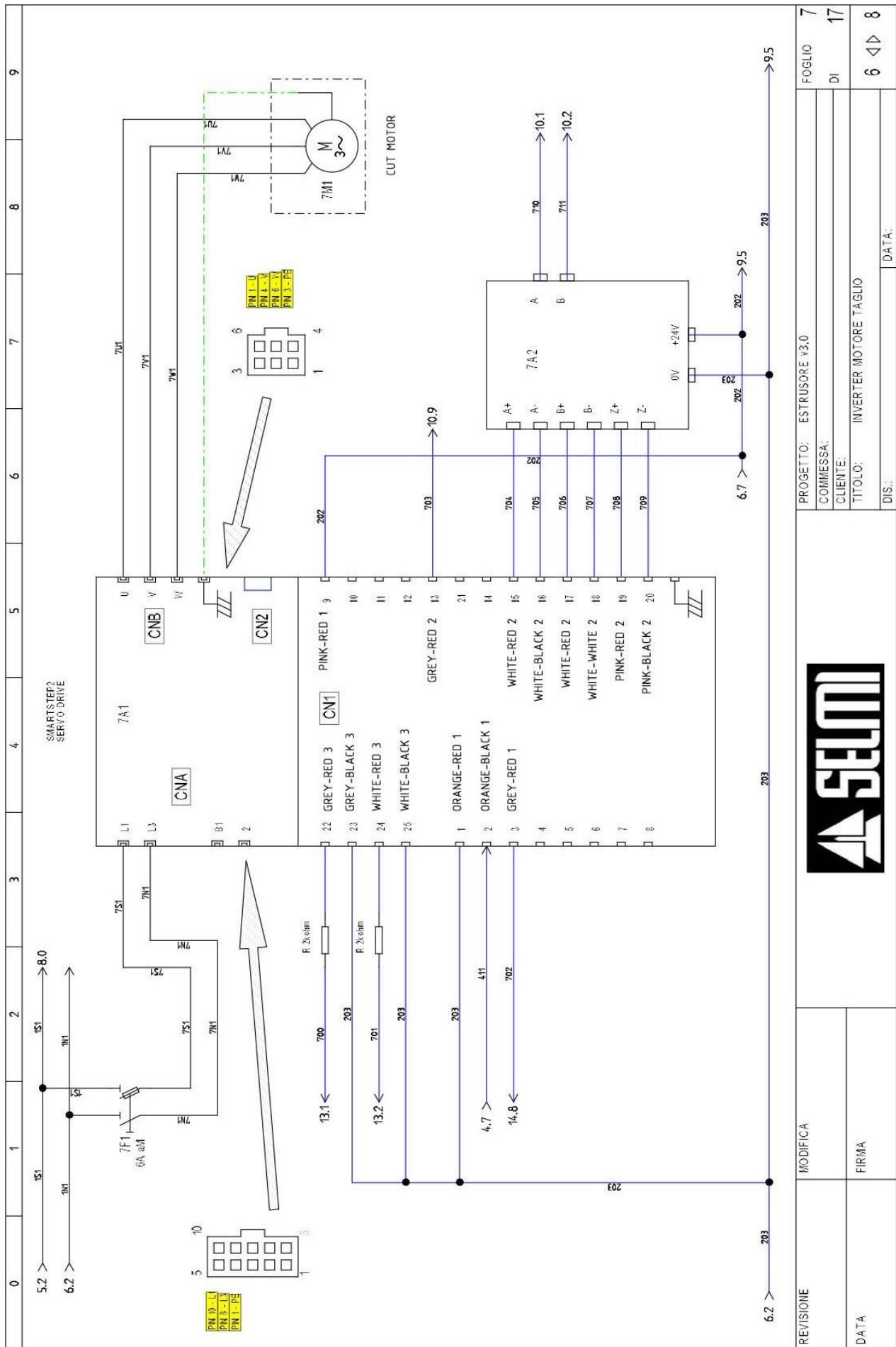


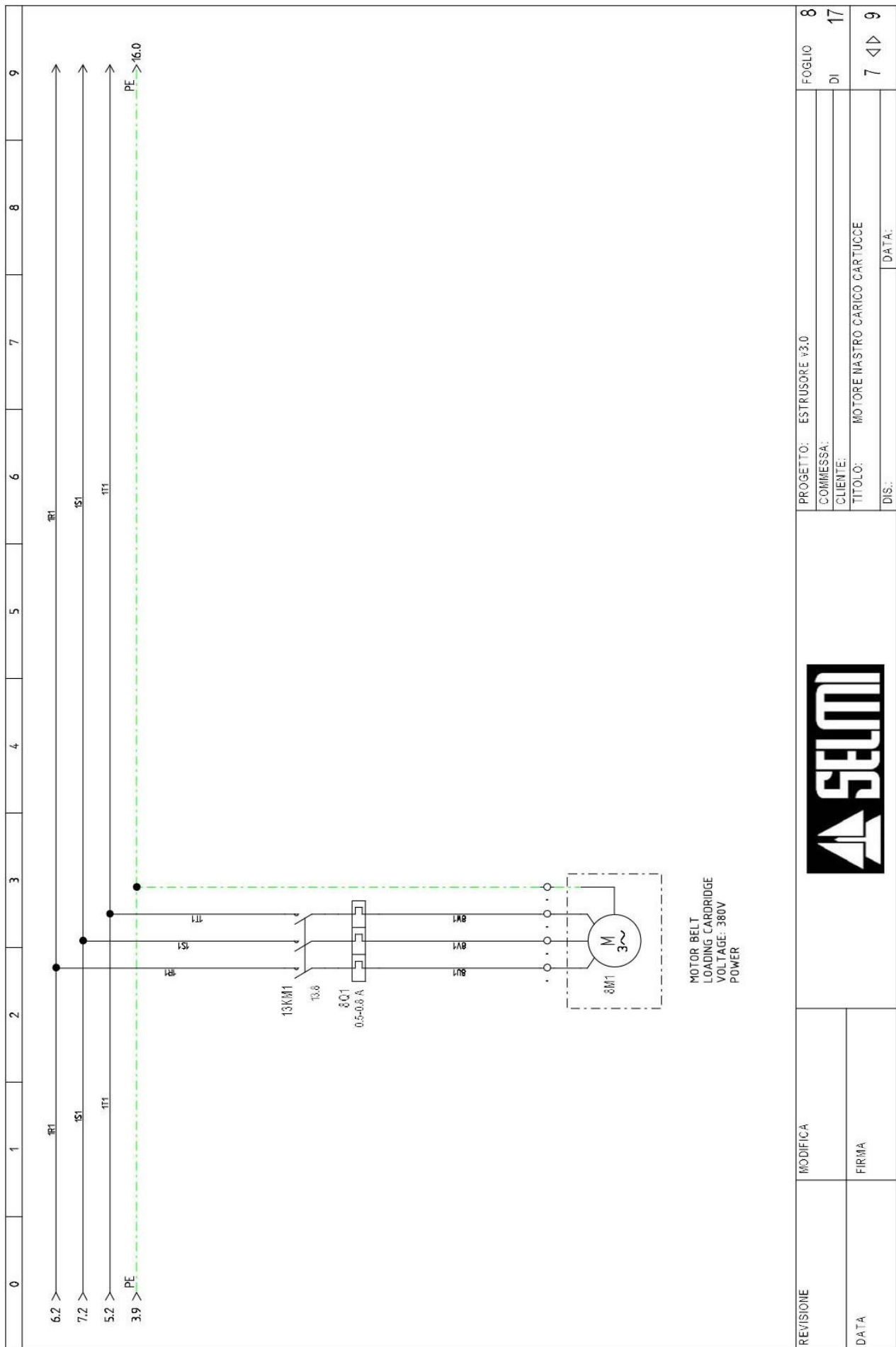
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			COMMESSA:	DI 17
DATA	FIRMA		CLIENTE:	
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			DIS.:	2 < 4
			DATA:	

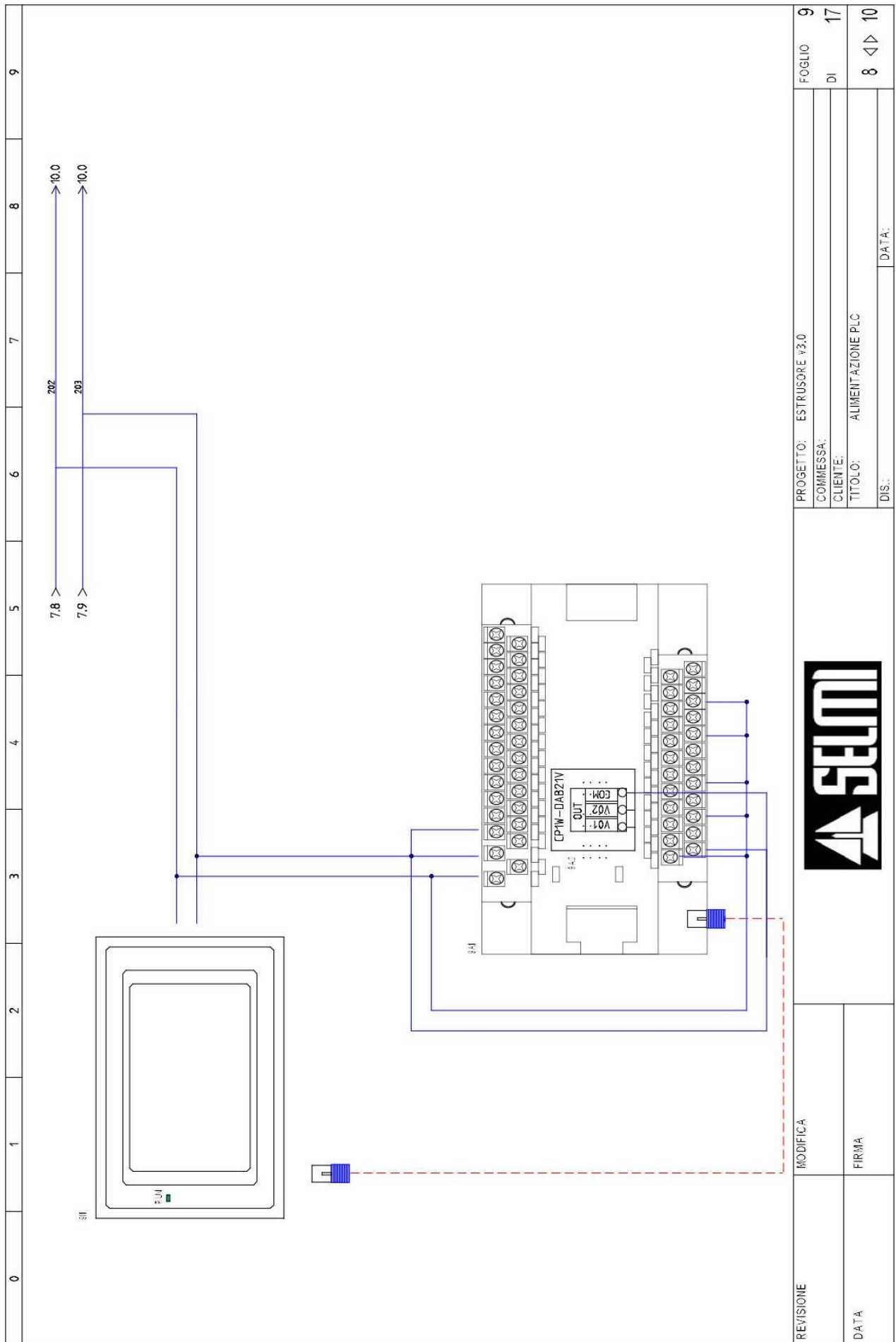


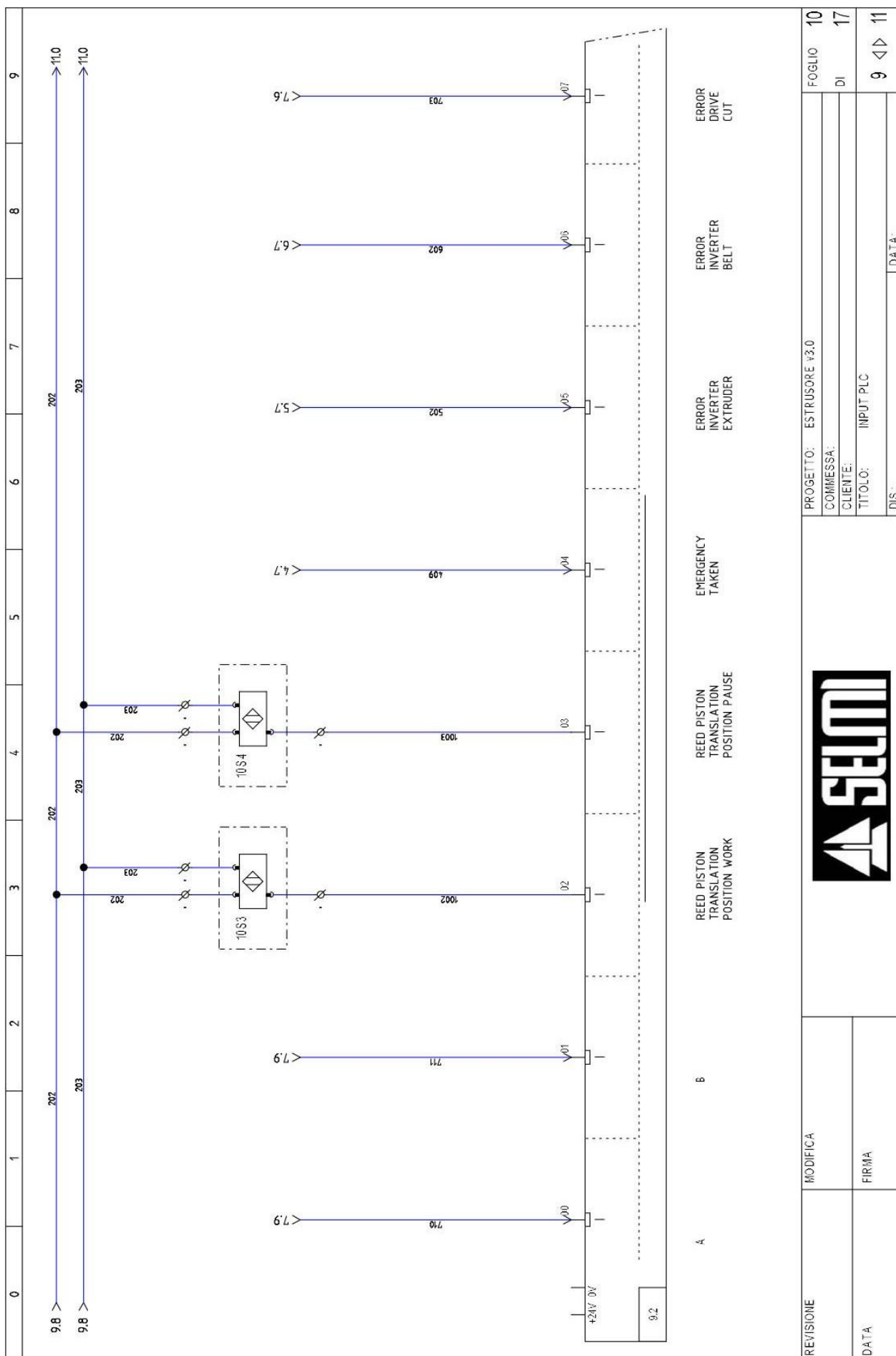


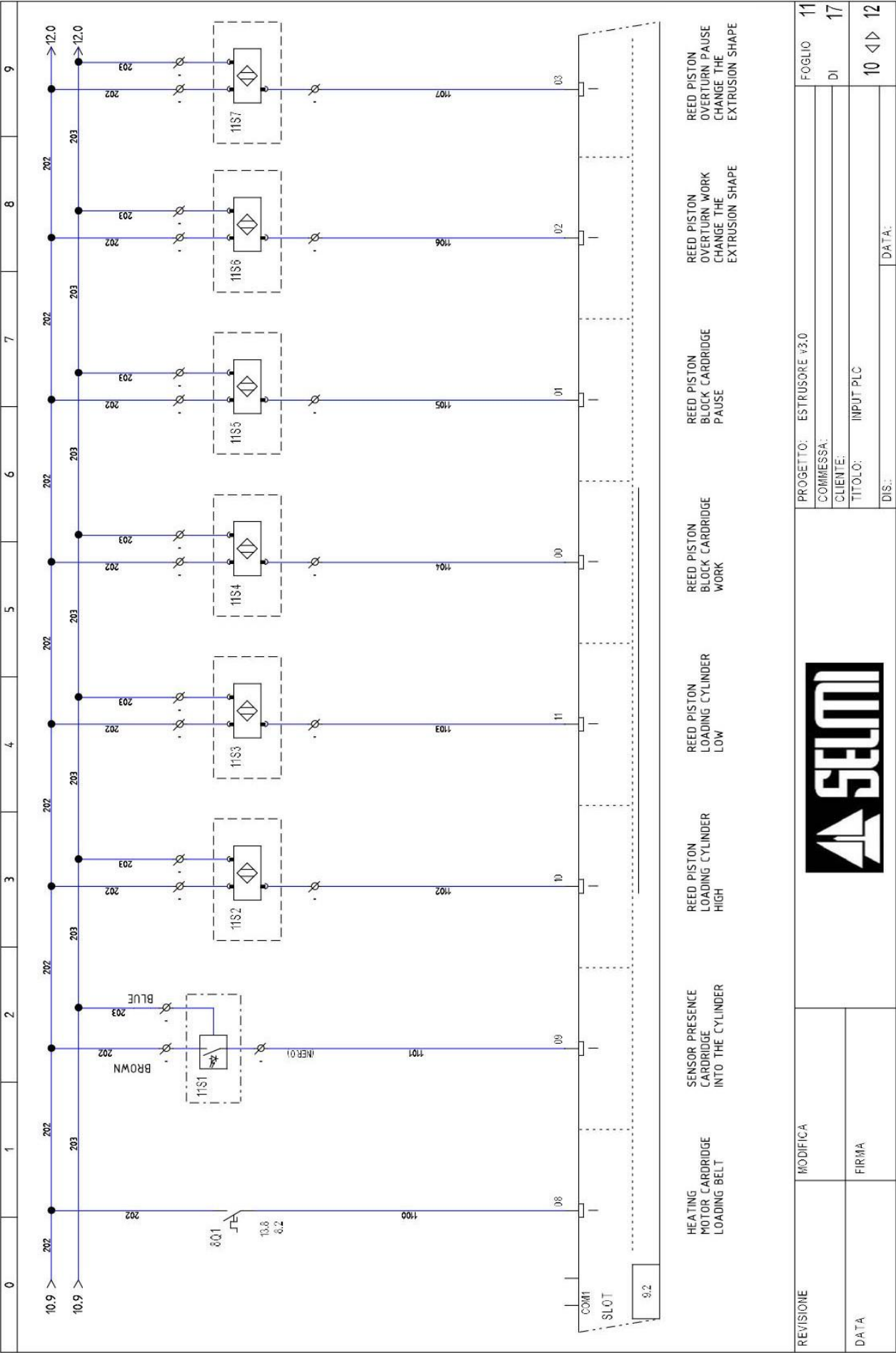




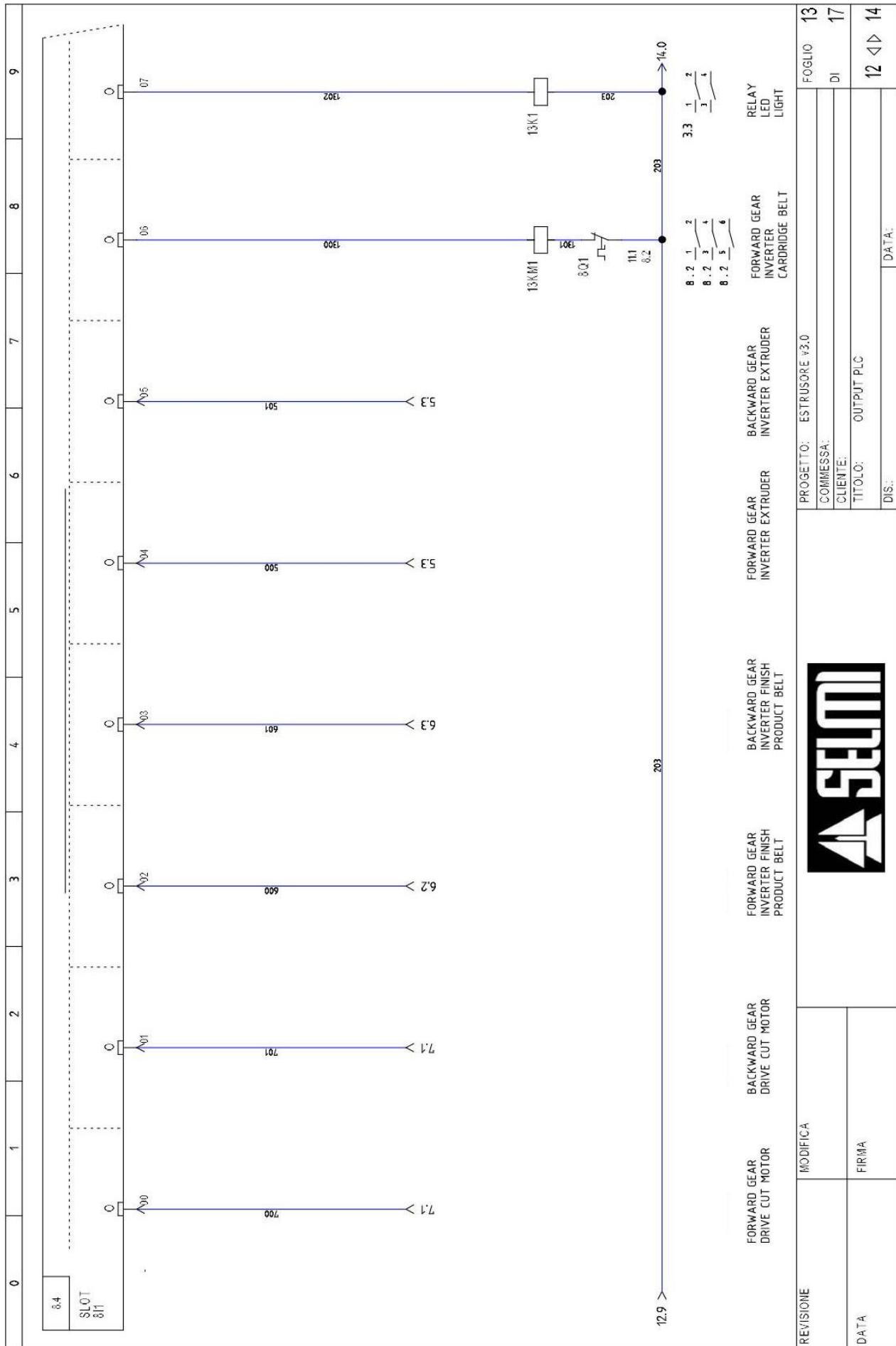


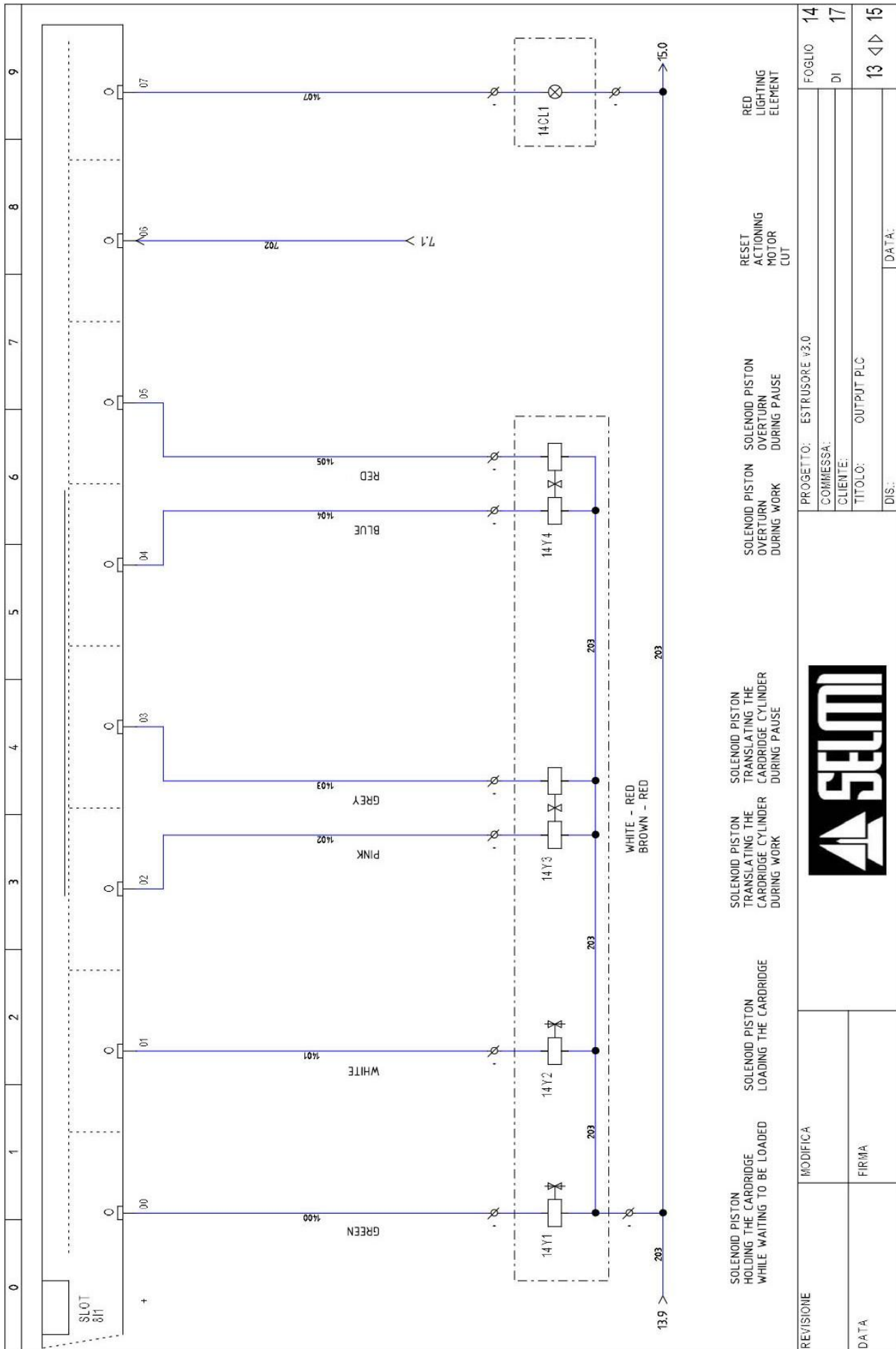


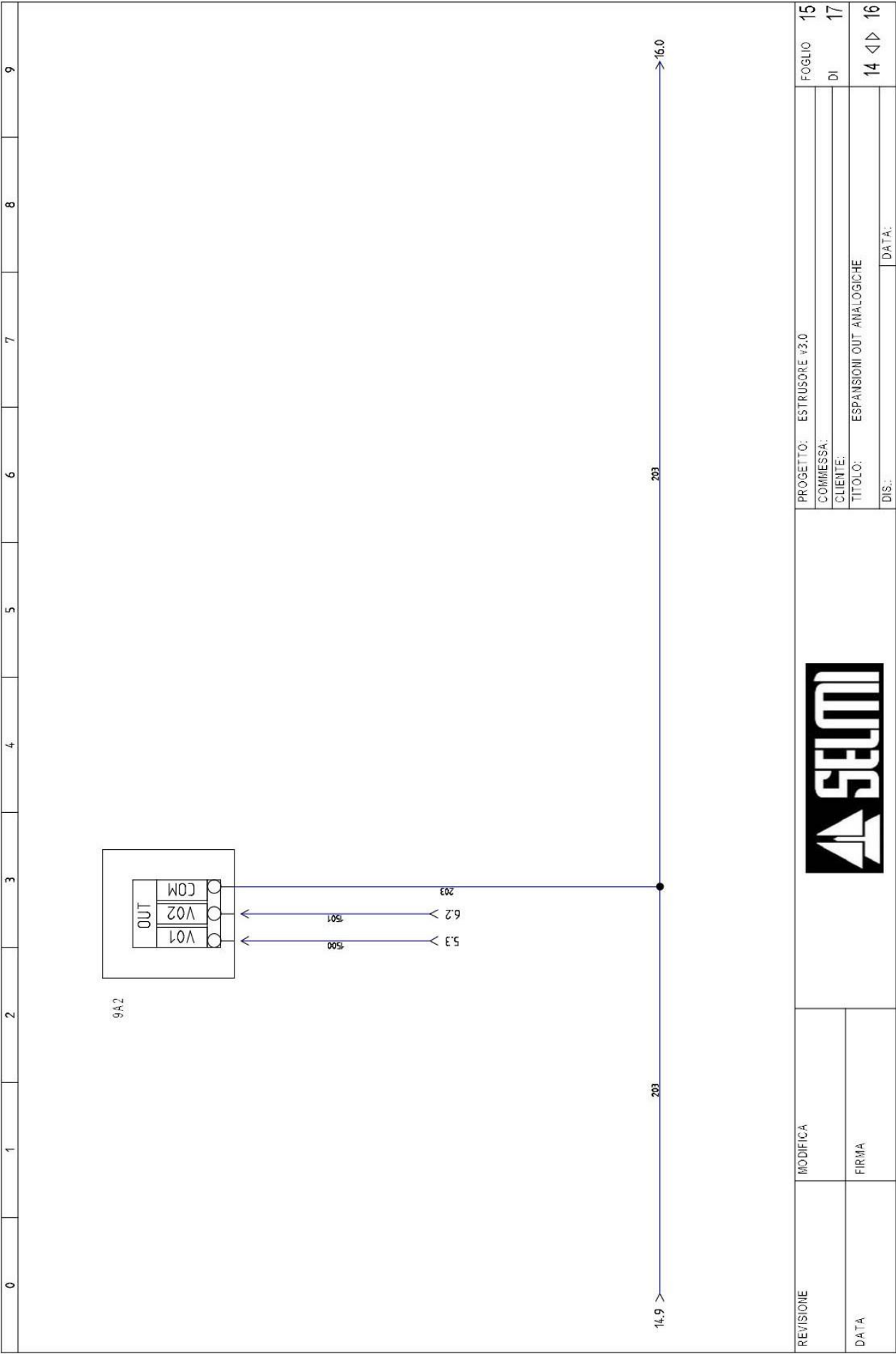


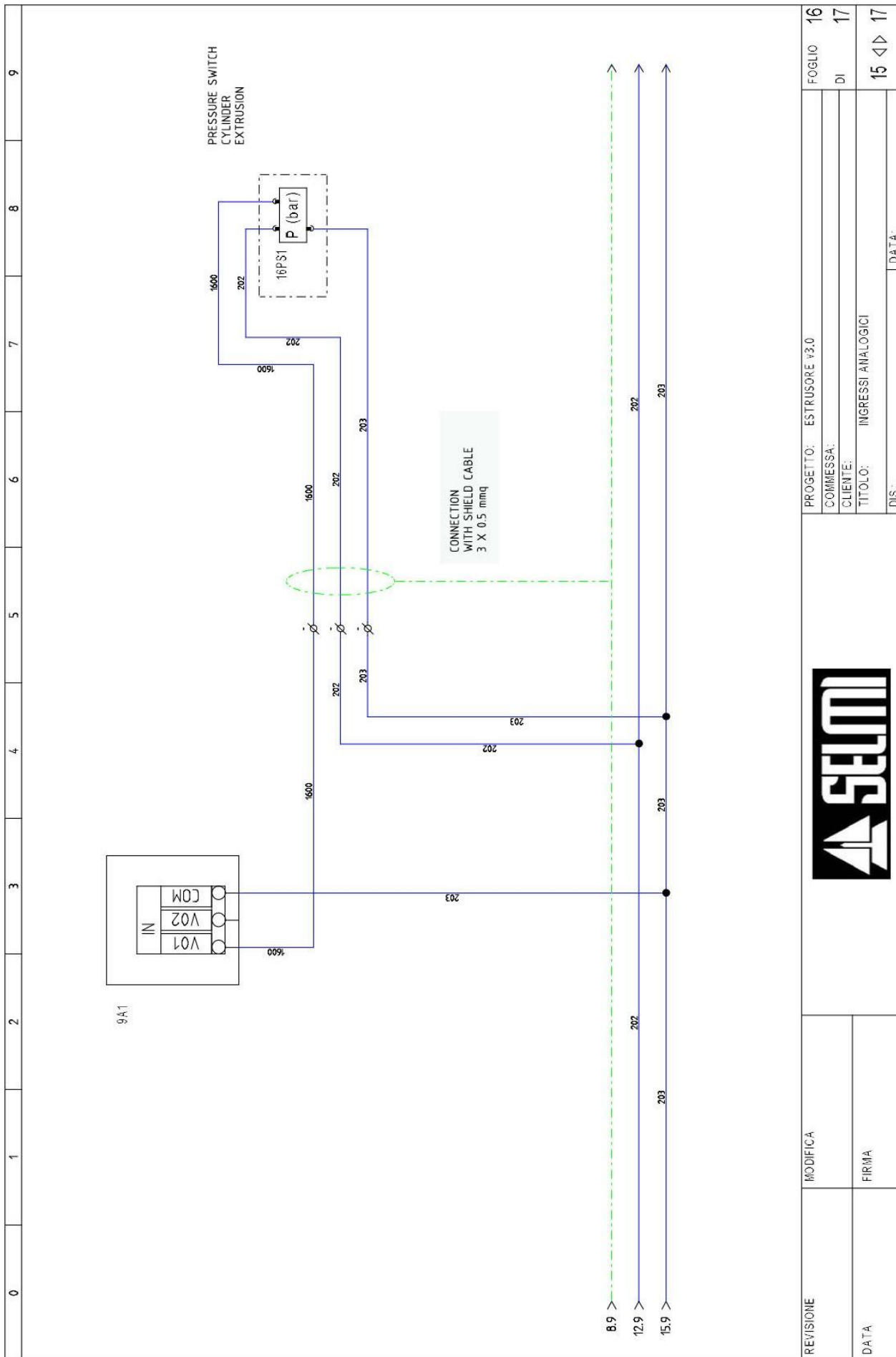


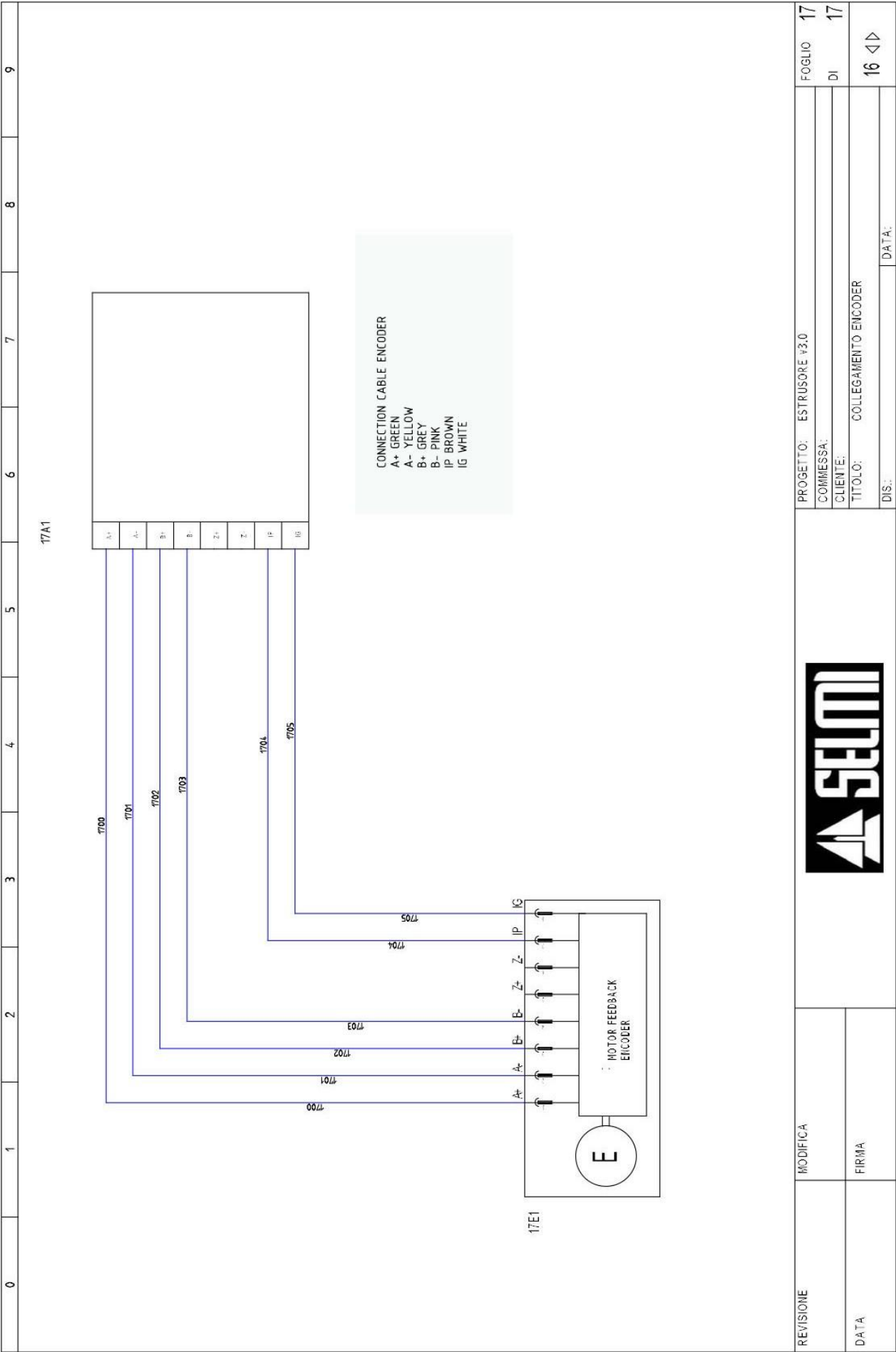
















MODIFICA








FIRMA







REVISIONE

DATA

SPARE PARTS

	CHF 001 Emergency button		CHF 010 24 V dc supply
	CHF 002 Start Reset button		CHF 011 Electrical schedule for the cutter motor communication
	CHF 003 Omron touch screen		CHF 012 Cutter motor drive
	CHF 004 Connection cable between power board and display board		CHF 013 Omron touch screen connection
	CHF 005 Led supply		CHF 014 Contactor upper belt motor
	CHF 006 Emergency contactor		CHF 015 Pneumatic electrovalves group
	CHF 007 Security module		CHF 016 Manometer
	CHF 008 Inverter lower belt		CHF 017 Air compressed pipe
	CHF 009 Inverter motor extruder		CHF 018 Piston for loading the cartridge

	CHF 019 Piston for the translation of the cylinder
	CHF 020 Piston for the overturn
	CHF 021 Motor extruder screw
	CHF 022 Motor lower belt
	CHF 023 Motor upper belt
	CHF 024 Door hinges
	CHF 025 Swiveling wheels

	CHF 026 Cutter brushless motor
	CHF 027 Piston for blocking the cartridge
	CHF 028 Reducer extruder
	CHF 029 Reducer lower belt
	CHF 030 Reducer upper belt
	CHF 031 Door hinges with electrical connection